# Appendix A:
# Construction CalEEMod Output and Summary Spreadsheets

# A.1 - Construction Equipment Spreadsheets

**Construction Equipment**

World Logistics Center 9/26/2013

| | | | | | Number of Equipment | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Year for grading and plot: | | | | | | | | | | |
| | | | | | 2015 | 2017 | 2019 | 2021 | 2022 | 2023 | 2024 | 2025 | 2027 | 2028 | 2030 |
| **Tier Phase** | **Equipment name provided by applicant** | **CalEEMod Equipment Type** | **HP** | **LF** | **2** | **4** | **9** | **1,3,20** | **5,10** | **5,10** | **7,8,21,22** | **11** | **11** | **12** | **6** |
| 3 Mass excavation | D10 dozers | Rubber Tired Dozers | 580 | 0.4 | 2 | 2 | 6 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 2 |
| 3 Mass excavation | D10 dozers | Rubber Tired Dozers | 580 | 0.4 | 2 | 2 | 6 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 2 |
| 3 Mass excavation | D9 Dozers | Rubber Tired Dozers | 410 | 0.4 | 2 | 2 | 6 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 2 |
| 3 Mass excavation | D8R Caterpillar dozer | Rubber Tired Dozers | 305 | 0.4 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Mass excavation | 651E Caterpillar scrapers | Scrapers | 550 | 0.48 | 3 | 3 | 10 | 1 | 0 | 6 | 3 | 6 | 4 | 3 | 0 |
| 3 Mass excavation | 651E Caterpillar scrapers | Scrapers | 550 | 0.48 | 9 | 10 | 20 | 9 | 6 | 12 | 9 | 12 | 11 | 9 | 6 |
| 3 Mass excavation | 834 Compactor | Plate Compactors | 354 | 0.43 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Mass excavation | 824C Caterpillar compactor | Plate Compactors | 354 | 0.43 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Mass excavation | 140G Motorgrader | Graders | 193 | 0.41 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| na Mass excavation | 10000 gal water pull | Off-Highway Trucks | 400 | 0.38 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Mass excavation | D6M Caterpillar dozer | Rubber Tired Dozers | 140 | 0.4 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Mass excavation | John Deere 550 dozer | Rubber Tired Dozers | 85 | 0.4 | 2 | 2 | 6 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 2 |
| 3 Mass excavation | 420D Caterpillar backhoe | Tractors/Loaders/Backhoes | 85 | 0.37 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| na Mass excavation | Water Trucks various | Other Material Handling Equipment | 167 | 0.40 | 4 | 4 | 4 | 3 | 2 | 4 | 4 | 4 | 5 | 4 | 4 |
| na Mass excavation | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 4 | 4 | 8 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 4 |
| na Mass excavation | Support haul trucks | (onsite vehicle travel) | | | 11 | 11 | 27 | 7 | 7 | 14 | 11 | 14 | 11 | 11 | 11 |
| 3 Finish grading | D6M Caterpillar dozer | Rubber Tired Dozers | 140 | 0.4 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Finish grading | John Deere 550 dozer | Rubber Tired Dozers | 85 | 0.4 | 2 | 2 | 6 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 |
| 3 Finish grading | 420D Caterpillar backhoe | Tractors/Loaders/Backhoes | 85 | 0.37 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| na Finish grading | Water Trucks various | Other Material Handling Equipment | 167 | 0.40 | 1 | 1 | 3 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 |
| na Finish grading | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 1 | 1 | 3 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 |
| 3 Building - concrete | Skip Loader (Cat Model 414) | Tractors/Loaders/Backhoes | 90 | 0.37 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 3 Building - concrete | Boom pump / truck pump | Pumps | 84 | 0.74 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| na Building - concrete | Concrete trucks | Cement and Mortar Mixers | 9 | 0.56 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| na Building - concrete | Water Trucks various | Other Material Handling Equipment | 167 | 0.40 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - concrete | 420D Caterpillar backhoe | Tractors/Loaders/Backhoes | 85 | 0.37 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 Building - wet utilities | Case 590 backhoe | Tractors/Loaders/Backhoes | 108 | 0.37 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 3 Building - wet utilities | Case 9060 excavator | Excavators | 300 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - wet utilities | PC 270 excavator | Excavators | 179 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - wet utilities | Case 240 excavator | Excavators | 173 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - wet utilities | Case 721 loader | Rubber Tired Loaders | 152 | 0.36 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| na Building - wet utilities | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| na Building - wet utilities | Delivery Trucks | (onsite vehicle travel) | | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 3 Building - electrical | Cat mini excavator | Excavators | 40 | 0.38 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 3 Building - electrical | Cat skiploader | Tractors/Loaders/Backhoes | 90 | 0.37 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| na Building - electrical | Concrete trucks | Cement and Mortar Mixers | 9 | 0.56 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 3 Building - electrical | Fork lift | Forklifts | 89 | 0.20 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| na Building - electrical | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| na Building - electrical | Delivery Trucks | (onsite vehicle travel) | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 Building - landscaping | 2005 John Deere 310G skiploader | Tractors/Loaders/Backhoes | 73 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - landscaping | 2007 John Deere 210LE skiploader | Tractors/Loaders/Backhoes | 78 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - landscaping | 2007 John Deere 544J wheel loader | Rubber Tired Loaders | 149 | 0.36 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - landscaping | 1999 Gradall 544D 10K reach lift | Forklifts | 125 | 0.20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - landscaping | 2013 komatsu PC-35MR3 Mini excavator | Excavators | 29 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - landscaping | 2013 Ditch Witch RT-45 trencher | Trenchers | 39 | 0.50 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Building - landscaping | 2013 Yanmar S190R Skid steer | Skid Steer Loaders | 69 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| na Building - landscaping | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| na Building - landscaping | 2001 Freightliner 2000 gallon water truck | Other Material Handling Equipment | 167 | 0.40 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 Utilities | Category Model 175,000lb excavator | Excavators | 523 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Utilities | Category Model 80,000lb excavator | Excavators | 286 | 0.38 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 3 Utilities | Category Model 65,000lb excavator | Excavators | 190 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Utilities | Backhoe 420 | Tractors/Loaders/Backhoes | 85 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| na Utilities | water truck 2000g | Other Material Handling Equipment | 167 | 0.40 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 3 Utilities | Category Model 100,000lb excavator | Excavators | 396 | 0.38 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 Utilities | Category Model 65,000lb excavator | Excavators | 190 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Utilities | 250G LC excavator | Excavators | 188 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Utilities | Cat mini excavator | Excavators | 40 | 0.38 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 3 Utilities | Cat skiploader | Tractors/Loaders/Backhoes | 90 | 0.37 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| na Utilities | Concrete trucks | Cement and Mortar Mixers | 9 | 0.56 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 3 Utilities | Fork lift | Forklifts | 89 | 0.20 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| na Utilities | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| na Utilities | Delivery Trucks | (onsite vehicle travel) | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| na Temporary utilities | dump truck 10wheel | (onsite vehicle travel) | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Temporary utilities | 90 tn crane | Cranes | 445 | 0.29 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 Interchange | D9 Dozers | Rubber Tired Dozers | 410 | 0.4 | | | 1 | 1 | | | | | | | |
| 3 Interchange | Paddle Wheel Scraper (Model 623) | Scrapers | 330 | 0.48 | | | 1 | 1 | | | | | | | |

| Tier | Phase | Equipment name provided by applicant | CalEEMod Equipment Type | HP | LF | 2 | 4 | 9 | 1,3,20 | 5,10 | 5,10 | 7,8,21,22 | 11 | 11 | 12 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Interchange | Excavator (Model 324) | Excavators | 190 | 0.38 | | | 1 | 1 | | | | | | | |
| 3 | Interchange | Backhoe (Model 430) | Tractors/Loaders/Backhoes | 98 | 0.37 | | | 1 | 1 | | | | | | | |
| 3 | Interchange | Crane | Cranes | 226 | 0.29 | | | 1 | 1 | | | | | | | |
| na | Interchange | Concrete Trucks | Cement and Mortar Mixers | 9 | 0.56 | | | 4 | 4 | | | | | | | |
| na | Interchange | Service support truck | Other Material Handling Equipment | 167 | 0.40 | | | 4 | 4 | | | | | | | |
| 3 | Interchange | Drill Rig | Bore/Drill Rigs | 206 | 0.50 | | | 1 | 1 | | | | | | | |
| na | Interchange | Dump Trucks | (onsite vehicle travel) | | | | | 5 | 5 | | | | | | | |
| 3 | Interchange | Rubber Tired Wheel Loader (Model 950) | Rubber Tired Loaders | 180 | 0.36 | | | 1 | 1 | | | | | | | |
| 3 | Interchange | Concrete Screed Machine | Other General Industrial Equipment | 88 | 0.34 | | | 1 | 1 | | | | | | | |
| 3 | Interchange | Skip Loader (Cat Model 414) | Tractors/Loaders/Backhoes | 90 | 0.37 | | | 1 | 1 | | | | | | | |
| 3 | Interchange | D6M Caterpillar dozer | Rubber Tired Dozers | 140 | 0.4 | | | 1 | 1 | | | | | | | |
| 3 | Interchange | Motor Grader (Model 14M) | Graders | 259 | 0.41 | | | 1 | 1 | | | | | | | |
| 3 | Curbing/drive approache | Gomaco GT-3600 curb machine | Paving Equipment | 99 | 0.36 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | Curbing/drive approache | John Deere 210 Skip loader | Tractors/Loaders/Backhoes | 55 | 0.37 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | Curbing/drive approache | Lazer Screed (rent) | Paving Equipment | 131 | 0.36 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| na | Curbing/drive approache | Concrete Trucks | Cement and Mortar Mixers | 9 | 0.56 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| na | Curbing/drive approache | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 | Paving | Grade Drum Roller | Rollers | 81 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Paving | Skip loader | Tractors/Loaders/Backhoes | 90 | 0.37 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 | Paving | Blade | Paving Equipment | 131 | 0.36 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Paving | Scraper | Scrapers | 362 | 0.48 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Paving | Paver | Pavers | 126 | 0.42 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Paving | Pave Roller / compactor | Plate Compactors | 8 | 0.43 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| na | Paving | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| na | Paving | Delivery Trucks | (onsite vehicle travel) | | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| na | Paving | Bottom dumps | (onsite vehicle travel) | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 | Landscaping | 2005 John Deere 310G skiploader | Tractors/Loaders/Backhoes | 73 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Landscaping | 2007 John Deere 210LE skiploader | Tractors/Loaders/Backhoes | 78 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Landscaping | 2007 John Deere 544J wheel loader | Rubber Tired Loaders | 149 | 0.36 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Landscaping | 1999 Gradall 544D 10K reach lift | Forklifts | 125 | 0.20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Landscaping | 2013 komatsu PC-35MR3 Mini excavator | Excavators | 29 | 0.38 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Landscaping | 2013 Ditch Witch RT-45 trencher | Trenchers | 39 | 0.50 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | Landscaping | 2013 Yanmar S190R Skid steer | Skid Steer Loaders | 69 | 0.37 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| na | Landscaping | 2001 Freightliner 2000 gallon water truck | Other Material Handling Equipment | 167 | 0.40 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| na | Landscaping | Delivery Trucks | (onsite vehicle travel) | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| na | Landscaping | Service support truck | Other Material Handling Equipment | 167 | 0.40 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | 360 | 361 | 464 | 373 | 346 | 385 | 360 | 385 | 381 | 360 | 354 |

**Construction Equipment**
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| Tier | Phase | Equipment name provided by applica | HP | LF | Source for HP |
|---|---|---|---|---|---|
| 3 | Mass excavation | D10 dozers | 580 | 0.4 | http://www.cat.com/en_US/products/new/equipment/dozers/large-dozers/17732721.html |
| 3 | Mass excavation | D10 dozers | 580 | 0.4 | http://www.cat.com/en_US/products/new/equipment/dozers/large-dozers/17732721.html |
| 3 | Mass excavation | D9 Dozers | 410 | 0.4 | www.cat.com/equipment/track-type-tractors/large-track-type-tractors |
| 3 | Mass excavation | D8R Caterpillar dozer | 305 | 0.4 | http://www.cat.com/cda/layout?m=607307&x=7 |
| 3 | Mass excavation | 651E Caterpillar scrapers | 550 | 0.48 | http://www.cat.com/cda/layout?m=607252&x=7 |
| 3 | Mass excavation | 651E Caterpillar scrapers | 550 | 0.48 | http://www.cat.com/cda/layout?m=607252&x=7 |
| 3 | Mass excavation | 834 Compactor | 354 | 0.43 | http://www.cat.com/equipment/compactors/soil-compactors |
| 3 | Mass excavation | 824C Caterpillar compactor | 354 | 0.43 | http://www.cat.com/equipment/compactors/soil-compactors |
| 3 | Mass excavation | 140G Motorgrader | 193 | 0.41 | http://www.cat.com/equipment/motor-graders |
| na | Mass excavation | 10000 gal water pull | 400 | 0.38 | CalEEMod default |
| 3 | Mass excavation | D6M Caterpillar dozer | 140 | 0.4 | http://www.cat.com/cda/layout?m=607309&x=7 |
| 3 | Mass excavation | John Deere 550 dozer | 85 | 0.4 | http://www.deere.com/wps/dcom/en_US/products/equipment/crawler_dozers/550k/550k.page |
| 3 | Mass excavation | 420D Caterpillar backhoe | 85 | 0.37 | http://www.cat.com/cda/layout?m=607376&x=7 |
| na | Mass excavation | Water Trucks various | 167 | 0.40 | CalEEMod default |
| na | Mass excavation | Service support truck | 167 | 0.40 | CalEEMod default |
| na | Mass excavation | Support haul trucks | | | |
| 3 | Finish grading | D6M Caterpillar dozer | 140 | 0.4 | http://www.cat.com/cda/layout?m=607309&x=7 |
| 3 | Finish grading | John Deere 550 dozer | 85 | 0.4 | http://www.deere.com/wps/dcom/en_US/products/equipment/crawler_dozers/550k/550k.page |
| 3 | Finish grading | 420D Caterpillar backhoe | 85 | 0.37 | http://www.cat.com/cda/layout?m=607376&x=7 |
| na | Finish grading | Water Trucks various | 167 | 0.40 | CalEEMod default |
| na | Finish grading | Service support truck | 167 | 0.40 | CalEEMod default |
| 3 | Building - concrete | Skip Loader (Cat Model 414) | 90 | 0.37 | http://www.cat.com/cda/layout?m=663368&x=7 |
| 3 | Building - concrete | Boom pump / truck pump | 84 | 0.74 | CalEEMod default |
| na | Building - concrete | Concrete trucks | 9 | 0.56 | CalEEMod default |
| na | Building - concrete | Water Trucks various | 167 | 0.40 | CalEEMod default |
| 3 | Building - concrete | 420D Caterpillar backhoe | 85 | 0.37 | http://www.cat.com/cda/layout?m=607376&x=7 |
| 3 | Building - wet utilities | Case 590 backhoe | 108 | 0.37 | http://www.ritchiespecs.com/specification?type=&category=Loader+Backhoe&make=Case&model=590+Super+M+Series+III&modelid=104950 |
| 3 | Building - wet utilities | Case 9060 excavator | 300 | 0.38 | http://www.ritchiespecs.com/specification?type=&category=Hydraulic%20Excavator&make=Case&model=9060B&modelid=92372 |
| 3 | Building - wet utilities | PC 270 excavator | 179 | 0.38 | http://www.komatsu.com/ce/products/pdfs/PC270-7_.pdf |
| 3 | Building - wet utilities | Case 240 excavator | 173 | 0.38 | http://www.ritchiespecs.com/specification?type=Construction+Equipment&category=Mobile+Excavator&make=Case&model=WX240&modelid=94067 |
| 3 | Building - wet utilities | Case 721 loader | 152 | 0.36 | http://www.ritchiespecs.com/specification?type=Construction+Equipment&category=Wheel+Loader&make=Case&model=721C&modelid=91168 |
| na | Building - wet utilities | Service support truck | 167 | 0.40 | CalEEMod default |
| na | Building - wet utilities | Delivery Trucks | | | |
| 3 | Building - electrical | Cat mini excavator | 40 | 0.38 | http://www.cat.com/equipment/hydraulic-excavators/mini-hydraulic-excavators |
| 3 | Building - electrical | Cat skiploader | 90 | 0.37 | http://www.cat.com/cda/layout?m=663368&x=7 |
| na | Building - electrical | Concrete trucks | 9 | 0.56 | CalEEMod default |
| 3 | Building - electrical | Fork lift | 89 | 0.20 | CalEEMod default |
| na | Building - electrical | Service support truck | 167 | 0.40 | CalEEMod default |
| na | Building - electrical | Delivery Trucks | | | |
| 3 | Building - landscaping | 2005 John Deere 310G skiploader | 73 | 0.37 | http://www.ritchiespecs.com/specification?type=&category=Loader%20Backhoe&make=John%20Deere&model=310G&modelid=91957 |
| 3 | Building - landscaping | 2007 John Deere 210LE skiploader | 78 | 0.37 | http://www.ritchiespecs.com/specification?type=&category=Wheel%20Loader&make=John%20Deere&model=210LE&modelid=103143 |
| 3 | Building - landscaping | 2007 John Deere 544J wheel loader | 149 | 0.36 | http://www.ritchiespecs.com/specification?type=&category=Wheel%20Loader&make=John%20Deere&model=544J%20High%20Lift&modelid=91103 |
| 3 | Building - landscaping | 1999 Gradall 544D 10K reach lift | 125 | 0.20 | http://www.ritchiespecs.com/specification?type=&category=Telescopic+Forklift&make=Gradall&model=544D10-55&modelid=94432 |
| 3 | Building - landscaping | 2013 komatsu PC-35MR3 Mini excavat | 29 | 0.38 | http://www.ritchiespecs.com/specification?type=Construction+Equipment&category=Mini+Excavator&make=Komatsu&model=PC35MR-3&modelid=105100 |
| 3 | Building - landscaping | 2013 Ditch Witch RT-45 trencher | 39 | 0.50 | http://www.ditchwitch.com/sites/default/files/specs-pdfs/RT45%20Specs.pdf |
| 3 | Building - landscaping | 2013 Yanmar S190R Skid steer | 69 | 0.37 | http://us.yanmar.com/products/construction/skid-steers/s190r/ |
| na | Building - landscaping | Service support truck | 167 | 0.40 | CalEEMod default |
| na | Building - landscaping | 2001 Freightliner 2000 gallon water truc | 167 | 0.40 | CalEEMod default |
| 3 | Utilities | Category Model 175,000lb excavator | 523 | 0.38 | http://www.cat.com/cda/layout?m=238325&x=7 |
| 3 | Utilities | Category Model 80,000lb excavator | 286 | 0.38 | http://www.cat.com/cda/layout?m=238325&x=7 |
| 3 | Utilities | Category Model 65,000lb excavator | 190 | 0.38 | http://www.cat.com/cda/layout?m=445381&x=7 |
| 3 | Utilities | Backhoe 420 | 85 | 0.37 | http://www.cat.com/cda/layout?m=607376&x=7 |
| na | Utilities | water truck 2000g | 167 | 0.40 | CalEEMod default |
| 3 | Utilities | Category Model 100,000lb excavator | 396 | 0.38 | http://www.cat.com/cda/layout?m=238325&x=7 |
| 3 | Utilities | Category Model 65,000lb excavator | 190 | 0.38 | http://www.cat.com/cda/layout?m=445381&x=7 |
| 3 | Utilities | 250G LC excavator | 188 | 0.38 | http://www.deere.com/wps/dcom/en_US/products/equipment/excavators/250g_lc/250g_lc.page |
| 3 | Utilities | Cat mini excavator | 40 | 0.38 | http://www.cat.com/equipment/hydraulic-excavators/mini-hydraulic-excavators |
| 3 | Utilities | Cat skiploader | 90 | 0.37 | http://www.cat.com/cda/layout?m=663368&x=7 |
| na | Utilities | Concrete trucks | 9 | 0.56 | CalEEMod default |
| 3 | Utilities | Fork lift | 89 | 0.20 | CalEEMod default |
| na | Utilities | Service support truck | 167 | 0.40 | CalEEMod default |
| na | Utilities | Delivery Trucks | | | |
| na | Temporary utilities | dump truck 10wheel | | | |
| 3 | Temporary utilities | 90 tn crane | 445 | 0.29 | http://www.kellytractor.com/eng/images/pdf/cranes/ht8690b.pdf |
| 3 | Interchange | D9 Dozers | 410 | 0.4 | www.cat.com/equipment/track-type-tractors/large-track-type-tractors |
| 3 | Interchange | Paddle Wheel Scraper (Model 623) | 330 | 0.48 | http://www.cat.com/cda/layout?m=607409&x=7 |

| Tier | Phase | Equipment name provided by applica | HP | LF | Source for HP |
|---|---|---|---|---|---|
| 3 | Interchange | Excavator (Model 324) | 190 | 0.38 | http://www.cat.com/cda/layout?m=445381&x=7 |
| 3 | Interchange | Backhoe (Model 430) | 98 | 0.37 | http://www.cat.com/cda/layout?m=607379&x=7 |
| 3 | Interchange | Crane | 226 | 0.29 | CalEEMod default |
| na | Interchange | Concrete Trucks | 9 | 0.56 | CalEEMod default |
| na | Interchange | Service support truck | 167 | 0.40 | CalEEMod default |
| 3 | Interchange | Drill Rig | 206 | 0.50 | CalEEMod default |
| na | Interchange | Dump Trucks | | | |
| 3 | Interchange | Rubber Tired Wheel Loader (Model 950 | 180 | 0.36 | http://www.cat.com/cda/layout?m=607357&x=7 |
| 3 | Interchange | Concrete Screed Machine | 88 | 0.34 | CalEEMod default |
| 3 | Interchange | Skip Loader (Cat Model 414) | 90 | 0.37 | http://www.cat.com/cda/layout?m=663368&x=7 |
| 3 | Interchange | D6M Caterpillar dozer | 140 | 0.4 | http://www.cat.com/cda/layout?m=607309&x=7 |
| 3 | Interchange | Motor Grader (Model 14M) | 259 | 0.41 | http://www.cat.com/cda/layout?m=308648&x=7 |
| 3 | Curbing/drive approache | Gomaco GT-3600 curb machine | 99 | 0.36 | http://www.gomaco.com/Resources/gt3600specs.html |
| 3 | Curbing/drive approache | John Deere 210 Skip loader | 55 | 0.37 | http://www.ritchiespecs.com/specification?type=&category=Loader+Backhoe&make=John+Deere&model=210C&modelid=91951 |
| 3 | Curbing/drive approache | Lazer Screed (rent) | 131 | 0.36 | CalEEMod default |
| na | Curbing/drive approache | Concrete Trucks | 9 | 0.56 | CalEEMod default |
| na | Curbing/drive approache | Service support truck | 167 | 0.40 | CalEEMod default |
| 3 | Paving | Grade Drum Roller | 81 | 0.38 | CalEEMod default |
| 3 | Paving | Skip loader | 90 | 0.37 | http://www.cat.com/cda/layout?m=663368&x=7 |
| 3 | Paving | Blade | 131 | 0.36 | CalEEMod default |
| 3 | Paving | Scraper | 362 | 0.48 | CalEEMod default |
| 3 | Paving | Paver | 126 | 0.42 | CalEEMod default |
| 3 | Paving | Pave Roller / compactor | 8 | 0.43 | CalEEMod default |
| na | Paving | Service support truck | 167 | 0.40 | CalEEMod default |
| na | Paving | Delivery Trucks | | | |
| na | Paving | Bottom dumps | | | |
| 3 | Landscaping | 2005 John Deere 310G skiploader | 73 | 0.37 | http://www.ritchiespecs.com/specification?type=&category=Loader%20Backhoe&make=John%20Deere&model=310G&modelid=91957 |
| 3 | Landscaping | 2007 John Deere 210LE skiploader | 78 | 0.37 | http://www.ritchiespecs.com/specification?type=&category=Wheel%20Loader&make=John%20Deere&model=210LE&modelid=103143 |
| 3 | Landscaping | 2007 John Deere 544J wheel loader | 149 | 0.36 | http://www.ritchiespecs.com/specification?type=&category=Wheel%20Loader&make=John%20Deere&model=544J%20High%20Lift&modelid=91103 |
| 3 | Landscaping | 1999 Gradall 544D 10K reach lift | 125 | 0.20 | http://www.ritchiespecs.com/specification?type=&category=Telescopic+Forklift&make=Gradall&model=544D10-55&modelid=94432 |
| 3 | Landscaping | 2013 komatsu PC-35MR3 Mini excavat | 29 | 0.38 | http://www.ritchiespecs.com/specification?type=Construction+Equipment&category=Mini+Excavator&make=Komatsu&model=PC35MR-3&modelid=105100 |
| 3 | Landscaping | 2013 Ditch Witch RT-45 trencher | 39 | 0.50 | http://www.ditchwitch.com/sites/default/files/specs-pdfs/RT45%20Specs.pdf |
| 3 | Landscaping | 2013 Yanmar S190R Skid steer | 69 | 0.37 | http://us.yanmar.com/products/construction/skid-steers/s190r/ |
| na | Landscaping | 2001 Freightliner 2000 gallon water truc | 167 | 0.40 | CalEEMod default |
| na | Landscaping | Delivery Trucks | | | |
| na | Landscaping | Service support truck | 167 | 0.40 | CalEEMod default |
| | | | | | Total |

## Construction Acreage Disturbed from Equipment

World Logistics Center

| | | | Acres disturbed per day per plot | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Equipment name provided by applicant** | **Factor** | **2** | **4** | **9** | **1,3,20** | **5,10** | **5,10** | **7,8,21,22** | **11** | **11** | **12** | **6** |
| Mass excavation | D10 dozers | **0.625** | 1.25 | 1.25 | 3.75 | 0.625 | 0.625 | 1.875 | 1.25 | 1.875 | 1.875 | 1.25 | 1.25 |
| Mass excavation | D10 dozers | **0.625** | 1.25 | 1.25 | 3.75 | 0.625 | 0.625 | 1.875 | 1.25 | 1.875 | 1.875 | 1.25 | 1.25 |
| Mass excavation | D9 Dozers | **0.625** | 1.25 | 1.25 | 3.75 | 0.625 | 0.625 | 1.875 | 1.25 | 1.875 | 1.875 | 1.25 | 1.25 |
| Mass excavation | D8R Caterpillar dozer | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Mass excavation | 651E Caterpillar scrapers | **1.25** | 3.75 | 3.75 | 12.5 | 1.25 | 0 | 7.5 | 3.75 | 7.5 | 5 | 3.75 | 0 |
| Mass excavation | 651E Caterpillar scrapers | **1.25** | 11.25 | 12.5 | 25 | 11.25 | 7.5 | 15 | 11.25 | 15 | 13.75 | 11.25 | 7.5 |
| Mass excavation | 834 Compactor | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Mass excavation | 824C Caterpillar compactor | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Mass excavation | 140G Motorgrader | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Mass excavation | 10000 gal water pull | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mass excavation | D6M Caterpillar dozer | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Mass excavation | John Deere 550 dozer | **0.625** | 1.25 | 1.25 | 3.75 | 0.625 | 0.625 | 1.875 | 1.25 | 1.875 | 1.875 | 1.25 | 1.25 |
| Mass excavation | 420D Caterpillar backhoe | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Mass excavation | Water Trucks various | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mass excavation | Service support truck | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mass excavation | Support haul trucks | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Finish grading | D6M Caterpillar dozer | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Finish grading | John Deere 550 dozer | **0.625** | 1.25 | 1.25 | 3.75 | 1.25 | 1.25 | 1.875 | 1.25 | 1.875 | 1.875 | 1.25 | 1.25 |
| Finish grading | 420D Caterpillar backhoe | **0.625** | 0.625 | 0.625 | 1.875 | 0.625 | 0.625 | 1.25 | 0.625 | 1.25 | 1.25 | 0.625 | 0.625 |
| Finish grading | Water Trucks various | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Finish grading | Service support truck | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - concrete | Skip Loader (Cat Model 414) | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - concrete | Boom pump / truck pump | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - concrete | Concrete trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - concrete | Water Trucks various | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - concrete | 420D Caterpillar backhoe | **0.625** | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Building - wet utilities | Case 590 backhoe | **0.625** | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 |
| Building - wet utilities | Case 9060 excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Building - wet utilities | PC 270 excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Building - wet utilities | Case 240 excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Building - wet utilities | Case 721 loader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - wet utilities | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - wet utilities | Delivery Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - electrical | Cat mini excavator | **0.625** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Building - electrical | Cat skiploader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - electrical | Concrete trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - electrical | Fork lift | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - electrical | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - electrical | Delivery Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 2005 John Deere 310G skiploader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 2007 John Deere 210LE skiploader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 2007 John Deere 544J wheel loader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 1999 Gradall 544D 10K reach lift | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 2013 komatsu PC-35MR3 Mini excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Building - landscaping | 2013 Ditch Witch RT-45 trencher | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 2013 Yanmar S190R Skid steer | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Building - landscaping | 2001 Freightliner 2000 gallon water truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | Category Model 175,000lb excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Utilities | Category Model 80,000lb excavator | **0.625** | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 |
| Utilities | Category Model 65,000lb excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Utilities | Backhoe 420 | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Utilities | water truck 2000g | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | Category Model 100,000lb excavator | **0.625** | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Utilities | Category Model 65,000lb excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Utilities | 250G LC excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Utilities | Cat mini excavator | **0.625** | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Utilities | Cat skiploader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | Concrete trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | Fork lift | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | Delivery Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Temporary utilities | dump truck 10wheel | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Temporary utilities | 90 tn crane | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | D9 Dozers | **0.625** | 0 | 0 | 0.625 | 0.625 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Paddle Wheel Scraper (Model 623) | **1.25** | 0 | 0 | 1.25 | 1.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Excavator (Model 324) | **0.625** | 0 | 0 | 0.625 | 0.625 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Backhoe (Model 430) | **0.625** | 0 | 0 | 0.625 | 0.625 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Crane | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Concrete Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Drill Rig | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Dump Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Rubber Tired Wheel Loader (Model 950) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Concrete Screed Machine | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Skip Loader (Cat Model 414) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | D6M Caterpillar dozer | **0.625** | 0 | 0 | 0.625 | 0.625 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interchange | Motor Grader (Model 14M) | **0.625** | 0 | 0 | 0.625 | 0.625 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Curbing/drive approaches | Gomaco GT-3600 curb machine | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Curbing/drive approaches | John Deere 210 Skip loader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Curbing/drive approaches | Lazer Screed (rent) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | Acres disturbed per day per plot | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Equipment name provided by applicant** | **Factor** | **2** | **4** | **9** | **1,3,20** | **5,10** | **5,10** | **7,8,21,22** | **11** | **11** | **12** | **6** |
| Curbing/drive approaches | Concrete Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Curbing/drive approaches | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Grade Drum Roller | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Skip loader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Blade | **1.25** | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Paving | Scraper | **1.25** | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Paving | Paver | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Pave Roller / compactor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Delivery Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | Bottom dumps | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 2005 John Deere 310G skiploader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 2007 John Deere 210LE skiploader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 2007 John Deere 544J wheel loader | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 1999 Gradall 544D 10K reach lift | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 2013 komatsu PC-35MR3 Mini excavator | **0.625** | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Landscaping | 2013 Ditch Witch RT-45 trencher | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 2013 Yanmar S190R Skid steer | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | 2001 Freightliner 2000 gallon water truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | Delivery Trucks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | Service support truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | | | | | |
| Mass excavation | | | 23.75 | 25.00 | 63.75 | 18.75 | 13.75 | 37.50 | 23.75 | 37.50 | 33.75 | 23.75 | 16.25 |
| Finish grading | | | 2.50 | 2.50 | 7.50 | 2.50 | 2.50 | 4.38 | 2.50 | 4.38 | 4.38 | 2.50 | 2.50 |
| Building - concrete | | | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| Building - wet utilities | | | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 |
| Building - electrical | | | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Building - landscaping | | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Utilities | | | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| Interchange | | | 0.00 | 0.00 | 4.38 | 4.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Landscaping | | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Curbing/drive approaches | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving | | | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| **Total Disturbed over year** | | **Days/year** | **Total disturbed/year** | | | | | | | | | | |
| Mass excavation | | 155 | 3681 | 3875 | 9881 | 2906 | 2131 | 5813 | 3681 | 5813 | 5231 | 3681 | 2519 |
| Finish grading | | 52 | 130 | 130 | 390 | 130 | 130 | 228 | 130 | 228 | 228 | 130 | 130 |
| Building - concrete | | 313 | 783 | 783 | 783 | 783 | 783 | 783 | 783 | 783 | 783 | 783 | 783 |
| Building - wet utilities | | 313 | 2348 | 2348 | 2348 | 2348 | 2348 | 2348 | 2348 | 2348 | 2348 | 2348 | 2348 |
| Building - electrical | | 313 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 |
| Building - landscaping | | 313 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 |
| Utilities | | 313 | 6260 | 6260 | 6260 | 6260 | 6260 | 6260 | 6260 | 6260 | 6260 | 6260 | 6260 |
| Interchange | | 313 | 0 | 0 | 1369 | 1369 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscaping | | 313 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 | 391 |
| Curbing/drive approaches | | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paving | | 48 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 |

Notes:
This project assumes a 10-hour day for construction equipment operation for the unmitigated scenario. CalEEMod assumes a typical 8-hour construction day. Therefore, the acres disturbed in a day is multiplied by 1.25 (10 divided by 8) for equipment over an 8-hour day to correspond to a 10-hour per day construction period; 0.5 acres = 0.625 acres; 1 acre = 1.25 acres.
• Crawler tractors, graders, and rubber tired dozers: 0.5 acres per 8-hour day, 0.625 acres per 10-hour day; note that compactors, excavators, and backhoes were also assigned 0.625 acres per day for a worst-case scenario.
• Scrapers: 1 acre per 8-hour day, 1.25 acres per 10-hour day.
Using the conversion factors shown above and the onsite equipment lists, the acreage disturbed is shown above.

## Construction Trips

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| Plot: | 2 | | 4 | | 9 | | 1,3,20 | | 5,10 | | 5,10 | | 7,8,21,22 | | 11 | | 11 | | 12 | | 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trips/day | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** | **V** | **H** |
| Mass excavation | 9 | 11 | 9 | 11 | 15 | 27 | 8 | 7 | 7 | 7 | 10 | 14 | 9 | 11 | 10 | 14 | 12 | 11 | 9 | 11 | 9 | 11 |
| Finish grading | 2 | 0 | 2 | 1 | 6 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 2 | 6 | 4 | 7 | 4 | 8 | 2 | 9 | 2 | 10 |
| Trips/day for vendor trips and total trips for haul trips | | | | | | | | | | | | | | | | | | | | | | |
| Mass excavation | 9 | 1705 | 9 | 1705 | 15 | 4185 | 8 | 1085 | 7 | 1085 | 10 | 2170 | 9 | 1705 | 10 | 2170 | 12 | 1705 | 9 | 1705 | 9 | 1705 |
| Finish grading | 2 | 0 | 2 | 52 | 6 | 104 | 2 | 156 | 4 | 208 | 4 | 260 | 2 | 312 | 4 | 364 | 4 | 416 | 2 | 468 | 2 | 520 |

Days in:

| | |
|---|---|
| Mass excavation | 155 |
| Finish grading | 52 |

V = vendor trips

H = haul trips

# A.2 - Construction Summary Unmitigated

## World Logistics Center

**Summary for Dispersion Modeling**

*Unmitigated*

| | | Onsite Emissions (tons/year) | | | | | |
|---|---|---|---|---|---|---|---|
| **Year** | **Construction Activity** | **NOx** | **CO** | **PM10 dust** | **PM10 exhaust** | **PM2.5 dust** | **PM2.5 exhaust** |
| 2015 | Other construction/grading | 97.82 | 53.59 | 2.152 | 4.522 | 0.486 | 4.160 |
| | Concrete pouring | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2016 | Other construction/grading | 78.92 | 45.79 | 0.041 | 4.248 | 0.004 | 3.909 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2017 | Other construction/grading | 116.20 | 65.56 | 2.204 | 5.697 | 0.492 | 5.242 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2018 | Other construction/grading | 78.92 | 45.79 | 0.041 | 4.248 | 0.004 | 3.909 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2019 | Other construction/grading | 159.28 | 89.11 | 4.572 | 7.315 | 1.271 | 6.731 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2020 | Other construction/grading | 94.53 | 54.40 | 0.658 | 4.983 | 0.240 | 4.585 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2021 | Other construction/grading | 105.37 | 60.84 | 2.016 | 5.329 | 0.423 | 4.903 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2022 | Other construction/grading | 86.91 | 50.66 | 1.067 | 4.558 | 0.211 | 4.194 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2023 | Other construction/grading | 99.54 | 58.84 | 1.917 | 5.046 | 0.503 | 4.643 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2024 | Other construction/grading | 91.46 | 53.97 | 1.421 | 4.731 | 0.329 | 4.353 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2025 | Other construction/grading | 95.73 | 57.65 | 1.925 | 4.898 | 0.503 | 4.507 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2026 | Other construction/grading | 78.92 | 45.79 | 0.041 | 4.248 | 0.004 | 3.909 |
| | Concrete pouring | 8.18 | 5.83 | 0.000 | 0.624 | 0.000 | 0.585 |
| 2027 | Other construction/grading | 51.15 | 57.33 | 2.877 | 2.036 | 0.739 | 1.874 |
| | Concrete pouring | 3.36 | 5.41 | 0.000 | 0.137 | 0.000 | 0.129 |
| 2028 | Other construction/grading | 43.61 | 52.31 | 2.209 | 1.739 | 0.492 | 1.601 |
| | Concrete pouring | 3.36 | 5.41 | 0.000 | 0.137 | 0.000 | 0.129 |
| 2029 | Other construction/grading | 25.34 | 39.51 | 0.041 | 1.037 | 0.004 | 0.954 |
| | Concrete pouring | 3.36 | 5.41 | 0.000 | 0.137 | 0.000 | 0.129 |
| 2030 | Other construction/grading | 31.57 | 46.08 | 2.054 | 1.273 | 0.476 | 1.190 |
| | Concrete pouring | 3.36 | 5.41 | 0.000 | 0.137 | 0.000 | 0.129 |

## World Logistics Center

**Unmitigated**

## Construction CalEEMod Results Summary

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

Model runs: onsite and offsite 2/24/15; onsite vehicles 12/11/13

*Onsite vehicles travel on unpaved roads*

| | Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **Construction Other** | | | | | | | | | | | |
| Building-concrete | | | | | | | | | | | |
| onsite | 7.12 | 62.93 | 44.81 | 0.06 | 0.00 | 4.80 | 0.00 | 4.50 | 6333.23 | 1.56 | 6366.06 |
| offsite | 0.63 | 9.71 | 7.61 | 0.03 | 1.04 | 0.19 | 0.28 | 0.18 | 2799.51 | 0.04 | 2800.30 |
| onsite vehicles | 0.26 | 0.75 | 3.06 | 0.00 | 10.56 | 0.01 | 1.05 | 0.01 | 108.34 | 0.00 | 108.40 |
| Building-wet utilities | | | | | | | | | | | |
| onsite | 11.62 | 126.95 | 73.60 | 0.13 | 0.00 | 6.95 | 0.00 | 6.39 | 13141.45 | 3.92 | 13223.84 |
| offsite | 0.50 | 7.19 | 6.15 | 0.02 | 0.97 | 0.16 | 0.27 | 0.14 | 2208.97 | 0.03 | 2209.66 |
| onsite vehicles | 0.22 | 0.60 | 2.13 | 0.00 | 9.73 | 0.01 | 0.97 | 0.00 | 88.99 | 0.00 | 89.04 |
| Building-electrical | | | | | | | | | | | |
| onsite | 7.33 | 60.93 | 45.58 | 0.06 | 0.00 | 4.66 | 0.00 | 4.29 | 5894.94 | 1.75 | 5931.59 |
| offsite | 0.48 | 7.82 | 5.58 | 0.02 | 0.77 | 0.16 | 0.21 | 0.15 | 2173.41 | 0.03 | 2173.96 |
| onsite vehicles | 0.20 | 0.62 | 2.38 | 0.00 | 7.66 | 0.01 | 0.76 | 0.00 | 86.20 | 0.00 | 86.24 |
| Building-landscaping | | | | | | | | | | | |
| onsite | 5.79 | 51.69 | 36.07 | 0.05 | 0.00 | 3.39 | 0.00 | 3.12 | 4917.10 | 1.47 | 4947.93 |
| offsite | 0.16 | 2.13 | 2.05 | 0.01 | 0.35 | 0.05 | 0.10 | 0.04 | 703.32 | 0.01 | 703.57 |
| onsite vehicles | 0.07 | 0.19 | 0.61 | 0.00 | 3.52 | 0.00 | 0.35 | 0.00 | 28.74 | 0.00 | 28.76 |
| Utilities | | | | | | | | | | | |
| onsite | 23.07 | 273.95 | 133.90 | 0.35 | 0.00 | 12.23 | 0.00 | 11.26 | 36314.07 | 10.83 | 36541.53 |
| offsite | 0.99 | 15.06 | 11.71 | 0.04 | 1.76 | 0.32 | 0.48 | 0.30 | 4402.25 | 0.06 | 4403.48 |
| onsite vehicles | 0.42 | 1.24 | 4.48 | 0.00 | 17.61 | 0.01 | 1.75 | 0.01 | 177.26 | 0.00 | 177.36 |
| Interchange | | | | | | | | | | | |
| onsite | 10.33 | 120.04 | 66.20 | 0.10 | 4.74 | 5.65 | 1.81 | 5.20 | 10385.63 | 3.10 | 10450.64 |
| offsite | 0.37 | 4.72 | 4.94 | 0.02 | 0.76 | 0.10 | 0.21 | 0.09 | 1589.59 | 0.03 | 1590.20 |
| onsite vehicles | 0.16 | 0.37 | 1.52 | 0.00 | 7.87 | 0.00 | 0.78 | 0.00 | 60.80 | 0.00 | 60.85 |
| Landscaping | | | | | | | | | | | |
| onsite | 6.18 | 55.84 | 38.60 | 0.05 | 0.00 | 3.62 | 0.00 | 3.33 | 5293.79 | 1.58 | 5326.98 |
| offsite | 0.15 | 1.83 | 1.91 | 0.01 | 0.33 | 0.04 | 0.09 | 0.04 | 630.58 | 0.01 | 630.82 |
| onsite vehicles | 0.07 | 0.16 | 0.54 | 0.00 | 3.31 | 0.00 | 0.33 | 0.00 | 25.52 | 0.00 | 25.54 |
| Temporary utilities | | | | | | | | | | | |
| onsite | 2.70 | 34.85 | 23.38 | 0.03 | 0.00 | 1.44 | 0.00 | 1.33 | 2908.78 | 0.87 | 2927.02 |
| offsite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| onsite vehicles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Curbing/drive approaches | | | | | | | | | | | |
| onsite | 1.56 | 16.03 | 10.21 | 0.01 | 0.00 | 1.00 | 0.00 | 0.92 | 1504.70 | 0.44 | 1513.98 |
| offsite | 0.23 | 3.48 | 2.80 | 0.01 | 0.41 | 0.07 | 0.11 | 0.07 | 1027.27 | 0.01 | 1027.57 |
| onsite vehicles | 0.10 | 0.28 | 1.06 | 0.00 | 4.14 | 0.00 | 0.41 | 0.00 | 40.68 | 0.00 | 40.70 |
| Paving | | | | | | | | | | | |
| onsite | 8.78 | 99.92 | 62.73 | 0.09 | 2.07 | 5.21 | 0.22 | 4.79 | 8930.83 | 2.65 | 8986.47 |
| offsite | 0.44 | 6.05 | 5.63 | 0.02 | 0.85 | 0.13 | 0.23 | 0.12 | 1915.78 | 0.03 | 1916.44 |
| onsite vehicles | 0.19 | 0.48 | 1.89 | 0.00 | 8.70 | 0.00 | 0.86 | 0.00 | 74.43 | 0.00 | 74.48 |
| *Subtotal: onsite vehicles.* | *1.69* | *4.70* | *17.66* | *0.01* | *73.11* | *0.04* | *7.26* | *0.04* | *690.97* | *0.02* | *691.36* |
| **Construction Other (post-2027)** | | | | | | | | | | | |
| Building-concrete | | | | | | | | | | | |
| onsite | 2.75 | 25.82 | 41.60 | 0.06 | 0.00 | 1.06 | 0.00 | 0.99 | 5974.24 | 1.46 | 6004.86 |
| offsite | 0.37 | 3.15 | 5.04 | 0.03 | 1.04 | 0.13 | 0.28 | 0.12 | 2468.54 | 0.02 | 2469.04 |
| onsite vehicles | 0.26 | 0.75 | 3.06 | 0.00 | 10.56 | 0.01 | 1.05 | 0.01 | 108.34 | 0.00 | 108.40 |
| Building-wet utilities | | | | | | | | | | | |
| onsite | 4.57 | 35.62 | 66.81 | 0.13 | 0.00 | 1.61 | 0.00 | 1.48 | 12121.58 | 3.92 | 12203.91 |
| offsite | 0.28 | 2.22 | 3.68 | 0.02 | 0.97 | 0.09 | 0.27 | 0.09 | 1933.09 | 0.02 | 1933.51 |
| onsite vehicles | 0.22 | 0.60 | 2.13 | 0.00 | 9.73 | 0.01 | 0.97 | 0.00 | 88.99 | 0.00 | 89.04 |
| Building-electrical | | | | | | | | | | | |
| onsite | 3.00 | 27.52 | 40.93 | 0.06 | 0.00 | 1.09 | 0.00 | 1.01 | 5445.28 | 1.74 | 5481.92 |
| offsite | 0.29 | 2.49 | 3.73 | 0.02 | 0.77 | 0.11 | 0.21 | 0.10 | 1930.03 | 0.02 | 1930.38 |
| onsite vehicles | 0.20 | 0.62 | 2.38 | 0.00 | 7.66 | 0.01 | 0.76 | 0.00 | 86.20 | 0.00 | 86.24 |
| Building-landscaping | | | | | | | | | | | |
| onsite | 2.29 | 19.14 | 32.45 | 0.05 | 0.00 | 0.83 | 0.00 | 0.77 | 4536.19 | 1.47 | 4567.00 |
| offsite | 0.09 | 0.64 | 1.14 | 0.01 | 0.35 | 0.03 | 0.10 | 0.02 | 609.55 | 0.01 | 609.69 |
| onsite vehicles | 0.07 | 0.19 | 0.61 | 0.00 | 3.52 | 0.00 | 0.35 | 0.00 | 28.74 | 0.00 | 28.76 |
| Utilities | | | | | | | | | | | |
| onsite | 10.53 | 79.36 | 113.88 | 0.35 | 0.00 | 3.00 | 0.00 | 2.76 | 33515.23 | 10.83 | 33742.62 |
| offsite | 0.57 | 4.69 | 7.33 | 0.04 | 1.76 | 0.20 | 0.48 | 0.18 | 3881.49 | 0.04 | 3882.25 |
| onsite vehicles | 0.42 | 1.24 | 4.48 | 0.00 | 17.61 | 0.01 | 1.75 | 0.01 | 177.26 | 0.00 | 177.36 |
| Interchange | | | | | | | | | | | |
| onsite | 5.02 | 45.36 | 41.94 | 0.10 | 4.74 | 1.93 | 1.81 | 1.78 | 9590.60 | 3.10 | 9655.62 |
| offsite | 0.20 | 1.52 | 2.93 | 0.02 | 0.76 | 0.06 | 0.21 | 0.06 | 1369.53 | 0.02 | 1369.89 |
| onsite vehicles | 0.16 | 0.37 | 1.52 | 0.00 | 7.87 | 0.00 | 0.78 | 0.00 | 60.80 | 0.00 | 60.85 |
| Landscaping | | | | | | | | | | | |
| onsite | 2.43 | 20.17 | 34.78 | 0.05 | 0.00 | 0.89 | 0.00 | 0.82 | 4883.90 | 1.58 | 4917.07 |
| offsite | 0.08 | 0.55 | 1.04 | 0.01 | 0.33 | 0.02 | 0.09 | 0.02 | 543.39 | 0.01 | 543.53 |
| onsite vehicles | 0.07 | 0.16 | 0.54 | 0.00 | 3.31 | 0.00 | 0.33 | 0.00 | 25.52 | 0.00 | 25.54 |
| Temporary utilities | | | | | | | | | | | |
| onsite | 1.24 | 12.26 | 10.43 | 0.03 | 0.00 | 0.50 | 0.00 | 0.46 | 2685.55 | 0.87 | 2703.79 |
| offsite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| onsite vehicles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Curbing/drive approaches | | | | | | | | | | | |
| onsite | 0.62 | 5.58 | 9.57 | 0.01 | 0.00 | 0.26 | 0.00 | 0.24 | 1391.29 | 0.44 | 1400.57 |
| offsite | 0.13 | 1.10 | 1.77 | 0.01 | 0.41 | 0.05 | 0.11 | 0.04 | 903.61 | 0.01 | 903.79 |
| onsite vehicles | 0.10 | 0.28 | 1.06 | 0.00 | 4.14 | 0.00 | 0.41 | 0.00 | 40.68 | 0.00 | 40.70 |
| Paving | | | | | | | | | | | |
| onsite | 3.67 | 34.39 | 44.95 | 0.09 | 2.07 | 1.48 | 0.22 | 1.36 | 8249.01 | 2.65 | 8304.64 |
| offsite | 0.25 | 1.93 | 3.43 | 0.02 | 0.85 | 0.08 | 0.23 | 0.07 | 1666.02 | 0.02 | 1666.42 |
| onsite vehicles | 0.19 | 0.48 | 1.89 | 0.00 | 8.70 | 0.00 | 0.86 | 0.00 | 74.43 | 0.00 | 74.48 |
| **Year 2015** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 45.64 | 596.28 | 319.01 | 0.51 | 14.81 | 23.37 | 4.69 | 21.50 | 53898.21 | 16.09 | 54236.12 |
| offsite | 0.62 | 7.13 | 8.64 | 0.03 | 1.39 | 0.15 | 0.38 | 0.14 | 2619.40 | 0.05 | 2620.55 |
| onsite vehicles | 0.28 | 0.58 | 2.32 | 0.00 | 14.50 | 0.00 | 1.44 | 0.00 | 99.64 | 0.00 | 99.72 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.74 | 17.58 | 8.90 | 0.01 | 7.82 | 1.08 | 3.94 | 0.99 | 1142.81 | 0.34 | 1149.97 |
| offsite | 0.11 | 0.71 | 1.84 | 0.00 | 0.33 | 0.02 | 0.09 | 0.01 | 436.72 | 0.01 | 437.01 |
| onsite vehicles | 0.06 | 0.06 | 0.27 | 0.00 | 3.52 | 0.00 | 0.35 | 0.00 | 15.77 | 0.00 | 15.79 |
| **Year 2017** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 44.56 | 568.05 | 299.29 | 0.54 | 15.22 | 21.98 | 4.74 | 20.22 | 55398.67 | 16.97 | 55755.12 |
| offsite | 0.50 | 5.67 | 7.24 | 0.03 | 1.39 | 0.11 | 0.38 | 0.10 | 2500.26 | 0.05 | 2501.22 |
| onsite vehicles | 0.23 | 0.49 | 2.01 | 0.00 | 14.50 | 0.00 | 1.44 | 0.00 | 95.38 | 0.00 | 95.44 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.59 | 15.93 | 8.73 | 0.01 | 7.82 | 0.97 | 3.94 | 0.89 | 1111.99 | 0.34 | 1119.15 |
| offsite | 0.10 | 0.85 | 1.68 | 0.01 | 0.35 | 0.02 | 0.09 | 0.02 | 498.66 | 0.01 | 498.92 |
| onsite vehicles | 0.05 | 0.08 | 0.33 | 0.00 | 3.73 | 0.00 | 0.37 | 0.00 | 18.40 | 0.00 | 18.41 |
| **Year 2019** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 99.21 | 1223.60 | 654.92 | 1.36 | 41.96 | 46.49 | 13.81 | 42.77 | 134739.58 | 42.63 | 135634.81 |
| offsite | 0.75 | 10.08 | 9.79 | 0.05 | 1.88 | 0.22 | 0.51 | 0.21 | 4146.26 | 0.05 | 4147.34 |
| onsite vehicles | 0.30 | 0.92 | 3.68 | 0.00 | 19.06 | 0.01 | 1.89 | 0.01 | 162.99 | 0.00 | 163.08 |
| Finish grading | | | | | | | | | | | |
| onsite | 3.82 | 37.99 | 25.01 | 0.03 | 23.47 | 2.24 | 11.81 | 2.06 | 3228.13 | 1.02 | 3249.58 |
| offsite | 0.15 | 1.73 | 2.07 | 0.01 | 0.47 | 0.04 | 0.13 | 0.04 | 828.69 | 0.01 | 828.96 |
| onsite vehicles | 0.07 | 0.17 | 0.63 | 0.00 | 4.76 | 0.00 | 0.47 | 0.00 | 32.88 | 0.00 | 32.90 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year 2021** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 24.27 | 283.12 | 161.40 | 0.39 | 8.50 | 10.78 | 1.95 | 9.92 | 37546.18 | 12.14 | 37801.19 |
| offsite | 0.34 | 2.69 | 5.07 | 0.02 | 1.28 | 0.08 | 0.35 | 0.07 | 1897.26 | 0.04 | 1897.99 |
| onsite vehicles | 0.16 | 0.28 | 1.32 | 0.00 | 13.46 | 0.00 | 1.34 | 0.00 | 71.83 | 0.00 | 71.88 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.13 | 11.12 | 8.17 | 0.01 | 7.82 | 0.63 | 3.94 | 0.58 | 1052.61 | 0.34 | 1059.76 |
| offsite | 0.11 | 0.93 | 1.63 | 0.01 | 0.40 | 0.03 | 0.11 | 0.02 | 617.04 | 0.01 | 617.27 |
| onsite vehicles | 0.05 | 0.09 | 0.45 | 0.00 | 4.13 | 0.00 | 0.41 | 0.00 | 23.33 | 0.00 | 23.34 |
| **Year 2022** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 17.84 | 201.84 | 120.18 | 0.29 | 6.85 | 7.75 | 1.77 | 7.13 | 28069.09 | 9.08 | 28259.73 |
| offsite | 0.32 | 2.33 | 4.79 | 0.02 | 1.26 | 0.07 | 0.34 | 0.07 | 1817.29 | 0.03 | 1818.00 |
| onsite vehicles | 0.15 | 0.24 | 1.22 | 0.00 | 13.25 | 0.00 | 1.32 | 0.00 | 68.43 | 0.00 | 68.48 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.05 | 10.12 | 8.95 | 0.01 | 7.82 | 0.56 | 3.94 | 0.52 | 1193.22 | 0.39 | 1201.33 |
| offsite | 0.14 | 1.27 | 1.96 | 0.01 | 0.46 | 0.04 | 0.13 | 0.04 | 828.42 | 0.01 | 828.67 |
| onsite vehicles | 0.06 | 0.14 | 0.64 | 0.00 | 4.75 | 0.00 | 0.47 | 0.00 | 32.37 | 0.00 | 32.39 |
| **Year 2023** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 47.71 | 525.47 | 328.31 | 0.81 | 24.00 | 20.19 | 7.74 | 18.57 | 78895.29 | 25.52 | 79431.14 |
| offsite | 0.41 | 2.90 | 5.92 | 0.03 | 1.48 | 0.12 | 0.40 | 0.11 | 2572.14 | 0.04 | 2572.90 |
| onsite vehicles | 0.18 | 0.38 | 1.98 | 0.00 | 15.33 | 0.00 | 1.52 | 0.00 | 99.62 | 0.00 | 99.68 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.91 | 18.37 | 16.06 | 0.02 | 13.11 | 1.00 | 6.57 | 0.92 | 2108.99 | 0.68 | 2123.31 |
| offsite | 0.14 | 1.06 | 2.00 | 0.01 | 0.48 | 0.04 | 0.13 | 0.04 | 903.35 | 0.01 | 903.59 |
| onsite vehicles | 0.06 | 0.14 | 0.72 | 0.00 | 4.97 | 0.00 | 0.49 | 0.00 | 35.44 | 0.00 | 35.46 |
| **Year 2024** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 29.83 | 321.03 | 206.37 | 0.53 | 14.81 | 12.30 | 4.69 | 11.32 | 51249.30 | 16.58 | 51597.38 |
| offsite | 0.36 | 2.41 | 5.22 | 0.03 | 1.39 | 0.10 | 0.38 | 0.09 | 2253.18 | 0.03 | 2253.89 |
| onsite vehicles | 0.16 | 0.32 | 1.64 | 0.00 | 14.48 | 0.00 | 1.44 | 0.00 | 86.62 | 0.00 | 86.67 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.88 | 8.26 | 7.95 | 0.01 | 7.82 | 0.44 | 3.94 | 0.41 | 1054.23 | 0.34 | 1061.39 |
| offsite | 0.14 | 1.01 | 1.92 | 0.01 | 0.46 | 0.04 | 0.12 | 0.04 | 851.44 | 0.01 | 851.68 |
| onsite vehicles | 0.06 | 0.13 | 0.69 | 0.00 | 4.76 | 0.00 | 0.47 | 0.00 | 32.76 | 0.00 | 32.78 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year 2025** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 41.96 | 428.86 | 297.60 | 0.82 | 24.00 | 16.50 | 7.74 | 15.18 | 78973.71 | 25.54 | 79510.09 |
| offsite | 0.40 | 2.87 | 5.67 | 0.03 | 1.48 | 0.12 | 0.40 | 0.11 | 2557.22 | 0.04 | 2557.95 |
| onsite vehicles | 0.17 | 0.38 | 1.93 | 0.00 | 15.33 | 0.00 | 1.52 | 0.00 | 99.10 | 0.00 | 99.15 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.54 | 14.19 | 15.67 | 0.02 | 13.11 | 0.73 | 6.57 | 0.67 | 2110.54 | 0.68 | 2124.87 |
| offsite | 0.17 | 1.31 | 2.24 | 0.01 | 0.53 | 0.06 | 0.14 | 0.05 | 1063.33 | 0.01 | 1063.59 |
| onsite vehicles | 0.06 | 0.17 | 0.88 | 0.00 | 5.39 | 0.00 | 0.54 | 0.00 | 41.83 | 0.00 | 41.85 |
| **Year 2027** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 37.62 | 392.23 | 267.24 | 0.70 | 22.76 | 15.14 | 7.61 | 13.93 | 67686.11 | 21.89 | 68145.82 |
| offsite | 0.36 | 2.53 | 5.17 | 0.03 | 1.46 | 0.11 | 0.40 | 0.10 | 2429.06 | 0.03 | 2429.75 |
| onsite vehicles | 0.15 | 0.35 | 1.75 | 0.00 | 15.12 | 0.00 | 1.50 | 0.00 | 94.70 | 0.00 | 94.75 |
| Finish grading | | | | | | | | | | | |
| onsite | 1.54 | 14.19 | 15.67 | 0.02 | 13.11 | 0.73 | 6.57 | 0.67 | 2110.54 | 0.68 | 2124.87 |
| offsite | 0.17 | 1.36 | 2.31 | 0.01 | 0.55 | 0.06 | 0.15 | 0.05 | 1141.00 | 0.01 | 1141.25 |
| onsite vehicles | 0.07 | 0.18 | 0.95 | 0.00 | 5.56 | 0.00 | 0.55 | 0.00 | 44.96 | 0.00 | 44.98 |
| **Year 2028** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 27.15 | 278.53 | 192.68 | 0.53 | 14.81 | 10.69 | 4.69 | 9.83 | 51293.80 | 16.59 | 51642.18 |
| offsite | 0.32 | 2.25 | 4.80 | 0.03 | 1.39 | 0.09 | 0.38 | 0.09 | 2225.18 | 0.03 | 2225.83 |
| onsite vehicles | 0.14 | 0.31 | 1.58 | 0.00 | 14.48 | 0.00 | 1.44 | 0.00 | 85.69 | 0.00 | 85.74 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.77 | 7.09 | 7.84 | 0.01 | 7.82 | 0.37 | 3.94 | 0.34 | 1055.27 | 0.34 | 1062.44 |
| offsite | 0.16 | 1.29 | 2.24 | 0.01 | 0.53 | 0.05 | 0.14 | 0.05 | 1089.07 | 0.01 | 1089.32 |
| onsite vehicles | 0.06 | 0.17 | 0.93 | 0.00 | 5.39 | 0.00 | 0.53 | 0.00 | 42.29 | 0.00 | 42.31 |
| **Year 2030** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 20.16 | 94.23 | 96.73 | 0.36 | 12.34 | 3.57 | 4.43 | 3.57 | 39867.05 | 1.80 | 39904.84 |
| offsite | 0.31 | 2.22 | 4.69 | 0.03 | 1.39 | 0.09 | 0.38 | 0.09 | 2216.86 | 0.03 | 2217.49 |
| onsite vehicles | 0.13 | 0.30 | 1.57 | 0.00 | 14.50 | 0.00 | 1.44 | 0.00 | 85.41 | 0.00 | 85.45 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.74 | 3.83 | 7.87 | 0.01 | 7.82 | 0.17 | 3.94 | 0.17 | 1263.03 | 0.07 | 1264.41 |
| offsite | 0.17 | 1.40 | 2.36 | 0.01 | 0.55 | 0.06 | 0.15 | 0.06 | 1168.56 | 0.01 | 1168.81 |
| onsite vehicles | 0.06 | 0.19 | 1.02 | 0.00 | 5.59 | 0.00 | 0.56 | 0.00 | 45.48 | 0.00 | 45.50 |

**World Logistics Center** **Unmitigated**

**Construction Daily Summary**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Unmitigated*

**Onsite Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 124 | 1402 | 817 | 1 | 116 | 68 | 18 | 62 | 141086 | 42 | 141958 |
| 2016 | 263 | 788 | 487 | 1 | 75 | 43 | 7 | 40 | 85930 | 25 | 86457 |
| 2017 | 309 | 1372 | 797 | 1 | 116 | 66 | 18 | 61 | 142554 | 42 | 143445 |
| 2018 | 263 | 788 | 487 | 1 | 75 | 43 | 7 | 40 | 85930 | 25 | 86457 |
| 2019 | 366 | 2050 | 1171 | 2 | 164 | 92 | 35 | 85 | 224093 | 69 | 225537 |
| 2020 | 273 | 908 | 553 | 1 | 80 | 49 | 9 | 45 | 96315 | 28 | 96907 |
| 2021 | 299 | 1202 | 724 | 1 | 114 | 60 | 17 | 56 | 135009 | 41 | 135864 |
| 2022 | 282 | 1000 | 618 | 1 | 108 | 52 | 15 | 48 | 115293 | 35 | 116019 |
| 2023 | 313 | 1332 | 834 | 2 | 133 | 65 | 24 | 59 | 167069 | 51 | 168146 |
| 2024 | 294 | 1118 | 703 | 1 | 117 | 56 | 18 | 52 | 138353 | 42 | 139235 |
| 2025 | 307 | 1231 | 803 | 2 | 133 | 61 | 24 | 56 | 167155 | 51 | 168233 |
| 2026 | 263 | 788 | 487 | 1 | 75 | 43 | 7 | 40 | 85930 | 25 | 86457 |
| 2027 | 259 | 672 | 699 | 2 | 132 | 27 | 24 | 25 | 149430 | 48 | 150428 |
| 2028 | 248 | 551 | 616 | 1 | 118 | 22 | 18 | 20 | 131970 | 42 | 132850 |
| 2029 | 220 | 265 | 413 | 1 | 75 | 11 | 7 | 10 | 79493 | 25 | 80018 |
| 2030 | 241 | 363 | 520 | 1 | 115 | 14 | 18 | 14 | 120754 | 27 | 121318 |

**Offsite Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 4 | 61 | 54 | 0 | 8 | 1 | 2 | 1 | 18917 | 0 | 18923 |
| 2016 | 4 | 53 | 43 | 0 | 6 | 1 | 2 | 1 | 15861 | 0 | 15866 |
| 2017 | 4 | 60 | 52 | 0 | 8 | 1 | 2 | 1 | 18860 | 0 | 18866 |
| 2018 | 4 | 53 | 43 | 0 | 6 | 1 | 2 | 1 | 15861 | 0 | 15866 |
| 2019 | 4 | 65 | 55 | 0 | 9 | 1 | 2 | 1 | 20836 | 0 | 20842 |
| 2020 | 4 | 53 | 43 | 0 | 6 | 1 | 2 | 1 | 15861 | 0 | 15866 |
| 2021 | 4 | 57 | 50 | 0 | 8 | 1 | 2 | 1 | 18375 | 0 | 18381 |
| 2022 | 4 | 57 | 50 | 0 | 8 | 1 | 2 | 1 | 18507 | 0 | 18512 |
| 2023 | 4 | 57 | 51 | 0 | 8 | 1 | 2 | 1 | 19337 | 0 | 19342 |
| 2024 | 4 | 57 | 51 | 0 | 8 | 1 | 2 | 1 | 18966 | 0 | 18971 |
| 2025 | 4 | 57 | 51 | 0 | 8 | 1 | 2 | 1 | 19482 | 0 | 19487 |
| 2026 | 4 | 53 | 43 | 0 | 6 | 1 | 2 | 1 | 15861 | 0 | 15866 |
| 2027 | 4 | 57 | 51 | 0 | 8 | 1 | 2 | 1 | 19431 | 0 | 19437 |
| 2028 | 4 | 57 | 50 | 0 | 8 | 1 | 2 | 1 | 19175 | 0 | 19181 |
| 2029 | 4 | 53 | 43 | 0 | 6 | 1 | 2 | 1 | 15861 | 0 | 15866 |
| 2030 | 4 | 57 | 50 | 0 | 8 | 1 | 2 | 1 | 19247 | 0 | 19252 |

**Total Onsite and Offsite Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM10 total | PM2.5 dust | PM2.5 exhaust | PM2.5 total | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 128 | 1463 | 871 | 1.5 | 124 | 69 | 193 | 20 | 64 | 84 | 160004 | 42 | 160882 |
| 2016 | 267 | 841 | 530 | 1.0 | 82 | 44 | 126 | 9 | 41 | 50 | 101791 | 25 | 102323 |
| 2017 | 314 | 1432 | 849 | 1.6 | 125 | 68 | 192 | 20 | 62 | 82 | 161414 | 43 | 162311 |
| 2018 | 267 | 841 | 530 | 1.0 | 82 | 44 | 126 | 9 | 41 | 50 | 101791 | 25 | 102323 |
| 2019 | 371 | 2116 | 1226 | 2.4 | 173 | 93 | 267 | 38 | 86 | 124 | 244929 | 69 | 246379 |
| 2020 | 277 | 961 | 596 | 1.1 | 86 | 50 | 137 | 11 | 46 | 57 | 112177 | 28 | 112773 |
| 2021 | 303 | 1259 | 774 | 1.5 | 122 | 62 | 184 | 19 | 57 | 76 | 153385 | 41 | 154245 |
| 2022 | 286 | 1057 | 668 | 1.3 | 116 | 53 | 169 | 17 | 49 | 66 | 133800 | 35 | 134531 |
| 2023 | 317 | 1389 | 885 | 1.9 | 141 | 66 | 207 | 26 | 61 | 87 | 186406 | 52 | 187489 |
| 2024 | 298 | 1174 | 754 | 1.6 | 125 | 57 | 183 | 20 | 53 | 73 | 157318 | 42 | 158206 |
| 2025 | 311 | 1289 | 854 | 1.9 | 141 | 62 | 203 | 26 | 57 | 83 | 186637 | 52 | 187720 |
| 2026 | 267 | 841 | 530 | 1.0 | 82 | 44 | 126 | 9 | 41 | 50 | 101791 | 25 | 102323 |
| 2027 | 263 | 729 | 750 | 1.7 | 140 | 28 | 168 | 26 | 26 | 52 | 168861 | 48 | 169865 |
| 2028 | 252 | 607 | 667 | 1.6 | 126 | 23 | 149 | 20 | 21 | 42 | 151146 | 42 | 152031 |
| 2029 | 223 | 318 | 456 | 1.0 | 82 | 12 | 94 | 9 | 11 | 20 | 95354 | 25 | 95884 |
| 2030 | 245 | 420 | 571 | 1.4 | 124 | 16 | 140 | 20 | 15 | 35 | 140001 | 27 | 140570 |
| Average | 274 | 1046 | 719 | 1 | 117 | 49 | 166 | 19 | 46 | 64 | 147300 | 39 | 148116 |
| % Average | | | | | 70% | 30% | | 29% | 71% | | | | |

| | Total Construction Emissions (pounds/day) | | | | |
|---|---|---|---|---|---|
| | **VOC** | **NOx** | **CO** | **PM10** | **PM2.5** |
| 2015 | 128 | 1463 | 871 | 193 | 84 |
| 2016 | 267 | 841 | 530 | 126 | 50 |
| 2017 | 314 | 1432 | 849 | 192 | 82 |
| 2018 | 267 | 841 | 530 | 126 | 50 |
| 2019 | 371 | 2116 | 1226 | 267 | 124 |
| 2020 | 277 | 961 | 596 | 137 | 57 |
| 2021 | 303 | 1259 | 774 | 184 | 76 |
| 2022 | 286 | 1057 | 668 | 169 | 66 |
| 2023 | 317 | 1389 | 885 | 207 | 87 |
| 2024 | 298 | 1174 | 754 | 183 | 73 |
| 2025 | 311 | 1289 | 854 | 203 | 83 |
| 2026 | 267 | 841 | 530 | 126 | 50 |
| 2027 | 263 | 729 | 750 | 168 | 52 |
| 2028 | 252 | 607 | 667 | 149 | 42 |
| 2029 | 223 | 318 | 456 | 94 | 20 |
| 2030 | 245 | 420 | 571 | 140 | 35 |
| Threshold | 75 | 100 | 550 | 150 | 55 |
| Max | 371 | 2116 | 1226 | 267 | 124 |
| Exceed by | 296 | 2016 | 676 | 117 | 69 |

**World Logistics Center** **Unmitigated**

**Construction Onsite Daily Emissions**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Unmitigated*

| | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | | | | | | | | | | | |
| Mass excavation | 45.9 | 596.9 | 321.3 | 0.5 | 29.3 | 23.4 | 6.1 | 21.5 | 53998 | 16.1 | 54336 |
| Finish grading | 1.8 | 17.6 | 9.2 | 0.0 | 11.3 | 1.1 | 4.3 | 1.0 | 1159 | 0.3 | 1166 |
| Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| Paving VOC | 0.0 | | | | | | | | | | |
| Painting VOC | 0.0 | | | | | | | | | | |
| *Maximum/day* | *123.6* | *1402.3* | *817.0* | *1.3* | *115.8* | *67.8* | *17.9* | *62.5* | *141086* | *41.5* | *141958* |
| **2016** | | | | | | | | | | | |
| Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| Paving VOC | 8.9 | | | | | | | | | | |
| Painting VOC | 178.2 | | | | | | | | | | |
| *Maximum/day* | *262.9* | *787.8* | *486.6* | *0.8* | *75.2* | *43.3* | *7.5* | *40.0* | *85930* | *25.1* | *86457* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 44.8 | 568.5 | 301.3 | 0.5 | 29.7 | 22.0 | 6.2 | 20.2 | 55494 | 17.0 | 55851 |
| | Finish grading | 1.6 | 16.0 | 9.1 | 0.0 | 11.6 | 1.0 | 4.3 | 0.9 | 1130 | 0.3 | 1138 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *309.4* | *1372.3* | *796.9* | *1.4* | *116.5* | *66.3* | *18.0* | *61.1* | *142554* | *42.4* | *143445* |
| **2018** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *262.9* | *787.8* | *486.6* | *0.8* | *75.2* | *43.3* | *7.5* | *40.0* | *85930* | *25.1* | *86457* |
| **2019** | Mass excavation | 99.5 | 1224.5 | 658.6 | 1.4 | 61.0 | 46.5 | 15.7 | 42.8 | 134903 | 42.6 | 135798 |
| | Finish grading | 3.9 | 38.2 | 25.6 | 0.0 | 28.2 | 2.2 | 12.3 | 2.1 | 3261 | 1.0 | 3282 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *366.3* | *2050.5* | *1170.8* | *2.2* | *164.4* | *92.1* | *35.5* | *84.8* | *224093* | *68.7* | *225537* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 10.3 | 120.0 | 66.2 | 0.1 | 4.7 | 5.6 | 1.8 | 5.2 | 10386 | 3.1 | 10451 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | Maximum/day | *273.3* | *907.8* | *552.8* | *0.9* | *79.9* | *49.0* | *9.3* | *45.2* | *96315* | *28.2* | *96907* |
| **2021** | Mass excavation | 24.4 | 283.4 | 162.7 | 0.4 | 22.0 | 10.8 | 3.3 | 9.9 | 37618 | 12.1 | 37873 |
| | Finish grading | 1.2 | 11.2 | 8.6 | 0.0 | 12.0 | 0.6 | 4.3 | 0.6 | 1076 | 0.3 | 1083 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 10.3 | 120.0 | 66.2 | 0.1 | 4.7 | 5.6 | 1.8 | 5.2 | 10386 | 3.1 | 10451 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *298.9* | *1202.4* | *724.1* | *1.3* | *113.8* | *60.4* | *16.9* | *55.7* | *135009* | *40.7* | *135864* |
| **2022** | Mass excavation | 18.0 | 202.1 | 121.4 | 0.3 | 20.1 | 7.8 | 3.1 | 7.1 | 28138 | 9.1 | 28328 |
| | Finish grading | 1.1 | 10.3 | 9.6 | 0.0 | 12.6 | 0.6 | 4.4 | 0.5 | 1226 | 0.4 | 1234 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *282.0* | *1000.1* | *617.6* | *1.1* | *107.9* | *51.7* | *15.0* | *47.6* | *115293* | *34.6* | *116019* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2023** | Mass excavation | 47.9 | 525.9 | 330.3 | 0.8 | 39.3 | 20.2 | 9.3 | 18.6 | 78995 | 25.5 | 79531 |
| | Finish grading | 2.0 | 18.5 | 16.8 | 0.0 | 18.1 | 1.0 | 7.1 | 0.9 | 2144 | 0.7 | 2159 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *312.8* | *1332.2* | *833.6* | *1.7* | *132.6* | *64.5* | *23.8* | *59.5* | *167069* | *51.3* | *168146* |
| **2024** | Mass excavation | 30.0 | 321.3 | 208.0 | 0.5 | 29.3 | 12.3 | 6.1 | 11.3 | 51336 | 16.6 | 51684 |
| | Finish grading | 0.9 | 8.4 | 8.6 | 0.0 | 12.6 | 0.4 | 4.4 | 0.4 | 1087 | 0.3 | 1094 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *293.9* | *1117.5* | *703.2* | *1.4* | *117.1* | *56.1* | *18.0* | *51.7* | *138353* | *42.0* | *139235* |
| **2025** | Mass excavation | 42.1 | 429.2 | 299.5 | 0.8 | 39.3 | 16.5 | 9.3 | 15.2 | 79073 | 25.5 | 79609 |
| | Finish grading | 1.6 | 14.4 | 16.5 | 0.0 | 18.5 | 0.7 | 7.1 | 0.7 | 2152 | 0.7 | 2167 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *306.7* | *1231.4* | *802.6* | *1.7* | *133.0* | *60.6* | *23.9* | *55.8* | *167155* | *51.3* | *168233* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 7.1 | 62.9 | 44.8 | 0.1 | 0.0 | 4.8 | 0.0 | 4.5 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 11.6 | 126.9 | 73.6 | 0.1 | 0.0 | 6.9 | 0.0 | 6.4 | 13141 | 3.9 | 13224 |
| | Building - electrical | 7.3 | 60.9 | 45.6 | 0.1 | 0.0 | 4.7 | 0.0 | 4.3 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 5.8 | 51.7 | 36.1 | 0.0 | 0.0 | 3.4 | 0.0 | 3.1 | 4917 | 1.5 | 4948 |
| | Utilities | 23.1 | 274.0 | 133.9 | 0.3 | 0.0 | 12.2 | 0.0 | 11.3 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 6.2 | 55.8 | 38.6 | 0.1 | 0.0 | 3.6 | 0.0 | 3.3 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 2.7 | 34.8 | 23.4 | 0.0 | 0.0 | 1.4 | 0.0 | 1.3 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 1.6 | 16.0 | 10.2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.9 | 1505 | 0.4 | 1514 |
| | Paving | 8.8 | 99.9 | 62.7 | 0.1 | 2.1 | 5.2 | 0.2 | 4.8 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *262.9* | *787.8* | *486.6* | *0.8* | *75.2* | *43.3* | *7.5* | *40.0* | *85930* | *25.1* | *86457* |
| ***Tier 4 for all offroad equipment except scrapers*** | | | | | | | | | | | | |
| **2027** | Mass excavation | 37.8 | 392.6 | 269.0 | 0.7 | 37.9 | 15.1 | 9.1 | 13.9 | 67781 | 21.9 | 68241 |
| | Finish grading | 1.6 | 14.4 | 16.6 | 0.0 | 18.7 | 0.7 | 7.1 | 0.7 | 2155 | 0.7 | 2170 |
| | Building - concrete | 2.8 | 25.8 | 41.6 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 4.6 | 35.6 | 66.8 | 0.1 | 0.0 | 1.6 | 0.0 | 1.5 | 12122 | 3.9 | 12204 |
| | Building - electrical | 3.0 | 27.5 | 40.9 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 2.3 | 19.1 | 32.4 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4536 | 1.5 | 4567 |
| | Utilities | 10.5 | 79.4 | 113.9 | 0.3 | 0.0 | 3.0 | 0.0 | 2.8 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 2.4 | 20.2 | 34.8 | 0.1 | 0.0 | 0.9 | 0.0 | 0.8 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 1.2 | 12.3 | 10.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.6 | 5.6 | 9.6 | 0.0 | 0.0 | 0.3 | 0.0 | 0.2 | 1391 | 0.4 | 1401 |
| | Paving | 3.7 | 34.4 | 44.9 | 0.1 | 2.1 | 1.5 | 0.2 | 1.4 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *259.3* | *671.5* | *698.7* | *1.5* | *131.7* | *26.6* | *23.7* | *24.5* | *149430* | *47.6* | *150428* |
| **2028** | Mass excavation | 27.3 | 278.8 | 194.3 | 0.5 | 29.3 | 10.7 | 6.1 | 9.8 | 51379 | 16.6 | 51728 |
| | Finish grading | 0.8 | 7.3 | 8.8 | 0.0 | 13.2 | 0.4 | 4.5 | 0.3 | 1098 | 0.3 | 1105 |
| | Building - concrete | 2.8 | 25.8 | 41.6 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 4.6 | 35.6 | 66.8 | 0.1 | 0.0 | 1.6 | 0.0 | 1.5 | 12122 | 3.9 | 12204 |
| | Building - electrical | 3.0 | 27.5 | 40.9 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 2.3 | 19.1 | 32.4 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4536 | 1.5 | 4567 |
| | Utilities | 10.5 | 79.4 | 113.9 | 0.3 | 0.0 | 3.0 | 0.0 | 2.8 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 2.4 | 20.2 | 34.8 | 0.1 | 0.0 | 0.9 | 0.0 | 0.8 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 1.2 | 12.3 | 10.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.6 | 5.6 | 9.6 | 0.0 | 0.0 | 0.3 | 0.0 | 0.2 | 1391 | 0.4 | 1401 |
| | Paving | 3.7 | 34.4 | 44.9 | 0.1 | 2.1 | 1.5 | 0.2 | 1.4 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *248.0* | *550.7* | *616.1* | *1.4* | *117.7* | *21.8* | *18.1* | *20.1* | *131970* | *41.9* | *132850* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 2.8 | 25.8 | 41.6 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 4.6 | 35.6 | 66.8 | 0.1 | 0.0 | 1.6 | 0.0 | 1.5 | 12122 | 3.9 | 12204 |
| | Building - electrical | 3.0 | 27.5 | 40.9 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 2.3 | 19.1 | 32.4 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4536 | 1.5 | 4567 |
| | Utilities | 10.5 | 79.4 | 113.9 | 0.3 | 0.0 | 3.0 | 0.0 | 2.8 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 2.4 | 20.2 | 34.8 | 0.1 | 0.0 | 0.9 | 0.0 | 0.8 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 1.2 | 12.3 | 10.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.6 | 5.6 | 9.6 | 0.0 | 0.0 | 0.3 | 0.0 | 0.2 | 1391 | 0.4 | 1401 |
| | Paving | 3.7 | 34.4 | 44.9 | 0.1 | 2.1 | 1.5 | 0.2 | 1.4 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *219.9* | *264.6* | *413.1* | *0.8* | *75.2* | *10.8* | *7.5* | *9.9* | *79493* | *25.0* | *80018* |
| **2030** | Mass excavation | 20.3 | 94.5 | 98.3 | 0.4 | 26.8 | 3.6 | 5.9 | 3.6 | 39952 | 1.8 | 39990 |
| | Finish grading | 0.8 | 4.0 | 8.9 | 0.0 | 13.4 | 0.2 | 4.5 | 0.2 | 1309 | 0.1 | 1310 |
| | Building - concrete | 2.8 | 25.8 | 41.6 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 4.6 | 35.6 | 66.8 | 0.1 | 0.0 | 1.6 | 0.0 | 1.5 | 12122 | 3.9 | 12204 |
| | Building - electrical | 3.0 | 27.5 | 40.9 | 0.1 | 0.0 | 1.1 | 0.0 | 1.0 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 2.3 | 19.1 | 32.4 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4536 | 1.5 | 4567 |
| | Utilities | 10.5 | 79.4 | 113.9 | 0.3 | 0.0 | 3.0 | 0.0 | 2.8 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 2.4 | 20.2 | 34.8 | 0.1 | 0.0 | 0.9 | 0.0 | 0.8 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 1.2 | 12.3 | 10.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.6 | 5.6 | 9.6 | 0.0 | 0.0 | 0.3 | 0.0 | 0.2 | 1391 | 0.4 | 1401 |
| | Paving | 3.7 | 34.4 | 44.9 | 0.1 | 2.1 | 1.5 | 0.2 | 1.4 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 178.2 | | | | | | | | | | |
| | *Maximum/day* | *241.0* | *363.1* | *520.2* | *1.2* | *115.4* | *14.5* | *17.8* | *13.7* | *120754* | *26.8* | *121318* |

## World Logistics Center
## Construction Offsite Daily Emissions

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*
*Unmitigated*

| | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | | | | | | | | | | | |
| Mass excavation | 0.6 | 7.1 | 8.6 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2619.4 | 0.1 | 2620.5 |
| Finish grading | 0.1 | 0.7 | 1.8 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 436.7 | 0.0 | 437.0 |
| Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| *Maximum/day* | *4.3* | *61.1* | *53.9* | *0.2* | *8.2* | *1.3* | *2.2* | *1.2* | *18917* | *0.3* | *18923* |
| **2016** | | | | | | | | | | | |
| Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **VOC** | **NOx** | **CO** | **SO2** | **PM10 dust** | **PM10 exhaust** | **PM2.5 dust** | **PM2.5 exhaust** | **CO2** | **CH4** | **MTCO2e** |
| **2017** | Mass excavation | 0.5 | 5.7 | 7.2 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2500.3 | 0.0 | 2501.2 |
| | Finish grading | 0.1 | 0.9 | 1.7 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 498.7 | 0.0 | 498.9 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.2* | *59.8* | *52.4* | *0.2* | *8.2* | *1.3* | *2.2* | *1.2* | *18860* | *0.3* | *18866* |
| **2018** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2019** | Mass excavation | 0.8 | 10.1 | 9.8 | 0.0 | 1.9 | 0.2 | 0.5 | 0.2 | 4146.3 | 0.1 | 4147.3 |
| | Finish grading | 0.2 | 1.7 | 2.1 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 828.7 | 0.0 | 829.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.5* | *65.1* | *55.3* | *0.2* | *8.8* | *1.4* | *2.4* | *1.3* | *20836* | *0.3* | *20842* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2021** | Mass excavation | 0.3 | 2.7 | 5.1 | 0.0 | 1.3 | 0.1 | 0.3 | 0.1 | 1897.3 | 0.0 | 1898.0 |
| | Finish grading | 0.1 | 0.9 | 1.6 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 617.0 | 0.0 | 617.3 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.0* | *56.9* | *50.1* | *0.2* | *8.2* | *1.2* | *2.2* | *1.1* | *18375* | *0.3* | *18381* |
| **2022** | Mass excavation | 0.3 | 2.3 | 4.8 | 0.0 | 1.3 | 0.1 | 0.3 | 0.1 | 1817.3 | 0.0 | 1818.0 |
| | Finish grading | 0.1 | 1.3 | 2.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 828.4 | 0.0 | 828.7 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.9* | *50.2* | *0.2* | *8.2* | *1.2* | *2.2* | *1.1* | *18507* | *0.3* | *18512* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2023** | Mass excavation | 0.4 | 2.9 | 5.9 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 2572.1 | 0.0 | 2572.9 |
| | Finish grading | 0.1 | 1.1 | 2.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 903.3 | 0.0 | 903.6 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *57.2* | *51.4* | *0.2* | *8.5* | *1.3* | *2.3* | *1.2* | *19337* | *0.3* | *19342* |
| **2024** | Mass excavation | 0.4 | 2.4 | 5.2 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2253.2 | 0.0 | 2253.9 |
| | Finish grading | 0.1 | 1.0 | 1.9 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 851.4 | 0.0 | 851.7 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.7* | *50.6* | *0.2* | *8.3* | *1.3* | *2.3* | *1.2* | *18966* | *0.3* | *18971* |
| **2025** | Mass excavation | 0.4 | 2.9 | 5.7 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 2557.2 | 0.0 | 2558.0 |
| | Finish grading | 0.2 | 1.3 | 2.2 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1063.3 | 0.0 | 1063.6 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.2* | *57.4* | *51.3* | *0.2* | *8.5* | *1.3* | *2.3* | *1.2* | *19482* | *0.3* | *19487* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2027** | Mass excavation | 0.4 | 2.5 | 5.2 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 2429.1 | 0.0 | 2429.7 |
| | Finish grading | 0.2 | 1.4 | 2.3 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1141.0 | 0.0 | 1141.3 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *57.2* | *50.9* | *0.2* | *8.5* | *1.3* | *2.3* | *1.2* | *19431* | *0.3* | *19437* |
| **2028** | Mass excavation | 0.3 | 2.2 | 4.8 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2225.2 | 0.0 | 2225.8 |
| | Finish grading | 0.2 | 1.3 | 2.2 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1089.1 | 0.0 | 1089.3 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.8* | *50.5* | *0.2* | *8.4* | *1.3* | *2.3* | *1.2* | *19175* | *0.3* | *19181* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2030** | Mass excavation | 0.3 | 2.2 | 4.7 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2216.9 | 0.0 | 2217.5 |
| | Finish grading | 0.2 | 1.4 | 2.4 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1168.6 | 0.0 | 1168.8 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.9* | *50.5* | *0.2* | *8.4* | *1.3* | *2.3* | *1.2* | *19247* | *0.3* | *19252* |

**World Logistics Center**

**Construction Duration**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Unmitigated*

**Unmitigated**

| Number of days: | | 52 weeks/year |
|---|---|---|
| 1 month | 20 | 5 days/week for average annual construction |
| 2 months | 40 | |
| 3 months | 65 | |
| 6 months | 130 | |

**Days of Construction**

| Plot: | 2 | | | | 4 | | | | 9 | | | | 1 ,3 and 20 | | 5 and 10 | | | | 7, 8 ,21 and 22 | | 11 | | | | | | 12 | | | | 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year: | *Year 2015* | | *Year 2016* | | *Year 2017* | | *Year 2018* | | *Year 2019* | | *Year 2020* | | *Year 2021* | | *Year 2022* | | *Year 2023* | | *Year 2024* | | *Year 2025* | | *Year 2026* | | *Year 2027* | | *Year 2028* | | *Year 2029* | | *Year 2030* | |
| Quarter: | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 |
| Mass excavation | 130 | | | | 130 | | | | 130 | | | | 130 | | | 77 | 77 | | | 77 | 77 | | | | 130 | | 130 | | | | 130 | |
| Finish grading | 40 | | | | 40 | | | | 40 | | | | 40 | | | 40 | 40 | | | 40 | 40 | | | | 40 | | 40 | | | | 40 | |
| Building - concrete | 0 | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Building - wet utilities | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Building - electrical | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Building - landscaping | 0 | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Utilities | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Interchange | | | | | | | | | | | 130 | 130 | 130 | | | | | | | | | | | | | | | | | | | |
| Landscaping | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Temporary utilities | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 |
| Curbing/drive approaches | 0 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Paving | 0 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

| Year: | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total | Months |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 77 | 77 | 77 | 77 | 0 | 130 | 130 | 0 | 130 | 1218 | 51 |
| Finish grading | 40 | 0 | 40 | 0 | 40 | 0 | 40 | 40 | 40 | 40 | 40 | 0 | 40 | 40 | 0 | 40 | 440 | 18 |
| Building - concrete | 0 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 3900 | 163 |
| Building - wet utilities | 130 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4030 | 168 |
| Building - electrical | 130 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4030 | 168 |
| Building - landscaping | 0 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 3900 | 163 |
| Utilities | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4160 | 173 |
| Interchange | 0 | 0 | 0 | 0 | 0 | 260 | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 390 | 16 |
| Landscaping | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4160 | 173 |
| Temporary utilities | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 2080 | 87 |
| Curbing/drive approaches | 40 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 1240 | 52 |
| Paving | 20 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 620 | 26 |

**World Logistics Center** **Unmitigated**

**Construction Annual Summary**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Unmitigated*

**Onsite Emissions (tons/year)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 8.3 | 97.8 | 53.6 | 0.10 | 2.15 | 4.52 | 0.49 | 4.16 | 10488 | 3.13 | 10554 |
| 2016 | 10.2 | 87.1 | 51.6 | 0.09 | 0.04 | 4.87 | 0.00 | 4.49 | 9774 | 2.87 | 9834 |
| 2017 | 13.1 | 124.4 | 71.4 | 0.13 | 2.20 | 6.32 | 0.49 | 5.83 | 13404 | 3.98 | 13488 |
| 2018 | 10.6 | 87.1 | 51.6 | 0.09 | 0.04 | 4.87 | 0.00 | 4.49 | 9774 | 2.87 | 9834 |
| 2019 | 17.4 | 167.5 | 94.9 | 0.18 | 4.57 | 7.94 | 1.27 | 7.32 | 18608 | 5.66 | 18727 |
| 2020 | 13.8 | 102.7 | 60.2 | 0.11 | 0.66 | 5.61 | 0.24 | 5.17 | 11124 | 3.27 | 11193 |
| 2021 | 14.7 | 113.5 | 66.7 | 0.13 | 2.02 | 5.95 | 0.42 | 5.49 | 12916 | 3.87 | 12997 |
| 2022 | 11.2 | 95.1 | 56.5 | 0.10 | 1.07 | 5.18 | 0.21 | 4.78 | 10882 | 3.23 | 10950 |
| 2023 | 11.4 | 107.7 | 64.7 | 0.13 | 1.92 | 5.67 | 0.50 | 5.23 | 12858 | 3.87 | 12940 |
| 2024 | 11.4 | 99.6 | 59.8 | 0.11 | 1.42 | 5.36 | 0.33 | 4.94 | 11772 | 3.52 | 11846 |
| 2025 | 12.0 | 103.9 | 63.5 | 0.13 | 1.93 | 5.52 | 0.50 | 5.09 | 12862 | 3.87 | 12943 |
| 2026 | 10.6 | 87.1 | 51.6 | 0.09 | 0.04 | 4.87 | 0.00 | 4.49 | 9774 | 2.87 | 9834 |
| 2027 | 8.2 | 54.5 | 62.7 | 0.14 | 2.88 | 2.17 | 0.74 | 2.00 | 13486 | 4.29 | 13576 |
| 2028 | 7.4 | 47.0 | 57.7 | 0.13 | 2.21 | 1.88 | 0.49 | 1.73 | 12399 | 3.94 | 12482 |
| 2029 | 5.0 | 28.7 | 44.9 | 0.09 | 0.04 | 1.17 | 0.00 | 1.08 | 9037 | 2.86 | 9097 |
| 2030 | 6.3 | 34.9 | 51.5 | 0.12 | 2.05 | 1.41 | 0.48 | 1.32 | 11660 | 2.98 | 11723 |

**Offsite Emissions (tons/year)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 0.3 | 3.8 | 3.2 | 0.01 | 0.50 | 0.08 | 0.14 | 0.07 | 1158 | 0.02 | 1158 |
| 2016 | 0.4 | 5.9 | 4.8 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.02 | 1759 |
| 2017 | 0.4 | 6.3 | 5.3 | 0.02 | 0.81 | 0.13 | 0.22 | 0.12 | 1931 | 0.03 | 1932 |
| 2018 | 0.4 | 5.9 | 4.8 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.02 | 1759 |
| 2019 | 0.4 | 6.6 | 5.5 | 0.02 | 0.84 | 0.14 | 0.23 | 0.13 | 2045 | 0.03 | 2045 |
| 2020 | 0.4 | 5.9 | 4.8 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.02 | 1759 |
| 2021 | 0.4 | 6.1 | 5.1 | 0.02 | 0.80 | 0.13 | 0.22 | 0.12 | 1894 | 0.03 | 1895 |
| 2022 | 0.4 | 6.1 | 5.0 | 0.02 | 0.77 | 0.13 | 0.21 | 0.12 | 1845 | 0.03 | 1846 |
| 2023 | 0.4 | 6.1 | 5.0 | 0.02 | 0.78 | 0.13 | 0.21 | 0.12 | 1876 | 0.03 | 1876 |
| 2024 | 0.4 | 6.1 | 5.0 | 0.02 | 0.78 | 0.13 | 0.21 | 0.12 | 1863 | 0.03 | 1863 |
| 2025 | 0.4 | 6.1 | 5.0 | 0.02 | 0.78 | 0.13 | 0.21 | 0.12 | 1878 | 0.03 | 1879 |
| 2026 | 0.4 | 5.9 | 4.8 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.02 | 1759 |
| 2027 | 0.4 | 6.1 | 5.2 | 0.02 | 0.82 | 0.13 | 0.22 | 0.12 | 1939 | 0.03 | 1940 |
| 2028 | 0.4 | 6.1 | 5.1 | 0.02 | 0.81 | 0.13 | 0.22 | 0.12 | 1925 | 0.03 | 1926 |
| 2029 | 0.4 | 5.9 | 4.8 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.02 | 1759 |
| 2030 | 0.4 | 6.1 | 5.1 | 0.02 | 0.81 | 0.13 | 0.22 | 0.12 | 1926 | 0.03 | 1927 |

**Total Onsite and Offsite Emissions (tons/year)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | MT/year CO2 | MT/year CH4 | MTCO2e (CalEEMod) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 8.6 | 101.6 | 56.8 | 0.11 | 2.65 | 4.60 | 0.62 | 4.23 | 11646 | 3.14 | 11712 |
| 2016 | 10.6 | 93.0 | 56.4 | 0.11 | 0.75 | 5.00 | 0.20 | 4.61 | 11533 | 2.90 | 11594 |
| 2017 | 13.5 | 130.7 | 76.7 | 0.15 | 3.01 | 6.45 | 0.71 | 5.95 | 15335 | 4.01 | 15419 |
| 2018 | 11.0 | 93.0 | 56.4 | 0.11 | 0.75 | 5.00 | 0.20 | 4.61 | 11533 | 2.90 | 11594 |
| 2019 | 17.8 | 174.1 | 100.4 | 0.20 | 5.42 | 8.08 | 1.50 | 7.45 | 20653 | 5.69 | 20772 |
| 2020 | 14.2 | 108.7 | 65.0 | 0.12 | 1.37 | 5.73 | 0.43 | 5.29 | 12883 | 3.30 | 12952 |
| 2021 | 15.1 | 119.7 | 71.8 | 0.14 | 2.82 | 6.08 | 0.64 | 5.61 | 14810 | 3.90 | 14892 |
| 2022 | 11.6 | 101.1 | 61.5 | 0.12 | 1.84 | 5.31 | 0.42 | 4.90 | 12727 | 3.25 | 12796 |
| 2023 | 11.8 | 113.8 | 69.7 | 0.14 | 2.70 | 5.80 | 0.71 | 5.35 | 14734 | 3.89 | 14816 |
| 2024 | 11.9 | 105.7 | 64.8 | 0.13 | 2.20 | 5.49 | 0.54 | 5.06 | 13635 | 3.54 | 13709 |
| 2025 | 12.4 | 110.0 | 68.5 | 0.14 | 2.71 | 5.65 | 0.72 | 5.21 | 14740 | 3.89 | 14822 |
| 2026 | 11.0 | 93.0 | 56.4 | 0.11 | 0.75 | 5.00 | 0.20 | 4.61 | 11533 | 2.90 | 11594 |
| 2027 | 8.6 | 60.6 | 67.9 | 0.16 | 3.70 | 2.31 | 0.96 | 2.13 | 15425 | 4.32 | 15516 |
| 2028 | 7.8 | 53.1 | 62.9 | 0.15 | 3.02 | 2.01 | 0.71 | 1.85 | 14324 | 3.97 | 14407 |
| 2029 | 5.4 | 34.6 | 49.7 | 0.11 | 0.75 | 1.30 | 0.20 | 1.20 | 10796 | 2.88 | 10856 |
| 2030 | 6.7 | 41.0 | 56.6 | 0.14 | 2.87 | 1.54 | 0.70 | 1.44 | 13586 | 3.00 | 13649 |
| Total | 178.1 | 1534.0 | 1041.4 | 2.17 | 37.31 | 75.36 | 9.47 | 69.49 | 219894 | 57.49 | 221101 |
| Average over 30 years (tons/year) | | | | | | | | | 8080 | 2.11 | |

| | Black Carbon (tons) | Black Carbon (MTCO2e) | Square Feet | Percent added | Refrigerants (MTCO2e) | Construction Waste (MTCO2e) | Waste, Refrigerants | Water Use (CO2) | Water use (CH4) | Water use (N2O) | Water Use (MTCO2e) | Total (MTCO2e) | Without Refrigerants and Waste | Waste (CH4 tons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 3.260 | 2248 | 0 | 5.2% | 26 | -17 | 9 | 381 | 0.0175 | 0.0036 | 347 | 14315 | 14306 | -0.90 |
| 2016 | 3.550 | 2447 | 2100000 | 5.2% | 26 | -17 | 9 | 381 | 0.0175 | 0.0036 | 347 | 14396 | 14388 | -0.90 |
| 2017 | 4.581 | 3159 | 4200000 | 6.9% | 34 | -23 | 11 | 508 | 0.0233 | 0.0048 | 462 | 19052 | 19040 | -1.21 |
| 2018 | 3.550 | 2447 | 7000000 | 6.9% | 34 | -23 | 11 | 508 | 0.0233 | 0.0048 | 462 | 14515 | 14503 | -1.21 |
| 2019 | 5.733 | 3953 | 9800000 | 12.8% | 64 | -43 | 21 | 943 | 0.0433 | 0.0090 | 859 | 25605 | 25584 | -2.24 |
| 2020 | 4.070 | 2806 | 15000000 | 13.1% | 65 | -43 | 22 | 961 | 0.0442 | 0.0091 | 875 | 16655 | 16633 | -2.28 |
| 2021 | 4.319 | 2978 | 20300000 | 6.5% | 33 | -22 | 11 | 480 | 0.0221 | 0.0046 | 438 | 18318 | 18307 | -1.14 |
| 2022 | 3.771 | 2600 | 22950000 | 2.7% | 13 | -9 | 4 | 199 | 0.0092 | 0.0019 | 182 | 15582 | 15578 | -0.47 |
| 2023 | 4.118 | 2839 | 24050000 | 5.4% | 27 | -18 | 9 | 399 | 0.0183 | 0.0038 | 363 | 18028 | 18019 | -0.95 |
| 2024 | 3.895 | 2685 | 26250000 | 5.8% | 29 | -19 | 10 | 426 | 0.0196 | 0.0041 | 388 | 16792 | 16783 | -1.01 |
| 2025 | 4.014 | 2768 | 28600000 | 6.6% | 33 | -22 | 11 | 484 | 0.0222 | 0.0046 | 441 | 18041 | 18030 | -1.15 |
| 2026 | 3.550 | 2447 | 31270000 | 6.6% | 33 | -22 | 11 | 482 | 0.0222 | 0.0046 | 439 | 14491 | 14480 | -1.15 |
| 2027 | 1.637 | 1129 | 33930000 | 6.6% | 33 | -22 | 11 | 484 | 0.0222 | 0.0046 | 441 | 17097 | 17086 | -1.15 |
| 2028 | 1.426 | 983 | 36600000 | 4.3% | 21 | -14 | 7 | 317 | 0.0146 | 0.0030 | 289 | 15686 | 15679 | -0.75 |
| 2029 | 0.923 | 637 | 38350000 | 4.3% | 21 | -14 | 7 | 317 | 0.0146 | 0.0030 | 289 | 11789 | 11782 | -0.75 |
| 2030 | 1.110 | 765 | 40100000 | 1.2% | 6 | -4 | 2 | 91 | 0.0042 | 0.0009 | 83 | 14500 | 14497 | -0.22 |
| Total | 53.507 | 36891 | 40600000 | 0 | 498 | -333 | 165 | 7360 | 0.3383 | 0.0700 | 6703 | 264861 | 264696 | -17.48 |
| Average (30 years) | 1.784 | 1230 | | | 17 | -11 | 6 | 245 | 0.0113 | 0.0023 | 223 | 8829 | 8823 | -0.58 |
| Tons average | | | | | | | | 245 | 0.0113 | 0.0023 | | | | |
| Tons in 2022 | | | | | | | | 199 | 0.0092 | 0.0019 | | | | |
| Percent of total | | 14% | | | | | | | | | | | | |

| | CO2 | Methane | Nitrous Oxide | HFCs | Black Carbon | MTCO2e | |
|---|---|---|---|---|---|---|---|
| **2022** | 14229 | 3.60 | 0.0019 | 0.010 | 3.771 | 15582 | |
| **Average** | 8325 | 2.12 | 0.0023 | 0.000 | 1.784 | 8823 | (without refrigerants) |

Percent of black carbon from PM2.5 exhaust: 77%
Black carbon global warming potential: 760
Refrigerants, land use, and water use estimated per year based on percent square feet added

## World Logistics Center
## Construction Onsite Annual Emissions

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*
*Unmitigated*

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | Mass excavation | 130 | 3.0 | 38.8 | 20.9 | 0.03 | 1.90 | 1.52 | 0.40 | 1.40 | 3509.9 | 1.0 | 3531.8 |
| | Finish grading | 40 | 0.0 | 0.4 | 0.2 | 0.00 | 0.23 | 0.02 | 0.09 | 0.02 | 23.2 | 0.0 | 23.3 |
| | Building - concrete | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Building - wet utilities | 130 | 0.8 | 8.3 | 4.8 | 0.01 | 0.00 | 0.45 | 0.00 | 0.42 | 854.2 | 0.3 | 859.5 |
| | Building - electrical | 130 | 0.5 | 4.0 | 3.0 | 0.00 | 0.00 | 0.30 | 0.00 | 0.28 | 383.2 | 0.1 | 385.6 |
| | Building - landscaping | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 40 | 0.0 | 0.3 | 0.2 | 0.00 | 0.00 | 0.02 | 0.00 | 0.02 | 30.1 | 0.0 | 30.3 |
| | Paving | 20 | 0.1 | 1.0 | 0.6 | 0.00 | 0.02 | 0.05 | 0.00 | 0.05 | 89.3 | 0.0 | 89.9 |
| | Paving VOC | | 0.0 | | | | | | | | | | |
| | Painting VOC | 0 | 0.0 | | | | | | | | | | |
| | *Total* | | *8.3* | *97.8* | *53.6* | *0.10* | *2.15* | *4.52* | *0.49* | *4.16* | *10487.9* | *3.1* | *10553.6* |
| **2016** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.8 | | | | | | | | | | |
| | *Total* | | *10.2* | *87.1* | *51.6* | *0.09* | *0.04* | *4.87* | *0.00* | *4.49* | *9774.2* | *2.9* | *9834.5* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 130 | 2.9 | 37.0 | 19.6 | 0.04 | 1.93 | 1.43 | 0.40 | 1.31 | 3607.1 | 1.1 | 3630.3 |
| | Finish grading | 40 | 0.0 | 0.3 | 0.2 | 0.00 | 0.23 | 0.02 | 0.09 | 0.02 | 22.6 | 0.0 | 22.8 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.7 | | | | | | | | | | |
| | *Total* | | *13.1* | *124.4* | *71.4* | *0.13* | *2.20* | *6.32* | *0.49* | *5.83* | *13403.9* | *4.0* | *13487.5* |
| **2018** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.2 | | | | | | | | | | |
| | *Total* | | *10.6* | *87.1* | *51.6* | *0.09* | *0.04* | *4.87* | *0.00* | *4.49* | *9774.2* | *2.9* | *9834.5* |
| **2019** | Mass excavation | 130 | 6.5 | 79.6 | 42.8 | 0.09 | 3.97 | 3.02 | 1.02 | 2.78 | 8768.7 | 2.8 | 8826.9 |
| | Finish grading | 40 | 0.1 | 0.8 | 0.5 | 0.00 | 0.56 | 0.04 | 0.25 | 0.04 | 65.2 | 0.0 | 65.6 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.4 | | | | | | | | | | |
| | *Total* | | *17.4* | *167.5* | *94.9* | *0.18* | *4.57* | *7.94* | *1.27* | *7.32* | *18608.1* | *5.7* | *18727.0* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 260 | 1.3 | 15.6 | 8.6 | 0.01 | 0.62 | 0.73 | 0.24 | 0.68 | 1350.1 | 0.4 | 1358.6 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 4.0 | | | | | | | | | | |
| | *Total* | | *13.8* | *102.7* | *60.2* | *0.11* | *0.66* | *5.61* | *0.24* | *5.17* | *11124.3* | *3.3* | *11193.1* |
| **2021** | Mass excavation | 130 | 1.6 | 18.4 | 10.6 | 0.03 | 1.43 | 0.70 | 0.21 | 0.64 | 2445.2 | 0.8 | 2461.7 |
| | Finish grading | 40 | 0.0 | 0.2 | 0.2 | 0.00 | 0.24 | 0.01 | 0.09 | 0.01 | 21.5 | 0.0 | 21.7 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 130 | 0.7 | 7.8 | 4.3 | 0.01 | 0.31 | 0.37 | 0.12 | 0.34 | 675.1 | 0.2 | 679.3 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 4.0 | | | | | | | | | | |
| | *Total* | | *14.7* | *113.5* | *66.7* | *0.13* | *2.02* | *5.95* | *0.42* | *5.49* | *12915.9* | *3.9* | *12997.2* |
| **2022** | Mass excavation | 77 | 0.7 | 7.8 | 4.7 | 0.01 | 0.77 | 0.30 | 0.12 | 0.27 | 1083.3 | 0.3 | 1090.6 |
| | Finish grading | 40 | 0.0 | 0.2 | 0.2 | 0.00 | 0.25 | 0.01 | 0.09 | 0.01 | 24.5 | 0.0 | 24.7 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.0 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *11.2* | *95.1* | *56.5* | *0.10* | *1.07* | *5.18* | *0.21* | *4.78* | *10882.0* | *3.2* | *10949.8* |

| | | Days/ year | Onsite Emissions (tons/year) VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2023** | Mass excavation | 77 | 1.8 | 20.2 | 12.7 | 0.03 | 1.51 | 0.78 | 0.36 | 0.72 | 3041.3 | 1.0 | 3061.9 |
| | Finish grading | 40 | 0.0 | 0.4 | 0.3 | 0.00 | 0.36 | 0.02 | 0.14 | 0.02 | 42.9 | 0.0 | 43.2 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.1 | | | | | | | | | | |
| | *Total* | | *11.4* | *107.7* | *64.7* | *0.13* | *1.92* | *5.67* | *0.50* | *5.23* | *12858.4* | *3.9* | *12939.6* |
| **2024** | Mass excavation | 77 | 1.2 | 12.4 | 8.0 | 0.02 | 1.13 | 0.47 | 0.24 | 0.44 | 1976.4 | 0.6 | 1989.8 |
| | Finish grading | 40 | 0.0 | 0.2 | 0.2 | 0.00 | 0.25 | 0.01 | 0.09 | 0.01 | 21.7 | 0.0 | 21.9 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.8 | | | | | | | | | | |
| | *Total* | | *11.4* | *99.6* | *59.8* | *0.11* | *1.42* | *5.36* | *0.33* | *4.94* | *11772.3* | *3.5* | *11846.2* |
| **2025** | Mass excavation | 77 | 1.6 | 16.5 | 11.5 | 0.03 | 1.51 | 0.64 | 0.36 | 0.58 | 3044.3 | 1.0 | 3065.0 |
| | Finish grading | 40 | 0.0 | 0.3 | 0.3 | 0.00 | 0.37 | 0.01 | 0.14 | 0.01 | 43.0 | 0.0 | 43.3 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.9 | | | | | | | | | | |
| | *Total* | | *12.0* | *103.9* | *63.5* | *0.13* | *1.93* | *5.52* | *0.50* | *5.09* | *12861.5* | *3.9* | *12942.8* |

| | | Days/ year | Onsite Emissions (tons/year) VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2026** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.9 | 8.2 | 5.8 | 0.01 | 0.00 | 0.62 | 0.00 | 0.59 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 1.5 | 16.5 | 9.6 | 0.02 | 0.00 | 0.90 | 0.00 | 0.83 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 1.0 | 7.9 | 5.9 | 0.01 | 0.00 | 0.61 | 0.00 | 0.56 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.8 | 6.7 | 4.7 | 0.01 | 0.00 | 0.44 | 0.00 | 0.41 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 3.0 | 35.6 | 17.4 | 0.05 | 0.00 | 1.59 | 0.00 | 1.46 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.8 | 7.3 | 5.0 | 0.01 | 0.00 | 0.47 | 0.00 | 0.43 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.2 | 2.3 | 1.5 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.1 | 0.6 | 0.4 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.2 | 2.0 | 1.3 | 0.00 | 0.04 | 0.10 | 0.00 | 0.10 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *10.6* | *87.1* | *51.6* | *0.09* | *0.04* | *4.87* | *0.00* | *4.49* | *9774.2* | *2.9* | *9834.5* |
| **2027** | Mass excavation | 130 | 2.5 | 25.5 | 17.5 | 0.05 | 2.46 | 0.98 | 0.59 | 0.91 | 4405.8 | 1.4 | 4435.6 |
| | Finish grading | 40 | 0.0 | 0.3 | 0.3 | 0.00 | 0.37 | 0.01 | 0.14 | 0.01 | 43.1 | 0.0 | 43.4 |
| | Building - concrete | 260 | 0.4 | 3.4 | 5.4 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.6 | 4.6 | 8.7 | 0.02 | 0.00 | 0.21 | 0.00 | 0.19 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.4 | 3.6 | 5.3 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.3 | 2.5 | 4.2 | 0.01 | 0.00 | 0.11 | 0.00 | 0.10 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 1.4 | 10.3 | 14.8 | 0.05 | 0.00 | 0.39 | 0.00 | 0.36 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.3 | 2.6 | 4.5 | 0.01 | 0.00 | 0.12 | 0.00 | 0.11 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.1 | 0.8 | 0.7 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.2 | 0.4 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.1 | 0.7 | 0.9 | 0.00 | 0.04 | 0.03 | 0.00 | 0.03 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *8.2* | *54.5* | *62.7* | *0.14* | *2.88* | *2.17* | *0.74* | *2.00* | *13486.0* | *4.3* | *13576.2* |
| **2028** | Mass excavation | 130 | 1.8 | 18.1 | 12.6 | 0.03 | 1.90 | 0.69 | 0.40 | 0.64 | 3339.7 | 1.1 | 3362.3 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.00 | 0.26 | 0.01 | 0.09 | 0.01 | 22.0 | 0.0 | 22.1 |
| | Building - concrete | 260 | 0.4 | 3.4 | 5.4 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.6 | 4.6 | 8.7 | 0.02 | 0.00 | 0.21 | 0.00 | 0.19 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.4 | 3.6 | 5.3 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.3 | 2.5 | 4.2 | 0.01 | 0.00 | 0.11 | 0.00 | 0.10 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 1.4 | 10.3 | 14.8 | 0.05 | 0.00 | 0.39 | 0.00 | 0.36 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.3 | 2.6 | 4.5 | 0.01 | 0.00 | 0.12 | 0.00 | 0.11 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.1 | 0.8 | 0.7 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.2 | 0.4 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.1 | 0.7 | 0.9 | 0.00 | 0.04 | 0.03 | 0.00 | 0.03 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.05 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *7.4* | *47.0* | *57.7* | *0.13* | *2.21* | *1.88* | *0.49* | *1.73* | *12398.7* | *3.9* | *12481.5* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.4 | 3.4 | 5.4 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.6 | 4.6 | 8.7 | 0.02 | 0.00 | 0.21 | 0.00 | 0.19 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.4 | 3.6 | 5.3 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.3 | 2.5 | 4.2 | 0.01 | 0.00 | 0.11 | 0.00 | 0.10 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 1.4 | 10.3 | 14.8 | 0.05 | 0.00 | 0.39 | 0.00 | 0.36 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.3 | 2.6 | 4.5 | 0.01 | 0.00 | 0.12 | 0.00 | 0.11 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.1 | 0.8 | 0.7 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.2 | 0.4 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.1 | 0.7 | 0.9 | 0.00 | 0.04 | 0.03 | 0.00 | 0.03 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.05 | | | | | | | | | | |
| | Painting VOC | | 1.4 | | | | | | | | | | |
| | *Total* | | *5.0* | *28.7* | *44.9* | *0.09* | *0.04* | *1.17* | *0.00* | *1.08* | *9037.1* | *2.9* | *9097.1* |
| **2030** | Mass excavation | 130 | 1.3 | 6.1 | 6.4 | 0.02 | 1.74 | 0.23 | 0.38 | 0.23 | 2596.9 | 0.1 | 2599.4 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.00 | 0.27 | 0.00 | 0.09 | 0.00 | 26.2 | 0.0 | 26.2 |
| | Building - concrete | 260 | 0.4 | 3.4 | 5.4 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.6 | 4.6 | 8.7 | 0.02 | 0.00 | 0.21 | 0.00 | 0.19 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.4 | 3.6 | 5.3 | 0.01 | 0.00 | 0.14 | 0.00 | 0.13 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.3 | 2.5 | 4.2 | 0.01 | 0.00 | 0.11 | 0.00 | 0.10 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 1.4 | 10.3 | 14.8 | 0.05 | 0.00 | 0.39 | 0.00 | 0.36 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.3 | 2.6 | 4.5 | 0.01 | 0.00 | 0.12 | 0.00 | 0.11 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.1 | 0.8 | 0.7 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.2 | 0.4 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.1 | 0.7 | 0.9 | 0.00 | 0.04 | 0.03 | 0.00 | 0.03 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.05 | | | | | | | | | | |
| | Painting VOC | | 1.4 | | | | | | | | | | |
| | *Total* | | *6.3* | *34.9* | *51.5* | *0.12* | *2.05* | *1.41* | *0.48* | *1.32* | *11660.2* | *3.0* | *11722.7* |

## World Logistics Center
## Construction Offsite Annual Emissions

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*
*Unmitigated*

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | Mass excavation | 130 | 0.0 | 0.5 | 0.6 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 170.3 | 0.0 | 170.3 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.7 | 0.0 | 8.7 |
| | Building - concrete | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - wet utilities | 130 | 0.0 | 0.5 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 143.6 | 0.0 | 143.6 |
| | Building - electrical | 130 | 0.0 | 0.5 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 141.3 | 0.0 | 141.3 |
| | Building - landscaping | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.5 | 0.0 | 20.6 |
| | Paving | 20 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.2 | 0.0 | 19.2 |
| | *Total* | | *0.3* | *3.8* | *3.2* | *0.0* | *0.5* | *0.1* | *0.1* | *0.1* | *1157.8* | *0.0* | *1158.2* |
| **2016** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 130 | 0.0 | 0.4 | 0.5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 162.5 | 0.0 | 162.6 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 10.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.3* | *5.3* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1931.2* | *0.0* | *1931.8* |
| **2018** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2019** | Mass excavation | 130 | 0.0 | 0.7 | 0.6 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 269.5 | 0.0 | 269.6 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.6 | 0.0 | 16.6 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.6* | *5.5* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *2044.8* | *0.0* | *2045.4* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 260 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2021** | Mass excavation | 130 | 0.0 | 0.2 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 123.3 | 0.0 | 123.4 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.3 | 0.0 | 12.3 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.1* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1894.4* | *0.0* | *1895.0* |
| **2022** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 70.0 | 0.0 | 70.0 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.6 | 0.0 | 16.6 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1845.3* | *0.0* | *1845.8* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2023** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 99.0 | 0.0 | 99.1 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.1 | 0.0 | 18.1 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1875.8* | *0.0* | *1876.4* |
| **2024** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 86.7 | 0.0 | 86.8 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.0 | 0.0 | 17.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1862.5* | *0.0* | *1863.1* |
| **2025** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 98.5 | 0.0 | 98.5 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.3 | 0.0 | 21.3 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1878.5* | *0.0* | *1879.0* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2027** | Mass excavation | 130 | 0.0 | 0.2 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 157.9 | 0.0 | 157.9 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.8 | 0.0 | 22.8 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.2* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1939.5* | *0.0* | *1940.0* |
| **2028** | Mass excavation | 130 | 0.0 | 0.1 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 144.6 | 0.0 | 144.7 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.8 | 0.0 | 21.8 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.1* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1925.2* | *0.0* | *1925.7* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2030** | Mass excavation | 130 | 0.0 | 0.1 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 144.1 | 0.0 | 144.1 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.4 | 0.0 | 23.4 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.1* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1926.2* | *0.0* | *1926.8* |

## Construction
## VOC Off-Gassing during Construction

World Logistics Center
Prepared by Michael Brandman Associates
1-Nov-13

**Estimate of Area to be Painted (Exterior of Buildings)**

The number of buildings for the project is unknown at this time. The Skecher building was approximately 1,810,000 square feet. Assuming that the project buildings have an average size of 1,500,000 square feet each yields the following number of buildings. Taking the square root of the building size and mulitiplying by 4 yields the perimeter of each building. Days of painting for the exterior assumes that each building would take 30 days to paint.

| | | | | | | | | | Unmitigated | | | Mitigated | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Year* | *Area (million sf)* | *Building size (sf)* | *Buildings* | *Building perimeter (feet)* | *Height of building (feet)* | *Area painted per building (sf)* | *Coats* | *Area to be painted (sf)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* |
| 2016 | 2.1 | 1,500,000 | 1.4 | 4,899 | 40 | 195,959 | 2 | 548,686 | 1,646 | 42 | 39.2 | 686 | 42 | 16.3 |
| 2017 | 2.1 | 1,500,000 | 1.4 | 4,899 | 40 | 195,959 | 2 | 548,686 | 1,646 | 42 | 39.2 | 686 | 42 | 16.3 |
| 2018 | 2.8 | 1,500,000 | 1.9 | 4,899 | 40 | 195,959 | 2 | 744,645 | 2,234 | 57 | 39.2 | 931 | 57 | 16.3 |
| 2019 | 2.8 | 1,500,000 | 1.9 | 4,899 | 40 | 195,959 | 2 | 744,645 | 2,234 | 57 | 39.2 | 931 | 57 | 16.3 |
| 2020 | 5.2 | 1,500,000 | 3.5 | 4,899 | 40 | 195,959 | 2 | 1,371,714 | 4,115 | 105 | 39.2 | 1,715 | 105 | 16.3 |
| 2021 | 5.2 | 1,500,000 | 3.5 | 4,899 | 40 | 195,959 | 2 | 1,371,714 | 4,115 | 105 | 39.2 | 1,715 | 105 | 16.3 |
| 2022 | 2.7 | 1,500,000 | 1.9 | 4,899 | 40 | 195,959 | 2 | 744,645 | 2,234 | 57 | 39.2 | 931 | 57 | 16.3 |
| 2023 | 1.1 | 1,500,000 | 0.8 | 4,899 | 40 | 195,959 | 2 | 313,535 | 941 | 24 | 39.2 | 392 | 24 | 16.3 |
| 2024 | 2.2 | 1,500,000 | 1.5 | 4,899 | 40 | 195,959 | 2 | 587,878 | 1,764 | 45 | 39.2 | 735 | 45 | 16.3 |
| 2025 | 2.4 | 1,500,000 | 1.6 | 4,899 | 40 | 195,959 | 2 | 627,069 | 1,881 | 48 | 39.2 | 784 | 48 | 16.3 |
| 2026 | 2.7 | 1,500,000 | 1.8 | 4,899 | 40 | 195,959 | 2 | 705,453 | 2,116 | 54 | 39.2 | 882 | 54 | 16.3 |
| 2027 | 2.7 | 1,500,000 | 1.8 | 4,899 | 40 | 195,959 | 2 | 705,453 | 2,116 | 54 | 39.2 | 882 | 54 | 16.3 |
| 2028 | 2.7 | 1,500,000 | 1.8 | 4,899 | 40 | 195,959 | 2 | 705,453 | 2,116 | 54 | 39.2 | 882 | 54 | 16.3 |
| 2029 | 1.8 | 1,500,000 | 1.2 | 4,899 | 40 | 195,959 | 2 | 470,302 | 1,411 | 36 | 39.2 | 588 | 36 | 16.3 |
| 2030 | 1.8 | 1,500,000 | 1.2 | 4,899 | 40 | 195,959 | 2 | 470,302 | 1,411 | 36 | 39.2 | 588 | 36 | 16.3 |
| 2031 | 0.5 | 1,500,000 | 0.4 | 4,899 | 40 | 195,959 | 2 | 156,767 | 470 | 12 | 39.2 | 196 | 12 | 16.3 |
| Total | 40.6 | - | 27.6 | - | - | - | - | 10,816,947 | | 828 | | | 828 | |

## Construction
## VOC Off-Gassing during Construction

World Logistics Center
Prepared by Michael Brandman Associates
1-Nov-13

**Estimate of Area to be Painted (Interior of Buildings)**

It is assumed that the warehouse interiors would not be painted, with the exception the offices (if any). The Skecher building had approximately 50,000 square feet of office. CalEEMod assumes the total surface painting equals 2 times the square footage, which is used here to determine the interior area to be painted. Days of painting for the interior offices assume that each building would take 10 days to paint.

| | | | | Unmitigated | | | Mitigated | | |
|---|---|---|---|---|---|---|---|---|---|
| *Year* | *Buildings* | *Office area per building (sf)* | *Area to be painted (sf)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* |
| 2016 | 1.4 | 50,000 | 140,000 | 1,260 | 14 | 90.0 | 525 | 14 | 37.5 |
| 2017 | 1.4 | 50,000 | 140,000 | 1,260 | 14 | 90.0 | 525 | 14 | 37.5 |
| 2018 | 1.9 | 50,000 | 190,000 | 1,710 | 19 | 90.0 | 713 | 19 | 37.5 |
| 2019 | 1.9 | 50,000 | 190,000 | 1,710 | 19 | 90.0 | 713 | 19 | 37.5 |
| 2020 | 3.5 | 50,000 | 350,000 | 3,150 | 35 | 90.0 | 1,313 | 35 | 37.5 |
| 2021 | 3.5 | 50,000 | 350,000 | 3,150 | 35 | 90.0 | 1,313 | 35 | 37.5 |
| 2022 | 1.9 | 50,000 | 190,000 | 1,710 | 19 | 90.0 | 713 | 19 | 37.5 |
| 2023 | 0.8 | 50,000 | 80,000 | 720 | 8 | 90.0 | 300 | 8 | 37.5 |
| 2024 | 1.5 | 50,000 | 150,000 | 1,350 | 15 | 90.0 | 563 | 15 | 37.5 |
| 2025 | 1.6 | 50,000 | 160,000 | 1,440 | 16 | 90.0 | 600 | 16 | 37.5 |
| 2026 | 1.8 | 50,000 | 180,000 | 1,620 | 18 | 90.0 | 675 | 18 | 37.5 |
| 2027 | 1.8 | 50,000 | 180,000 | 1,620 | 18 | 90.0 | 675 | 18 | 37.5 |
| 2028 | 1.8 | 50,000 | 180,000 | 1,620 | 18 | 90.0 | 675 | 18 | 37.5 |
| 2029 | 1.2 | 50,000 | 120,000 | 1,080 | 12 | 90.0 | 450 | 12 | 37.5 |
| 2030 | 1.2 | 50,000 | 120,000 | 1,080 | 12 | 90.0 | 450 | 12 | 37.5 |
| 2031 | 0.4 | 50,000 | 40,000 | 360 | 4 | 90.0 | 150 | 4 | 37.5 |
| Total | | | 2,760,000 | | 276 | | | 276 | |

**VOC Emissions Estimates Assumptions**

VOC emissions are estimated separately using the methodology in the CalEEMod manual:

E = EF x F • A

Where:

E = emissions (pounds VOC)
EF = emission factor (pounds per square feet) = VOC content (g/L) / 454 (g/lb) x 3.785(L/Gal) / 180(square feet)
A = building surface area (square feet)
F = fraction of surface area

Unmitigated EF (assume 250 grams/Liter) = 0.012
Mitigated EF (assume 100 grams/Liter) = 0.005
Traffic coatings EF (100 g/L) = 0.005 (source: SCAQMD Rule 1113, Traffic Coating Current Limit)
Exterior Fraction of surface area = 0.25
Interior Fraction of surface area = 0.75

**Construction**
**VOC Off-Gassing during Construction**
World Logistics Center
Prepared by Michael Brandman Associates
1-Nov-13

**VOC Emissions from Painting (striping)**

CalEEMod also calculates the VOC emissions from the painting of stripes, handicap symbols, directional arrows and car space descriptions in parking lots. Please refer to Appendix E for the studies conducted to determine a default percent of parking lot square footage that is painted. The equation for striping emission is the same as that for $E_{AC}$ above, but $A_{paint}$ is:

$$A_{paint} = A_{PL} \times P\%$$

Where:

$A_{PL}$ = Parking lot area (sqft)

$P\%$ = Default percent of parking lot area that is painted

**5 acres/day painted**

**Unmitigated**

| Year | Area (acres) | Paved Area | Paved Area (acres) | P% | Area to be painted (sf) | Emissions (lbs VOC) | Days of Painting | Emissions (lbs/day) |
|---|---|---|---|---|---|---|---|---|
| 2016 | 194 | 33% | 64 | 6% | 166891 | 626 | 12.8 | 49.0 |
| 2017 | 151 | 33% | 50 | 6% | 130020 | 488 | 9.9 | 49.0 |
| 2018 | 151 | 33% | 50 | 6% | 130020 | 488 | 9.9 | 49.0 |
| 2019 | 243 | 33% | 80 | 6% | 209498 | 786 | 16.0 | 49.0 |
| 2020 | 243 | 33% | 80 | 6% | 209498 | 786 | 16.0 | 49.0 |
| 2021 | 214 | 33% | 71 | 6% | 184745 | 693 | 14.1 | 49.0 |
| 2022 | 64 | 33% | 21 | 6% | 55372 | 208 | 4.2 | 49.0 |
| 2023 | 140 | 33% | 46 | 6% | 120662 | 452 | 9.2 | 49.0 |
| 2024 | 174 | 33% | 57 | 6% | 150245 | 563 | 11.5 | 49.0 |
| 2025 | 167 | 33% | 55 | 6% | 143748 | 539 | 11.0 | 49.0 |
| 2026 | 167 | 33% | 55 | 6% | 143748 | 539 | 11.0 | 49.0 |
| 2027 | 167 | 33% | 55 | 6% | 143748 | 539 | 11.0 | 49.0 |
| 2028 | 116 | 33% | 38 | 6% | 99747 | 374 | 7.6 | 49.0 |
| 2029 | 116 | 33% | 38 | 6% | 99747 | 374 | 7.6 | 49.0 |
| 2030 | 115 | 33% | 38 | 6% | 99445 | 373 | 7.6 | 49.0 |
| Total | 2420 | | | | 2087135 | 7,827 | | |

## Construction
## VOC Off-Gassing during Construction

World Logistics Center
Prepared by Michael Brandman Associates
1-Nov-13

**Summary of Painting Emissions**

| | Unmitigated (pounds/day) | | | | (tons/year) | Mitigated (pounds/day) | | | | (tons/year) |
|---|---|---|---|---|---|---|---|---|---|---|
| *Year* | *Exterior* | *Interior* | *Pavement* | *Total* | ***Total*** | *Exterior* | *Interior* | *Pavement* | *Total* | *Total* |
| 2016 | 39.2 | 90.0 | 49.0 | 178.2 | *1.8* | 16.3 | 37.5 | 49.0 | 102.8 | *0.9* |
| 2017 | 39.2 | 90.0 | 49.0 | 178.2 | *1.7* | 16.3 | 37.5 | 49.0 | 102.8 | *0.8* |
| 2018 | 39.2 | 90.0 | 49.0 | 178.2 | *2.2* | 16.3 | 37.5 | 49.0 | 102.8 | *1.1* |
| 2019 | 39.2 | 90.0 | 49.0 | 178.2 | *2.4* | 16.3 | 37.5 | 49.0 | 102.8 | *1.2* |
| 2020 | 39.2 | 90.0 | 49.0 | 178.2 | *4.0* | 16.3 | 37.5 | 49.0 | 102.8 | *1.9* |
| 2021 | 39.2 | 90.0 | 49.0 | 178.2 | *4.0* | 16.3 | 37.5 | 49.0 | 102.8 | *1.9* |
| 2022 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *0.9* |
| 2023 | 39.2 | 90.0 | 49.0 | 178.2 | *1.1* | 16.3 | 37.5 | 49.0 | 102.8 | *0.6* |
| 2024 | 39.2 | 90.0 | 49.0 | 178.2 | *1.8* | 16.3 | 37.5 | 49.0 | 102.8 | *0.9* |
| 2025 | 39.2 | 90.0 | 49.0 | 178.2 | *1.9* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2026 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2027 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2028 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2029 | 39.2 | 90.0 | 49.0 | 178.2 | *1.4* | 16.3 | 37.5 | 49.0 | 102.8 | *0.7* |
| 2030 | 39.2 | 90.0 | 49.0 | 178.2 | *1.4* | 16.3 | 37.5 | 49.0 | 102.8 | *0.7* |
| Total | | | | | | | | | | |

**VOC Off-Gassing from Asphalt Paving**

Except from the 2013 CalEEMod Manual (Appendix A):

E = EF x A

Where:
E = emissions from asphalt paving off-gassing (lbs)
EF = emission factor (lb/acre) = 2.62 lb/acre
A = area of parking lot (acre)

Days of paving: **3.4 acres/day**

| *Year* | *Area (acres)* | *Paved Area* | *Paved Area (acres)* | *VOC Emissions (lbs)* | *Days of Paving* | *VOC Emissions (lbs/day)* | *Emissions (tons/year)* |
|---|---|---|---|---|---|---|---|
| 2016 | 193.5 | 0.33 | 63.9 | 167.3 | 18.8 | 8.9 | 0.1 |
| 2017 | 150.8 | 0.33 | 49.7 | 130.3 | 14.6 | 8.9 | 0.1 |
| 2018 | 150.8 | 0.33 | 49.7 | 130.3 | 14.6 | 8.9 | 0.1 |
| 2019 | 242.9 | 0.33 | 80.2 | 210.0 | 23.6 | 8.9 | 0.1 |
| 2020 | 242.9 | 0.33 | 80.2 | 210.0 | 23.6 | 8.9 | 0.1 |
| 2021 | 214.2 | 0.33 | 70.7 | 185.2 | 20.8 | 8.9 | 0.1 |
| 2022 | 64.2 | 0.33 | 21.2 | 55.5 | 6.2 | 8.9 | 0.0 |
| 2023 | 139.9 | 0.33 | 46.2 | 121.0 | 13.6 | 8.9 | 0.1 |
| 2024 | 174.2 | 0.33 | 57.5 | 150.6 | 16.9 | 8.9 | 0.1 |
| 2025 | 166.7 | 0.33 | 55.0 | 144.1 | 16.2 | 8.9 | 0.1 |
| 2026 | 166.7 | 0.33 | 55.0 | 144.1 | 16.2 | 8.9 | 0.1 |
| 2027 | 166.7 | 0.33 | 55.0 | 144.1 | 16.2 | 8.9 | 0.1 |
| 2028 | 115.7 | 0.33 | 38.2 | 100.0 | 11.2 | 8.9 | 0.0 |
| 2029 | 115.7 | 0.33 | 38.2 | 100.0 | 11.2 | 8.9 | 0.0 |
| 2030 | 115.3 | 0.33 | 38.0 | 99.7 | 11.2 | 8.9 | 0.0 |
| Total | 2419.9 | 0 | 0.0 | | | | |

# Air Conditioning and Refrigeration Fugitive Emissions - Installation

Project: World Logistics Center
Prepared by: Michael Brandman Associates
Prepared on: 11/5/2013

| Land Use | Building Area (SF) |
|---|---|
| Unrefrigerated warehouse | 39,379,000 |
| Store | 3,000 |
| Office | 1,218,000 |
| Total | 40,600,000 |

| Type of Unit | Units | Average charge (lbs) | Average charge (kg) | Annual Leak Rate in percent of capacity | Emissions (kg/year) | Emissions (tons/year) | Average Global Warming Potential | MTCO2e | Emissions (tons) averaged over 30 years | MTCO2e averaged over 30 years |
|---|---|---|---|---|---|---|---|---|---|---|
| *Air conditioning Systems* | | | | | | | | | | |
| Unitary A/C - small | 244.6 | 100 | 45 | 3% | 333 | 0.37 | 1500 | 498 | 0.0122046 | 17 |

Sources:

- General methodology and leak rate: U.S. Environmental Protection Agency, Climate Leaders. May 2008. Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment. EPA430-K-03-004. http://www.epa.gov/stateply/documents/resources/mfgrfg.pdf
- Number of units: It is assumed that there would be one unitary A/C for every 5,000 square feet of office space and one for the store.
- Average charge and Global Warming Potential: South Coast Air Quality Management District. Draft Environmental Assessment for Proposed Amended Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems and Proposed Rule 1415.1 – Reduction of Refrigerant Emissions from Stationary Refrigeration Systems. November 2010. Website: http://www.aqmd.gov/ceqa/documents/2010/aqmd/finalEA/1415DEA.pdf (Table B-1)

# A.3 - Construction Summary Mitigated

## World Logistics Center

**Summary for Dispersion Modeling**

*Mitigated: Tier IV construction equipment (2/24/2015)*

| | | Onsite Emissions (tons/year) | | | | | |
|---|---|---|---|---|---|---|---|
| **Year** | **Construction Activity** | **NOx** | **CO** | **PM10 dust** | **PM10 exhaust** | **PM2.5 dust** | **PM2.5 exhaust** |
| 2015 | Other construction/grading | 33.12 | 53.59 | 2.152 | 0.324 | 0.486 | 0.319 |
| | Concrete pouring | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2016 | Other construction/grading | 32.89 | 45.79 | 0.041 | 0.416 | 0.004 | 0.407 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2017 | Other construction/grading | 42.49 | 65.56 | 2.204 | 0.474 | 0.492 | 0.465 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2018 | Other construction/grading | 32.89 | 45.79 | 0.041 | 0.416 | 0.004 | 0.407 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2019 | Other construction/grading | 57.01 | 89.11 | 4.572 | 0.562 | 1.271 | 0.553 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2020 | Other construction/grading | 36.74 | 54.40 | 0.658 | 0.438 | 0.240 | 0.429 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2021 | Other construction/grading | 41.76 | 60.84 | 2.016 | 0.469 | 0.423 | 0.460 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2022 | Other construction/grading | 36.07 | 50.66 | 1.067 | 0.441 | 0.211 | 0.431 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2023 | Other construction/grading | 41.55 | 58.84 | 1.917 | 0.468 | 0.503 | 0.459 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2024 | Other construction/grading | 38.48 | 53.97 | 1.421 | 0.450 | 0.329 | 0.441 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2025 | Other construction/grading | 41.55 | 57.65 | 1.925 | 0.468 | 0.503 | 0.459 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2026 | Other construction/grading | 32.89 | 45.79 | 0.041 | 0.416 | 0.004 | 0.407 |
| | Concrete pouring | 3.39 | 5.83 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2027 | Other construction/grading | 45.00 | 57.33 | 2.877 | 0.417 | 0.739 | 0.414 |
| | Concrete pouring | 3.39 | 5.41 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2028 | Other construction/grading | 41.88 | 52.31 | 2.209 | 0.399 | 0.492 | 0.396 |
| | Concrete pouring | 3.39 | 5.41 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2029 | Other construction/grading | 32.50 | 39.51 | 0.041 | 0.342 | 0.004 | 0.339 |
| | Concrete pouring | 3.39 | 5.41 | 0.000 | 0.018 | 0.000 | 0.018 |
| 2030 | Other construction/grading | 38.67 | 46.08 | 2.054 | 0.379 | 0.476 | 0.376 |
| | Concrete pouring | 3.39 | 5.41 | 0.000 | 0.018 | 0.000 | 0.018 |

## World Logistics Center

**Mitigated**

## Construction CalEEMod Results Summary

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)* *Note: CO listed below are unmitigated emissions because of CalEEMod bug*

*Onsite vehicles travel on unpaved roads*

| | Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **Construction Other (pre 2027)** | | | | | | | | | | | |
| Building-concrete | | | | | | | | | | | |
| onsite | 1.45 | 26.11 | 44.81 | 0.06 | 0.00 | 0.14 | 0.00 | 0.14 | 6333.23 | 1.56 | 6366.06 |
| offsite | 0.63 | 9.71 | 7.61 | 0.03 | 1.04 | 0.19 | 0.28 | 0.18 | 2799.51 | 0.04 | 2800.30 |
| onsite vehicles | 0.26 | 0.75 | 3.06 | 0.00 | 10.56 | 0.01 | 1.05 | 0.01 | 108.34 | 0.00 | 108.40 |
| Building-wet utilities | | | | | | | | | | | |
| onsite | 1.96 | 48.21 | 73.60 | 0.13 | 0.00 | 0.21 | 0.00 | 0.21 | 13141.45 | 3.92 | 13223.84 |
| offsite | 0.50 | 7.19 | 6.15 | 0.02 | 0.97 | 0.16 | 0.27 | 0.14 | 2208.97 | 0.03 | 2209.66 |
| onsite vehicles | 0.22 | 0.60 | 2.13 | 0.00 | 9.73 | 0.01 | 0.97 | 0.00 | 88.99 | 0.00 | 89.04 |
| Building-electrical | | | | | | | | | | | |
| onsite | 1.28 | 30.58 | 45.58 | 0.06 | 0.00 | 0.43 | 0.00 | 0.43 | 5894.94 | 1.75 | 5931.59 |
| offsite | 0.48 | 7.82 | 5.58 | 0.02 | 0.77 | 0.16 | 0.21 | 0.15 | 2173.41 | 0.03 | 2173.96 |
| onsite vehicles | 0.20 | 0.62 | 2.38 | 0.00 | 7.66 | 0.01 | 0.76 | 0.00 | 86.20 | 0.00 | 86.24 |
| Building-landscaping | | | | | | | | | | | |
| onsite | 1.83 | 25.60 | 36.07 | 0.05 | 0.00 | 0.79 | 0.00 | 0.76 | 4917.10 | 1.47 | 4947.93 |
| offsite | 0.16 | 2.13 | 2.05 | 0.01 | 0.35 | 0.05 | 0.10 | 0.04 | 703.32 | 0.01 | 703.57 |
| onsite vehicles | 0.07 | 0.19 | 0.61 | 0.00 | 3.52 | 0.00 | 0.35 | 0.00 | 28.74 | 0.00 | 28.76 |
| Utilities | | | | | | | | | | | |
| onsite | 6.01 | 110.99 | 133.90 | 0.35 | 0.00 | 0.90 | 0.00 | 0.90 | 36314.07 | 10.83 | 36541.53 |
| offsite | 0.99 | 15.06 | 11.71 | 0.04 | 1.76 | 0.32 | 0.48 | 0.30 | 4402.25 | 0.06 | 4403.48 |
| onsite vehicles | 0.42 | 1.24 | 4.48 | 0.00 | 17.61 | 0.01 | 1.75 | 0.01 | 177.26 | 0.00 | 177.36 |
| Interchange | | | | | | | | | | | |
| onsite | 1.67 | 29.68 | 66.20 | 0.10 | 4.74 | 0.17 | 1.81 | 0.17 | 10385.63 | 3.10 | 10450.64 |
| offsite | 0.37 | 4.72 | 4.94 | 0.02 | 0.76 | 0.10 | 0.21 | 0.09 | 1589.59 | 0.03 | 1590.20 |
| onsite vehicles | 0.16 | 0.37 | 1.52 | 0.00 | 7.87 | 0.00 | 0.78 | 0.00 | 60.80 | 0.00 | 60.85 |
| Landscaping | | | | | | | | | | | |
| onsite | 1.87 | 27.18 | 38.60 | 0.05 | 0.00 | 0.80 | 0.00 | 0.76 | 5293.79 | 1.58 | 5326.98 |
| offsite | 0.15 | 1.83 | 1.91 | 0.01 | 0.33 | 0.04 | 0.09 | 0.04 | 630.58 | 0.01 | 630.82 |
| onsite vehicles | 0.07 | 0.16 | 0.54 | 0.00 | 3.31 | 0.00 | 0.33 | 0.00 | 25.52 | 0.00 | 25.54 |
| Temporary utilities | | | | | | | | | | | |
| onsite | 0.46 | 7.34 | 23.38 | 0.03 | 0.00 | 0.05 | 0.00 | 0.05 | 2908.78 | 0.87 | 2927.02 |
| offsite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| onsite vehicles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Curbing/drive approaches | | | | | | | | | | | |
| onsite | 0.28 | 6.69 | 10.21 | 0.01 | 0.00 | 0.08 | 0.00 | 0.08 | 1504.70 | 0.44 | 1513.98 |
| offsite | 0.23 | 3.48 | 2.80 | 0.01 | 0.41 | 0.07 | 0.11 | 0.07 | 1027.27 | 0.01 | 1027.57 |
| onsite vehicles | 0.10 | 0.28 | 1.06 | 0.00 | 4.14 | 0.00 | 0.41 | 0.00 | 40.68 | 0.00 | 40.70 |
| Paving | | | | | | | | | | | |
| onsite | 1.40 | 30.46 | 62.73 | 0.09 | 2.07 | 0.14 | 0.22 | 0.14 | 8930.83 | 2.65 | 8986.47 |
| offsite | 0.44 | 6.05 | 5.63 | 0.02 | 0.85 | 0.13 | 0.23 | 0.12 | 1915.78 | 0.03 | 1916.44 |
| onsite vehicles | 0.19 | 0.48 | 1.89 | 0.00 | 8.70 | 0.00 | 0.86 | 0.00 | 74.43 | 0.00 | 74.48 |
| *Subtotal: onsite vehicles.* | *1.69* | *4.70* | *17.66* | *0.01* | *73.11* | *0.04* | *7.26* | *0.04* | *690.97* | *0.02* | *691.36* |
| **Construction Other (post-2027)** | | | | | | | | | | | |
| Building-concrete | | | | | | | | | | | |
| onsite | 1.45 | 26.11 | 41.60 | 0.06 | 0.00 | 0.14 | 0.00 | 0.14 | 5974.24 | 1.46 | 6004.86 |
| offsite | 0.37 | 3.15 | 5.04 | 0.03 | 1.04 | 0.13 | 0.28 | 0.12 | 2468.54 | 0.02 | 2469.04 |
| onsite vehicles | 0.26 | 0.75 | 3.06 | 0.00 | 10.56 | 0.01 | 1.05 | 0.01 | 108.34 | 0.00 | 108.40 |
| Building-wet utilities | | | | | | | | | | | |
| onsite | 1.96 | 48.21 | 66.81 | 0.13 | 0.00 | 0.21 | 0.00 | 0.21 | 12121.58 | 3.92 | 12203.91 |
| offsite | 0.28 | 2.22 | 3.68 | 0.02 | 0.97 | 0.09 | 0.27 | 0.09 | 1933.09 | 0.02 | 1933.51 |
| onsite vehicles | 0.22 | 0.60 | 2.13 | 0.00 | 9.73 | 0.01 | 0.97 | 0.00 | 88.99 | 0.00 | 89.04 |
| Building-electrical | | | | | | | | | | | |
| onsite | 1.28 | 30.58 | 40.93 | 0.06 | 0.00 | 0.43 | 0.00 | 0.43 | 5445.28 | 1.74 | 5481.92 |
| offsite | 0.29 | 2.49 | 3.73 | 0.02 | 0.77 | 0.11 | 0.21 | 0.10 | 1930.03 | 0.02 | 1930.38 |
| onsite vehicles | 0.20 | 0.62 | 2.38 | 0.00 | 7.66 | 0.01 | 0.76 | 0.00 | 86.20 | 0.00 | 86.24 |
| Building-landscaping | | | | | | | | | | | |
| onsite | 1.21 | 24.10 | 32.45 | 0.05 | 0.00 | 0.51 | 0.00 | 0.50 | 4536.19 | 1.47 | 4567.00 |
| offsite | 0.09 | 0.64 | 1.14 | 0.01 | 0.35 | 0.03 | 0.10 | 0.02 | 609.55 | 0.01 | 609.69 |
| onsite vehicles | 0.07 | 0.19 | 0.61 | 0.00 | 3.52 | 0.00 | 0.35 | 0.00 | 28.74 | 0.00 | 28.76 |
| Utilities | | | | | | | | | | | |
| onsite | 6.01 | 110.98 | 113.88 | 0.35 | 0.00 | 0.90 | 0.00 | 0.90 | 33515.23 | 10.83 | 33742.62 |
| offsite | 0.57 | 4.69 | 7.33 | 0.04 | 1.76 | 0.20 | 0.48 | 0.18 | 3881.49 | 0.04 | 3882.25 |
| onsite vehicles | 0.42 | 1.24 | 4.48 | 0.00 | 17.61 | 0.01 | 1.75 | 0.01 | 177.26 | 0.00 | 177.36 |
| Interchange | | | | | | | | | | | |
| onsite | 1.67 | 29.68 | 41.94 | 0.10 | 4.74 | 0.17 | 1.81 | 0.17 | 9590.60 | 3.10 | 9655.62 |
| offsite | 0.20 | 1.52 | 2.93 | 0.02 | 0.76 | 0.06 | 0.21 | 0.06 | 1369.53 | 0.02 | 1369.89 |
| onsite vehicles | 0.16 | 0.37 | 1.52 | 0.00 | 7.87 | 0.00 | 0.78 | 0.00 | 60.80 | 0.00 | 60.85 |
| Landscaping | | | | | | | | | | | |
| onsite | 1.26 | 25.68 | 34.78 | 0.05 | 0.00 | 0.51 | 0.00 | 0.50 | 4883.90 | 1.58 | 4917.07 |
| offsite | 0.08 | 0.55 | 1.04 | 0.01 | 0.33 | 0.02 | 0.09 | 0.02 | 543.39 | 0.01 | 543.53 |
| onsite vehicles | 0.07 | 0.16 | 0.54 | 0.00 | 3.31 | 0.00 | 0.33 | 0.00 | 25.52 | 0.00 | 25.54 |
| Temporary utilities | | | | | | | | | | | |
| onsite | 0.46 | 7.34 | 10.43 | 0.03 | 0.00 | 0.05 | 0.00 | 0.05 | 2685.55 | 0.87 | 2703.79 |
| offsite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| onsite vehicles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Curbing/drive approaches | | | | | | | | | | | |
| onsite | 0.28 | 6.69 | 9.57 | 0.01 | 0.00 | 0.08 | 0.00 | 0.08 | 1391.29 | 0.44 | 1400.57 |
| offsite | 0.13 | 1.10 | 1.77 | 0.01 | 0.41 | 0.05 | 0.11 | 0.04 | 903.61 | 0.01 | 903.79 |
| onsite vehicles | 0.10 | 0.28 | 1.06 | 0.00 | 4.14 | 0.00 | 0.41 | 0.00 | 40.68 | 0.00 | 40.70 |
| Paving | | | | | | | | | | | |
| onsite | 1.40 | 30.46 | 44.95 | 0.09 | 2.07 | 0.14 | 0.22 | 0.14 | 8249.01 | 2.65 | 8304.64 |
| offsite | 0.25 | 1.93 | 3.43 | 0.02 | 0.85 | 0.08 | 0.23 | 0.07 | 1666.02 | 0.02 | 1666.42 |
| onsite vehicles | 0.19 | 0.48 | 1.89 | 0.00 | 8.70 | 0.00 | 0.86 | 0.00 | 74.43 | 0.00 | 74.48 |
| **Year 2015** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 8.38 | 138.21 | 319.01 | 0.51 | 14.81 | 0.84 | 4.69 | 0.84 | 53898.21 | 16.09 | 54236.12 |
| offsite | 0.62 | 7.13 | 8.64 | 0.03 | 1.39 | 0.15 | 0.38 | 0.14 | 2619.40 | 0.05 | 2620.55 |
| onsite vehicles | 0.28 | 0.58 | 2.32 | 0.00 | 14.50 | 0.00 | 1.44 | 0.00 | 99.64 | 0.00 | 99.72 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.17 | 4.77 | 8.90 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1142.81 | 0.34 | 1149.97 |
| offsite | 0.11 | 0.71 | 1.84 | 0.00 | 0.33 | 0.02 | 0.09 | 0.01 | 436.72 | 0.01 | 437.01 |
| onsite vehicles | 0.06 | 0.06 | 0.27 | 0.00 | 3.52 | 0.00 | 0.35 | 0.00 | 15.77 | 0.00 | 15.79 |
| **Year 2017** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 8.84 | 145.72 | 299.29 | 0.54 | 15.22 | 0.89 | 4.74 | 0.89 | 55398.67 | 16.97 | 55755.12 |
| offsite | 0.50 | 5.67 | 7.24 | 0.03 | 1.39 | 0.11 | 0.38 | 0.10 | 2500.26 | 0.05 | 2501.22 |
| onsite vehicles | 0.23 | 0.49 | 2.01 | 0.00 | 14.50 | 0.00 | 1.44 | 0.00 | 95.38 | 0.00 | 95.44 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.17 | 4.77 | 8.73 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1111.99 | 0.34 | 1119.15 |
| offsite | 0.10 | 0.85 | 1.68 | 0.01 | 0.35 | 0.02 | 0.09 | 0.02 | 498.66 | 0.01 | 498.92 |
| onsite vehicles | 0.05 | 0.08 | 0.33 | 0.00 | 3.73 | 0.00 | 0.37 | 0.00 | 18.40 | 0.00 | 18.41 |
| **Year 2019** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 22.24 | 365.78 | 654.92 | 1.36 | 41.96 | 2.23 | 13.81 | 2.23 | 134739.58 | 42.63 | 135634.81 |
| offsite | 0.75 | 10.08 | 9.79 | 0.05 | 1.88 | 0.22 | 0.51 | 0.21 | 4146.26 | 0.05 | 4147.34 |
| onsite vehicles | 0.30 | 0.92 | 3.68 | 0.00 | 19.06 | 0.01 | 1.89 | 0.01 | 162.99 | 0.00 | 163.08 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.50 | 14.31 | 25.01 | 0.03 | 23.47 | 0.05 | 11.81 | 0.05 | 3228.13 | 1.02 | 3249.58 |
| offsite | 0.15 | 1.73 | 2.07 | 0.01 | 0.47 | 0.04 | 0.13 | 0.04 | 828.69 | 0.01 | 828.96 |
| onsite vehicles | 0.07 | 0.17 | 0.63 | 0.00 | 4.76 | 0.00 | 0.47 | 0.00 | 32.88 | 0.00 | 32.90 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year 2021** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 6.33 | 105.02 | 161.40 | 0.39 | 8.50 | 0.64 | 1.95 | 0.64 | 37546.18 | 12.14 | 37801.19 |
| offsite | 0.34 | 2.69 | 5.07 | 0.02 | 1.28 | 0.08 | 0.35 | 0.07 | 1897.26 | 0.04 | 1897.99 |
| onsite vehicles | 0.16 | 0.28 | 1.32 | 0.00 | 13.46 | 0.00 | 1.34 | 0.00 | 71.83 | 0.00 | 71.88 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.17 | 4.77 | 8.17 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1052.61 | 0.34 | 1059.76 |
| offsite | 0.11 | 0.93 | 1.63 | 0.01 | 0.40 | 0.03 | 0.11 | 0.02 | 617.04 | 0.01 | 617.27 |
| onsite vehicles | 0.05 | 0.09 | 0.45 | 0.00 | 4.13 | 0.00 | 0.41 | 0.00 | 23.33 | 0.00 | 23.34 |
| **Year 2022** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 5.12 | 79.66 | 120.18 | 0.29 | 6.85 | 0.63 | 1.77 | 0.62 | 28069.09 | 9.08 | 28259.73 |
| offsite | 0.32 | 2.33 | 4.79 | 0.02 | 1.26 | 0.07 | 0.34 | 0.07 | 1817.29 | 0.03 | 1818.00 |
| onsite vehicles | 0.15 | 0.24 | 1.22 | 0.00 | 13.25 | 0.00 | 1.32 | 0.00 | 68.43 | 0.00 | 68.48 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.19 | 5.40 | 8.95 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1193.22 | 0.39 | 1201.33 |
| offsite | 0.14 | 1.27 | 1.96 | 0.01 | 0.46 | 0.04 | 0.13 | 0.04 | 828.42 | 0.01 | 828.67 |
| onsite vehicles | 0.06 | 0.14 | 0.64 | 0.00 | 4.75 | 0.00 | 0.47 | 0.00 | 32.37 | 0.00 | 32.39 |
| **Year 2023** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 13.32 | 219.62 | 328.31 | 0.81 | 24.00 | 1.34 | 7.74 | 1.34 | 78895.29 | 25.52 | 79431.14 |
| offsite | 0.41 | 2.90 | 5.92 | 0.03 | 1.48 | 0.12 | 0.40 | 0.11 | 2572.14 | 0.04 | 2572.90 |
| onsite vehicles | 0.18 | 0.38 | 1.98 | 0.00 | 15.33 | 0.00 | 1.52 | 0.00 | 99.62 | 0.00 | 99.68 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.34 | 9.54 | 16.06 | 0.02 | 13.11 | 0.04 | 6.57 | 0.04 | 2108.99 | 0.68 | 2123.31 |
| offsite | 0.14 | 1.06 | 2.00 | 0.01 | 0.48 | 0.04 | 0.13 | 0.04 | 903.35 | 0.01 | 903.59 |
| onsite vehicles | 0.06 | 0.14 | 0.72 | 0.00 | 4.97 | 0.00 | 0.49 | 0.00 | 35.44 | 0.00 | 35.46 |
| **Year 2024** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 8.65 | 142.53 | 206.37 | 0.53 | 14.81 | 0.87 | 4.69 | 0.87 | 51249.30 | 16.58 | 51597.38 |
| offsite | 0.36 | 2.41 | 5.22 | 0.03 | 1.39 | 0.10 | 0.38 | 0.09 | 2253.18 | 0.03 | 2253.89 |
| onsite vehicles | 0.16 | 0.32 | 1.64 | 0.00 | 14.48 | 0.00 | 1.44 | 0.00 | 86.62 | 0.00 | 86.67 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.17 | 4.77 | 7.95 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1054.23 | 0.34 | 1061.39 |
| offsite | 0.14 | 1.01 | 1.92 | 0.01 | 0.46 | 0.04 | 0.12 | 0.04 | 851.44 | 0.01 | 851.68 |
| onsite vehicles | 0.06 | 0.13 | 0.69 | 0.00 | 4.76 | 0.00 | 0.47 | 0.00 | 32.76 | 0.00 | 32.78 |

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year 2025** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 13.32 | 219.62 | 297.60 | 0.82 | 24.00 | 1.34 | 7.74 | 1.34 | 78973.71 | 25.54 | 79510.09 |
| offsite | 0.40 | 2.87 | 5.67 | 0.03 | 1.48 | 0.12 | 0.40 | 0.11 | 2557.22 | 0.04 | 2557.95 |
| onsite vehicles | 0.17 | 0.38 | 1.93 | 0.00 | 15.33 | 0.00 | 1.52 | 0.00 | 99.10 | 0.00 | 99.15 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.34 | 9.54 | 15.67 | 0.02 | 13.11 | 0.04 | 6.57 | 0.04 | 2110.54 | 0.68 | 2124.87 |
| offsite | 0.17 | 1.31 | 2.24 | 0.01 | 0.53 | 0.06 | 0.14 | 0.05 | 1063.33 | 0.01 | 1063.59 |
| onsite vehicles | 0.06 | 0.17 | 0.88 | 0.00 | 5.39 | 0.00 | 0.54 | 0.00 | 41.83 | 0.00 | 41.85 |
| **Year 2027** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 11.41 | 189.08 | 267.24 | 0.70 | 22.76 | 1.14 | 7.61 | 1.14 | 67686.11 | 21.89 | 68145.82 |
| offsite | 0.36 | 2.53 | 5.17 | 0.03 | 1.46 | 0.11 | 0.40 | 0.10 | 2429.06 | 0.03 | 2429.75 |
| onsite vehicles | 0.15 | 0.35 | 1.75 | 0.00 | 15.12 | 0.00 | 1.50 | 0.00 | 94.70 | 0.00 | 94.75 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.34 | 9.54 | 15.67 | 0.02 | 13.11 | 0.04 | 6.57 | 0.04 | 2110.54 | 0.68 | 2124.87 |
| offsite | 0.17 | 1.36 | 2.31 | 0.01 | 0.55 | 0.06 | 0.15 | 0.05 | 1141.00 | 0.01 | 1141.25 |
| onsite vehicles | 0.07 | 0.18 | 0.95 | 0.00 | 5.56 | 0.00 | 0.55 | 0.00 | 44.96 | 0.00 | 44.98 |
| **Year 2028** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 8.65 | 142.53 | 192.68 | 0.53 | 14.81 | 0.87 | 4.69 | 0.87 | 51293.80 | 16.59 | 51642.18 |
| offsite | 0.32 | 2.25 | 4.80 | 0.03 | 1.39 | 0.09 | 0.38 | 0.09 | 2225.18 | 0.03 | 2225.83 |
| onsite vehicles | 0.14 | 0.31 | 1.58 | 0.00 | 14.48 | 0.00 | 1.44 | 0.00 | 85.69 | 0.00 | 85.74 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.17 | 4.77 | 7.84 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1055.27 | 0.34 | 1062.44 |
| offsite | 0.16 | 1.29 | 2.24 | 0.01 | 0.53 | 0.05 | 0.14 | 0.05 | 1089.07 | 0.01 | 1089.32 |
| onsite vehicles | 0.06 | 0.17 | 0.93 | 0.00 | 5.39 | 0.00 | 0.53 | 0.00 | 42.29 | 0.00 | 42.31 |
| **Year 2030** | | | | | | | | | | | |
| Mass excavation | | | | | | | | | | | |
| onsite | 5.58 | 93.16 | 96.73 | 0.36 | 12.34 | 0.56 | 4.43 | 0.56 | 39867.05 | 1.80 | 39904.84 |
| offsite | 0.31 | 2.22 | 4.69 | 0.03 | 1.39 | 0.09 | 0.38 | 0.09 | 2216.86 | 0.03 | 2217.49 |
| onsite vehicles | 0.13 | 0.30 | 1.57 | 0.00 | 14.50 | 0.00 | 1.44 | 0.00 | 85.41 | 0.00 | 85.45 |
| Finish grading | | | | | | | | | | | |
| onsite | 0.17 | 4.77 | 7.87 | 0.01 | 7.82 | 0.02 | 3.94 | 0.02 | 1263.03 | 0.07 | 1264.41 |
| offsite | 0.17 | 1.40 | 2.36 | 0.01 | 0.55 | 0.06 | 0.15 | 0.06 | 1168.56 | 0.01 | 1168.81 |
| onsite vehicles | 0.06 | 0.19 | 1.02 | 0.00 | 5.59 | 0.00 | 0.56 | 0.00 | 45.48 | 0.00 | 45.50 |

**World Logistics Center**
**Construction Daily Summary**
*Prepared by Michael Brandman Associates/FirstCarbon Solutions*
*Mitigated: Tier IV construction equipment (2/24/2015)*

**Onsite Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 27 | 461 | 817 | 1.3 | 115.8 | 4.4 | 17.9 | 4.4 | 141086 | 42 | 141958 |
| 2016 | 130 | 318 | 487 | 0.8 | 75.2 | 3.6 | 7.5 | 3.5 | 85930 | 25 | 86457 |
| 2017 | 139 | 469 | 797 | 1.4 | 116.5 | 4.5 | 18.0 | 4.4 | 142554 | 42 | 143445 |
| 2018 | 130 | 318 | 487 | 0.8 | 75.2 | 3.6 | 7.5 | 3.5 | 85930 | 25 | 86457 |
| 2019 | 153 | 699 | 1171 | 2.2 | 164.4 | 5.9 | 35.5 | 5.8 | 224093 | 69 | 225537 |
| 2020 | 132 | 348 | 553 | 0.9 | 79.9 | 3.7 | 9.3 | 3.7 | 96315 | 28 | 96907 |
| 2021 | 138 | 458 | 724 | 1.3 | 113.8 | 4.4 | 16.9 | 4.3 | 135009 | 41 | 135864 |
| 2022 | 135 | 403 | 618 | 1.1 | 107.9 | 4.2 | 15.0 | 4.1 | 115293 | 35 | 116019 |
| 2023 | 144 | 548 | 834 | 1.7 | 132.6 | 4.9 | 23.8 | 4.9 | 167069 | 51 | 168146 |
| 2024 | 139 | 466 | 703 | 1.4 | 117.1 | 4.5 | 18.0 | 4.4 | 138353 | 42 | 139235 |
| 2025 | 144 | 548 | 803 | 1.7 | 133.0 | 4.9 | 23.9 | 4.9 | 167155 | 51 | 168233 |
| 2026 | 130 | 318 | 487 | 0.8 | 75.2 | 3.6 | 7.5 | 3.5 | 85930 | 25 | 86457 |
| 2027 | 141 | 514 | 699 | 1.5 | 131.7 | 4.2 | 23.7 | 4.2 | 149430 | 48 | 150428 |
| 2028 | 138 | 463 | 616 | 1.4 | 117.7 | 3.9 | 18.1 | 3.9 | 131970 | 42 | 132850 |
| 2029 | 129 | 315 | 413 | 0.8 | 75.2 | 3.0 | 7.5 | 3.0 | 79493 | 25 | 80018 |
| 2030 | 135 | 413 | 520 | 1.2 | 115.4 | 3.6 | 17.8 | 3.6 | 120754 | 27 | 121318 |

**Offsite Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 4 | 61 | 54 | 0.2 | 8.2 | 1.3 | 2.2 | 1.2 | 18917 | 0.3 | 18923 |
| 2016 | 4 | 53 | 43 | 0.2 | 6.5 | 1.1 | 1.8 | 1.0 | 15861 | 0.2 | 15866 |
| 2017 | 4 | 60 | 52 | 0.2 | 8.2 | 1.3 | 2.2 | 1.2 | 18860 | 0.3 | 18866 |
| 2018 | 4 | 53 | 43 | 0.2 | 6.5 | 1.1 | 1.8 | 1.0 | 15861 | 0.2 | 15866 |
| 2019 | 4 | 65 | 55 | 0.2 | 8.8 | 1.4 | 2.4 | 1.3 | 20836 | 0.3 | 20842 |
| 2020 | 4 | 53 | 43 | 0.2 | 6.5 | 1.1 | 1.8 | 1.0 | 15861 | 0.2 | 15866 |
| 2021 | 4 | 57 | 50 | 0.2 | 8.2 | 1.2 | 2.2 | 1.1 | 18375 | 0.3 | 18381 |
| 2022 | 4 | 57 | 50 | 0.2 | 8.2 | 1.2 | 2.2 | 1.1 | 18507 | 0.3 | 18512 |
| 2023 | 4 | 57 | 51 | 0.2 | 8.5 | 1.3 | 2.3 | 1.2 | 19337 | 0.3 | 19342 |
| 2024 | 4 | 57 | 51 | 0.2 | 8.3 | 1.3 | 2.3 | 1.2 | 18966 | 0.3 | 18971 |
| 2025 | 4 | 57 | 51 | 0.2 | 8.5 | 1.3 | 2.3 | 1.2 | 19482 | 0.3 | 19487 |
| 2026 | 4 | 53 | 43 | 0.2 | 6.5 | 1.1 | 1.8 | 1.0 | 15861 | 0.2 | 15866 |
| 2027 | 4 | 57 | 51 | 0.2 | 8.5 | 1.3 | 2.3 | 1.2 | 19431 | 0.3 | 19437 |
| 2028 | 4 | 57 | 50 | 0.2 | 8.4 | 1.3 | 2.3 | 1.2 | 19175 | 0.3 | 19181 |
| 2029 | 4 | 53 | 43 | 0.2 | 6.5 | 1.1 | 1.8 | 1.0 | 15861 | 0.2 | 15866 |
| 2030 | 4 | 57 | 50 | 0.2 | 8.4 | 1.3 | 2.3 | 1.2 | 19247 | 0.3 | 19252 |

**Total Onsite and Offsite Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM10 total | PM2.5 dust | PM2.5 exhaust | PM2.5 total | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 31 | 523 | 871 | 1.5 | 124.0 | 5.7 | 129.8 | 20.1 | 5.5 | 26 | 160004 | 42 | 160882 |
| 2016 | 134 | 371 | 530 | 1.0 | 81.7 | 4.7 | 86.4 | 9.3 | 4.5 | 14 | 101791 | 25 | 102323 |
| 2017 | 143 | 529 | 849 | 1.6 | 124.7 | 5.7 | 130.4 | 20.2 | 5.6 | 26 | 161414 | 43 | 162311 |
| 2018 | 134 | 371 | 530 | 1.0 | 81.7 | 4.7 | 86.4 | 9.3 | 4.5 | 14 | 101791 | 25 | 102323 |
| 2019 | 158 | 764 | 1226 | 2.4 | 173.3 | 7.2 | 180.5 | 37.9 | 7.1 | 45 | 244929 | 69 | 246379 |
| 2020 | 135 | 401 | 596 | 1.1 | 86.4 | 4.9 | 91.3 | 11.1 | 4.7 | 16 | 112177 | 28 | 112773 |
| 2021 | 142 | 515 | 774 | 1.5 | 122.0 | 5.6 | 127.6 | 19.1 | 5.5 | 25 | 153385 | 41 | 154245 |
| 2022 | 140 | 460 | 668 | 1.3 | 116.1 | 5.5 | 121.5 | 17.2 | 5.3 | 22 | 133800 | 35 | 134531 |
| 2023 | 148 | 605 | 885 | 1.9 | 141.0 | 6.2 | 147.3 | 26.1 | 6.1 | 32 | 186406 | 52 | 187489 |
| 2024 | 143 | 522 | 754 | 1.6 | 125.4 | 5.7 | 131.1 | 20.3 | 5.6 | 26 | 157318 | 42 | 158206 |
| 2025 | 148 | 605 | 854 | 1.9 | 141.5 | 6.2 | 147.7 | 26.2 | 6.1 | 32 | 186637 | 52 | 187720 |
| 2026 | 134 | 371 | 530 | 1.0 | 81.7 | 4.7 | 86.4 | 9.3 | 4.5 | 14 | 101791 | 25 | 102323 |
| 2027 | 145 | 571 | 750 | 1.7 | 140.2 | 5.5 | 145.7 | 26.0 | 5.3 | 31 | 168861 | 48 | 169865 |
| 2028 | 142 | 519 | 667 | 1.6 | 126.1 | 5.2 | 131.2 | 20.4 | 5.0 | 25 | 151146 | 42 | 152031 |
| 2029 | 132 | 368 | 456 | 1.0 | 81.7 | 4.1 | 85.8 | 9.3 | 4.0 | 13 | 95354 | 25 | 95884 |
| 2030 | 139 | 470 | 571 | 1.4 | 123.9 | 4.9 | 128.7 | 20.1 | 4.7 | 25 | 140001 | 27 | 140570 |

| | Total Construction Emissions (pounds/day) | | | | |
|---|---|---|---|---|---|
| | **VOC** | **NOx** | **CO** | **PM10** | **PM2.5** |
| 2015 | 31 | 523 | 871 | 130 | 26 |
| 2016 | 134 | 371 | 530 | 86 | 14 |
| 2017 | 143 | 529 | 849 | 130 | 26 |
| 2018 | 134 | 371 | 530 | 86 | 14 |
| 2019 | 158 | 764 | 1226 | 181 | 45 |
| 2020 | 135 | 401 | 596 | 91 | 16 |
| 2021 | 142 | 515 | 774 | 128 | 25 |
| 2022 | 140 | 460 | 668 | 122 | 22 |
| 2023 | 148 | 605 | 885 | 147 | 32 |
| 2024 | 143 | 522 | 754 | 131 | 26 |
| 2025 | 148 | 605 | 854 | 148 | 32 |
| 2026 | 134 | 371 | 530 | 86 | 14 |
| 2027 | 145 | 571 | 750 | 146 | 31 |
| 2028 | 142 | 519 | 667 | 131 | 25 |
| 2029 | 132 | 368 | 456 | 86 | 13 |
| 2030 | 139 | 470 | 571 | 129 | 25 |
| Threshold | 75 | 100 | 550 | 150 | 55 |
| Max | 158 | 764 | 1226 | 181 | 45 |
| Exceed by | 83 | 664 | 676 | 31 | -10 |
| Average | 134 | 498 | 719 | 122 | 24 |
| :IR Average | 233 | 1,100 | 1217 | 87 | 49 |
| Diff | -99 | -602 | -498 | 35 | -25 |

**World Logistics Center** **Mitigated**

**Construction Onsite Daily Emissions**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)*

| | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | | | | | | | | | | | |
| Mass excavation | 8.7 | 138.8 | 321.3 | 0.5 | 29.3 | 0.8 | 6.1 | 0.8 | 53998 | 16.1 | 54336 |
| Finish grading | 0.2 | 4.8 | 9.2 | 0.0 | 11.3 | 0.0 | 4.3 | 0.0 | 1159 | 0.3 | 1166 |
| Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| Paving VOC | 0.0 | | | | | | | | | | |
| Painting VOC | 0.0 | | | | | | | | | | |
| *Maximum/day* | *27.1* | *461.5* | *817.0* | *1.3* | *115.8* | *4.4* | *17.9* | *4.4* | *141086* | *41.5* | *141958* |
| **2016** | | | | | | | | | | | |
| Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| Paving VOC | 8.9 | | | | | | | | | | |
| Painting VOC | 102.8 | | | | | | | | | | |
| *Maximum/day* | *130.0* | *317.9* | *486.6* | *0.8* | *75.2* | *3.6* | *7.5* | *3.5* | *85930* | *25.1* | *86457* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 9.1 | 146.2 | 301.3 | 0.5 | 29.7 | 0.9 | 6.2 | 0.9 | 55494 | 17.0 | 55851 |
| | Finish grading | 0.2 | 4.8 | 9.1 | 0.0 | 11.6 | 0.0 | 4.3 | 0.0 | 1130 | 0.3 | 1138 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *139.3* | *468.9* | *796.9* | *1.4* | *116.5* | *4.5* | *18.0* | *4.4* | *142554* | *42.4* | *143445* |
| **2018** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *130.0* | *317.9* | *486.6* | *0.8* | *75.2* | *3.6* | *7.5* | *3.5* | *85930* | *25.1* | *86457* |
| **2019** | Mass excavation | 22.5 | 366.7 | 658.6 | 1.4 | 61.0 | 2.2 | 15.7 | 2.2 | 134903 | 42.6 | 135798 |
| | Finish grading | 0.6 | 14.5 | 25.6 | 0.0 | 28.2 | 0.1 | 12.3 | 0.1 | 3261 | 1.0 | 3282 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *153.1* | *699.0* | *1170.8* | *2.2* | *164.4* | *5.9* | *35.5* | *5.8* | *224093* | *68.7* | *225537* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 1.7 | 29.7 | 66.2 | 0.1 | 4.7 | 0.2 | 1.8 | 0.2 | 10386 | 3.1 | 10451 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | Maximum/day | *131.7* | *347.5* | *552.8* | *0.9* | *79.9* | *3.7* | *9.3* | *3.7* | *96315* | *28.2* | *96907* |
| **2021** | Mass excavation | 6.5 | 105.3 | 162.7 | 0.4 | 22.0 | 0.6 | 3.3 | 0.6 | 37618 | 12.1 | 37873 |
| | Finish grading | 0.2 | 4.9 | 8.6 | 0.0 | 12.0 | 0.0 | 4.3 | 0.0 | 1076 | 0.3 | 1083 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 1.7 | 29.7 | 66.2 | 0.1 | 4.7 | 0.2 | 1.8 | 0.2 | 10386 | 3.1 | 10451 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *138.4* | *457.7* | *724.1* | *1.3* | *113.8* | *4.4* | *16.9* | *4.3* | *135009* | *40.7* | *135864* |
| **2022** | Mass excavation | 5.3 | 79.9 | 121.4 | 0.3 | 20.1 | 0.6 | 3.1 | 0.6 | 28138 | 9.1 | 28328 |
| | Finish grading | 0.2 | 5.5 | 9.6 | 0.0 | 12.6 | 0.0 | 4.4 | 0.0 | 1226 | 0.4 | 1234 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *135.5* | *403.3* | *617.6* | *1.1* | *107.9* | *4.2* | *15.0* | *4.1* | *115293* | *34.6* | *116019* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2023** | Mass excavation | 13.5 | 220.0 | 330.3 | 0.8 | 39.3 | 1.3 | 9.3 | 1.3 | 78995 | 25.5 | 79531 |
| | Finish grading | 0.4 | 9.7 | 16.8 | 0.0 | 18.1 | 0.0 | 7.1 | 0.0 | 2144 | 0.7 | 2159 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *143.9* | *547.6* | *833.6* | *1.7* | *132.6* | *4.9* | *23.8* | *4.9* | *167069* | *51.3* | *168146* |
| **2024** | Mass excavation | 8.8 | 142.8 | 208.0 | 0.5 | 29.3 | 0.9 | 6.1 | 0.9 | 51336 | 16.6 | 51684 |
| | Finish grading | 0.2 | 4.9 | 8.6 | 0.0 | 12.6 | 0.0 | 4.4 | 0.0 | 1087 | 0.3 | 1094 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *139.0* | *465.6* | *703.2* | *1.4* | *117.1* | *4.5* | *18.0* | *4.4* | *138353* | *42.0* | *139235* |
| **2025** | Mass excavation | 13.5 | 220.0 | 299.5 | 0.8 | 39.3 | 1.3 | 9.3 | 1.3 | 79073 | 25.5 | 79609 |
| | Finish grading | 0.4 | 9.7 | 16.5 | 0.0 | 18.5 | 0.0 | 7.1 | 0.0 | 2152 | 0.7 | 2167 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *143.9* | *547.6* | *802.6* | *1.7* | *133.0* | *4.9* | *23.9* | *4.9* | *167155* | *51.3* | *168233* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 1.4 | 26.1 | 44.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 6333 | 1.6 | 6366 |
| | Building - wet utilities | 2.0 | 48.2 | 73.6 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 13141 | 3.9 | 13224 |
| | Building - electrical | 1.3 | 30.6 | 45.6 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5895 | 1.7 | 5932 |
| | Building - landscaping | 1.8 | 25.6 | 36.1 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 4917 | 1.5 | 4948 |
| | Utilities | 6.0 | 111.0 | 133.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 36314 | 10.8 | 36542 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.9 | 27.2 | 38.6 | 0.1 | 0.0 | 0.8 | 0.0 | 0.8 | 5294 | 1.6 | 5327 |
| | Temporary utilities | 0.5 | 7.3 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2909 | 0.9 | 2927 |
| | Curbing/drive approaches | 0.3 | 6.7 | 10.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1505 | 0.4 | 1514 |
| | Paving | 1.4 | 30.5 | 62.7 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8931 | 2.6 | 8986 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *130.0* | *317.9* | *486.6* | *0.8* | *75.2* | *3.6* | *7.5* | *3.5* | *85930* | *25.1* | *86457* |
| ***Tier 4 for all offroad equipment except scrapers*** | | | | | | | | | | | | |
| **2027** | Mass excavation | 11.6 | 189.4 | 269.0 | 0.7 | 37.9 | 1.1 | 9.1 | 1.1 | 67781 | 21.9 | 68241 |
| | Finish grading | 0.4 | 9.7 | 16.6 | 0.0 | 18.7 | 0.0 | 7.1 | 0.0 | 2155 | 0.7 | 2170 |
| | Building - concrete | 1.4 | 26.1 | 41.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 2.0 | 48.2 | 66.8 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 12122 | 3.9 | 12204 |
| | Building - electrical | 1.3 | 30.6 | 40.9 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 1.2 | 24.1 | 32.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 4536 | 1.5 | 4567 |
| | Utilities | 6.0 | 111.0 | 113.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 1.3 | 25.7 | 34.8 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 0.5 | 7.3 | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.3 | 6.7 | 9.6 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1391 | 0.4 | 1401 |
| | Paving | 1.4 | 30.5 | 44.9 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *140.7* | *514.0* | *698.7* | *1.5* | *131.7* | *4.2* | *23.7* | *4.2* | *149430* | *47.6* | *150428* |
| **2028** | Mass excavation | 8.8 | 142.8 | 194.3 | 0.5 | 29.3 | 0.9 | 6.1 | 0.9 | 51379 | 16.6 | 51728 |
| | Finish grading | 0.2 | 4.9 | 8.8 | 0.0 | 13.2 | 0.0 | 4.5 | 0.0 | 1098 | 0.3 | 1105 |
| | Building - concrete | 1.4 | 26.1 | 41.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 2.0 | 48.2 | 66.8 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 12122 | 3.9 | 12204 |
| | Building - electrical | 1.3 | 30.6 | 40.9 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 1.2 | 24.1 | 32.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 4536 | 1.5 | 4567 |
| | Utilities | 6.0 | 111.0 | 113.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.3 | 25.7 | 34.8 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 0.5 | 7.3 | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.3 | 6.7 | 9.6 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1391 | 0.4 | 1401 |
| | Paving | 1.4 | 30.5 | 44.9 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *137.8* | *462.6* | *616.1* | *1.4* | *117.7* | *3.9* | *18.1* | *3.9* | *131970* | *41.9* | *132850* |

| | | Onsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Building - concrete | 1.4 | 26.1 | 41.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 2.0 | 48.2 | 66.8 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 12122 | 3.9 | 12204 |
| | Building - electrical | 1.3 | 30.6 | 40.9 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 1.2 | 24.1 | 32.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 4536 | 1.5 | 4567 |
| | Utilities | 6.0 | 111.0 | 113.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.3 | 25.7 | 34.8 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 0.5 | 7.3 | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.3 | 6.7 | 9.6 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1391 | 0.4 | 1401 |
| | Paving | 1.4 | 30.5 | 44.9 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *128.7* | *314.8* | *413.1* | *0.8* | *75.2* | *3.0* | *7.5* | *3.0* | *79493* | *25.0* | *80018* |
| **2030** | Mass excavation | 5.7 | 93.5 | 98.3 | 0.4 | 26.8 | 0.6 | 5.9 | 0.6 | 39952 | 1.8 | 39990 |
| | Finish grading | 0.2 | 5.0 | 8.9 | 0.0 | 13.4 | 0.0 | 4.5 | 0.0 | 1309 | 0.1 | 1310 |
| | Building - concrete | 1.4 | 26.1 | 41.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 5974 | 1.5 | 6005 |
| | Building - wet utilities | 2.0 | 48.2 | 66.8 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 12122 | 3.9 | 12204 |
| | Building - electrical | 1.3 | 30.6 | 40.9 | 0.1 | 0.0 | 0.4 | 0.0 | 0.4 | 5445 | 1.7 | 5482 |
| | Building - landscaping | 1.2 | 24.1 | 32.4 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 4536 | 1.5 | 4567 |
| | Utilities | 6.0 | 111.0 | 113.9 | 0.3 | 0.0 | 0.9 | 0.0 | 0.9 | 33515 | 10.8 | 33743 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| | Landscaping | 1.3 | 25.7 | 34.8 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 4884 | 1.6 | 4917 |
| | Temporary utilities | 0.5 | 7.3 | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2686 | 0.9 | 2704 |
| | Curbing/drive approaches | 0.3 | 6.7 | 9.6 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 1391 | 0.4 | 1401 |
| | Paving | 1.4 | 30.5 | 44.9 | 0.1 | 2.1 | 0.1 | 0.2 | 0.1 | 8249 | 2.6 | 8305 |
| | Other phases onsite travel | 1.7 | 4.7 | 17.7 | 0.0 | 73.1 | 0.0 | 7.3 | 0.0 | 691 | 0.0 | 691 |
| | Paving VOC | 8.9 | | | | | | | | | | |
| | Painting VOC | 102.8 | | | | | | | | | | |
| | *Maximum/day* | *134.7* | *413.3* | *520.2* | *1.2* | *115.4* | *3.6* | *17.8* | *3.6* | *120754* | *26.8* | *121318* |

**World Logistics Center** **Mitigated**

**Construction Offsite Daily Emissions**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)*

| | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | | | | | | | | | | | |
| Mass excavation | 0.6 | 7.1 | 8.6 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2619.4 | 0.1 | 2620.5 |
| Finish grading | 0.1 | 0.7 | 1.8 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 436.7 | 0.0 | 437.0 |
| Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| *Maximum/day* | *4.3* | *61.1* | *53.9* | *0.2* | *8.2* | *1.3* | *2.2* | *1.2* | *18917* | *0.3* | *18923* |
| **2016** | | | | | | | | | | | |
| Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 0.5 | 5.7 | 7.2 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2500.3 | 0.0 | 2501.2 |
| | Finish grading | 0.1 | 0.9 | 1.7 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 498.7 | 0.0 | 498.9 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.2* | *59.8* | *52.4* | *0.2* | *8.2* | *1.3* | *2.2* | *1.2* | *18860* | *0.3* | *18866* |
| **2018** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2019** | Mass excavation | 0.8 | 10.1 | 9.8 | 0.0 | 1.9 | 0.2 | 0.5 | 0.2 | 4146.3 | 0.1 | 4147.3 |
| | Finish grading | 0.2 | 1.7 | 2.1 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 828.7 | 0.0 | 829.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.5* | *65.1* | *55.3* | *0.2* | *8.8* | *1.4* | *2.4* | *1.3* | *20836* | *0.3* | *20842* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2021** | Mass excavation | 0.3 | 2.7 | 5.1 | 0.0 | 1.3 | 0.1 | 0.3 | 0.1 | 1897.3 | 0.0 | 1898.0 |
| | Finish grading | 0.1 | 0.9 | 1.6 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 617.0 | 0.0 | 617.3 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.0* | *56.9* | *50.1* | *0.2* | *8.2* | *1.2* | *2.2* | *1.1* | *18375* | *0.3* | *18381* |
| **2022** | Mass excavation | 0.3 | 2.3 | 4.8 | 0.0 | 1.3 | 0.1 | 0.3 | 0.1 | 1817.3 | 0.0 | 1818.0 |
| | Finish grading | 0.1 | 1.3 | 2.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 828.4 | 0.0 | 828.7 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.9* | *50.2* | *0.2* | *8.2* | *1.2* | *2.2* | *1.1* | *18507* | *0.3* | *18512* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2023** | Mass excavation | 0.4 | 2.9 | 5.9 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 2572.1 | 0.0 | 2572.9 |
| | Finish grading | 0.1 | 1.1 | 2.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 903.3 | 0.0 | 903.6 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *57.2* | *51.4* | *0.2* | *8.5* | *1.3* | *2.3* | *1.2* | *19337* | *0.3* | *19342* |
| **2024** | Mass excavation | 0.4 | 2.4 | 5.2 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2253.2 | 0.0 | 2253.9 |
| | Finish grading | 0.1 | 1.0 | 1.9 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 851.4 | 0.0 | 851.7 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.7* | *50.6* | *0.2* | *8.3* | *1.3* | *2.3* | *1.2* | *18966* | *0.3* | *18971* |
| **2025** | Mass excavation | 0.4 | 2.9 | 5.7 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 2557.2 | 0.0 | 2558.0 |
| | Finish grading | 0.2 | 1.3 | 2.2 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1063.3 | 0.0 | 1063.6 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.2* | *57.4* | *51.3* | *0.2* | *8.5* | *1.3* | *2.3* | *1.2* | *19482* | *0.3* | *19487* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2027** | Mass excavation | 0.4 | 2.5 | 5.2 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 2429.1 | 0.0 | 2429.7 |
| | Finish grading | 0.2 | 1.4 | 2.3 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1141.0 | 0.0 | 1141.3 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *57.2* | *50.9* | *0.2* | *8.5* | *1.3* | *2.3* | *1.2* | *19431* | *0.3* | *19437* |
| **2028** | Mass excavation | 0.3 | 2.2 | 4.8 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2225.2 | 0.0 | 2225.8 |
| | Finish grading | 0.2 | 1.3 | 2.2 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1089.1 | 0.0 | 1089.3 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.8* | *50.5* | *0.2* | *8.4* | *1.3* | *2.3* | *1.2* | *19175* | *0.3* | *19181* |

| | | Offsite Emissions (pounds/day) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **VOC** | **NOx** | **CO** | **SO2** | **PM10 dust** | **PM10 exhaust** | **PM2.5 dust** | **PM2.5 exhaust** | **CO2** | **CH4** | **MTCO2e** |
| **2029** | Mass excavation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *3.6* | *53.3* | *43.4* | *0.2* | *6.5* | *1.1* | *1.8* | *1.0* | *15861* | *0.2* | *15866* |
| **2030** | Mass excavation | 0.3 | 2.2 | 4.7 | 0.0 | 1.4 | 0.1 | 0.4 | 0.1 | 2216.9 | 0.0 | 2217.5 |
| | Finish grading | 0.2 | 1.4 | 2.4 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 | 1168.6 | 0.0 | 1168.8 |
| | Building - concrete | 0.6 | 9.7 | 7.6 | 0.0 | 1.0 | 0.2 | 0.3 | 0.2 | 2799.5 | 0.0 | 2800.3 |
| | Building - wet utilities | 0.5 | 7.2 | 6.1 | 0.0 | 1.0 | 0.2 | 0.3 | 0.1 | 2209.0 | 0.0 | 2209.7 |
| | Building - electrical | 0.5 | 7.8 | 5.6 | 0.0 | 0.8 | 0.2 | 0.2 | 0.1 | 2173.4 | 0.0 | 2174.0 |
| | Building - landscaping | 0.2 | 2.1 | 2.1 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 703.3 | 0.0 | 703.6 |
| | Utilities | 1.0 | 15.1 | 11.7 | 0.0 | 1.8 | 0.3 | 0.5 | 0.3 | 4402.2 | 0.1 | 4403.5 |
| | Interchange | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 0.1 | 1.8 | 1.9 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 630.6 | 0.0 | 630.8 |
| | Temporary utilities | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 0.2 | 3.5 | 2.8 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 1027.3 | 0.0 | 1027.6 |
| | Paving | 0.4 | 6.0 | 5.6 | 0.0 | 0.9 | 0.1 | 0.2 | 0.1 | 1915.8 | 0.0 | 1916.4 |
| | *Maximum/day* | *4.1* | *56.9* | *50.5* | *0.2* | *8.4* | *1.3* | *2.3* | *1.2* | *19247* | *0.3* | *19252* |

**World Logistics Center**

**Mitigated**

**Construction Duration**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)*

| Number of days: | | 52 weeks/year |
|---|---|---|
| 1 month | 20 | 5 days/week for average annual construction |
| 2 months | 40 | |
| 3 months | 65 | |
| 6 months | 130 | |

**Days of Construction**

| Plot: | 2 | | | | 4 | | | | 9 | | | | 1 ,3 and 20 | | 5 and 10 | | | | 7, 8 ,21 and 22 | | 11 | | | | | | 12 | | | | 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year: | *Year 2015* | | *Year 2016* | | *Year 2017* | | *Year 2018* | | *Year 2019* | | *Year 2020* | | *Year 2021* | | *Year 2022* | | *Year 2023* | | *Year 2024* | | *Year 2025* | | *Year 2026* | | *Year 2027* | | *Year 2028* | | *Year 2029* | | *Year 2030* | |
| Quarter: | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 | Q1&2 | Q3&4 |
| Mass excavation | 130 | | | | 130 | | | | 130 | | | | 130 | | | 77 | 77 | | | 77 | 77 | | | | 130 | | 130 | | | | 130 | |
| Finish grading | 40 | | | | 40 | | | | 40 | | | | 40 | | | 40 | 40 | | | 40 | 40 | | | | 40 | | 40 | | | | 40 | |
| Building - concrete | 0 | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Building - wet utilities | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Building - electrical | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Building - landscaping | 0 | 0 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Utilities | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Interchange | | | | | | | | | | | 130 | 130 | 130 | | | | | | | | | | | | | | | | | | | |
| Landscaping | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| Temporary utilities | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 0 | 130 |
| Curbing/drive approaches | 0 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Paving | 0 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

| Year: | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total | Months |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 130 | 0 | 130 | 0 | 130 | 0 | 130 | 77 | 77 | 77 | 77 | 0 | 130 | 130 | 0 | 130 | 1218 | 51 |
| Finish grading | 40 | 0 | 40 | 0 | 40 | 0 | 40 | 40 | 40 | 40 | 40 | 0 | 40 | 40 | 0 | 40 | 440 | 18 |
| Building - concrete | 0 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 3900 | 163 |
| Building - wet utilities | 130 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4030 | 168 |
| Building - electrical | 130 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4030 | 168 |
| Building - landscaping | 0 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 3900 | 163 |
| Utilities | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4160 | 173 |
| Interchange | 0 | 0 | 0 | 0 | 0 | 260 | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 390 | 16 |
| Landscaping | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 4160 | 173 |
| Temporary utilities | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 2080 | 87 |
| Curbing/drive approaches | 40 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 1240 | 52 |
| Paving | 20 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 620 | 26 |

**World Logistics Center** **Mitigated**

**Construction Annual Summary**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)*

**Onsite Emissions (tons/year)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 1.85 | 33.12 | 53.59 | 0.10 | 2.15 | 0.32 | 0.49 | 0.32 | 10488 | 3.1 | 10554 |
| 2016 | 3.79 | 36.28 | 51.62 | 0.09 | 0.04 | 0.43 | 0.00 | 0.43 | 9774 | 2.9 | 9834 |
| 2017 | 4.30 | 45.88 | 71.38 | 0.13 | 2.20 | 0.49 | 0.49 | 0.48 | 13404 | 4.0 | 13488 |
| 2018 | 4.22 | 36.28 | 51.62 | 0.09 | 0.04 | 0.43 | 0.00 | 0.43 | 9774 | 2.9 | 9834 |
| 2019 | 5.89 | 60.41 | 94.94 | 0.18 | 4.57 | 0.58 | 1.27 | 0.57 | 18608 | 5.7 | 18727 |
| 2020 | 6.29 | 40.14 | 60.22 | 0.11 | 0.66 | 0.46 | 0.24 | 0.45 | 11124 | 3.3 | 11193 |
| 2021 | 6.55 | 45.15 | 66.67 | 0.13 | 2.02 | 0.49 | 0.42 | 0.48 | 12916 | 3.9 | 12997 |
| 2022 | 4.25 | 39.47 | 56.48 | 0.10 | 1.07 | 0.46 | 0.21 | 0.45 | 10882 | 3.2 | 10950 |
| 2023 | 3.59 | 44.95 | 64.67 | 0.13 | 1.92 | 0.49 | 0.50 | 0.48 | 12858 | 3.9 | 12940 |
| 2024 | 4.20 | 41.88 | 59.80 | 0.11 | 1.42 | 0.47 | 0.33 | 0.46 | 11772 | 3.5 | 11846 |
| 2025 | 4.47 | 44.95 | 63.48 | 0.13 | 1.93 | 0.49 | 0.50 | 0.48 | 12862 | 3.9 | 12943 |
| 2026 | 4.15 | 36.28 | 51.62 | 0.09 | 0.04 | 0.43 | 0.00 | 0.43 | 9774 | 2.9 | 9834 |
| 2027 | 4.75 | 48.40 | 62.74 | 0.14 | 2.88 | 0.43 | 0.74 | 0.43 | 13486 | 4.3 | 13576 |
| 2028 | 4.46 | 45.27 | 57.72 | 0.13 | 2.21 | 0.42 | 0.49 | 0.41 | 12399 | 3.9 | 12482 |
| 2029 | 3.26 | 35.89 | 44.92 | 0.09 | 0.04 | 0.36 | 0.00 | 0.36 | 9037 | 2.9 | 9097 |
| 2030 | 3.64 | 42.06 | 51.49 | 0.12 | 2.05 | 0.40 | 0.48 | 0.39 | 11660 | 3.0 | 11723 |

**Offsite Emissions (tons/year)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 0.26 | 3.78 | 3.24 | 0.01 | 0.50 | 0.08 | 0.14 | 0.07 | 1158 | 0.0 | 1158 |
| 2016 | 0.40 | 5.95 | 4.78 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.0 | 1759 |
| 2017 | 0.43 | 6.33 | 5.28 | 0.02 | 0.81 | 0.13 | 0.22 | 0.12 | 1931 | 0.0 | 1932 |
| 2018 | 0.40 | 5.95 | 4.78 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.0 | 1759 |
| 2019 | 0.45 | 6.64 | 5.45 | 0.02 | 0.84 | 0.14 | 0.23 | 0.13 | 2045 | 0.0 | 2045 |
| 2020 | 0.40 | 5.95 | 4.78 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.0 | 1759 |
| 2021 | 0.42 | 6.14 | 5.14 | 0.02 | 0.80 | 0.13 | 0.22 | 0.12 | 1894 | 0.0 | 1895 |
| 2022 | 0.41 | 6.06 | 5.00 | 0.02 | 0.77 | 0.13 | 0.21 | 0.12 | 1845 | 0.0 | 1846 |
| 2023 | 0.42 | 6.08 | 5.04 | 0.02 | 0.78 | 0.13 | 0.21 | 0.12 | 1876 | 0.0 | 1876 |
| 2024 | 0.41 | 6.06 | 5.01 | 0.02 | 0.78 | 0.13 | 0.21 | 0.12 | 1863 | 0.0 | 1863 |
| 2025 | 0.42 | 6.08 | 5.04 | 0.02 | 0.78 | 0.13 | 0.21 | 0.12 | 1878 | 0.0 | 1879 |
| 2026 | 0.40 | 5.95 | 4.78 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.0 | 1759 |
| 2027 | 0.42 | 6.14 | 5.16 | 0.02 | 0.82 | 0.13 | 0.22 | 0.12 | 1939 | 0.0 | 1940 |
| 2028 | 0.42 | 6.12 | 5.13 | 0.02 | 0.81 | 0.13 | 0.22 | 0.12 | 1925 | 0.0 | 1926 |
| 2029 | 0.40 | 5.95 | 4.78 | 0.02 | 0.71 | 0.13 | 0.19 | 0.12 | 1759 | 0.0 | 1759 |
| 2030 | 0.42 | 6.12 | 5.13 | 0.02 | 0.81 | 0.13 | 0.22 | 0.12 | 1926 | 0.0 | 1927 |

**Total Onsite and Offsite Emissions (tons/year)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | MT/year CO2 | MT/year CH4 | MTCO2e (CalEEMod) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 2.12 | 36.90 | 56.84 | 0.11 | 2.65 | 0.40 | 0.62 | 0.39 | 11646 | 3.14 | 11712 |
| 2016 | 4.19 | 42.23 | 56.39 | 0.11 | 0.75 | 0.56 | 0.20 | 0.54 | 11533 | 2.90 | 11594 |
| 2017 | 4.73 | 52.21 | 76.66 | 0.15 | 3.01 | 0.63 | 0.71 | 0.61 | 15335 | 4.01 | 15419 |
| 2018 | 4.62 | 42.23 | 56.39 | 0.11 | 0.75 | 0.56 | 0.20 | 0.54 | 11533 | 2.90 | 11594 |
| 2019 | 6.34 | 67.04 | 100.39 | 0.20 | 5.42 | 0.72 | 1.50 | 0.70 | 20653 | 5.69 | 20772 |
| 2020 | 6.69 | 46.09 | 65.00 | 0.12 | 1.37 | 0.58 | 0.43 | 0.56 | 12883 | 3.30 | 12952 |
| 2021 | 6.97 | 51.29 | 71.81 | 0.14 | 2.82 | 0.62 | 0.64 | 0.60 | 14810 | 3.90 | 14892 |
| 2022 | 4.67 | 45.53 | 61.48 | 0.12 | 1.84 | 0.59 | 0.42 | 0.57 | 12727 | 3.25 | 12796 |
| 2023 | 4.00 | 51.02 | 69.71 | 0.14 | 2.70 | 0.62 | 0.71 | 0.60 | 14734 | 3.89 | 14816 |
| 2024 | 4.61 | 47.94 | 64.81 | 0.13 | 2.20 | 0.60 | 0.54 | 0.58 | 13635 | 3.54 | 13709 |
| 2025 | 4.89 | 51.03 | 68.52 | 0.14 | 2.71 | 0.62 | 0.72 | 0.60 | 14740 | 3.89 | 14822 |
| 2026 | 4.55 | 42.23 | 56.39 | 0.11 | 0.75 | 0.56 | 0.20 | 0.54 | 11533 | 2.90 | 11594 |
| 2027 | 5.18 | 54.53 | 67.89 | 0.16 | 3.70 | 0.57 | 0.96 | 0.55 | 15425 | 4.32 | 15516 |
| 2028 | 4.88 | 51.39 | 62.85 | 0.15 | 3.02 | 0.55 | 0.71 | 0.54 | 14324 | 3.97 | 14407 |
| 2029 | 3.66 | 41.84 | 49.69 | 0.11 | 0.75 | 0.48 | 0.20 | 0.47 | 10796 | 2.88 | 10856 |
| 2030 | 4.06 | 48.18 | 56.61 | 0.14 | 2.87 | 0.53 | 0.70 | 0.52 | 13586 | 3.00 | 13649 |
| Total | 76.16 | 771.68 | 1041.45 | 2.17 | 37.31 | 9.18 | 9.47 | 8.90 | 219894 | 57.49 | 221101 |
| Average over 30 years (tons/year) | | | | | | | | | 8080 | 2.11 | |

| | Black Carbon (tons) | Black Carbon (MTCO2e) | Square Feet | Percent added | Refrigerants (MTCO2e) | Construction Waste (MTCO2e) | Waste, refrigerants (MTCO2e) | Water Use (tons CO2) | Water use (tons CH4) | Water use (tons N2O) | Water Use (MTCO2e) | Total (MTCO2e) | Without Refrigerants and Waste (MTCO2e) | Waste (CH4 tons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 0.303 | 209 | 0 | 5.2% | 26 | -701 | -675 | 381 | 0.0175 | 0.0036 | 347 | 11592 | 12267 | -36.78 |
| 2016 | 0.416 | 287 | 2100000 | 5.2% | 26 | -701 | -675 | 381 | 0.0175 | 0.0036 | 347 | 11552 | 12227 | -36.78 |
| 2017 | 0.467 | 322 | 4200000 | 6.9% | 34 | -934 | -900 | 508 | 0.0233 | 0.0048 | 462 | 15303 | 16203 | -49.04 |
| 2018 | 0.416 | 287 | 7000000 | 6.9% | 34 | -934 | -900 | 508 | 0.0233 | 0.0048 | 462 | 11443 | 12343 | -49.04 |
| 2019 | 0.540 | 372 | 9800000 | 12.8% | 64 | -1735 | -1671 | 943 | 0.0433 | 0.0090 | 859 | 20332 | 22003 | -91.08 |
| 2020 | 0.433 | 299 | 15000000 | 13.1% | 65 | -1769 | -1704 | 961 | 0.0442 | 0.0091 | 875 | 12423 | 14126 | -92.83 |
| 2021 | 0.461 | 318 | 20300000 | 6.5% | 33 | -884 | -852 | 480 | 0.0221 | 0.0046 | 438 | 14796 | 15647 | -46.42 |
| 2022 | 0.437 | 302 | 22950000 | 2.7% | 13 | -367 | -354 | 199 | 0.0092 | 0.0019 | 182 | 12925 | 13279 | -19.27 |
| 2023 | 0.460 | 317 | 24050000 | 5.4% | 27 | -734 | -707 | 399 | 0.0183 | 0.0038 | 363 | 14790 | 15497 | -38.53 |
| 2024 | 0.446 | 307 | 26250000 | 5.8% | 29 | -784 | -755 | 426 | 0.0196 | 0.0041 | 388 | 13649 | 14405 | -41.16 |
| 2025 | 0.461 | 318 | 28600000 | 6.6% | 33 | -891 | -858 | 484 | 0.0222 | 0.0046 | 441 | 14722 | 15580 | -46.77 |
| 2026 | 0.416 | 287 | 31270000 | 6.6% | 33 | -888 | -855 | 482 | 0.0222 | 0.0046 | 439 | 11465 | 12320 | -46.59 |
| 2027 | 0.427 | 295 | 33930000 | 6.6% | 33 | -891 | -858 | 484 | 0.0222 | 0.0046 | 441 | 15393 | 16251 | -46.77 |
| 2028 | 0.412 | 284 | 36600000 | 4.3% | 21 | -584 | -562 | 317 | 0.0146 | 0.0030 | 289 | 14418 | 14981 | -30.65 |
| 2029 | 0.363 | 251 | 38350000 | 4.3% | 21 | -584 | -562 | 317 | 0.0146 | 0.0030 | 289 | 10833 | 11396 | -30.65 |
| 2030 | 0.397 | 274 | 40100000 | 1.2% | 6 | -167 | -161 | 91 | 0.0042 | 0.0009 | 83 | 13845 | 14006 | -8.76 |
| Total | 6.857 | 4727 | 40600000 | 0 | 498 | -13548 | -13050 | 7360 | 0.3383 | 0.0700 | 6703 | 219482 | 232532 | -711.14 |
| Average (30 years) | 0.229 | 158 | | | 17 | -452 | -435 | 245 | 0.0113 | 0.0023 | 223 | 7316 | 7751 | -23.70 |
| Tons average | | | | | | | | 245 | 0.0113 | 0.0023 | | | | |
| Tons in 2022 | | | | | | | | 199 | 0.0092 | 0.0019 | | | | |
| Percent of total | | 2% | | | | | | | | | | | | |

| | CO2 | Methane | Nitrous Oxide | HFCs | Black Carbon | MTCO2e | |
|---|---|---|---|---|---|---|---|
| **2022** | 14229 | 3.60 | 0.0019 | 0.01 | 0.437 | 12925 | |
| **Average** | 8325 | 2.12 | 0.0023 | 0.00 | 0.23 | 7751 | (without refrigerants) |

| | |
|---|---|
| Percent of black carbon from PM2.5 exhaust: | 77% |
| Black carbon global warming potential: | 760 |

Refrigerants, land use, and water use estimated per year based on percent square feet added

**World Logistics Center** **Mitigated**

**Construction Onsite Annual Emissions**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)*

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | Mass excavation | 130 | 0.6 | 9.0 | 20.9 | 0.0 | 1.9 | 0.1 | 0.4 | 0.1 | 3509.9 | 1.0 | 3531.8 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 23.2 | 0.0 | 23.3 |
| | Building - concrete | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - wet utilities | 130 | 0.1 | 3.1 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 854.2 | 0.3 | 859.5 |
| | Building - electrical | 130 | 0.1 | 2.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 383.2 | 0.1 | 385.6 |
| | Building - landscaping | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.1 | 0.0 | 30.3 |
| | Paving | 20 | 0.0 | 0.3 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 89.3 | 0.0 | 89.9 |
| | Paving VOC | | 0.0 | | | | | | | | | | |
| | Painting VOC | 0 | 0.0 | | | | | | | | | | |
| | *Total* | | *1.9* | *33.1* | *53.6* | *0.1* | *2.2* | *0.3* | *0.5* | *0.3* | *10487.9* | *3.1* | *10553.6* |
| **2016** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.8 | | | | | | | | | | |
| | *Total* | | *3.8* | *36.3* | *51.6* | *0.1* | *0.0* | *0.4* | *0.0* | *0.4* | *9774.2* | *2.9* | *9834.5* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 130 | 0.6 | 9.5 | 19.6 | 0.0 | 1.9 | 0.1 | 0.4 | 0.1 | 3607.1 | 1.1 | 3630.3 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 22.6 | 0.0 | 22.8 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.7 | | | | | | | | | | |
| | *Total* | | *4.3* | *45.9* | *71.4* | *0.1* | *2.2* | *0.5* | *0.5* | *0.5* | *13403.9* | *4.0* | *13487.5* |
| **2018** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.2 | | | | | | | | | | |
| | *Total* | | *4.2* | *36.3* | *51.6* | *0.1* | *0.0* | *0.4* | *0.0* | *0.4* | *9774.2* | *2.9* | *9834.5* |
| **2019** | Mass excavation | 130 | 1.5 | 23.8 | 42.8 | 0.1 | 4.0 | 0.1 | 1.0 | 0.1 | 8768.7 | 2.8 | 8826.9 |
| | Finish grading | 40 | 0.0 | 0.3 | 0.5 | 0.0 | 0.6 | 0.0 | 0.2 | 0.0 | 65.2 | 0.0 | 65.6 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.4 | | | | | | | | | | |
| | *Total* | | *5.9* | *60.4* | *94.9* | *0.2* | *4.6* | *0.6* | *1.3* | *0.6* | *18608.1* | *5.7* | *18727.0* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 260 | 0.2 | 3.9 | 8.6 | 0.0 | 0.6 | 0.0 | 0.2 | 0.0 | 1350.1 | 0.4 | 1358.6 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 4.0 | | | | | | | | | | |
| | *Total* | | *6.3* | *40.1* | *60.2* | *0.1* | *0.7* | *0.5* | *0.2* | *0.4* | *11124.3* | *3.3* | *11193.1* |
| **2021** | Mass excavation | 130 | 0.4 | 6.8 | 10.6 | 0.0 | 1.4 | 0.0 | 0.2 | 0.0 | 2445.2 | 0.8 | 2461.7 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 21.5 | 0.0 | 21.7 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 130 | 0.1 | 1.9 | 4.3 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 675.1 | 0.2 | 679.3 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 4.0 | | | | | | | | | | |
| | *Total* | | *6.5* | *45.2* | *66.7* | *0.1* | *2.0* | *0.5* | *0.4* | *0.5* | *12915.9* | *3.9* | *12997.2* |
| **2022** | Mass excavation | 77 | 0.2 | 3.1 | 4.7 | 0.0 | 0.8 | 0.0 | 0.1 | 0.0 | 1083.3 | 0.3 | 1090.6 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 24.5 | 0.0 | 24.7 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.0 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *4.3* | *39.5* | *56.5* | *0.1* | *1.1* | *0.5* | *0.2* | *0.4* | *10882.0* | *3.2* | *10949.8* |

| | | Days/ year | Onsite Emissions (tons/year) VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2023** | Mass excavation | 77 | 0.5 | 8.5 | 12.7 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 3041.3 | 1.0 | 3061.9 |
| | Finish grading | 40 | 0.0 | 0.2 | 0.3 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 42.9 | 0.0 | 43.2 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.1 | | | | | | | | | | |
| | *Total* | | *3.6* | *44.9* | *64.7* | *0.1* | *1.9* | *0.5* | *0.5* | *0.5* | *12858.4* | *3.9* | *12939.6* |
| **2024** | Mass excavation | 77 | 0.3 | 5.5 | 8.0 | 0.0 | 1.1 | 0.0 | 0.2 | 0.0 | 1976.4 | 0.6 | 1989.8 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 21.7 | 0.0 | 21.9 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.8 | | | | | | | | | | |
| | *Total* | | *4.2* | *41.9* | *59.8* | *0.1* | *1.4* | *0.5* | *0.3* | *0.5* | *11772.3* | *3.5* | *11846.2* |
| **2025** | Mass excavation | 77 | 0.5 | 8.5 | 11.5 | 0.0 | 1.5 | 0.1 | 0.4 | 0.1 | 3044.3 | 1.0 | 3065.0 |
| | Finish grading | 40 | 0.0 | 0.2 | 0.3 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 43.0 | 0.0 | 43.3 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 1.9 | | | | | | | | | | |
| | *Total* | | *4.5* | *44.9* | *63.5* | *0.1* | *1.9* | *0.5* | *0.5* | *0.5* | *12861.5* | *3.9* | *12942.8* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 823.3 | 0.2 | 827.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1708.4 | 0.5 | 1719.1 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 766.3 | 0.2 | 771.1 |
| | Building - landscaping | 260 | 0.2 | 3.3 | 4.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 639.2 | 0.2 | 643.2 |
| | Utilities | 260 | 0.8 | 14.4 | 17.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4720.8 | 1.4 | 4750.4 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.5 | 5.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 688.2 | 0.2 | 692.5 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 189.1 | 0.1 | 190.3 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.2 | 0.0 | 60.6 |
| | Paving | 40 | 0.0 | 0.6 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 178.6 | 0.1 | 179.7 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *4.2* | *36.3* | *51.6* | *0.1* | *0.0* | *0.4* | *0.0* | *0.4* | *9774.2* | *2.9* | *9834.5* |
| **2027** | Mass excavation | 130 | 0.8 | 12.3 | 17.5 | 0.0 | 2.5 | 0.1 | 0.6 | 0.1 | 4405.8 | 1.4 | 4435.6 |
| | Finish grading | 40 | 0.0 | 0.2 | 0.3 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 43.1 | 0.0 | 43.4 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 8.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.2 | 3.1 | 4.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 0.8 | 14.4 | 14.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.3 | 4.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.0 | 0.6 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.1 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *4.8* | *48.4* | *62.7* | *0.1* | *2.9* | *0.4* | *0.7* | *0.4* | *13486.0* | *4.3* | *13576.2* |
| **2028** | Mass excavation | 130 | 0.6 | 9.3 | 12.6 | 0.0 | 1.9 | 0.1 | 0.4 | 0.1 | 3339.7 | 1.1 | 3362.3 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 22.0 | 0.0 | 22.1 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 8.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.2 | 3.1 | 4.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 0.8 | 14.4 | 14.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.3 | 4.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.0 | 0.6 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.05 | | | | | | | | | | |
| | Painting VOC | | 2.1 | | | | | | | | | | |
| | *Total* | | *4.5* | *45.3* | *57.7* | *0.1* | *2.2* | *0.4* | *0.5* | *0.4* | *12398.7* | *3.9* | *12481.5* |

| | | | Onsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 8.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.2 | 3.1 | 4.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 0.8 | 14.4 | 14.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.3 | 4.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.0 | 0.6 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.05 | | | | | | | | | | |
| | Painting VOC | | 1.4 | | | | | | | | | | |
| | *Total* | | *3.3* | *35.9* | *44.9* | *0.1* | *0.0* | *0.4* | *0.0* | *0.4* | *9037.1* | *2.9* | *9097.1* |
| **2030** | Mass excavation | 130 | 0.4 | 6.1 | 6.4 | 0.0 | 1.7 | 0.0 | 0.4 | 0.0 | 2596.9 | 0.1 | 2599.4 |
| | Finish grading | 40 | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 26.2 | 0.0 | 26.2 |
| | Building - concrete | 260 | 0.2 | 3.4 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 776.7 | 0.2 | 780.6 |
| | Building - wet utilities | 260 | 0.3 | 6.3 | 8.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1575.8 | 0.5 | 1586.5 |
| | Building - electrical | 260 | 0.2 | 4.0 | 5.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 707.9 | 0.2 | 712.6 |
| | Building - landscaping | 260 | 0.2 | 3.1 | 4.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 589.7 | 0.2 | 593.7 |
| | Utilities | 260 | 0.8 | 14.4 | 14.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 4357.0 | 1.4 | 4386.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.2 | 3.3 | 4.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 634.9 | 0.2 | 639.2 |
| | Temporary utilities | 130 | 0.0 | 0.5 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 174.6 | 0.1 | 175.7 |
| | Curbing/drive approaches | 80 | 0.0 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 55.7 | 0.0 | 56.0 |
| | Paving | 40 | 0.0 | 0.6 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 165.0 | 0.1 | 166.1 |
| | Paving VOC | | 0.05 | | | | | | | | | | |
| | Painting VOC | | 1.4 | | | | | | | | | | |
| | *Total* | | *3.6* | *42.1* | *51.5* | *0.1* | *2.1* | *0.4* | *0.5* | *0.4* | *11660.2* | *3.0* | *11722.7* |

**World Logistics Center** **Mitigated**

**Construction Offsite Annual Emissions**

*Prepared by Michael Brandman Associates/FirstCarbon Solutions*

*Mitigated: Tier IV construction equipment (2/24/2015)*

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2015** | Mass excavation | 130 | 0.0 | 0.5 | 0.6 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 170.3 | 0.0 | 170.3 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.7 | 0.0 | 8.7 |
| | Building - concrete | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - wet utilities | 130 | 0.0 | 0.5 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 143.6 | 0.0 | 143.6 |
| | Building - electrical | 130 | 0.0 | 0.5 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 141.3 | 0.0 | 141.3 |
| | Building - landscaping | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.5 | 0.0 | 20.6 |
| | Paving | 20 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.2 | 0.0 | 19.2 |
| | *Total* | | *0.3* | *3.8* | *3.2* | *0.0* | *0.5* | *0.1* | *0.1* | *0.1* | *1157.8* | *0.0* | *1158.2* |
| **2016** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2017** | Mass excavation | 130 | 0.0 | 0.4 | 0.5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 162.5 | 0.0 | 162.6 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 10.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.3* | *5.3* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1931.2* | *0.0* | *1931.8* |
| **2018** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2019** | Mass excavation | 130 | 0.0 | 0.7 | 0.6 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 269.5 | 0.0 | 269.6 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.6 | 0.0 | 16.6 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.6* | *5.5* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *2044.8* | *0.0* | *2045.4* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2020** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 260 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2021** | Mass excavation | 130 | 0.0 | 0.2 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 123.3 | 0.0 | 123.4 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.3 | 0.0 | 12.3 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.1* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1894.4* | *0.0* | *1895.0* |
| **2022** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 70.0 | 0.0 | 70.0 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.6 | 0.0 | 16.6 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1845.3* | *0.0* | *1845.8* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2023** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 99.0 | 0.0 | 99.1 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.1 | 0.0 | 18.1 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1875.8* | *0.0* | *1876.4* |
| **2024** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 86.7 | 0.0 | 86.8 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.0 | 0.0 | 17.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1862.5* | *0.0* | *1863.1* |
| **2025** | Mass excavation | 77 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 98.5 | 0.0 | 98.5 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.3 | 0.0 | 21.3 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.0* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1878.5* | *0.0* | *1879.0* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2026** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2027** | Mass excavation | 130 | 0.0 | 0.2 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 157.9 | 0.0 | 157.9 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.8 | 0.0 | 22.8 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.2* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1939.5* | *0.0* | *1940.0* |
| **2028** | Mass excavation | 130 | 0.0 | 0.1 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 144.6 | 0.0 | 144.7 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.8 | 0.0 | 21.8 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.1* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1925.2* | *0.0* | *1925.7* |

| | | | Offsite Emissions (tons/year) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days/ year | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM2.5 dust | PM2.5 exhaust | CO2 | CH4 | MTCO2e |
| **2029** | Mass excavation | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Finish grading | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *5.9* | *4.8* | *0.0* | *0.7* | *0.1* | *0.2* | *0.1* | *1758.8* | *0.0* | *1759.3* |
| **2030** | Mass excavation | 130 | 0.0 | 0.1 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 144.1 | 0.0 | 144.1 |
| | Finish grading | 40 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.4 | 0.0 | 23.4 |
| | Building - concrete | 260 | 0.1 | 1.3 | 1.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 363.9 | 0.0 | 364.0 |
| | Building - wet utilities | 260 | 0.1 | 0.9 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 287.2 | 0.0 | 287.3 |
| | Building - electrical | 260 | 0.1 | 1.0 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 282.5 | 0.0 | 282.6 |
| | Building - landscaping | 260 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 91.4 | 0.0 | 91.5 |
| | Utilities | 260 | 0.1 | 2.0 | 1.5 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 572.3 | 0.0 | 572.5 |
| | Interchange | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Landscaping | 260 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 82.0 | 0.0 | 82.0 |
| | Temporary utilities | 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Curbing/drive approaches | 80 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.1 | 0.0 | 41.1 |
| | Paving | 40 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.3 | 0.0 | 38.3 |
| | *Total* | | *0.4* | *6.1* | *5.1* | *0.0* | *0.8* | *0.1* | *0.2* | *0.1* | *1926.2* | *0.0* | *1926.8* |

## Construction
## VOC Off-Gassing during Construction

World Logistics Center
Prepared by Michael Brandman Associates
1-Nov-13

**Estimate of Area to be Painted (Exterior of Buildings)**

The number of buildings for the project is unknown at this time. The Skecher building was approximately 1,810,000 square feet. Assuming that the project buildings have an average size of 1,500,000 square feet each yields the following number of buildings. Taking the square root of the building size and mulitiplying by 4 yields the perimeter of each building. Days of painting for the exterior assumes that each building would take 30 days to paint.

| | | | | | | | | | Unmitigated | | | Mitigated | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Year* | *Area (million sf)* | *Building size (sf)* | *Buildings* | *Building perimeter (feet)* | *Height of building (feet)* | *Area painted per building (sf)* | *Coats* | *Area to be painted (sf)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* |
| 2016 | 2.1 | 1,500,000 | 1.4 | 4,899 | 40 | 195,959 | 2 | 548,686 | 1,646 | 42 | 39.2 | 686 | 42 | 16.3 |
| 2017 | 2.1 | 1,500,000 | 1.4 | 4,899 | 40 | 195,959 | 2 | 548,686 | 1,646 | 42 | 39.2 | 686 | 42 | 16.3 |
| 2018 | 2.8 | 1,500,000 | 1.9 | 4,899 | 40 | 195,959 | 2 | 744,645 | 2,234 | 57 | 39.2 | 931 | 57 | 16.3 |
| 2019 | 2.8 | 1,500,000 | 1.9 | 4,899 | 40 | 195,959 | 2 | 744,645 | 2,234 | 57 | 39.2 | 931 | 57 | 16.3 |
| 2020 | 5.2 | 1,500,000 | 3.5 | 4,899 | 40 | 195,959 | 2 | 1,371,714 | 4,115 | 105 | 39.2 | 1,715 | 105 | 16.3 |
| 2021 | 5.2 | 1,500,000 | 3.5 | 4,899 | 40 | 195,959 | 2 | 1,371,714 | 4,115 | 105 | 39.2 | 1,715 | 105 | 16.3 |
| 2022 | 2.7 | 1,500,000 | 1.9 | 4,899 | 40 | 195,959 | 2 | 744,645 | 2,234 | 57 | 39.2 | 931 | 57 | 16.3 |
| 2023 | 1.1 | 1,500,000 | 0.8 | 4,899 | 40 | 195,959 | 2 | 313,535 | 941 | 24 | 39.2 | 392 | 24 | 16.3 |
| 2024 | 2.2 | 1,500,000 | 1.5 | 4,899 | 40 | 195,959 | 2 | 587,878 | 1,764 | 45 | 39.2 | 735 | 45 | 16.3 |
| 2025 | 2.4 | 1,500,000 | 1.6 | 4,899 | 40 | 195,959 | 2 | 627,069 | 1,881 | 48 | 39.2 | 784 | 48 | 16.3 |
| 2026 | 2.7 | 1,500,000 | 1.8 | 4,899 | 40 | 195,959 | 2 | 705,453 | 2,116 | 54 | 39.2 | 882 | 54 | 16.3 |
| 2027 | 2.7 | 1,500,000 | 1.8 | 4,899 | 40 | 195,959 | 2 | 705,453 | 2,116 | 54 | 39.2 | 882 | 54 | 16.3 |
| 2028 | 2.7 | 1,500,000 | 1.8 | 4,899 | 40 | 195,959 | 2 | 705,453 | 2,116 | 54 | 39.2 | 882 | 54 | 16.3 |
| 2029 | 1.8 | 1,500,000 | 1.2 | 4,899 | 40 | 195,959 | 2 | 470,302 | 1,411 | 36 | 39.2 | 588 | 36 | 16.3 |
| 2030 | 1.8 | 1,500,000 | 1.2 | 4,899 | 40 | 195,959 | 2 | 470,302 | 1,411 | 36 | 39.2 | 588 | 36 | 16.3 |
| 2031 | 0.5 | 1,500,000 | 0.4 | 4,899 | 40 | 195,959 | 2 | 156,767 | 470 | 12 | 39.2 | 196 | 12 | 16.3 |
| Total | 40.6 | - | 27.6 | - | - | - | - | 10,816,947 | | 828 | | | 828 | |

## Construction
## VOC Off-Gassing during Construction

World Logistics Center
Prepared by Michael Brandman Associates
1-Nov-13

**Estimate of Area to be Painted (Interior of Buildings)**

It is assumed that the warehouse interiors would not be painted, with the exception the offices (if any). The Skecher building had approximately 50,000 square feet of office. CalEEMod assumes the total surface painting equals 2 times the square footage, which is used here to determine the interior area to be painted. Days of painting for the interior offices assume that each building would take 10 days to paint.

| | | | | Unmitigated | | | Mitigated | | |
|---|---|---|---|---|---|---|---|---|---|
| *Year* | *Buildings* | *Office area per building (sf)* | *Area to be painted (sf)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* | *Emissions (lbs VOC)* | *Days of Painting* | *Emissions (lbs/day)* |
| 2016 | 1.4 | 50,000 | 140,000 | 1,260 | 14 | 90.0 | 525 | 14 | 37.5 |
| 2017 | 1.4 | 50,000 | 140,000 | 1,260 | 14 | 90.0 | 525 | 14 | 37.5 |
| 2018 | 1.9 | 50,000 | 190,000 | 1,710 | 19 | 90.0 | 713 | 19 | 37.5 |
| 2019 | 1.9 | 50,000 | 190,000 | 1,710 | 19 | 90.0 | 713 | 19 | 37.5 |
| 2020 | 3.5 | 50,000 | 350,000 | 3,150 | 35 | 90.0 | 1,313 | 35 | 37.5 |
| 2021 | 3.5 | 50,000 | 350,000 | 3,150 | 35 | 90.0 | 1,313 | 35 | 37.5 |
| 2022 | 1.9 | 50,000 | 190,000 | 1,710 | 19 | 90.0 | 713 | 19 | 37.5 |
| 2023 | 0.8 | 50,000 | 80,000 | 720 | 8 | 90.0 | 300 | 8 | 37.5 |
| 2024 | 1.5 | 50,000 | 150,000 | 1,350 | 15 | 90.0 | 563 | 15 | 37.5 |
| 2025 | 1.6 | 50,000 | 160,000 | 1,440 | 16 | 90.0 | 600 | 16 | 37.5 |
| 2026 | 1.8 | 50,000 | 180,000 | 1,620 | 18 | 90.0 | 675 | 18 | 37.5 |
| 2027 | 1.8 | 50,000 | 180,000 | 1,620 | 18 | 90.0 | 675 | 18 | 37.5 |
| 2028 | 1.8 | 50,000 | 180,000 | 1,620 | 18 | 90.0 | 675 | 18 | 37.5 |
| 2029 | 1.2 | 50,000 | 120,000 | 1,080 | 12 | 90.0 | 450 | 12 | 37.5 |
| 2030 | 1.2 | 50,000 | 120,000 | 1,080 | 12 | 90.0 | 450 | 12 | 37.5 |
| 2031 | 0.4 | 50,000 | 40,000 | 360 | 4 | 90.0 | 150 | 4 | 37.5 |
| Total | | | 2,760,000 | | 276 | | | 276 | |

**VOC Emissions Estimates Assumptions**

VOC emissions are estimated separately using the methodology in the CalEEMod manual:

E = EF x F • A

Where:

E = emissions (pounds VOC)
EF = emission factor (pounds per square feet) = VOC content (g/L) / 454 (g/lb) x 3.785(L/Gal) / 180(square feet)
A = building surface area (square feet)
F = fraction of surface area

Unmitigated EF (assume 250 grams/Liter) = 0.012
Mitigated EF (assume 100 grams/Liter) = 0.005
Traffic coatings EF (100 g/L) = 0.005 (source: SCAQMD Rule 1113, Traffic Coating Current Limit)
Exterior Fraction of surface area = 0.25
Interior Fraction of surface area = 0.75

## Construction
## VOC Off-Gassing during Construction

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**VOC Emissions from Painting (striping)**

CalEEMod also calculates the VOC emissions from the painting of stripes, handicap symbols, directional arrows and car space descriptions in parking lots. Please refer to Appendix E for the studies conducted to determine a default percent of parking lot square footage that is painted. The equation for striping emission is the same as that for $E_{AC}$ above, but $A_{paint}$ is:

$$A_{paint} = A_{PL} \times P\%$$

Where:

$A_{PL}$ = Parking lot area (sqft)

$P\%$ = Default percent of parking lot area that is painted

**5 acres/day painted**

**Unmitigated**

| Year | Area (acres) | Paved Area | Paved Area (acres) | P% | Area to be painted (sf) | Emissions (lbs VOC) | Days of Painting | Emissions (lbs/day) |
|---|---|---|---|---|---|---|---|---|
| 2016 | 194 | 33% | 64 | 6% | 166891 | 626 | 12.8 | 49.0 |
| 2017 | 151 | 33% | 50 | 6% | 130020 | 488 | 9.9 | 49.0 |
| 2018 | 151 | 33% | 50 | 6% | 130020 | 488 | 9.9 | 49.0 |
| 2019 | 243 | 33% | 80 | 6% | 209498 | 786 | 16.0 | 49.0 |
| 2020 | 243 | 33% | 80 | 6% | 209498 | 786 | 16.0 | 49.0 |
| 2021 | 214 | 33% | 71 | 6% | 184745 | 693 | 14.1 | 49.0 |
| 2022 | 64 | 33% | 21 | 6% | 55372 | 208 | 4.2 | 49.0 |
| 2023 | 140 | 33% | 46 | 6% | 120662 | 452 | 9.2 | 49.0 |
| 2024 | 174 | 33% | 57 | 6% | 150245 | 563 | 11.5 | 49.0 |
| 2025 | 167 | 33% | 55 | 6% | 143748 | 539 | 11.0 | 49.0 |
| 2026 | 167 | 33% | 55 | 6% | 143748 | 539 | 11.0 | 49.0 |
| 2027 | 167 | 33% | 55 | 6% | 143748 | 539 | 11.0 | 49.0 |
| 2028 | 116 | 33% | 38 | 6% | 99747 | 374 | 7.6 | 49.0 |
| 2029 | 116 | 33% | 38 | 6% | 99747 | 374 | 7.6 | 49.0 |
| 2030 | 115 | 33% | 38 | 6% | 99445 | 373 | 7.6 | 49.0 |
| Total | 2420 | | | | 2087135 | 7,827 | | |

## Construction
## VOC Off-Gassing during Construction

World Logistics Center
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**Summary of Painting Emissions**

| | Unmitigated (pounds/day) | | | | (tons/year) | Mitigated (pounds/day) | | | | (tons/year) |
|---|---|---|---|---|---|---|---|---|---|---|
| *Year* | *Exterior* | *Interior* | *Pavement* | *Total* | ***Total*** | *Exterior* | *Interior* | *Pavement* | *Total* | *Total* |
| 2016 | 39.2 | 90.0 | 49.0 | 178.2 | *1.8* | 16.3 | 37.5 | 49.0 | 102.8 | *0.9* |
| 2017 | 39.2 | 90.0 | 49.0 | 178.2 | *1.7* | 16.3 | 37.5 | 49.0 | 102.8 | *0.8* |
| 2018 | 39.2 | 90.0 | 49.0 | 178.2 | *2.2* | 16.3 | 37.5 | 49.0 | 102.8 | *1.1* |
| 2019 | 39.2 | 90.0 | 49.0 | 178.2 | *2.4* | 16.3 | 37.5 | 49.0 | 102.8 | *1.2* |
| 2020 | 39.2 | 90.0 | 49.0 | 178.2 | *4.0* | 16.3 | 37.5 | 49.0 | 102.8 | *1.9* |
| 2021 | 39.2 | 90.0 | 49.0 | 178.2 | *4.0* | 16.3 | 37.5 | 49.0 | 102.8 | *1.9* |
| 2022 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *0.9* |
| 2023 | 39.2 | 90.0 | 49.0 | 178.2 | *1.1* | 16.3 | 37.5 | 49.0 | 102.8 | *0.6* |
| 2024 | 39.2 | 90.0 | 49.0 | 178.2 | *1.8* | 16.3 | 37.5 | 49.0 | 102.8 | *0.9* |
| 2025 | 39.2 | 90.0 | 49.0 | 178.2 | *1.9* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2026 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2027 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2028 | 39.2 | 90.0 | 49.0 | 178.2 | *2.1* | 16.3 | 37.5 | 49.0 | 102.8 | *1.0* |
| 2029 | 39.2 | 90.0 | 49.0 | 178.2 | *1.4* | 16.3 | 37.5 | 49.0 | 102.8 | *0.7* |
| 2030 | 39.2 | 90.0 | 49.0 | 178.2 | *1.4* | 16.3 | 37.5 | 49.0 | 102.8 | *0.7* |
| Total | | | | | | | | | | |

**VOC Off-Gassing from Asphalt Paving**

Except from the 2013 CalEEMod Manual (Appendix A):

E = EF x A

Where:
E = emissions from asphalt paving off-gassing (lbs)
EF = emission factor (lb/acre) = 2.62 lb/acre
A = area of parking lot (acre)

Days of paving: **3.4 acres/day**

| *Year* | *Area (acres)* | *Paved Area* | *Paved Area (acres)* | *VOC Emissions (lbs)* | *Days of Paving* | *VOC Emissions (lbs/day)* | *Emissions (tons/year)* |
|---|---|---|---|---|---|---|---|
| 2016 | 193.5 | 0.33 | 63.9 | 167.3 | 18.8 | 8.9 | 0.1 |
| 2017 | 150.8 | 0.33 | 49.7 | 130.3 | 14.6 | 8.9 | 0.1 |
| 2018 | 150.8 | 0.33 | 49.7 | 130.3 | 14.6 | 8.9 | 0.1 |
| 2019 | 242.9 | 0.33 | 80.2 | 210.0 | 23.6 | 8.9 | 0.1 |
| 2020 | 242.9 | 0.33 | 80.2 | 210.0 | 23.6 | 8.9 | 0.1 |
| 2021 | 214.2 | 0.33 | 70.7 | 185.2 | 20.8 | 8.9 | 0.1 |
| 2022 | 64.2 | 0.33 | 21.2 | 55.5 | 6.2 | 8.9 | 0.0 |
| 2023 | 139.9 | 0.33 | 46.2 | 121.0 | 13.6 | 8.9 | 0.1 |
| 2024 | 174.2 | 0.33 | 57.5 | 150.6 | 16.9 | 8.9 | 0.1 |
| 2025 | 166.7 | 0.33 | 55.0 | 144.1 | 16.2 | 8.9 | 0.1 |
| 2026 | 166.7 | 0.33 | 55.0 | 144.1 | 16.2 | 8.9 | 0.1 |
| 2027 | 166.7 | 0.33 | 55.0 | 144.1 | 16.2 | 8.9 | 0.1 |
| 2028 | 115.7 | 0.33 | 38.2 | 100.0 | 11.2 | 8.9 | 0.0 |
| 2029 | 115.7 | 0.33 | 38.2 | 100.0 | 11.2 | 8.9 | 0.0 |
| 2030 | 115.3 | 0.33 | 38.0 | 99.7 | 11.2 | 8.9 | 0.0 |
| Total | 2419.9 | 0 | 0.0 | | | | |

# Air Conditioning and Refrigeration Fugitive Emissions - Installation

Project: World Logistics Center
Prepared by: Michael Brandman Associates
Prepared on: 11/5/2013

| Land Use | Building Area (SF) |
|---|---|
| Unrefrigerated warehouse | 39,379,000 |
| Store | 3,000 |
| Office | 1,218,000 |
| Total | 40,600,000 |

| Type of Unit | Units | Average charge (lbs) | Average charge (kg) | Annual Leak Rate in percent of capacity | Emissions (kg/year) | Emissions (tons/year) | Average Global Warming Potential | MTCO2e | Emissions (tons) averaged over 30 years | MTCO2e averaged over 30 years |
|---|---|---|---|---|---|---|---|---|---|---|
| *Air conditioning Systems* | | | | | | | | | | |
| Unitary A/C - small | 244.6 | 100 | 45 | 3% | 333 | 0.37 | 1500 | 498 | 0.0122046 | 17 |

Sources:

- General methodology and leak rate: U.S. Environmental Protection Agency, Climate Leaders. May 2008. Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment. EPA430-K-03-004. http://www.epa.gov/stateply/documents/resources/mfgrfg.pdf
- Number of units: It is assumed that there would be one unitary A/C for every 5,000 square feet of office space and one for the store.
- Average charge and Global Warming Potential: South Coast Air Quality Management District. Draft Environmental Assessment for Proposed Amended Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems and Proposed Rule 1415.1 – Reduction of Refrigerant Emissions from Stationary Refrigeration Systems. November 2010. Website: http://www.aqmd.gov/ceqa/documents/2010/aqmd/finalEA/1415DEA.pdf (Table B-1)

# A.4 - CalEEMod Output Construction

# World Logistics Center - Construction Other Phases (pre-2027)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 0.10 | 1000sqft | 1.00 | 100.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 150 | 0 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 49.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 81.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 11.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 51.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 100.00 | 155.00 |
| tblConstructionPhase | NumDays | 100.00 | 104.00 |

| | | | |
|---|---|---|---|
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 48.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 6/29/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 4/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 2/25/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 7/4/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 9/2/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 11/6/2015 |

| | | | |
|---|---|---|---|
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblEnergyUse | LightingElect | 1.75 | 0.00 |
| tblEnergyUse | NT24E | 0.82 | 0.00 |
| tblEnergyUse | NT24NG | 0.03 | 0.00 |
| tblEnergyUse | T24E | 0.45 | 0.00 |
| tblEnergyUse | T24NG | 2.11 | 0.00 |
| tblGrading | AcresOfGrading | 120.00 | 240.00 |
| tblGrading | AcresOfGrading | 586.88 | 1,369.00 |
| tblLandUse | LotAcreage | 0.00 | 1.00 |
| tblOffRoadEquipment | HorsePower | 226.00 | 445.00 |
| tblOffRoadEquipment | HorsePower | 174.00 | 259.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 55.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 108.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 73.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 78.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 98.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 97.00 | 73.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 78.00 |
| tblOffRoadEquipment | HorsePower | 205.00 | 206.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 300.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 179.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 173.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 40.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 29.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 523.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 286.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 190.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 396.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 190.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 188.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 40.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 190.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 29.00 |
| tblOffRoadEquipment | HorsePower | 89.00 | 125.00 |
| tblOffRoadEquipment | HorsePower | 89.00 | 125.00 |
| tblOffRoadEquipment | HorsePower | 87.00 | 88.00 |
| tblOffRoadEquipment | HorsePower | 125.00 | 126.00 |
| tblOffRoadEquipment | HorsePower | 130.00 | 131.00 |
| tblOffRoadEquipment | HorsePower | 130.00 | 99.00 |
| tblOffRoadEquipment | HorsePower | 130.00 | 131.00 |
| tblOffRoadEquipment | HorsePower | 80.00 | 81.00 |
| tblOffRoadEquipment | HorsePower | 199.00 | 152.00 |
| tblOffRoadEquipment | HorsePower | 199.00 | 149.00 |
| tblOffRoadEquipment | HorsePower | 199.00 | 180.00 |
| tblOffRoadEquipment | HorsePower | 199.00 | 149.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 362.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 361.00 | 330.00 |
| tblOffRoadEquipment | HorsePower | 64.00 | 69.00 |
| tblOffRoadEquipment | HorsePower | 64.00 | 69.00 |
| tblOffRoadEquipment | HorsePower | 80.00 | 39.00 |
| tblOffRoadEquipment | HorsePower | 80.00 | 39.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 8.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 4.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 4.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 8.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 8.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 0.09 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 7,512.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 528.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,191.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 5,008.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 6,260.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,817.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 624.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 15.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 7.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
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| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 100.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 50.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 83.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 95.00 | 15.00 |
| tblTripsAndVMT | WorkerTripNumber | 53.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 193.00 | 40.00 |
| tblTripsAndVMT | WorkerTripNumber | 48.00 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripNumber | 65.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 10.00 |
| tblWater | IndoorWaterUseRate | 23,125.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2015 | 88.4384 | 961.1064 | 583.4640 | 1.0922 | 24.7161 | 50.1728 | 74.8888 | 7.1850 | 46.2487 | 53.4336 | 0.0000 | 113,075.2010 | 113,075.2010 | 28.4204 | 0.0000 | 113,672.0301 |
| **Total** | **88.4384** | **961.1064** | **583.4640** | **1.0922** | **24.7161** | **50.1728** | **74.8888** | **7.1850** | **46.2487** | **53.4336** | **0.0000** | **113,075.2010** | **113,075.2010** | **28.4204** | **0.0000** | **113,672.0301** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2015 | 22.1861 | 400.8292 | 636.6292 | 1.0922 | 14.0603 | 4.9214 | 18.9816 | 4.0062 | 4.7558 | 8.7620 | 0.0000 | 113,075.2010 | 113,075.2010 | 28.4204 | 0.0000 | 113,672.0300 |
| **Total** | **22.1861** | **400.8292** | **636.6292** | **1.0922** | **14.0603** | **4.9214** | **18.9816** | **4.0062** | **4.7558** | **8.7620** | **0.0000** | **113,075.2010** | **113,075.2010** | **28.4204** | **0.0000** | **113,672.0300** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percent Reduction | 74.91 | 58.30 | -9.11 | 0.00 | 43.11 | 90.19 | 74.65 | 44.24 | 89.72 | 83.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Building - concrete | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 2 | Building - wet utilities | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 3 | Building - electrical | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 4 | Building - landscaping | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 5 | Utilities | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 6 | Interchange | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 7 | Landscaping | Grading | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 8 | Temporary utilities | Building Construction | 7/4/2015 | 12/31/2015 | 6 | 155 | |
| 9 | Curbing/drive approaches | Building Construction | 9/2/2015 | 12/31/2015 | 6 | 104 | |
| 10 | Paving | Grading | 11/6/2015 | 12/31/2015 | 6 | 48 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Building - concrete | Tractors/Loaders/Backhoes | 8 | 10.00 | 90 | 0.37 |
| Building - concrete | Pumps | 2 | 10.00 | 84 | 0.74 |
| Building - concrete | Cement and Mortar Mixers | 24 | 1.00 | 9 | 0.56 |
| Building - concrete | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Building - concrete | Tractors/Loaders/Backhoes | 4 | 10.00 | 85 | 0.37 |
| Building - wet utilities | Tractors/Loaders/Backhoes | 6 | 10.00 | 108 | 0.37 |
| Building - wet utilities | Excavators | 2 | 10.00 | 300 | 0.38 |
| Building - wet utilities | Excavators | 2 | 10.00 | 179 | 0.38 |
| Building - wet utilities | Excavators | 2 | 10.00 | 173 | 0.38 |
| Building - wet utilities | Rubber Tired Loaders | 6 | 10.00 | 152 | 0.36 |
| Building - wet utilities | Other Material Handling Equipment | 15 | 1.00 | 167 | 0.40 |
| Building - electrical | Excavators | 8 | 10.00 | 40 | 0.38 |
| Building - electrical | Tractors/Loaders/Backhoes | 8 | 10.00 | 90 | 0.37 |
| Building - electrical | Cement and Mortar Mixers | 12 | 1.00 | 9 | 0.56 |
| Building - electrical | Forklifts | 4 | 10.00 | 89 | 0.20 |
| Building - electrical | Other Material Handling Equipment | 6 | 1.00 | 167 | 0.40 |
| Building - landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 73 | 0.37 |
| Building - landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 78 | 0.37 |
| Building - landscaping | Rubber Tired Loaders | 2 | 10.00 | 149 | 0.36 |
| Building - landscaping | Forklifts | 2 | 10.00 | 125 | 0.20 |
| Building - landscaping | Excavators | 2 | 10.00 | 29 | 0.38 |
| Building - landscaping | Trenchers | 2 | 10.00 | 39 | 0.50 |
| Building - landscaping | Skid Steer Loaders | 2 | 10.00 | 69 | 0.37 |
| Building - landscaping | Other Material Handling Equipment | 3 | 1.00 | 167 | 0.40 |
| Building - landscaping | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Utilities | Excavators | 2 | 10.00 | 523 | 0.38 |
| Utilities | Excavators | 10 | 10.00 | 286 | 0.38 |
| Utilities | Excavators | 2 | 10.00 | 190 | 0.38 |
| Utilities | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Utilities | Other Material Handling Equipment | 7 | 1.00 | 167 | 0.40 |
| Utilities | Excavators | 4 | 10.00 | 396 | 0.38 |
| Utilities | Excavators | 2 | 10.00 | 190 | 0.38 |
| Utilities | Excavators | 2 | 10.00 | 188 | 0.38 |
| Utilities | Excavators | 8 | 10.00 | 40 | 0.38 |

| | | | | | |
|---|---|---|---|---|---|
| Utilities | Tractors/Loaders/Backhoes | 8 | 10.00 | 90 | 0.37 |
| Utilities | Cement and Mortar Mixers | 8 | 1.00 | 9 | 0.56 |
| Utilities | Forklifts | 4 | 10.00 | 89 | 0.20 |
| Utilities | Other Material Handling Equipment | 18 | 1.00 | 167 | 0.40 |
| Temporary utilities | Cranes | 2 | 10.00 | 445 | 0.29 |
| Interchange | Rubber Tired Dozers | 1 | 10.00 | 410 | 0.40 |
| Interchange | Scrapers | 1 | 10.00 | 330 | 0.48 |
| Interchange | Excavators | 1 | 10.00 | 190 | 0.38 |
| Interchange | Tractors/Loaders/Backhoes | 1 | 10.00 | 98 | 0.37 |
| Interchange | Cranes | 1 | 10.00 | 226 | 0.29 |
| Interchange | Cement and Mortar Mixers | 4 | 1.00 | 9 | 0.56 |
| Interchange | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Interchange | Bore/Drill Rigs | 1 | 10.00 | 206 | 0.50 |
| Interchange | Rubber Tired Loaders | 1 | 10.00 | 180 | 0.36 |
| Interchange | Other General Industrial Equipment | 1 | 10.00 | 88 | 0.34 |
| Interchange | Tractors/Loaders/Backhoes | 1 | 10.00 | 90 | 0.37 |
| Interchange | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Interchange | Graders | 1 | 10.00 | 259 | 0.41 |
| Curbing/drive approaches | Paving Equipment | 1 | 10.00 | 99 | 0.36 |
| Curbing/drive approaches | Tractors/Loaders/Backhoes | 1 | 10.00 | 55 | 0.37 |
| Curbing/drive approaches | Paving Equipment | 1 | 10.00 | 131 | 0.36 |
| Curbing/drive approaches | Cement and Mortar Mixers | 6 | 1.00 | 9 | 0.56 |
| Curbing/drive approaches | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Paving | Rollers | 2 | 10.00 | 81 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 4 | 10.00 | 90 | 0.37 |
| Paving | Paving Equipment | 2 | 10.00 | 131 | 0.36 |
| Paving | Scrapers | 2 | 10.00 | 362 | 0.48 |
| Paving | Pavers | 2 | 10.00 | 126 | 0.42 |
| Paving | Plate Compactors | 2 | 10.00 | 8 | 0.43 |
| Paving | Other Material Handling Equipment | 6 | 1.00 | 167 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 73 | 0.37 |
| Landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 78 | 0.37 |
| Landscaping | Rubber Tired Loaders | 2 | 10.00 | 149 | 0.36 |
| Landscaping | Forklifts | 2 | 10.00 | 125 | 0.20 |
| Landscaping | Excavators | 2 | 10.00 | 29 | 0.38 |
| Landscaping | Trenchers | 2 | 10.00 | 39 | 0.50 |
| Landscaping | Skid Steer Loaders | 2 | 10.00 | 69 | 0.37 |
| Landscaping | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Landscaping | Other Material Handling Equipment | 10 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Building - concrete | 40 | 25.00 | 2.00 | 7,512.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Building - wet utilities | 33 | 25.00 | 15.00 | 2,191.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Building - electrical | 38 | 15.00 | 6.00 | 5,008.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Building - landscaping | 21 | 10.00 | 7.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Utilities | 77 | 40.00 | 25.00 | 6,260.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Interchange | 19 | 25.00 | 4.00 | 2,817.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Landscaping | 26 | 10.00 | 6.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Temporary utilities | 2 | 0.00 | 0.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Curbing/drive approaches | 13 | 10.00 | 4.00 | 624.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 20 | 25.00 | 6.00 | 528.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Building - concrete - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 7.1151 | 62.9272 | 44.8104 | 0.0626 | | 4.8029 | 4.8029 | | 4.5021 | 4.5021 | | 6,333.2290 | 6,333.2290 | 1.5634 | | 6,366.0605 |
| **Total** | **7.1151** | **62.9272** | **44.8104** | **0.0626** | **0.0000** | **4.8029** | **4.8029** | **0.0000** | **4.5021** | **4.5021** | | **6,333.2290** | **6,333.2290** | **1.5634** | | **6,366.0605** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.4677 | 8.9215 | 4.7369 | 0.0213 | 0.5232 | 0.1777 | 0.7009 | 0.1433 | 0.1635 | 0.3068 | | 2,168.6231 | 2,168.6231 | 0.0151 | | 2,168.9392 |
| Vendor | 0.0318 | 0.5838 | 0.2910 | 1.4300e-003 | 0.0455 | 0.0135 | 0.0590 | 0.0130 | 0.0125 | 0.0254 | | 145.4720 | 145.4720 | 9.3000e-004 | | 145.4916 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.6290** | **9.7113** | **7.6092** | **0.0284** | **1.0437** | **0.1942** | **1.2379** | **0.2822** | **0.1787** | **0.4609** | | **2,799.5090** | **2,799.5090** | **0.0377** | | **2,800.2996** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4471 | 26.1136 | 44.1479 | 0.0626 | | 0.1391 | 0.1391 | | 0.1391 | 0.1391 | 0.0000 | 6,333.2290 | 6,333.2290 | 1.5634 | | 6,366.0605 |
| **Total** | **1.4471** | **26.1136** | **44.1479** | **0.0626** | **0.0000** | **0.1391** | **0.1391** | **0.0000** | **0.1391** | **0.1391** | **0.0000** | **6,333.2290** | **6,333.2290** | **1.5634** | | **6,366.0605** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.4677 | 8.9215 | 4.7369 | 0.0213 | 0.5232 | 0.1777 | 0.7009 | 0.1433 | 0.1635 | 0.3068 | | 2,168.6231 | 2,168.6231 | 0.0151 | | 2,168.9392 |
| Vendor | 0.0318 | 0.5838 | 0.2910 | 1.4300e-003 | 0.0455 | 0.0135 | 0.0590 | 0.0130 | 0.0125 | 0.0254 | | 145.4720 | 145.4720 | 9.3000e-004 | | 145.4916 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.6290** | **9.7113** | **7.6092** | **0.0284** | **1.0437** | **0.1942** | **1.2379** | **0.2822** | **0.1787** | **0.4609** | | **2,799.5090** | **2,799.5090** | **0.0377** | | **2,800.2996** |

## 3.3 Building - wet utilities - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 11.6206 | 126.9491 | 73.6037 | 0.1252 | | 6.9492 | 6.9492 | | 6.3933 | 6.3933 | | 13,141.4478 | 13,141.4478 | 3.9233 | | 13,223.8365 |
| **Total** | **11.6206** | **126.9491** | **73.6037** | **0.1252** | **0.0000** | **6.9492** | **6.9492** | **0.0000** | **6.3933** | **6.3933** | | **13,141.4478** | **13,141.4478** | **3.9233** | | **13,223.8365** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1364 | 2.6021 | 1.3816 | 6.2000e-003 | 0.1526 | 0.0518 | 0.2044 | 0.0418 | 0.0477 | 0.0895 | | 632.5151 | 632.5151 | 4.3900e-003 | | 632.6073 |
| Vendor | 0.2384 | 4.3783 | 2.1825 | 0.0107 | 0.3410 | 0.1015 | 0.4425 | 0.0973 | 0.0934 | 0.1907 | | 1,091.0402 | 1,091.0402 | 6.9800e-003 | | 1,091.1867 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.5044** | **7.1865** | **6.1453** | **0.0226** | **0.9686** | **0.1563** | **1.1250** | **0.2651** | **0.1438** | **0.4088** | | **2,208.9691** | **2,208.9691** | **0.0330** | | **2,209.6627** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9643 | 48.2084 | 86.1041 | 0.1252 | | 0.2053 | 0.2053 | | 0.2053 | 0.2053 | 0.0000 | 13,141.4478 | 13,141.4478 | 3.9233 | | 13,223.8365 |
| **Total** | **1.9643** | **48.2084** | **86.1041** | **0.1252** | **0.0000** | **0.2053** | **0.2053** | **0.0000** | **0.2053** | **0.2053** | **0.0000** | **13,141.4478** | **13,141.4478** | **3.9233** | | **13,223.8365** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1364 | 2.6021 | 1.3816 | 6.2000e-003 | 0.1526 | 0.0518 | 0.2044 | 0.0418 | 0.0477 | 0.0895 | | 632.5151 | 632.5151 | 4.3900e-003 | | 632.6073 |
| Vendor | 0.2384 | 4.3783 | 2.1825 | 0.0107 | 0.3410 | 0.1015 | 0.4425 | 0.0973 | 0.0934 | 0.1907 | | 1,091.0402 | 1,091.0402 | 6.9800e-003 | | 1,091.1867 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.5044** | **7.1865** | **6.1453** | **0.0226** | **0.9686** | **0.1563** | **1.1250** | **0.2651** | **0.1438** | **0.4088** | | **2,208.9691** | **2,208.9691** | **0.0330** | | **2,209.6627** |

## 3.4 Building - electrical - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 7.3348 | 60.9340 | 45.5828 | 0.0564 | | 4.6606 | 4.6606 | | 4.2896 | 4.2896 | | 5,894.9427 | 5,894.9427 | 1.7451 | | 5,931.5905 |
| **Total** | **7.3348** | **60.9340** | **45.5828** | **0.0564** | **0.0000** | **4.6606** | **4.6606** | **0.0000** | **4.2896** | **4.2896** | | **5,894.9427** | **5,894.9427** | **1.7451** | | **5,931.5905** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.3118 | 5.9477 | 3.1579 | 0.0142 | 0.3488 | 0.1185 | 0.4673 | 0.0955 | 0.1090 | 0.2045 | | 1,445.7487 | 1,445.7487 | 0.0100 | | 1,445.9595 |
| Vendor | 0.0954 | 1.7513 | 0.8730 | 4.2900e-003 | 0.1364 | 0.0406 | 0.1770 | 0.0389 | 0.0374 | 0.0763 | | 436.4161 | 436.4161 | 2.7900e-003 | | 436.4747 |
| Worker | 0.0777 | 0.1236 | 1.5488 | 3.3900e-003 | 0.2850 | 1.7800e-003 | 0.2868 | 0.0756 | 1.6300e-003 | 0.0772 | | 291.2483 | 291.2483 | 0.0130 | | 291.5213 |
| **Total** | **0.4849** | **7.8226** | **5.5797** | **0.0219** | **0.7702** | **0.1609** | **0.9311** | **0.2100** | **0.1480** | **0.3580** | | **2,173.4131** | **2,173.4131** | **0.0258** | | **2,173.9554** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.2818 | 30.5809 | 42.2617 | 0.0564 | | 0.4326 | 0.4326 | | 0.4326 | 0.4326 | 0.0000 | 5,894.9427 | 5,894.9427 | 1.7451 | | 5,931.5905 |
| **Total** | **1.2818** | **30.5809** | **42.2617** | **0.0564** | **0.0000** | **0.4326** | **0.4326** | **0.0000** | **0.4326** | **0.4326** | **0.0000** | **5,894.9427** | **5,894.9427** | **1.7451** | | **5,931.5905** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.3118 | 5.9477 | 3.1579 | 0.0142 | 0.3488 | 0.1185 | 0.4673 | 0.0955 | 0.1090 | 0.2045 | | 1,445.7487 | 1,445.7487 | 0.0100 | | 1,445.9595 |
| Vendor | 0.0954 | 1.7513 | 0.8730 | 4.2900e-003 | 0.1364 | 0.0406 | 0.1770 | 0.0389 | 0.0374 | 0.0763 | | 436.4161 | 436.4161 | 2.7900e-003 | | 436.4747 |
| Worker | 0.0777 | 0.1236 | 1.5488 | 3.3900e-003 | 0.2850 | 1.7800e-003 | 0.2868 | 0.0756 | 1.6300e-003 | 0.0772 | | 291.2483 | 291.2483 | 0.0130 | | 291.5213 |
| **Total** | **0.4849** | **7.8226** | **5.5797** | **0.0219** | **0.7702** | **0.1609** | **0.9311** | **0.2100** | **0.1480** | **0.3580** | | **2,173.4131** | **2,173.4131** | **0.0258** | | **2,173.9554** |

## 3.5 Building - landscaping - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 5.7924 | 51.6864 | 36.0722 | 0.0468 | | 3.3899 | 3.3899 | | 3.1187 | 3.1187 | | 4,917.1009 | 4,917.1009 | 1.4680 | | 4,947.9280 |
| **Total** | **5.7924** | **51.6864** | **36.0722** | **0.0468** | **0.0000** | **3.3899** | **3.3899** | **0.0000** | **3.1187** | **3.1187** | | **4,917.1009** | **4,917.1009** | **1.4680** | | **4,947.9280** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.1113 | 2.0432 | 1.0185 | 5.0000e-003 | 0.1591 | 0.0474 | 0.2065 | 0.0454 | 0.0436 | 0.0890 | | 509.1521 | 509.1521 | 3.2600e-003 | | 509.2205 |
| Worker | 0.0518 | 0.0824 | 1.0325 | 2.2600e-003 | 0.1900 | 1.1900e-003 | 0.1912 | 0.0504 | 1.0900e-003 | 0.0515 | | 194.1656 | 194.1656 | 8.6600e-003 | | 194.3475 |
| **Total** | **0.1631** | **2.1257** | **2.0510** | **7.2600e-003** | **0.3492** | **0.0486** | **0.3977** | **0.0958** | **0.0447** | **0.1405** | | **703.3176** | **703.3176** | **0.0119** | | **703.5680** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.8285 | 25.6007 | 36.4928 | 0.0468 | | 0.7921 | 0.7921 | | 0.7581 | 0.7581 | 0.0000 | 4,917.1009 | 4,917.1009 | 1.4680 | | 4,947.9280 |
| **Total** | **1.8285** | **25.6007** | **36.4928** | **0.0468** | **0.0000** | **0.7921** | **0.7921** | **0.0000** | **0.7581** | **0.7581** | **0.0000** | **4,917.1009** | **4,917.1009** | **1.4680** | | **4,947.9280** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.1113 | 2.0432 | 1.0185 | 5.0000e-003 | 0.1591 | 0.0474 | 0.2065 | 0.0454 | 0.0436 | 0.0890 | | 509.1521 | 509.1521 | 3.2600e-003 | | 509.2205 |
| Worker | 0.0518 | 0.0824 | 1.0325 | 2.2600e-003 | 0.1900 | 1.1900e-003 | 0.1912 | 0.0504 | 1.0900e-003 | 0.0515 | | 194.1656 | 194.1656 | 8.6600e-003 | | 194.3475 |
| **Total** | **0.1631** | **2.1257** | **2.0510** | **7.2600e-003** | **0.3492** | **0.0486** | **0.3977** | **0.0958** | **0.0447** | **0.1405** | | **703.3176** | **703.3176** | **0.0119** | | **703.5680** |

## 3.6 Utilities - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 23.0712 | 273.9509 | 133.9000 | 0.3463 | | 12.2340 | 12.2340 | | 11.2565 | 11.2565 | | 36,314.0728 | 36,314.0728 | 10.8314 | | 36,541.5329 |
| **Total** | **23.0712** | **273.9509** | **133.9000** | **0.3463** | **0.0000** | **12.2340** | **12.2340** | **0.0000** | **11.2565** | **11.2565** | | **36,314.0728** | **36,314.0728** | **10.8314** | | **36,541.5329** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.3897 | 7.4346 | 3.9474 | 0.0177 | 0.4360 | 0.1481 | 0.5841 | 0.1194 | 0.1362 | 0.2556 | | 1,807.1859 | 1,807.1859 | 0.0126 | | 1,807.4494 |
| Vendor | 0.3974 | 7.2972 | 3.6374 | 0.0179 | 0.5683 | 0.1692 | 0.7375 | 0.1622 | 0.1557 | 0.3178 | | 1,818.4003 | 1,818.4003 | 0.0116 | | 1,818.6445 |
| Worker | 0.2073 | 0.3297 | 4.1301 | 9.0500e-003 | 0.7601 | 4.7400e-003 | 0.7649 | 0.2016 | 4.3500e-003 | 0.2059 | | 776.6622 | 776.6622 | 0.0347 | | 777.3900 |
| **Total** | **0.9944** | **15.0615** | **11.7149** | **0.0446** | **1.7643** | **0.3221** | **2.0864** | **0.4831** | **0.2963** | **0.7793** | | **4,402.2484** | **4,402.2484** | **0.0588** | | **4,403.4838** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 6.0136 | 110.9867 | 201.9167 | 0.3463 | | 0.9025 | 0.9025 | | 0.9025 | 0.9025 | 0.0000 | 36,314.0728 | 36,314.0728 | 10.8314 | | 36,541.5329 |
| **Total** | **6.0136** | **110.9867** | **201.9167** | **0.3463** | **0.0000** | **0.9025** | **0.9025** | **0.0000** | **0.9025** | **0.9025** | **0.0000** | **36,314.0728** | **36,314.0728** | **10.8314** | | **36,541.5329** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.3897 | 7.4346 | 3.9474 | 0.0177 | 0.4360 | 0.1481 | 0.5841 | 0.1194 | 0.1362 | 0.2556 | | 1,807.1859 | 1,807.1859 | 0.0126 | | 1,807.4494 |
| Vendor | 0.3974 | 7.2972 | 3.6374 | 0.0179 | 0.5683 | 0.1692 | 0.7375 | 0.1622 | 0.1557 | 0.3178 | | 1,818.4003 | 1,818.4003 | 0.0116 | | 1,818.6445 |
| Worker | 0.2073 | 0.3297 | 4.1301 | 9.0500e-003 | 0.7601 | 4.7400e-003 | 0.7649 | 0.2016 | 4.3500e-003 | 0.2059 | | 776.6622 | 776.6622 | 0.0347 | | 777.3900 |
| **Total** | **0.9944** | **15.0615** | **11.7149** | **0.0446** | **1.7643** | **0.3221** | **2.0864** | **0.4831** | **0.2963** | **0.7793** | | **4,402.2484** | **4,402.2484** | **0.0588** | | **4,403.4838** |

## 3.7 Interchange - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 12.1660 | 0.0000 | 12.1660 | 4.6386 | 0.0000 | 4.6386 | | | 0.0000 | | | 0.0000 |
| Off-Road | 10.3267 | 120.0357 | 66.2018 | 0.0990 | | 5.6476 | 5.6476 | | 5.1964 | 5.1964 | | 10,385.6270 | 10,385.6270 | 3.0956 | | 10,450.6351 |
| **Total** | **10.3267** | **120.0357** | **66.2018** | **0.0990** | **12.1660** | **5.6476** | **17.8136** | **4.6386** | **5.1964** | **9.8350** | | **10,385.6270** | **10,385.6270** | **3.0956** | | **10,450.6351** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1754 | 3.3456 | 1.7763 | 7.9800e-003 | 0.1962 | 0.0666 | 0.2628 | 0.0537 | 0.0613 | 0.1150 | | 813.2337 | 813.2337 | 5.6500e-003 | | 813.3522 |
| Vendor | 0.0636 | 1.1676 | 0.5820 | 2.8600e-003 | 0.0909 | 0.0271 | 0.1180 | 0.0259 | 0.0249 | 0.0509 | | 290.9440 | 290.9440 | 1.8600e-003 | | 290.9831 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.3685** | **4.7192** | **4.9396** | **0.0165** | **0.7622** | **0.0967** | **0.8589** | **0.2056** | **0.0889** | **0.2946** | | **1,589.5916** | **1,589.5916** | **0.0292** | | **1,590.2041** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 4.7448 | 0.0000 | 4.7448 | 1.8091 | 0.0000 | 1.8091 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.6749 | 29.6779 | 57.0969 | 0.0990 | | 0.1692 | 0.1692 | | 0.1692 | 0.1692 | 0.0000 | 10,385.6270 | 10,385.6270 | 3.0956 | | 10,450.6351 |
| **Total** | **1.6749** | **29.6779** | **57.0969** | **0.0990** | **4.7448** | **0.1692** | **4.9140** | **1.8091** | **0.1692** | **1.9783** | **0.0000** | **10,385.6270** | **10,385.6270** | **3.0956** | | **10,450.6351** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1754 | 3.3456 | 1.7763 | 7.9800e-003 | 0.1962 | 0.0666 | 0.2628 | 0.0537 | 0.0613 | 0.1150 | | 813.2337 | 813.2337 | 5.6500e-003 | | 813.3522 |
| Vendor | 0.0636 | 1.1676 | 0.5820 | 2.8600e-003 | 0.0909 | 0.0271 | 0.1180 | 0.0259 | 0.0249 | 0.0509 | | 290.9440 | 290.9440 | 1.8600e-003 | | 290.9831 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.3685** | **4.7192** | **4.9396** | **0.0165** | **0.7622** | **0.0967** | **0.8589** | **0.2056** | **0.0889** | **0.2946** | | **1,589.5916** | **1,589.5916** | **0.0292** | | **1,590.2041** |

## 3.8 Landscaping - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 6.1790 | 55.8427 | 38.6001 | 0.0504 | | 3.6152 | 3.6152 | | 3.3260 | 3.3260 | | 5,293.7930 | 5,293.7930 | 1.5804 | | 5,326.9818 |
| **Total** | **6.1790** | **55.8427** | **38.6001** | **0.0504** | **0.0000** | **3.6152** | **3.6152** | **0.0000** | **3.3260** | **3.3260** | | **5,293.7930** | **5,293.7930** | **1.5804** | | **5,326.9818** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0954 | 1.7513 | 0.8730 | 4.2900e-003 | 0.1364 | 0.0406 | 0.1770 | 0.0389 | 0.0374 | 0.0763 | | 436.4161 | 436.4161 | 2.7900e-003 | | 436.4747 |
| Worker | 0.0518 | 0.0824 | 1.0325 | 2.2600e-003 | 0.1900 | 1.1900e-003 | 0.1912 | 0.0504 | 1.0900e-003 | 0.0515 | | 194.1656 | 194.1656 | 8.6600e-003 | | 194.3475 |
| **Total** | **0.1472** | **1.8338** | **1.9055** | **6.5500e-003** | **0.3264** | **0.0418** | **0.3682** | **0.0893** | **0.0385** | **0.1278** | | **630.5816** | **630.5816** | **0.0115** | | **630.8222** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.8726 | 27.1839 | 39.2173 | 0.0504 | | 0.7979 | 0.7979 | | 0.7640 | 0.7640 | 0.0000 | 5,293.7930 | 5,293.7930 | 1.5804 | | 5,326.9818 |
| **Total** | **1.8726** | **27.1839** | **39.2173** | **0.0504** | **0.0000** | **0.7979** | **0.7979** | **0.0000** | **0.7640** | **0.7640** | **0.0000** | **5,293.7930** | **5,293.7930** | **1.5804** | | **5,326.9818** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0954 | 1.7513 | 0.8730 | 4.2900e-003 | 0.1364 | 0.0406 | 0.1770 | 0.0389 | 0.0374 | 0.0763 | | 436.4161 | 436.4161 | 2.7900e-003 | | 436.4747 |
| Worker | 0.0518 | 0.0824 | 1.0325 | 2.2600e-003 | 0.1900 | 1.1900e-003 | 0.1912 | 0.0504 | 1.0900e-003 | 0.0515 | | 194.1656 | 194.1656 | 8.6600e-003 | | 194.3475 |
| **Total** | **0.1472** | **1.8338** | **1.9055** | **6.5500e-003** | **0.3264** | **0.0418** | **0.3682** | **0.0893** | **0.0385** | **0.1278** | | **630.5816** | **630.5816** | **0.0115** | | **630.8222** |

## 3.9 Temporary utilities - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.7030 | 34.8466 | 23.3843 | 0.0277 | | 1.4417 | 1.4417 | | 1.3264 | 1.3264 | | 2,908.7789 | 2,908.7789 | 0.8684 | | 2,927.0151 |
| **Total** | **2.7030** | **34.8466** | **23.3843** | **0.0277** | | **1.4417** | **1.4417** | | **1.3264** | **1.3264** | | **2,908.7789** | **2,908.7789** | **0.8684** | | **2,927.0151** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.4552 | 7.3403 | 14.7943 | 0.0277 | | 0.0455 | 0.0455 | | 0.0455 | 0.0455 | 0.0000 | 2,908.7789 | 2,908.7789 | 0.8684 | | 2,927.0151 |
| **Total** | **0.4552** | **7.3403** | **14.7943** | **0.0277** | | **0.0455** | **0.0455** | | **0.0455** | **0.0455** | **0.0000** | **2,908.7789** | **2,908.7789** | **0.8684** | | **2,927.0151** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

## 3.10 Curbing/drive approaches - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.5554 | 16.0262 | 10.2119 | 0.0145 | | 1.0038 | 1.0038 | | 0.9244 | 0.9244 | | 1,504.6987 | 1,504.6987 | 0.4418 | | 1,513.9773 |
| **Total** | **1.5554** | **16.0262** | **10.2119** | **0.0145** | | **1.0038** | **1.0038** | | **0.9244** | **0.9244** | | **1,504.6987** | **1,504.6987** | **0.4418** | | **1,513.9773** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1169 | 2.2304 | 1.1842 | 5.3200e-003 | 0.1308 | 0.0444 | 0.1752 | 0.0358 | 0.0409 | 0.0767 | | 542.1558 | 542.1558 | 3.7600e-003 | | 542.2348 |
| Vendor | 0.0636 | 1.1676 | 0.5820 | 2.8600e-003 | 0.0909 | 0.0271 | 0.1180 | 0.0259 | 0.0249 | 0.0509 | | 290.9440 | 290.9440 | 1.8600e-003 | | 290.9831 |
| Worker | 0.0518 | 0.0824 | 1.0325 | 2.2600e-003 | 0.1900 | 1.1900e-003 | 0.1912 | 0.0504 | 1.0900e-003 | 0.0515 | | 194.1656 | 194.1656 | 8.6600e-003 | | 194.3475 |
| **Total** | **0.2323** | **3.4804** | **2.7987** | **0.0104** | **0.4117** | **0.0727** | **0.4844** | **0.1122** | **0.0669** | **0.1790** | | **1,027.2654** | **1,027.2654** | **0.0143** | | **1,027.5654** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.2822 | 6.6905 | 10.8249 | 0.0145 | | 0.0810 | 0.0810 | | 0.0810 | 0.0810 | 0.0000 | 1,504.6987 | 1,504.6987 | 0.4418 | | 1,513.9773 |
| **Total** | **0.2822** | **6.6905** | **10.8249** | **0.0145** | | **0.0810** | **0.0810** | | **0.0810** | **0.0810** | **0.0000** | **1,504.6987** | **1,504.6987** | **0.4418** | | **1,513.9773** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1169 | 2.2304 | 1.1842 | 5.3200e-003 | 0.1308 | 0.0444 | 0.1752 | 0.0358 | 0.0409 | 0.0767 | | 542.1558 | 542.1558 | 3.7600e-003 | | 542.2348 |
| Vendor | 0.0636 | 1.1676 | 0.5820 | 2.8600e-003 | 0.0909 | 0.0271 | 0.1180 | 0.0259 | 0.0249 | 0.0509 | | 290.9440 | 290.9440 | 1.8600e-003 | | 290.9831 |
| Worker | 0.0518 | 0.0824 | 1.0325 | 2.2600e-003 | 0.1900 | 1.1900e-003 | 0.1912 | 0.0504 | 1.0900e-003 | 0.0515 | | 194.1656 | 194.1656 | 8.6600e-003 | | 194.3475 |
| **Total** | **0.2323** | **3.4804** | **2.7987** | **0.0104** | **0.4117** | **0.0727** | **0.4844** | **0.1122** | **0.0669** | **0.1790** | | **1,027.2654** | **1,027.2654** | **0.0143** | | **1,027.5654** |

## 3.11 Paving - 2015

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 5.3025 | 0.0000 | 5.3025 | 0.5726 | 0.0000 | 0.5726 | | | 0.0000 | | | 0.0000 |
| Off-Road | 8.7774 | 99.9205 | 62.7276 | 0.0854 | | 5.2095 | 5.2095 | | 4.7947 | 4.7947 | | 8,930.8324 | 8,930.8324 | 2.6494 | | 8,986.4707 |
| **Total** | **8.7774** | **99.9205** | **62.7276** | **0.0854** | **5.3025** | **5.2095** | **10.5120** | **0.5726** | **4.7947** | **5.3673** | | **8,930.8324** | **8,930.8324** | **2.6494** | | **8,986.4707** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2144 | 4.0890 | 2.1711 | 9.7500e-003 | 0.2398 | 0.0815 | 0.3212 | 0.0657 | 0.0749 | 0.1406 | | 993.9522 | 993.9522 | 6.9000e-003 | | 994.0972 |
| Vendor | 0.0954 | 1.7513 | 0.8730 | 4.2900e-003 | 0.1364 | 0.0406 | 0.1770 | 0.0389 | 0.0374 | 0.0763 | | 436.4161 | 436.4161 | 2.7900e-003 | | 436.4747 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.4393** | **6.0464** | **5.6253** | **0.0197** | **0.8512** | **0.1250** | **0.9763** | **0.2306** | **0.1150** | **0.3456** | | **1,915.7822** | **1,915.7822** | **0.0314** | | **1,916.4406** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.0680 | 0.0000 | 2.0680 | 0.2233 | 0.0000 | 0.2233 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4030 | 30.4591 | 55.4033 | 0.0854 | | 0.1380 | 0.1380 | | 0.1380 | 0.1380 | 0.0000 | 8,930.8324 | 8,930.8324 | 2.6494 | | 8,986.4706 |
| **Total** | **1.4030** | **30.4591** | **55.4033** | **0.0854** | **2.0680** | **0.1380** | **2.2060** | **0.2233** | **0.1380** | **0.3613** | **0.0000** | **8,930.8324** | **8,930.8324** | **2.6494** | | **8,986.4706** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2144 | 4.0890 | 2.1711 | 9.7500e-003 | 0.2398 | 0.0815 | 0.3212 | 0.0657 | 0.0749 | 0.1406 | | 993.9522 | 993.9522 | 6.9000e-003 | | 994.0972 |
| Vendor | 0.0954 | 1.7513 | 0.8730 | 4.2900e-003 | 0.1364 | 0.0406 | 0.1770 | 0.0389 | 0.0374 | 0.0763 | | 436.4161 | 436.4161 | 2.7900e-003 | | 436.4747 |
| Worker | 0.1295 | 0.2061 | 2.5813 | 5.6500e-003 | 0.4751 | 2.9600e-003 | 0.4780 | 0.1260 | 2.7200e-003 | 0.1287 | | 485.4139 | 485.4139 | 0.0217 | | 485.8688 |
| **Total** | **0.4393** | **6.0464** | **5.6253** | **0.0197** | **0.8512** | **0.1250** | **0.9763** | **0.2306** | **0.1150** | **0.3456** | | **1,915.7822** | **1,915.7822** | **0.0314** | | **1,916.4406** |

# World Logistics Center - Construction Other Building Phases (2027)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 0.10 | 1000sqft | 1.00 | 100.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 150 | 0 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 49.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 81.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 11.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 51.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
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| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
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| tblConstructionPhase | NumDays | 100.00 | 104.00 |

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| tblConstructionPhase | NumDays | 2.00 | 48.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
| tblConstructionPhase | NumDays | 2.00 | 313.00 |
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| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
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| tblConstructionPhase | PhaseEndDate | 2/25/2028 | 12/31/2027 |
| tblConstructionPhase | PhaseEndDate | 12/30/2028 | 12/31/2027 |
| tblConstructionPhase | PhaseEndDate | 12/30/2028 | 12/31/2027 |
| tblConstructionPhase | PhaseEndDate | 12/30/2028 | 12/31/2027 |
| tblConstructionPhase | PhaseEndDate | 12/30/2028 | 12/31/2027 |
| tblConstructionPhase | PhaseEndDate | 12/30/2028 | 12/31/2027 |
| tblConstructionPhase | PhaseEndDate | 12/30/2028 | 12/31/2027 |
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| tblConstructionPhase | PhaseStartDate | 1/1/2028 | 9/2/2027 |
| tblConstructionPhase | PhaseStartDate | 1/1/2028 | 11/6/2027 |

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| tblConstructionPhase | PhaseStartDate | 1/1/2028 | 1/1/2027 |
| tblConstructionPhase | PhaseStartDate | 1/1/2028 | 1/1/2027 |
| tblConstructionPhase | PhaseStartDate | 1/1/2028 | 1/1/2027 |
| tblConstructionPhase | PhaseStartDate | 1/1/2028 | 1/1/2027 |
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| tblEnergyUse | NT24E | 0.82 | 0.00 |
| tblEnergyUse | NT24NG | 0.03 | 0.00 |
| tblEnergyUse | T24E | 0.45 | 0.00 |
| tblEnergyUse | T24NG | 2.11 | 0.00 |
| tblGrading | AcresOfGrading | 120.00 | 240.00 |
| tblGrading | AcresOfGrading | 586.88 | 1,369.00 |
| tblLandUse | LotAcreage | 0.00 | 1.00 |
| tblOffRoadEquipment | HorsePower | 226.00 | 445.00 |
| tblOffRoadEquipment | HorsePower | 174.00 | 259.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 55.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
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| tblOffRoadEquipment | HorsePower | 97.00 | 108.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 73.00 |
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| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
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| tblOffRoadEquipment | HorsePower | 97.00 | 90.00 |

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| tblOffRoadEquipment | HorsePower | 162.00 | 286.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 190.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 396.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 190.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 188.00 |
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| tblOffRoadEquipment | HorsePower | 162.00 | 190.00 |
| tblOffRoadEquipment | HorsePower | 162.00 | 29.00 |
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| tblOffRoadEquipment | HorsePower | 89.00 | 125.00 |
| tblOffRoadEquipment | HorsePower | 87.00 | 88.00 |
| tblOffRoadEquipment | HorsePower | 125.00 | 126.00 |
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| tblOffRoadEquipment | HorsePower | 199.00 | 149.00 |
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| tblOffRoadEquipment | HorsePower | 199.00 | 149.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 362.00 |

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| tblOffRoadEquipment | HorsePower | 64.00 | 69.00 |
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| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 10.00 |
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| tblSolidWaste | SolidWasteGenerationRate | 0.09 | 0.00 |
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| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
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| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 7,512.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 528.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,191.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 5,008.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 6,260.00 |
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| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 15.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 7.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 100.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 50.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 83.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 95.00 | 15.00 |
| tblTripsAndVMT | WorkerTripNumber | 53.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 193.00 | 40.00 |
| tblTripsAndVMT | WorkerTripNumber | 48.00 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripNumber | 65.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 10.00 |
| tblWater | IndoorWaterUseRate | 23,125.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2027 | 38.3820 | 323.5039 | 467.4256 | 1.0910 | 24.7160 | 13.4170 | 38.1330 | 7.1849 | 12.3737 | 19.5586 | 0.0000 | 103,698.1257 | 103,698.1257 | 28.2082 | 0.0000 | 104,290.4975 |
| **Total** | **38.3820** | **323.5039** | **467.4256** | **1.0910** | **24.7160** | **13.4170** | **38.1330** | **7.1849** | **12.3737** | **19.5586** | **0.0000** | **103,698.1257** | **103,698.1257** | **28.2082** | **0.0000** | **104,290.4975** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2027 | 19.2481 | 358.1091 | 616.2747 | 1.0910 | 14.0602 | 3.9019 | 17.9621 | 4.0061 | 3.8178 | 7.8239 | 0.0000 | 103,698.1256 | 103,698.1256 | 28.2082 | 0.0000 | 104,290.4974 |
| **Total** | **19.2481** | **358.1091** | **616.2747** | **1.0910** | **14.0602** | **3.9019** | **17.9621** | **4.0061** | **3.8178** | **7.8239** | **0.0000** | **103,698.1256** | **103,698.1256** | **28.2082** | **0.0000** | **104,290.4974** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percent Reduction | 49.85 | -10.70 | -31.84 | 0.00 | 43.11 | 70.92 | 52.90 | 44.24 | 69.15 | 60.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Building - concrete | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 2 | Building - wet utilities | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 3 | Building - electrical | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 4 | Building - landscaping | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 5 | Utilities | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 6 | Interchange | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 7 | Landscaping | Grading | 1/1/2027 | 12/31/2027 | 6 | 313 | |
| 8 | Temporary utilities | Building Construction | 7/4/2027 | 12/31/2027 | 6 | 155 | |
| 9 | Curbing/drive approaches | Building Construction | 9/2/2027 | 12/31/2027 | 6 | 104 | |
| 10 | Paving | Grading | 11/6/2027 | 12/31/2027 | 6 | 48 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Building - concrete | Tractors/Loaders/Backhoes | 8 | 10.00 | 90 | 0.37 |
| Building - concrete | Pumps | 2 | 10.00 | 84 | 0.74 |
| Building - concrete | Cement and Mortar Mixers | 24 | 1.00 | 9 | 0.56 |

| | | | | | |
|---|---|---|---|---|---|
| Building - concrete | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Building - concrete | Tractors/Loaders/Backhoes | 4 | 10.00 | 85 | 0.37 |
| Building - wet utilities | Tractors/Loaders/Backhoes | 6 | 10.00 | 108 | 0.37 |
| Building - wet utilities | Excavators | 2 | 10.00 | 300 | 0.38 |
| Building - wet utilities | Excavators | 2 | 10.00 | 179 | 0.38 |
| Building - wet utilities | Excavators | 2 | 10.00 | 173 | 0.38 |
| Building - wet utilities | Rubber Tired Loaders | 6 | 10.00 | 152 | 0.36 |
| Building - wet utilities | Other Material Handling Equipment | 15 | 1.00 | 167 | 0.40 |
| Building - electrical | Excavators | 8 | 10.00 | 40 | 0.38 |
| Building - electrical | Tractors/Loaders/Backhoes | 8 | 10.00 | 90 | 0.37 |
| Building - electrical | Cement and Mortar Mixers | 12 | 1.00 | 9 | 0.56 |
| Building - electrical | Forklifts | 4 | 10.00 | 89 | 0.20 |
| Building - electrical | Other Material Handling Equipment | 6 | 1.00 | 167 | 0.40 |
| Building - landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 73 | 0.37 |
| Building - landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 78 | 0.37 |
| Building - landscaping | Rubber Tired Loaders | 2 | 10.00 | 149 | 0.36 |
| Building - landscaping | Forklifts | 2 | 10.00 | 125 | 0.20 |
| Building - landscaping | Excavators | 2 | 10.00 | 29 | 0.38 |
| Building - landscaping | Trenchers | 2 | 10.00 | 39 | 0.50 |
| Building - landscaping | Skid Steer Loaders | 2 | 10.00 | 69 | 0.37 |
| Building - landscaping | Other Material Handling Equipment | 3 | 1.00 | 167 | 0.40 |
| Building - landscaping | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Utilities | Excavators | 2 | 10.00 | 523 | 0.38 |
| Utilities | Excavators | 10 | 10.00 | 286 | 0.38 |
| Utilities | Excavators | 2 | 10.00 | 190 | 0.38 |
| Utilities | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Utilities | Other Material Handling Equipment | 7 | 1.00 | 167 | 0.40 |
| Utilities | Excavators | 4 | 10.00 | 396 | 0.38 |
| Utilities | Excavators | 2 | 10.00 | 190 | 0.38 |
| Utilities | Excavators | 2 | 10.00 | 188 | 0.38 |

| | | | | | |
|---|---|---|---|---|---|
| Utilities | Excavators | 8 | 10.00 | 40 | 0.38 |
| Utilities | Tractors/Loaders/Backhoes | 8 | 10.00 | 90 | 0.37 |
| Utilities | Cement and Mortar Mixers | 8 | 1.00 | 9 | 0.56 |
| Utilities | Forklifts | 4 | 10.00 | 89 | 0.20 |
| Utilities | Other Material Handling Equipment | 18 | 1.00 | 167 | 0.40 |
| Temporary utilities | Cranes | 2 | 10.00 | 445 | 0.29 |
| Interchange | Rubber Tired Dozers | 1 | 10.00 | 410 | 0.40 |
| Interchange | Scrapers | 1 | 10.00 | 330 | 0.48 |
| Interchange | Excavators | 1 | 10.00 | 190 | 0.38 |
| Interchange | Tractors/Loaders/Backhoes | 1 | 10.00 | 98 | 0.37 |
| Interchange | Cranes | 1 | 10.00 | 226 | 0.29 |
| Interchange | Cement and Mortar Mixers | 4 | 1.00 | 9 | 0.56 |
| Interchange | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Interchange | Bore/Drill Rigs | 1 | 10.00 | 206 | 0.50 |
| Interchange | Rubber Tired Loaders | 1 | 10.00 | 180 | 0.36 |
| Interchange | Other General Industrial Equipment | 1 | 10.00 | 88 | 0.34 |
| Interchange | Tractors/Loaders/Backhoes | 1 | 10.00 | 90 | 0.37 |
| Interchange | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Interchange | Graders | 1 | 10.00 | 259 | 0.41 |
| Curbing/drive approaches | Paving Equipment | 1 | 10.00 | 99 | 0.36 |
| Curbing/drive approaches | Tractors/Loaders/Backhoes | 1 | 10.00 | 55 | 0.37 |
| Curbing/drive approaches | Paving Equipment | 1 | 10.00 | 131 | 0.36 |
| Curbing/drive approaches | Cement and Mortar Mixers | 6 | 1.00 | 9 | 0.56 |
| Curbing/drive approaches | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Paving | Rollers | 2 | 10.00 | 81 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 4 | 10.00 | 90 | 0.37 |
| Paving | Paving Equipment | 2 | 10.00 | 131 | 0.36 |
| Paving | Scrapers | 2 | 10.00 | 362 | 0.48 |
| Paving | Pavers | 2 | 10.00 | 126 | 0.42 |
| Paving | Plate Compactors | 2 | 10.00 | 8 | 0.43 |

| | | | | | |
|---|---|---|---|---|---|
| Paving | Other Material Handling Equipment | 6 | 1.00 | 167 | 0.40 |
| Landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 73 | 0.37 |
| Landscaping | Tractors/Loaders/Backhoes | 2 | 10.00 | 78 | 0.37 |
| Landscaping | Rubber Tired Loaders | 2 | 10.00 | 149 | 0.36 |
| Landscaping | Forklifts | 2 | 10.00 | 125 | 0.20 |
| Landscaping | Excavators | 2 | 10.00 | 29 | 0.38 |
| Landscaping | Trenchers | 2 | 10.00 | 39 | 0.50 |
| Landscaping | Skid Steer Loaders | 2 | 10.00 | 69 | 0.37 |
| Landscaping | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Landscaping | Other Material Handling Equipment | 10 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Building - concrete | 40 | 25.00 | 2.00 | 7,512.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Building - wet utilities | 33 | 25.00 | 15.00 | 2,191.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Building - electrical | 38 | 15.00 | 6.00 | 5,008.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Building - landscaping | 21 | 10.00 | 7.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Utilities | 77 | 40.00 | 25.00 | 6,260.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Interchange | 19 | 25.00 | 4.00 | 2,817.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Landscaping | 26 | 10.00 | 6.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Temporary utilities | 2 | 0.00 | 0.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Curbing/drive approaches | 13 | 10.00 | 4.00 | 624.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 20 | 25.00 | 6.00 | 528.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Building - concrete - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.7522 | 25.8181 | 41.6034 | 0.0626 | | 1.0554 | 1.0554 | | 0.9945 | 0.9945 | | 5,974.2424 | 5,974.2424 | 1.4582 | | 6,004.8645 |
| **Total** | **2.7522** | **25.8181** | **41.6034** | **0.0626** | **0.0000** | **1.0554** | **1.0554** | **0.0000** | **0.9945** | **0.9945** | | **5,974.2424** | **5,974.2424** | **1.4582** | | **6,004.8645** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.3020 | 2.8892 | 3.6803 | 0.0209 | 0.5234 | 0.1234 | 0.6468 | 0.1434 | 0.1135 | 0.2569 | | 1,970.1354 | 1,970.1354 | 0.0113 | | 1,970.3729 |
| Vendor | 0.0183 | 0.1715 | 0.1923 | 1.4100e-003 | 0.0454 | 7.3000e-003 | 0.0527 | 0.0130 | 6.7200e-003 | 0.0197 | | 132.3177 | 132.3177 | 6.3000e-004 | | 132.3310 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.3745** | **3.1504** | **5.0364** | **0.0280** | **1.0439** | **0.1335** | **1.1774** | **0.2823** | **0.1229** | **0.4052** | | **2,468.5426** | **2,468.5426** | **0.0237** | | **2,469.0405** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4466 | 26.1067 | 44.1479 | 0.0626 | | 0.1364 | 0.1364 | | 0.1364 | 0.1364 | 0.0000 | 5,974.2424 | 5,974.2424 | 1.4582 | | 6,004.8644 |
| **Total** | **1.4466** | **26.1067** | **44.1479** | **0.0626** | **0.0000** | **0.1364** | **0.1364** | **0.0000** | **0.1364** | **0.1364** | **0.0000** | **5,974.2424** | **5,974.2424** | **1.4582** | | **6,004.8644** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.3020 | 2.8892 | 3.6803 | 0.0209 | 0.5234 | 0.1234 | 0.6468 | 0.1434 | 0.1135 | 0.2569 | | 1,970.1354 | 1,970.1354 | 0.0113 | | 1,970.3729 |
| Vendor | 0.0183 | 0.1715 | 0.1923 | 1.4100e-003 | 0.0454 | 7.3000e-003 | 0.0527 | 0.0130 | 6.7200e-003 | 0.0197 | | 132.3177 | 132.3177 | 6.3000e-004 | | 132.3310 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.3745** | **3.1504** | **5.0364** | **0.0280** | **1.0439** | **0.1335** | **1.1774** | **0.2823** | **0.1229** | **0.4052** | | **2,468.5426** | **2,468.5426** | **0.0237** | | **2,469.0405** |

## 3.3 Building - wet utilities - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.5687 | 35.6235 | 66.8091 | 0.1252 | | 1.6073 | 1.6073 | | 1.4787 | 1.4787 | | 12,121.5778 | 12,121.5778 | 3.9204 | | 12,203.9054 |
| **Total** | **4.5687** | **35.6235** | **66.8091** | **0.1252** | **0.0000** | **1.6073** | **1.6073** | **0.0000** | **1.4787** | **1.4787** | | **12,121.5778** | **12,121.5778** | **3.9204** | | **12,203.9054** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0881 | 0.8427 | 1.0734 | 6.1000e-003 | 0.1527 | 0.0360 | 0.1887 | 0.0418 | 0.0331 | 0.0749 | | 574.6228 | 574.6228 | 3.3000e-003 | | 574.6921 |
| Vendor | 0.1375 | 1.2861 | 1.4424 | 0.0106 | 0.3408 | 0.0548 | 0.3956 | 0.0972 | 0.0504 | 0.1476 | | 992.3824 | 992.3824 | 4.7600e-003 | | 992.4823 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.2798** | **2.2185** | **3.6796** | **0.0223** | **0.9685** | **0.0936** | **1.0621** | **0.2650** | **0.0861** | **0.3511** | | **1,933.0948** | **1,933.0948** | **0.0198** | | **1,933.5110** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9643 | 48.2084 | 86.1041 | 0.1252 | | 0.2053 | 0.2053 | | 0.2053 | 0.2053 | 0.0000 | 12,121.5778 | 12,121.5778 | 3.9204 | | 12,203.9054 |
| **Total** | **1.9643** | **48.2084** | **86.1041** | **0.1252** | **0.0000** | **0.2053** | **0.2053** | **0.0000** | **0.2053** | **0.2053** | **0.0000** | **12,121.5778** | **12,121.5778** | **3.9204** | | **12,203.9054** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0881 | 0.8427 | 1.0734 | 6.1000e-003 | 0.1527 | 0.0360 | 0.1887 | 0.0418 | 0.0331 | 0.0749 | | 574.6228 | 574.6228 | 3.3000e-003 | | 574.6921 |
| Vendor | 0.1375 | 1.2861 | 1.4424 | 0.0106 | 0.3408 | 0.0548 | 0.3956 | 0.0972 | 0.0504 | 0.1476 | | 992.3824 | 992.3824 | 4.7600e-003 | | 992.4823 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.2798** | **2.2185** | **3.6796** | **0.0223** | **0.9685** | **0.0936** | **1.0621** | **0.2650** | **0.0861** | **0.3511** | | **1,933.0948** | **1,933.0948** | **0.0198** | | **1,933.5110** |

## 3.4 Building - electrical - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.9968 | 27.5226 | 40.9296 | 0.0565 | | 1.0944 | 1.0944 | | 1.0085 | 1.0085 | | 5,445.2825 | 5,445.2825 | 1.7445 | | 5,481.9164 |
| **Total** | **2.9968** | **27.5226** | **40.9296** | **0.0565** | **0.0000** | **1.0944** | **1.0944** | **0.0000** | **1.0085** | **1.0085** | | **5,445.2825** | **5,445.2825** | **1.7445** | | **5,481.9164** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2014 | 1.9261 | 2.4535 | 0.0140 | 0.3489 | 0.0823 | 0.4312 | 0.0956 | 0.0757 | 0.1713 | | 1,313.4236 | 1,313.4236 | 7.5400e-003 | | 1,313.5820 |
| Vendor | 0.0550 | 0.5144 | 0.5770 | 4.2200e-003 | 0.1363 | 0.0219 | 0.1582 | 0.0389 | 0.0202 | 0.0590 | | 396.9530 | 396.9530 | 1.9000e-003 | | 396.9929 |
| Worker | 0.0325 | 0.0539 | 0.6983 | 3.4000e-003 | 0.2850 | 1.7000e-003 | 0.2867 | 0.0756 | 1.5800e-003 | 0.0772 | | 219.6538 | 219.6538 | 7.0600e-003 | | 219.8020 |
| **Total** | **0.2889** | **2.4944** | **3.7287** | **0.0216** | **0.7703** | **0.1059** | **0.8762** | **0.2100** | **0.0974** | **0.3075** | | **1,930.0303** | **1,930.0303** | **0.0165** | | **1,930.3768** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.2816 | 30.5774 | 42.2617 | 0.0565 | | 0.4312 | 0.4312 | | 0.4312 | 0.4312 | 0.0000 | 5,445.2825 | 5,445.2825 | 1.7445 | | 5,481.9164 |
| **Total** | **1.2816** | **30.5774** | **42.2617** | **0.0565** | **0.0000** | **0.4312** | **0.4312** | **0.0000** | **0.4312** | **0.4312** | **0.0000** | **5,445.2825** | **5,445.2825** | **1.7445** | | **5,481.9164** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2014 | 1.9261 | 2.4535 | 0.0140 | 0.3489 | 0.0823 | 0.4312 | 0.0956 | 0.0757 | 0.1713 | | 1,313.4236 | 1,313.4236 | 7.5400e-003 | | 1,313.5820 |
| Vendor | 0.0550 | 0.5144 | 0.5770 | 4.2200e-003 | 0.1363 | 0.0219 | 0.1582 | 0.0389 | 0.0202 | 0.0590 | | 396.9530 | 396.9530 | 1.9000e-003 | | 396.9929 |
| Worker | 0.0325 | 0.0539 | 0.6983 | 3.4000e-003 | 0.2850 | 1.7000e-003 | 0.2867 | 0.0756 | 1.5800e-003 | 0.0772 | | 219.6538 | 219.6538 | 7.0600e-003 | | 219.8020 |
| **Total** | **0.2889** | **2.4944** | **3.7287** | **0.0216** | **0.7703** | **0.1059** | **0.8762** | **0.2100** | **0.0974** | **0.3075** | | **1,930.0303** | **1,930.0303** | **0.0165** | | **1,930.3768** |

## 3.5 Building - landscaping - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.2876 | 19.1420 | 32.4489 | 0.0469 | | 0.8328 | 0.8328 | | 0.7662 | 0.7662 | | 4,536.1875 | 4,536.1875 | 1.4671 | | 4,566.9965 |
| **Total** | **2.2876** | **19.1420** | **32.4489** | **0.0469** | **0.0000** | **0.8328** | **0.8328** | **0.0000** | **0.7662** | **0.7662** | | **4,536.1875** | **4,536.1875** | **1.4671** | | **4,566.9965** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0642 | 0.6002 | 0.6731 | 4.9200e-003 | 0.1590 | 0.0256 | 0.1846 | 0.0454 | 0.0235 | 0.0689 | | 463.1118 | 463.1118 | 2.2200e-003 | | 463.1584 |
| Worker | 0.0217 | 0.0359 | 0.4655 | 2.2700e-003 | 0.1900 | 1.1300e-003 | 0.1912 | 0.0504 | 1.0500e-003 | 0.0514 | | 146.4358 | 146.4358 | 4.7100e-003 | | 146.5346 |
| **Total** | **0.0858** | **0.6361** | **1.1386** | **7.1900e-003** | **0.3491** | **0.0267** | **0.3758** | **0.0958** | **0.0246** | **0.1203** | | **609.5476** | **609.5476** | **6.9300e-003** | | **609.6930** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.2122 | 24.0970 | 35.4577 | 0.0469 | | 0.5079 | 0.5079 | | 0.4967 | 0.4967 | 0.0000 | 4,536.1875 | 4,536.1875 | 1.4671 | | 4,566.9964 |
| **Total** | **1.2122** | **24.0970** | **35.4577** | **0.0469** | **0.0000** | **0.5079** | **0.5079** | **0.0000** | **0.4967** | **0.4967** | **0.0000** | **4,536.1875** | **4,536.1875** | **1.4671** | | **4,566.9964** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0642 | 0.6002 | 0.6731 | 4.9200e-003 | 0.1590 | 0.0256 | 0.1846 | 0.0454 | 0.0235 | 0.0689 | | 463.1118 | 463.1118 | 2.2200e-003 | | 463.1584 |
| Worker | 0.0217 | 0.0359 | 0.4655 | 2.2700e-003 | 0.1900 | 1.1300e-003 | 0.1912 | 0.0504 | 1.0500e-003 | 0.0514 | | 146.4358 | 146.4358 | 4.7100e-003 | | 146.5346 |
| **Total** | **0.0858** | **0.6361** | **1.1386** | **7.1900e-003** | **0.3491** | **0.0267** | **0.3758** | **0.0958** | **0.0246** | **0.1203** | | **609.5476** | **609.5476** | **6.9300e-003** | | **609.6930** |

## 3.6 Utilities - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 10.5347 | 79.3576 | 113.8782 | 0.3465 | | 2.9986 | 2.9986 | | 2.7599 | 2.7599 | | 33,515.2272 | 33,515.2272 | 10.8284 | | 33,742.6238 |
| **Total** | **10.5347** | **79.3576** | **113.8782** | **0.3465** | **0.0000** | **2.9986** | **2.9986** | **0.0000** | **2.7599** | **2.7599** | | **33,515.2272** | **33,515.2272** | **10.8284** | | **33,742.6238** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2517 | 2.4077 | 3.0669 | 0.0174 | 0.4361 | 0.1029 | 0.5390 | 0.1195 | 0.0946 | 0.2141 | | 1,641.7795 | 1,641.7795 | 9.4300e-003 | | 1,641.9775 |
| Vendor | 0.2291 | 2.1435 | 2.4040 | 0.0176 | 0.5680 | 0.0913 | 0.6593 | 0.1620 | 0.0840 | 0.2460 | | 1,653.9706 | 1,653.9706 | 7.9300e-003 | | 1,654.1371 |
| Worker | 0.0867 | 0.1436 | 1.8621 | 9.0700e-003 | 0.7601 | 4.5300e-003 | 0.7646 | 0.2016 | 4.2100e-003 | 0.2058 | | 585.7433 | 585.7433 | 0.0188 | | 586.1386 |
| **Total** | **0.5675** | **4.6947** | **7.3329** | **0.0441** | **1.7642** | **0.1987** | **1.9629** | **0.4830** | **0.1828** | **0.6658** | | **3,881.4934** | **3,881.4934** | **0.0362** | | **3,882.2531** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 6.0134 | 110.9844 | 201.9167 | 0.3465 | | 0.9016 | 0.9016 | | 0.9016 | 0.9016 | 0.0000 | 33,515.2272 | 33,515.2272 | 10.8284 | | 33,742.6238 |
| **Total** | **6.0134** | **110.9844** | **201.9167** | **0.3465** | **0.0000** | **0.9016** | **0.9016** | **0.0000** | **0.9016** | **0.9016** | **0.0000** | **33,515.2272** | **33,515.2272** | **10.8284** | | **33,742.6238** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2517 | 2.4077 | 3.0669 | 0.0174 | 0.4361 | 0.1029 | 0.5390 | 0.1195 | 0.0946 | 0.2141 | | 1,641.7795 | 1,641.7795 | 9.4300e-003 | | 1,641.9775 |
| Vendor | 0.2291 | 2.1435 | 2.4040 | 0.0176 | 0.5680 | 0.0913 | 0.6593 | 0.1620 | 0.0840 | 0.2460 | | 1,653.9706 | 1,653.9706 | 7.9300e-003 | | 1,654.1371 |
| Worker | 0.0867 | 0.1436 | 1.8621 | 9.0700e-003 | 0.7601 | 4.5300e-003 | 0.7646 | 0.2016 | 4.2100e-003 | 0.2058 | | 585.7433 | 585.7433 | 0.0188 | | 586.1386 |
| **Total** | **0.5675** | **4.6947** | **7.3329** | **0.0441** | **1.7642** | **0.1987** | **1.9629** | **0.4830** | **0.1828** | **0.6658** | | **3,881.4934** | **3,881.4934** | **0.0362** | | **3,882.2531** |

## 3.7 Interchange - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 12.1660 | 0.0000 | 12.1660 | 4.6386 | 0.0000 | 4.6386 | | | 0.0000 | | | 0.0000 |
| Off-Road | 5.0237 | 45.3556 | 41.9365 | 0.0992 | | 1.9312 | 1.9312 | | 1.7773 | 1.7773 | | 9,590.5970 | 9,590.5970 | 3.0963 | | 9,655.6182 |
| **Total** | **5.0237** | **45.3556** | **41.9365** | **0.0992** | **12.1660** | **1.9312** | **14.0972** | **4.6386** | **1.7773** | **6.4159** | | **9,590.5970** | **9,590.5970** | **3.0963** | | **9,655.6182** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1133 | 1.0834 | 1.3801 | 7.8500e-003 | 0.1963 | 0.0463 | 0.2425 | 0.0538 | 0.0426 | 0.0963 | | 738.8008 | 738.8008 | 4.2400e-003 | | 738.8899 |
| Vendor | 0.0367 | 0.3430 | 0.3846 | 2.8100e-003 | 0.0909 | 0.0146 | 0.1055 | 0.0259 | 0.0134 | 0.0394 | | 264.6353 | 264.6353 | 1.2700e-003 | | 264.6619 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.2041** | **1.5162** | **2.9285** | **0.0163** | **0.7622** | **0.0637** | **0.8259** | **0.2057** | **0.0587** | **0.2643** | | **1,369.5256** | **1,369.5256** | **0.0173** | | **1,369.8884** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 4.7448 | 0.0000 | 4.7448 | 1.8091 | 0.0000 | 1.8091 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.6748 | 29.6767 | 57.0969 | 0.0992 | | 0.1688 | 0.1688 | | 0.1688 | 0.1688 | 0.0000 | 9,590.5970 | 9,590.5970 | 3.0963 | | 9,655.6182 |
| **Total** | **1.6748** | **29.6767** | **57.0969** | **0.0992** | **4.7448** | **0.1688** | **4.9135** | **1.8091** | **0.1688** | **1.9778** | **0.0000** | **9,590.5970** | **9,590.5970** | **3.0963** | | **9,655.6182** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1133 | 1.0834 | 1.3801 | 7.8500e-003 | 0.1963 | 0.0463 | 0.2425 | 0.0538 | 0.0426 | 0.0963 | | 738.8008 | 738.8008 | 4.2400e-003 | | 738.8899 |
| Vendor | 0.0367 | 0.3430 | 0.3846 | 2.8100e-003 | 0.0909 | 0.0146 | 0.1055 | 0.0259 | 0.0134 | 0.0394 | | 264.6353 | 264.6353 | 1.2700e-003 | | 264.6619 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.2041** | **1.5162** | **2.9285** | **0.0163** | **0.7622** | **0.0637** | **0.8259** | **0.2057** | **0.0587** | **0.2643** | | **1,369.5256** | **1,369.5256** | **0.0173** | | **1,369.8884** |

## 3.8 Landscaping - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4269 | 20.1698 | 34.7816 | 0.0505 | | 0.8861 | 0.8861 | | 0.8152 | 0.8152 | | 4,883.9033 | 4,883.9033 | 1.5796 | | 4,917.0739 |
| **Total** | **2.4269** | **20.1698** | **34.7816** | **0.0505** | **0.0000** | **0.8861** | **0.8861** | **0.0000** | **0.8152** | **0.8152** | | **4,883.9033** | **4,883.9033** | **1.5796** | | **4,917.0739** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0550 | 0.5144 | 0.5770 | 4.2200e-003 | 0.1363 | 0.0219 | 0.1582 | 0.0389 | 0.0202 | 0.0590 | | 396.9530 | 396.9530 | 1.9000e-003 | | 396.9929 |
| Worker | 0.0217 | 0.0359 | 0.4655 | 2.2700e-003 | 0.1900 | 1.1300e-003 | 0.1912 | 0.0504 | 1.0500e-003 | 0.0514 | | 146.4358 | 146.4358 | 4.7100e-003 | | 146.5346 |
| **Total** | **0.0767** | **0.5503** | **1.0425** | **6.4900e-003** | **0.3263** | **0.0230** | **0.3494** | **0.0893** | **0.0212** | **0.1105** | | **543.3888** | **543.3888** | **6.6100e-003** | | **543.5275** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.2564 | 25.6802 | 38.1822 | 0.0505 | | 0.5138 | 0.5138 | | 0.5026 | 0.5026 | 0.0000 | 4,883.9033 | 4,883.9033 | 1.5796 | | 4,917.0739 |
| **Total** | **1.2564** | **25.6802** | **38.1822** | **0.0505** | **0.0000** | **0.5138** | **0.5138** | **0.0000** | **0.5026** | **0.5026** | **0.0000** | **4,883.9033** | **4,883.9033** | **1.5796** | | **4,917.0739** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0550 | 0.5144 | 0.5770 | 4.2200e-003 | 0.1363 | 0.0219 | 0.1582 | 0.0389 | 0.0202 | 0.0590 | | 396.9530 | 396.9530 | 1.9000e-003 | | 396.9929 |
| Worker | 0.0217 | 0.0359 | 0.4655 | 2.2700e-003 | 0.1900 | 1.1300e-003 | 0.1912 | 0.0504 | 1.0500e-003 | 0.0514 | | 146.4358 | 146.4358 | 4.7100e-003 | | 146.5346 |
| **Total** | **0.0767** | **0.5503** | **1.0425** | **6.4900e-003** | **0.3263** | **0.0230** | **0.3494** | **0.0893** | **0.0212** | **0.1105** | | **543.3888** | **543.3888** | **6.6100e-003** | | **543.5275** |

## 3.9 Temporary utilities - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.2427 | 12.2579 | 10.4336 | 0.0277 | | 0.5002 | 0.5002 | | 0.4602 | 0.4602 | | 2,685.5544 | 2,685.5544 | 0.8686 | | 2,703.7942 |
| **Total** | **1.2427** | **12.2579** | **10.4336** | **0.0277** | | **0.5002** | **0.5002** | | **0.4602** | **0.4602** | | **2,685.5544** | **2,685.5544** | **0.8686** | | **2,703.7942** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.4552 | 7.3403 | 14.7943 | 0.0277 | | 0.0455 | 0.0455 | | 0.0455 | 0.0455 | 0.0000 | 2,685.5544 | 2,685.5544 | 0.8686 | | 2,703.7942 |
| **Total** | **0.4552** | **7.3403** | **14.7943** | **0.0277** | | **0.0455** | **0.0455** | | **0.0455** | **0.0455** | **0.0000** | **2,685.5544** | **2,685.5544** | **0.8686** | | **2,703.7942** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

## 3.10 Curbing/drive approaches - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6210 | 5.5750 | 9.5731 | 0.0145 | | 0.2619 | 0.2619 | | 0.2418 | 0.2418 | | 1,391.2907 | 1,391.2907 | 0.4417 | | 1,400.5654 |
| **Total** | **0.6210** | **5.5750** | **9.5731** | **0.0145** | | **0.2619** | **0.2619** | | **0.2418** | **0.2418** | | **1,391.2907** | **1,391.2907** | **0.4417** | | **1,400.5654** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0755 | 0.7223 | 0.9201 | 5.2300e-003 | 0.1308 | 0.0309 | 0.1617 | 0.0358 | 0.0284 | 0.0642 | | 492.5338 | 492.5338 | 2.8300e-003 | | 492.5932 |
| Vendor | 0.0367 | 0.3430 | 0.3846 | 2.8100e-003 | 0.0909 | 0.0146 | 0.1055 | 0.0259 | 0.0134 | 0.0394 | | 264.6353 | 264.6353 | 1.2700e-003 | | 264.6619 |
| Worker | 0.0217 | 0.0359 | 0.4655 | 2.2700e-003 | 0.1900 | 1.1300e-003 | 0.1912 | 0.0504 | 1.0500e-003 | 0.0514 | | 146.4358 | 146.4358 | 4.7100e-003 | | 146.5346 |
| **Total** | **0.1338** | **1.1012** | **1.7702** | **0.0103** | **0.4117** | **0.0466** | **0.4583** | **0.1122** | **0.0429** | **0.1550** | | **903.6050** | **903.6050** | **8.8100e-003** | | **903.7898** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.2821 | 6.6887 | 10.8249 | 0.0145 | | 0.0803 | 0.0803 | | 0.0803 | 0.0803 | 0.0000 | 1,391.2907 | 1,391.2907 | 0.4417 | | 1,400.5654 |
| **Total** | **0.2821** | **6.6887** | **10.8249** | **0.0145** | | **0.0803** | **0.0803** | | **0.0803** | **0.0803** | **0.0000** | **1,391.2907** | **1,391.2907** | **0.4417** | | **1,400.5654** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0755 | 0.7223 | 0.9201 | 5.2300e-003 | 0.1308 | 0.0309 | 0.1617 | 0.0358 | 0.0284 | 0.0642 | | 492.5338 | 492.5338 | 2.8300e-003 | | 492.5932 |
| Vendor | 0.0367 | 0.3430 | 0.3846 | 2.8100e-003 | 0.0909 | 0.0146 | 0.1055 | 0.0259 | 0.0134 | 0.0394 | | 264.6353 | 264.6353 | 1.2700e-003 | | 264.6619 |
| Worker | 0.0217 | 0.0359 | 0.4655 | 2.2700e-003 | 0.1900 | 1.1300e-003 | 0.1912 | 0.0504 | 1.0500e-003 | 0.0514 | | 146.4358 | 146.4358 | 4.7100e-003 | | 146.5346 |
| **Total** | **0.1338** | **1.1012** | **1.7702** | **0.0103** | **0.4117** | **0.0466** | **0.4583** | **0.1122** | **0.0429** | **0.1550** | | **903.6050** | **903.6050** | **8.8100e-003** | | **903.7898** |

## 3.11 Paving - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 5.3025 | 0.0000 | 5.3025 | 0.5726 | 0.0000 | 0.5726 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.6691 | 34.3917 | 44.9466 | 0.0855 | | 1.4762 | 1.4762 | | 1.3601 | 1.3601 | | 8,249.0136 | 8,249.0136 | 2.6490 | | 8,304.6419 |
| **Total** | **3.6691** | **34.3917** | **44.9466** | **0.0855** | **5.3025** | **1.4762** | **6.7787** | **0.5726** | **1.3601** | **1.9326** | | **8,249.0136** | **8,249.0136** | **2.6490** | | **8,304.6419** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1384 | 1.3242 | 1.6868 | 9.5900e-003 | 0.2399 | 0.0566 | 0.2964 | 0.0657 | 0.0520 | 0.1177 | | 902.9787 | 902.9787 | 5.1900e-003 | | 903.0876 |
| Vendor | 0.0550 | 0.5144 | 0.5770 | 4.2200e-003 | 0.1363 | 0.0219 | 0.1582 | 0.0389 | 0.0202 | 0.0590 | | 396.9530 | 396.9530 | 1.9000e-003 | | 396.9929 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.2476** | **1.9284** | **3.4275** | **0.0195** | **0.8513** | **0.0813** | **0.9326** | **0.2306** | **0.0748** | **0.3054** | | **1,666.0212** | **1,666.0212** | **0.0189** | | **1,666.4171** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.0680 | 0.0000 | 2.0680 | 0.2233 | 0.0000 | 0.2233 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4030 | 30.4591 | 55.4033 | 0.0855 | | 0.1380 | 0.1380 | | 0.1380 | 0.1380 | 0.0000 | 8,249.0136 | 8,249.0136 | 2.6490 | | 8,304.6419 |
| **Total** | **1.4030** | **30.4591** | **55.4033** | **0.0855** | **2.0680** | **0.1380** | **2.2060** | **0.2233** | **0.1380** | **0.3613** | **0.0000** | **8,249.0136** | **8,249.0136** | **2.6490** | | **8,304.6419** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1384 | 1.3242 | 1.6868 | 9.5900e-003 | 0.2399 | 0.0566 | 0.2964 | 0.0657 | 0.0520 | 0.1177 | | 902.9787 | 902.9787 | 5.1900e-003 | | 903.0876 |
| Vendor | 0.0550 | 0.5144 | 0.5770 | 4.2200e-003 | 0.1363 | 0.0219 | 0.1582 | 0.0389 | 0.0202 | 0.0590 | | 396.9530 | 396.9530 | 1.9000e-003 | | 396.9929 |
| Worker | 0.0542 | 0.0898 | 1.1638 | 5.6700e-003 | 0.4751 | 2.8300e-003 | 0.4779 | 0.1260 | 2.6300e-003 | 0.1286 | | 366.0896 | 366.0896 | 0.0118 | | 366.3366 |
| **Total** | **0.2476** | **1.9284** | **3.4275** | **0.0195** | **0.8513** | **0.0813** | **0.9326** | **0.2306** | **0.0748** | **0.3054** | | **1,666.0212** | **1,666.0212** | **0.0189** | | **1,666.4171** |

# World Logistics Center - Construction Other Phases (Dust)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 0.10 | 1000sqft | 1.00 | 100.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 150 | 0 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 48.00 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 313.00 |
| tblConstructionPhase | NumDays | 100.00 | 155.00 |
| tblConstructionPhase | NumDays | 100.00 | 104.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 2/25/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |

| | | | |
|---|---|---|---|
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 12/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 6/29/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseEndDate | 4/30/2016 | 12/31/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 11/6/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 1/1/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 7/4/2015 |
| tblConstructionPhase | PhaseStartDate | 1/1/2016 | 9/2/2015 |
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| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
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| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
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| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |

| | | | |
|---|---|---|---|
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| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
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| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 0.09 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 7,512.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 528.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,191.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 5,008.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 6,260.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,817.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 624.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 15.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 7.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 15.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 40.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 10.00 |
| tblWater | IndoorWaterUseRate | 23,125.00 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Building - concrete | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 2 | Building - wet utilities | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 3 | Building - electrical | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 4 | Building - landscaping | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 5 | Utilities | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 6 | Interchange | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 7 | Landscaping | Building Construction | 1/1/2015 | 12/31/2015 | 6 | 313 | |
| 8 | Temporary utilities | Building Construction | 7/4/2015 | 12/31/2015 | 6 | 155 | |
| 9 | Curbing/drive approaches | Building Construction | 9/2/2015 | 12/31/2015 | 6 | 104 | |
| 10 | Paving | Building Construction | 11/6/2015 | 12/31/2015 | 6 | 48 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Building - concrete | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Building - wet utilities | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Building - electrical | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Building - landscaping | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Utilities | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Interchange | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Landscaping | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Temporary utilities | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Curbing/drive approaches | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |
| Paving | Tractors/Loaders/Backhoes | 1 | 1.00 | 90 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Building - concrete | 1 | 25.00 | 2.00 | 7,512.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Building - wet utilities | 1 | 25.00 | 15.00 | 2,191.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Building - electrical | 1 | 15.00 | 6.00 | 5,008.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Building - landscaping | 1 | 10.00 | 7.00 | 0.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Utilities | 1 | 40.00 | 25.00 | 6,260.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Interchange | 1 | 25.00 | 4.00 | 2,817.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Landscaping | 1 | 10.00 | 6.00 | 0.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Temporary utilities | 1 | 0.00 | 0.00 | 0.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Curbing/drive approaches | 1 | 10.00 | 4.00 | 624.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Paving | 1 | 25.00 | 6.00 | 528.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Unpaved Roads

Clean Paved Roads

## 3.2 Building - concrete - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1711 | 0.6790 | 2.7088 | 8.9000e-004 | 12.4903 | 5.4200e-003 | 12.4957 | 1.2459 | 4.9700e-003 | 1.2509 | | 86.3438 | 86.3438 | 1.5500e-003 | | 86.3765 |
| Vendor | 0.0125 | 0.0520 | 0.1527 | 7.0000e-005 | 1.0409 | 4.3000e-004 | 1.0413 | 0.1039 | 4.0000e-004 | 0.1043 | | 6.4334 | 6.4334 | 9.0000e-005 | | 6.4353 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 13.0091 | 2.5000e-004 | 13.0093 | 1.2973 | 2.3000e-004 | 1.2975 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.2583** | **0.7472** | **3.0558** | **1.1400e-003** | **26.5403** | **6.1000e-003** | **26.5464** | **2.6471** | **5.6000e-003** | **2.6527** | | **108.3358** | **108.3358** | **2.9300e-003** | | **108.3973** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1711 | 0.6790 | 2.7088 | 8.9000e-004 | 4.9717 | 5.4200e-003 | 4.9771 | 0.4941 | 4.9700e-003 | 0.4990 | | 86.3438 | 86.3438 | 1.5500e-003 | | 86.3765 |
| Vendor | 0.0125 | 0.0520 | 0.1527 | 7.0000e-005 | 0.4144 | 4.3000e-004 | 0.4148 | 0.0412 | 4.0000e-004 | 0.0416 | | 6.4334 | 6.4334 | 9.0000e-005 | | 6.4353 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 5.1772 | 2.5000e-004 | 5.1774 | 0.5141 | 2.3000e-004 | 0.5143 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.2583** | **0.7472** | **3.0558** | **1.1400e-003** | **10.5632** | **6.1000e-003** | **10.5693** | **1.0494** | **5.6000e-003** | **1.0550** | | **108.3358** | **108.3358** | **2.9300e-003** | | **108.3973** |

## 3.3 Building - wet utilities - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0499 | 0.1980 | 0.7901 | 2.6000e-004 | 3.6430 | 1.5800e-003 | 3.6446 | 0.3634 | 1.4500e-003 | 0.3649 | | 25.1836 | 25.1836 | 4.5000e-004 | | 25.1931 |
| Vendor | 0.0939 | 0.3899 | 1.1454 | 4.9000e-004 | 7.8068 | 3.2400e-003 | 7.8100 | 0.7789 | 2.9700e-003 | 0.7819 | | 48.2508 | 48.2508 | 6.6000e-004 | | 48.2646 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 13.0091 | 2.5000e-004 | 13.0093 | 1.2973 | 2.3000e-004 | 1.2975 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.2185** | **0.6042** | **2.1298** | **9.3000e-004** | **24.4588** | **5.0700e-003** | **24.4639** | **2.4396** | **4.6500e-003** | **2.4442** | | **88.9930** | **88.9930** | **2.4000e-003** | | **89.0433** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0499 | 0.1980 | 0.7901 | 2.6000e-004 | 1.4501 | 1.5800e-003 | 1.4517 | 0.1441 | 1.4500e-003 | 0.1456 | | 25.1836 | 25.1836 | 4.5000e-004 | | 25.1931 |
| Vendor | 0.0939 | 0.3899 | 1.1454 | 4.9000e-004 | 3.1077 | 3.2400e-003 | 3.1109 | 0.3090 | 2.9700e-003 | 0.3120 | | 48.2508 | 48.2508 | 6.6000e-004 | | 48.2646 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 5.1772 | 2.5000e-004 | 5.1774 | 0.5141 | 2.3000e-004 | 0.5143 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.2185** | **0.6042** | **2.1298** | **9.3000e-004** | **9.7349** | **5.0700e-003** | **9.7400** | **0.9672** | **4.6500e-003** | **0.9718** | | **88.9930** | **88.9930** | **2.4000e-003** | | **89.0433** |

## 3.4 Building - electrical - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1141 | 0.4526 | 1.8059 | 5.9000e-004 | 8.3269 | 3.6200e-003 | 8.3305 | 0.8306 | 3.3100e-003 | 0.8339 | | 57.5626 | 57.5626 | 1.0400e-003 | | 57.5843 |
| Vendor | 0.0376 | 0.1560 | 0.4582 | 2.0000e-004 | 3.1227 | 1.3000e-003 | 3.1240 | 0.3116 | 1.1900e-003 | 0.3128 | | 19.3003 | 19.3003 | 2.6000e-004 | | 19.3058 |
| Worker | 0.0448 | 9.7400e-003 | 0.1166 | 1.1000e-004 | 7.8054 | 1.5000e-004 | 7.8056 | 0.7784 | 1.4000e-004 | 0.7785 | | 9.3351 | 9.3351 | 7.7000e-004 | | 9.3513 |
| **Total** | **0.1964** | **0.6184** | **2.3806** | **9.0000e-004** | **19.2550** | **5.0700e-003** | **19.2601** | **1.9206** | **4.6400e-003** | **1.9252** | | **86.1980** | **86.1980** | **2.0700e-003** | | **86.2415** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1141 | 0.4526 | 1.8059 | 5.9000e-004 | 3.3145 | 3.6200e-003 | 3.3181 | 0.3294 | 3.3100e-003 | 0.3327 | | 57.5626 | 57.5626 | 1.0400e-003 | | 57.5843 |
| Vendor | 0.0376 | 0.1560 | 0.4582 | 2.0000e-004 | 1.2431 | 1.3000e-003 | 1.2444 | 0.1236 | 1.1900e-003 | 0.1248 | | 19.3003 | 19.3003 | 2.6000e-004 | | 19.3058 |
| Worker | 0.0448 | 9.7400e-003 | 0.1166 | 1.1000e-004 | 3.1063 | 1.5000e-004 | 3.1065 | 0.3085 | 1.4000e-004 | 0.3086 | | 9.3351 | 9.3351 | 7.7000e-004 | | 9.3513 |
| **Total** | **0.1964** | **0.6184** | **2.3806** | **9.0000e-004** | **7.6638** | **5.0700e-003** | **7.6689** | **0.7614** | **4.6400e-003** | **0.7661** | | **86.1980** | **86.1980** | **2.0700e-003** | | **86.2415** |

## 3.5 Building - landscaping - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0438 | 0.1820 | 0.5345 | 2.3000e-004 | 3.6432 | 1.5100e-003 | 3.6447 | 0.3635 | 1.3900e-003 | 0.3649 | | 22.5171 | 22.5171 | 3.1000e-004 | | 22.5235 |
| Worker | 0.0299 | 6.4900e-003 | 0.0777 | 7.0000e-005 | 5.2036 | 1.0000e-004 | 5.2037 | 0.5189 | 9.0000e-005 | 0.5190 | | 6.2234 | 6.2234 | 5.1000e-004 | | 6.2342 |
| **Total** | **0.0737** | **0.1885** | **0.6123** | **3.0000e-004** | **8.8468** | **1.6100e-003** | **8.8484** | **0.8824** | **1.4800e-003** | **0.8839** | | **28.7405** | **28.7405** | **8.2000e-004** | | **28.7577** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0438 | 0.1820 | 0.5345 | 2.3000e-004 | 1.4502 | 1.5100e-003 | 1.4518 | 0.1442 | 1.3900e-003 | 0.1456 | | 22.5171 | 22.5171 | 3.1000e-004 | | 22.5235 |
| Worker | 0.0299 | 6.4900e-003 | 0.0777 | 7.0000e-005 | 2.0709 | 1.0000e-004 | 2.0710 | 0.2056 | 9.0000e-005 | 0.2057 | | 6.2234 | 6.2234 | 5.1000e-004 | | 6.2342 |
| **Total** | **0.0737** | **0.1885** | **0.6123** | **3.0000e-004** | **3.5211** | **1.6100e-003** | **3.5227** | **0.3498** | **1.4800e-003** | **0.3513** | | **28.7405** | **28.7405** | **8.2000e-004** | | **28.7577** |

## 3.6 Utilities - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1426 | 0.5658 | 2.2573 | 7.4000e-004 | 10.4086 | 4.5200e-003 | 10.4131 | 1.0383 | 4.1400e-003 | 1.0424 | | 71.9532 | 71.9532 | 1.2900e-003 | | 71.9804 |
| Vendor | 0.1565 | 0.6499 | 1.9090 | 8.2000e-004 | 13.0113 | 5.4000e-003 | 13.0167 | 1.2982 | 4.9500e-003 | 1.3031 | | 80.4180 | 80.4180 | 1.0900e-003 | | 80.4410 |
| Worker | 0.1195 | 0.0260 | 0.3109 | 2.9000e-004 | 20.8145 | 4.0000e-004 | 20.8149 | 2.0757 | 3.6000e-004 | 2.0760 | | 24.8937 | 24.8937 | 2.0600e-003 | | 24.9369 |
| **Total** | **0.4185** | **1.2417** | **4.4772** | **1.8500e-003** | **44.2344** | **0.0103** | **44.2447** | **4.4121** | **9.4500e-003** | **4.4216** | | **177.2649** | **177.2649** | **4.4400e-003** | | **177.3582** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1426 | 0.5658 | 2.2573 | 7.4000e-004 | 4.1431 | 4.5200e-003 | 4.1476 | 0.4117 | 4.1400e-003 | 0.4159 | | 71.9532 | 71.9532 | 1.2900e-003 | | 71.9804 |
| Vendor | 0.1565 | 0.6499 | 1.9090 | 8.2000e-004 | 5.1794 | 5.4000e-003 | 5.1848 | 0.5150 | 4.9500e-003 | 0.5199 | | 80.4180 | 80.4180 | 1.0900e-003 | | 80.4410 |
| Worker | 0.1195 | 0.0260 | 0.3109 | 2.9000e-004 | 8.2835 | 4.0000e-004 | 8.2839 | 0.8226 | 3.6000e-004 | 0.8229 | | 24.8937 | 24.8937 | 2.0600e-003 | | 24.9369 |
| **Total** | **0.4185** | **1.2417** | **4.4772** | **1.8500e-003** | **17.6060** | **0.0103** | **17.6163** | **1.7493** | **9.4500e-003** | **1.7587** | | **177.2649** | **177.2649** | **4.4400e-003** | | **177.3582** |

## 3.7 Interchange - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0642 | 0.2546 | 1.0158 | 3.3000e-004 | 4.6839 | 2.0300e-003 | 4.6859 | 0.4672 | 1.8600e-003 | 0.4691 | | 32.3789 | 32.3789 | 5.8000e-004 | | 32.3912 |
| Vendor | 0.0250 | 0.1040 | 0.3055 | 1.3000e-004 | 2.0818 | 8.6000e-004 | 2.0827 | 0.2077 | 7.9000e-004 | 0.2085 | | 12.8669 | 12.8669 | 1.7000e-004 | | 12.8706 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 13.0091 | 2.5000e-004 | 13.0093 | 1.2973 | 2.3000e-004 | 1.2975 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.1639** | **0.3748** | **1.5155** | **6.4000e-004** | **19.7747** | **3.1400e-003** | **19.7779** | **1.9722** | **2.8800e-003** | **1.9751** | | **60.8044** | **60.8044** | **2.0400e-003** | | **60.8473** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0642 | 0.2546 | 1.0158 | 3.3000e-004 | 1.8644 | 2.0300e-003 | 1.8664 | 0.1853 | 1.8600e-003 | 0.1871 | | 32.3789 | 32.3789 | 5.8000e-004 | | 32.3912 |
| Vendor | 0.0250 | 0.1040 | 0.3055 | 1.3000e-004 | 0.8287 | 8.6000e-004 | 0.8296 | 0.0824 | 7.9000e-004 | 0.0832 | | 12.8669 | 12.8669 | 1.7000e-004 | | 12.8706 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 5.1772 | 2.5000e-004 | 5.1774 | 0.5141 | 2.3000e-004 | 0.5143 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.1639** | **0.3748** | **1.5155** | **6.4000e-004** | **7.8703** | **3.1400e-003** | **7.8734** | **0.7818** | **2.8800e-003** | **0.7847** | | **60.8044** | **60.8044** | **2.0400e-003** | | **60.8473** |

## 3.8 Landscaping - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0376 | 0.1560 | 0.4582 | 2.0000e-004 | 3.1227 | 1.3000e-003 | 3.1240 | 0.3116 | 1.1900e-003 | 0.3128 | | 19.3003 | 19.3003 | 2.6000e-004 | | 19.3058 |
| Worker | 0.0299 | 6.4900e-003 | 0.0777 | 7.0000e-005 | 5.2036 | 1.0000e-004 | 5.2037 | 0.5189 | 9.0000e-005 | 0.5190 | | 6.2234 | 6.2234 | 5.1000e-004 | | 6.2342 |
| **Total** | **0.0674** | **0.1625** | **0.5359** | **2.7000e-004** | **8.3263** | **1.4000e-003** | **8.3277** | **0.8305** | **1.2800e-003** | **0.8318** | | **25.5237** | **25.5237** | **7.7000e-004** | | **25.5401** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0376 | 0.1560 | 0.4582 | 2.0000e-004 | 1.2431 | 1.3000e-003 | 1.2444 | 0.1236 | 1.1900e-003 | 0.1248 | | 19.3003 | 19.3003 | 2.6000e-004 | | 19.3058 |
| Worker | 0.0299 | 6.4900e-003 | 0.0777 | 7.0000e-005 | 2.0709 | 1.0000e-004 | 2.0710 | 0.2056 | 9.0000e-005 | 0.2057 | | 6.2234 | 6.2234 | 5.1000e-004 | | 6.2342 |
| **Total** | **0.0674** | **0.1625** | **0.5359** | **2.7000e-004** | **3.3139** | **1.4000e-003** | **3.3153** | **0.3292** | **1.2800e-003** | **0.3305** | | **25.5237** | **25.5237** | **7.7000e-004** | | **25.5401** |

## 3.9 Temporary utilities - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

## 3.10 Curbing/drive approaches - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0428 | 0.1697 | 0.6772 | 2.2000e-004 | 3.1226 | 1.3600e-003 | 3.1239 | 0.3115 | 1.2400e-003 | 0.3127 | | 21.5860 | 21.5860 | 3.9000e-004 | | 21.5941 |
| Vendor | 0.0250 | 0.1040 | 0.3055 | 1.3000e-004 | 2.0818 | 8.6000e-004 | 2.0827 | 0.2077 | 7.9000e-004 | 0.2085 | | 12.8669 | 12.8669 | 1.7000e-004 | | 12.8706 |
| Worker | 0.0299 | 6.4900e-003 | 0.0777 | 7.0000e-005 | 5.2036 | 1.0000e-004 | 5.2037 | 0.5189 | 9.0000e-005 | 0.5190 | | 6.2234 | 6.2234 | 5.1000e-004 | | 6.2342 |
| **Total** | **0.0977** | **0.2802** | **1.0604** | **4.2000e-004** | **10.4080** | **2.3200e-003** | **10.4103** | **1.0381** | **2.1200e-003** | **1.0402** | | **40.6763** | **40.6763** | **1.0700e-003** | | **40.6989** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0428 | 0.1697 | 0.6772 | 2.2000e-004 | 1.2429 | 1.3600e-003 | 1.2443 | 0.1235 | 1.2400e-003 | 0.1248 | | 21.5860 | 21.5860 | 3.9000e-004 | | 21.5941 |
| Vendor | 0.0250 | 0.1040 | 0.3055 | 1.3000e-004 | 0.8287 | 8.6000e-004 | 0.8296 | 0.0824 | 7.9000e-004 | 0.0832 | | 12.8669 | 12.8669 | 1.7000e-004 | | 12.8706 |
| Worker | 0.0299 | 6.4900e-003 | 0.0777 | 7.0000e-005 | 2.0709 | 1.0000e-004 | 2.0710 | 0.2056 | 9.0000e-005 | 0.2057 | | 6.2234 | 6.2234 | 5.1000e-004 | | 6.2342 |
| **Total** | **0.0977** | **0.2802** | **1.0604** | **4.2000e-004** | **4.1425** | **2.3200e-003** | **4.1448** | **0.4116** | **2.1200e-003** | **0.4137** | | **40.6763** | **40.6763** | **1.0700e-003** | | **40.6989** |

## 3.11 Paving - 2015

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0784 | 0.3112 | 1.2415 | 4.1000e-004 | 5.7247 | 2.4900e-003 | 5.7272 | 0.5711 | 2.2800e-003 | 0.5733 | | 39.5743 | 39.5743 | 7.1000e-004 | | 39.5892 |
| Vendor | 0.0376 | 0.1560 | 0.4582 | 2.0000e-004 | 3.1227 | 1.3000e-003 | 3.1240 | 0.3116 | 1.1900e-003 | 0.3128 | | 19.3003 | 19.3003 | 2.6000e-004 | | 19.3058 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 13.0091 | 2.5000e-004 | 13.0093 | 1.2973 | 2.3000e-004 | 1.2975 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.1906** | **0.4834** | **1.8940** | **7.9000e-004** | **21.8565** | **4.0400e-003** | **21.8605** | **2.1799** | **3.7000e-003** | **2.1836** | | **74.4331** | **74.4331** | **2.2600e-003** | | **74.4806** |

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0784 | 0.3112 | 1.2415 | 4.1000e-004 | 2.2787 | 2.4900e-003 | 2.2812 | 0.2265 | 2.2800e-003 | 0.2287 | | 39.5743 | 39.5743 | 7.1000e-004 | | 39.5892 |
| Vendor | 0.0376 | 0.1560 | 0.4582 | 2.0000e-004 | 1.2431 | 1.3000e-003 | 1.2444 | 0.1236 | 1.1900e-003 | 0.1248 | | 19.3003 | 19.3003 | 2.6000e-004 | | 19.3058 |
| Worker | 0.0747 | 0.0162 | 0.1943 | 1.8000e-004 | 5.1772 | 2.5000e-004 | 5.1774 | 0.5141 | 2.3000e-004 | 0.5143 | | 15.5585 | 15.5585 | 1.2900e-003 | | 15.5855 |
| **Total** | **0.1906** | **0.4834** | **1.8940** | **7.9000e-004** | **8.6989** | **4.0400e-003** | **8.7030** | **0.8642** | **3.7000e-003** | **0.8678** | | **74.4331** | **74.4331** | **2.2600e-003** | | **74.4806** |

# WLC Construction Water Use

**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 1,218.00 | 1000sqft | 27.96 | 1,218,000.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 39,379.00 | 1000sqft | 2,582.00 | 39,379,000.00 | 0 |
| Convenience Market With Gas Pumps | 3.00 | 1000sqft | 0.07 | 3,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Edited the acreage for the warehouse to the total area of specific plan (2610 acres) minus the office and market.

Land Use Change -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 6,000.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblEnergyUse | LightingElect | 7.62 | 0.00 |
| tblEnergyUse | LightingElect | 4.80 | 0.00 |
| tblEnergyUse | LightingElect | 1.75 | 0.00 |
| tblEnergyUse | NT24E | 2.44 | 0.00 |
| tblEnergyUse | NT24E | 2.60 | 0.00 |
| tblEnergyUse | NT24E | 0.82 | 0.00 |
| tblEnergyUse | NT24NG | 0.30 | 0.00 |
| tblEnergyUse | NT24NG | 0.03 | 0.00 |
| tblEnergyUse | T24E | 5.60 | 0.00 |
| tblEnergyUse | T24E | 3.75 | 0.00 |
| tblEnergyUse | T24E | 0.45 | 0.00 |
| tblEnergyUse | T24NG | 2.02 | 0.00 |
| tblEnergyUse | T24NG | 3.07 | 0.00 |
| tblEnergyUse | T24NG | 2.11 | 0.00 |
| tblLandUse | LotAcreage | 904.02 | 2,582.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 9.02 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 1,132.74 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 37,016.26 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 3.00 | 0.00 |
| tblVehicleTrips | ST_TR | 1,448.33 | 0.00 |
| tblVehicleTrips | ST_TR | 1.64 | 0.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 1,182.08 | 0.00 |
| tblVehicleTrips | SU_TR | 0.76 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 845.60 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | WD_TR | 11.42 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 222,217.56 | 0.00 |
| tblWater | IndoorWaterUseRate | 216,479,705.06 | 0.00 |
| tblWater | IndoorWaterUseRate | 9,106,393,750.00 | 0.00 |
| tblWater | OutdoorWaterUseRate | 136,197.86 | 0.00 |
| tblWater | OutdoorWaterUseRate | 132,681,109.55 | 0.00 |
| tblWater | OutdoorWaterUseRate | 0.00 | 2,100,000,000.00 |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 6,676.5597 | 0.3069 | 0.0635 | 6,702.6886 |
| Unmitigated | 6,676.5597 | 0.3069 | 0.0635 | 6,702.6886 |

## 7.2 Water by Land Use

### Unmitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Convenience Market With Gas Pumps | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Office Park | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 0 / 2100 | 6,676.5597 | 0.3069 | 0.0635 | 6,702.6886 |
| **Total** | | **6,676.5597** | **0.3069** | **0.0635** | **6,702.6886** |

### Mitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Convenience Market With Gas Pumps | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Office Park | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 0 / 2100 | 6,676.5597 | 0.3069 | 0.0635 | 6,702.6886 |
| **Total** | | **6,676.5597** | **0.3069** | **0.0635** | **6,702.6886** |

# World Logistics Center - Construction Plot 2 (Year 2015) Dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 4,200.00 | 1000sqft | 193.50 | 4,200,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

On-road Fugitive Dust - -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,948.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 115.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2015 | 6/30/2015 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2015 | 4/30/2015 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 46 | 50.00 | 9.00 | 1,705.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 0.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0784 | 0.3112 | 1.2415 | 4.1000e-004 | 5.7247 | 2.4900e-003 | 5.7272 | 0.5711 | 2.2800e-003 | 0.5733 | | 39.5743 | 39.5743 | 7.1000e-004 | | 39.5892 |
| Vendor | 0.0563 | 0.2340 | 0.6873 | 3.0000e-004 | 4.6841 | 1.9500e-003 | 4.6860 | 0.4673 | 1.7800e-003 | 0.4691 | | 28.9505 | 28.9505 | 3.9000e-004 | | 28.9588 |
| Worker | 0.1493 | 0.0325 | 0.3886 | 3.6000e-004 | 26.0181 | 5.0000e-004 | 26.0186 | 2.5946 | 4.6000e-004 | 2.5951 | | 31.1171 | 31.1171 | 2.5700e-003 | | 31.1711 |
| **Total** | **0.2841** | **0.5776** | **2.3174** | **1.0700e-003** | **36.4269** | **4.9400e-003** | **36.4318** | **3.6330** | **4.5200e-003** | **3.6375** | | **99.6418** | **99.6418** | **3.6700e-003** | | **99.7191** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0784 | 0.3112 | 1.2415 | 4.1000e-004 | 2.2787 | 2.4900e-003 | 2.2812 | 0.2265 | 2.2800e-003 | 0.2287 | | 39.5743 | 39.5743 | 7.1000e-004 | | 39.5892 |
| Vendor | 0.0563 | 0.2340 | 0.6873 | 3.0000e-004 | 1.8646 | 1.9500e-003 | 1.8665 | 0.1854 | 1.7800e-003 | 0.1872 | | 28.9505 | 28.9505 | 3.9000e-004 | | 28.9588 |
| Worker | 0.1493 | 0.0325 | 0.3886 | 3.6000e-004 | 10.3544 | 5.0000e-004 | 10.3549 | 1.0282 | 4.6000e-004 | 1.0287 | | 31.1171 | 31.1171 | 2.5700e-003 | | 31.1711 |
| **Total** | **0.2841** | **0.5776** | **2.3174** | **1.0700e-003** | **14.4976** | **4.9400e-003** | **14.5026** | **1.4401** | **4.5200e-003** | **1.4446** | | **99.6418** | **99.6418** | **3.6700e-003** | | **99.7191** |

## 3.3 Finish grading - 2015

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0125 | 0.0520 | 0.1527 | 7.0000e-005 | 1.0409 | 4.3000e-004 | 1.0413 | 0.1039 | 4.0000e-004 | 0.1043 | | 6.4334 | 6.4334 | 9.0000e-005 | | 6.4353 |
| Worker | 0.0448 | 9.7400e-003 | 0.1166 | 1.1000e-004 | 7.8054 | 1.5000e-004 | 7.8056 | 0.7784 | 1.4000e-004 | 0.7785 | | 9.3351 | 9.3351 | 7.7000e-004 | | 9.3513 |
| **Total** | **0.0573** | **0.0617** | **0.2693** | **1.8000e-004** | **8.8463** | **5.8000e-004** | **8.8469** | **0.8822** | **5.4000e-004** | **0.8828** | | **15.7686** | **15.7686** | **8.6000e-004** | | **15.7866** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0125 | 0.0520 | 0.1527 | 7.0000e-005 | 0.4144 | 4.3000e-004 | 0.4148 | 0.0412 | 4.0000e-004 | 0.0416 | | 6.4334 | 6.4334 | 9.0000e-005 | | 6.4353 |
| Worker | 0.0448 | 9.7400e-003 | 0.1166 | 1.1000e-004 | 3.1063 | 1.5000e-004 | 3.1065 | 0.3085 | 1.4000e-004 | 0.3086 | | 9.3351 | 9.3351 | 7.7000e-004 | | 9.3513 |
| **Total** | **0.0573** | **0.0617** | **0.2693** | **1.8000e-004** | **3.5207** | **5.8000e-004** | **3.5212** | **0.3497** | **5.4000e-004** | **0.3502** | | **15.7686** | **15.7686** | **8.6000e-004** | | **15.7866** |

# World Logistics Center - Construction Plot 2 (Year 2015)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 4,200.00 | 1000sqft | 193.50 | 4,200,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 6300000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 13.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 310.00 | 155.00 |
| tblConstructionPhase | NumDays | 310.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/29/2015 | 4/30/2015 |
| tblConstructionPhase | PhaseStartDate | 7/1/2015 | 3/1/2015 |
| tblGrading | AcresOfGrading | 2,421.88 | 3,681.00 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 96.42 | 193.50 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 9.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,948.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 85.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 971,250,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2015 | 48.1014 | 621.6875 | 338.3903 | 0.5566 | 74.7271 | 24.6109 | 99.3379 | 28.2969 | 22.6420 | 50.9389 | 0.0000 | 58,097.1402 | 58,097.1402 | 16.5004 | 0.0000 | 58,443.6481 |
| **Total** | **48.1014** | **621.6875** | **338.3903** | **0.5566** | **74.7271** | **24.6109** | **99.3379** | **28.2969** | **22.6420** | **50.9389** | **0.0000** | **58,097.1402** | **58,097.1402** | **16.5004** | **0.0000** | **58,443.6481** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2015 | 9.2724 | 150.8151 | 295.3119 | 0.5566 | 24.3556 | 1.0220 | 25.3776 | 9.0926 | 1.0089 | 10.1014 | 0.0000 | 58,097.1401 | 58,097.1401 | 16.5004 | 0.0000 | 58,443.6480 |
| **Total** | **9.2724** | **150.8151** | **295.3119** | **0.5566** | **24.3556** | **1.0220** | **25.3776** | **9.0926** | **1.0089** | **10.1014** | **0.0000** | **58,097.1401** | **58,097.1401** | **16.5004** | **0.0000** | **58,443.6480** |

| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Bio- CO2** | **NBio-CO2** | **Total CO2** | **CH4** | **N20** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **80.72** | **75.74** | **12.73** | **0.00** | **67.41** | **95.85** | **74.45** | **67.87** | **95.54** | **80.17** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2015 | 6/30/2015 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2015 | 4/30/2015 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 3 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 9 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 34 | 50.00 | 9.00 | 1,705.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 0.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

### 3.2 Mass excavation - 2015

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 47.7680 | 0.0000 | 47.7680 | 15.1328 | 0.0000 | 15.1328 | | | 0.0000 | | | 0.0000 |
| Off-Road | 45.6352 | 596.2764 | 319.0073 | 0.5134 | | 23.3662 | 23.3662 | | 21.4969 | 21.4969 | | 53,898.2100 | 53,898.2100 | 16.0909 | | 54,236.1182 |
| **Total** | **45.6352** | **596.2764** | **319.0073** | **0.5134** | **47.7680** | **23.3662** | **71.1342** | **15.1328** | **21.4969** | **36.6296** | | **53,898.2100** | **53,898.2100** | **16.0909** | | **54,236.1182** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2144 | 4.0890 | 2.1711 | 9.7500e-003 | 0.2398 | 0.0815 | 0.3212 | 0.0657 | 0.0749 | 0.1406 | | 993.9522 | 993.9522 | 6.9000e-003 | | 994.0972 |
| Vendor | 0.1431 | 2.6270 | 1.3095 | 6.4300e-003 | 0.2046 | 0.0609 | 0.2655 | 0.0584 | 0.0560 | 0.1144 | | 654.6241 | 654.6241 | 4.1900e-003 | | 654.7120 |
| Worker | 0.2591 | 0.4121 | 5.1626 | 0.0113 | 0.9501 | 5.9300e-003 | 0.9561 | 0.2519 | 5.4300e-003 | 0.2574 | | 970.8278 | 970.8278 | 0.0433 | | 971.7375 |
| **Total** | **0.6165** | **7.1282** | **8.6431** | **0.0275** | **1.3945** | **0.1483** | **1.5428** | **0.3760** | **0.1364** | **0.5124** | | **2,619.4041** | **2,619.4041** | **0.0544** | | **2,620.5467** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 14.8081 | 0.0000 | 14.8081 | 4.6912 | 0.0000 | 4.6912 | | | 0.0000 | | | 0.0000 |
| Off-Road | 8.3784 | 138.2082 | 276.6059 | 0.5134 | | 0.8406 | 0.8406 | | 0.8406 | 0.8406 | 0.0000 | 53,898.2099 | 53,898.2099 | 16.0909 | | 54,236.1182 |
| **Total** | **8.3784** | **138.2082** | **276.6059** | **0.5134** | **14.8081** | **0.8406** | **15.6487** | **4.6912** | **0.8406** | **5.5317** | **0.0000** | **53,898.2099** | **53,898.2099** | **16.0909** | | **54,236.1182** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.2144 | 4.0890 | 2.1711 | 9.7500e-003 | 0.2398 | 0.0815 | 0.3212 | 0.0657 | 0.0749 | 0.1406 | | 993.9522 | 993.9522 | 6.9000e-003 | | 994.0972 |
| Vendor | 0.1431 | 2.6270 | 1.3095 | 6.4300e-003 | 0.2046 | 0.0609 | 0.2655 | 0.0584 | 0.0560 | 0.1144 | | 654.6241 | 654.6241 | 4.1900e-003 | | 654.7120 |
| Worker | 0.2591 | 0.4121 | 5.1626 | 0.0113 | 0.9501 | 5.9300e-003 | 0.9561 | 0.2519 | 5.4300e-003 | 0.2574 | | 970.8278 | 970.8278 | 0.0433 | | 971.7375 |
| **Total** | **0.6165** | **7.1282** | **8.6431** | **0.0275** | **1.3945** | **0.1483** | **1.5428** | **0.3760** | **0.1364** | **0.5124** | | **2,619.4041** | **2,619.4041** | **0.0544** | | **2,620.5467** |

### 3.3 Finish grading - 2015

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.7403 | 17.5755 | 8.9002 | 0.0109 | | 1.0811 | 1.0811 | | 0.9946 | 0.9946 | | 1,142.8057 | 1,142.8057 | 0.3412 | | 1,149.9704 |
| **Total** | **1.7403** | **17.5755** | **8.9002** | **0.0109** | **25.2341** | **1.0811** | **26.3152** | **12.6996** | **0.9946** | **13.6942** | | **1,142.8057** | **1,142.8057** | **0.3412** | | **1,149.9704** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0318 | 0.5838 | 0.2910 | 1.4300e-003 | 0.0455 | 0.0135 | 0.0590 | 0.0130 | 0.0125 | 0.0254 | | 145.4720 | 145.4720 | 9.3000e-004 | | 145.4916 |
| Worker | 0.0777 | 0.1236 | 1.5488 | 3.3900e-003 | 0.2850 | 1.7800e-003 | 0.2868 | 0.0756 | 1.6300e-003 | 0.0772 | | 291.2483 | 291.2483 | 0.0130 | | 291.5213 |
| **Total** | **0.1095** | **0.7074** | **1.8398** | **4.8200e-003** | **0.3305** | **0.0153** | **0.3458** | **0.0886** | **0.0141** | **0.1026** | | **436.7204** | **436.7204** | **0.0139** | | **437.0128** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1680 | 4.7714 | 8.2232 | 0.0109 | | 0.0178 | 0.0178 | | 0.0178 | 0.0178 | 0.0000 | 1,142.8057 | 1,142.8057 | 0.3412 | | 1,149.9704 |
| **Total** | **0.1680** | **4.7714** | **8.2232** | **0.0109** | **7.8226** | **0.0178** | **7.8403** | **3.9369** | **0.0178** | **3.9547** | **0.0000** | **1,142.8057** | **1,142.8057** | **0.3412** | | **1,149.9704** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0318 | 0.5838 | 0.2910 | 1.4300e-003 | 0.0455 | 0.0135 | 0.0590 | 0.0130 | 0.0125 | 0.0254 | | 145.4720 | 145.4720 | 9.3000e-004 | | 145.4916 |
| Worker | 0.0777 | 0.1236 | 1.5488 | 3.3900e-003 | 0.2850 | 1.7800e-003 | 0.2868 | 0.0756 | 1.6300e-003 | 0.0772 | | 291.2483 | 291.2483 | 0.0130 | | 291.5213 |
| **Total** | **0.1095** | **0.7074** | **1.8398** | **4.8200e-003** | **0.3305** | **0.0153** | **0.3458** | **0.0886** | **0.0141** | **0.1026** | | **436.7204** | **436.7204** | **0.0139** | | **437.0128** |

# World Logistics Center - Construction Plot 4 (Year 2017) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 5,600.00 | 1000sqft | 301.50 | 5,600,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 5,264.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 52.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 118.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 1,295,000,000.00 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2017 | 6/30/2017 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2017 | 4/30/2017 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 47 | 50.00 | 9.00 | 1,705.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 52.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2017

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0609 | 0.2682 | 1.0994 | 4.0000e-004 | 5.7247 | 1.7200e-003 | 5.7264 | 0.5711 | 1.5800e-003 | 0.5726 | | 38.3951 | 38.3951 | 6.7000e-004 | | 38.4093 |
| Vendor | 0.0445 | 0.2009 | 0.5990 | 2.9000e-004 | 4.6841 | 1.4000e-003 | 4.6855 | 0.4673 | 1.2800e-003 | 0.4686 | | 28.1465 | 28.1465 | 3.7000e-004 | | 28.1542 |
| Worker | 0.1265 | 0.0258 | 0.3126 | 3.6000e-004 | 26.0181 | 4.9000e-004 | 26.0186 | 2.5946 | 4.5000e-004 | 2.5950 | | 28.8366 | 28.8366 | 2.0500e-003 | | 28.8796 |
| **Total** | **0.2319** | **0.4948** | **2.0111** | **1.0500e-003** | **36.4269** | **3.6100e-003** | **36.4305** | **3.6330** | **3.3100e-003** | **3.6363** | | **95.3782** | **95.3782** | **3.0900e-003** | | **95.4431** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0609 | 0.2682 | 1.0994 | 4.0000e-004 | 2.2787 | 1.7200e-003 | 2.2804 | 0.2265 | 1.5800e-003 | 0.2280 | | 38.3951 | 38.3951 | 6.7000e-004 | | 38.4093 |
| Vendor | 0.0445 | 0.2009 | 0.5990 | 2.9000e-004 | 1.8646 | 1.4000e-003 | 1.8660 | 0.1854 | 1.2800e-003 | 0.1867 | | 28.1465 | 28.1465 | 3.7000e-004 | | 28.1542 |
| Worker | 0.1265 | 0.0258 | 0.3126 | 3.6000e-004 | 10.3544 | 4.9000e-004 | 10.3549 | 1.0282 | 4.5000e-004 | 1.0287 | | 28.8366 | 28.8366 | 2.0500e-003 | | 28.8796 |
| **Total** | **0.2319** | **0.4948** | **2.0111** | **1.0500e-003** | **14.4977** | **3.6100e-003** | **14.5013** | **1.4401** | **3.3100e-003** | **1.4434** | | **95.3782** | **95.3782** | **3.0900e-003** | | **95.4431** |

### 3.3 Finish grading - 2017

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 5.5400e-003 | 0.0244 | 0.1000 | 4.0000e-005 | 0.5204 | 1.6000e-004 | 0.5206 | 0.0519 | 1.4000e-004 | 0.0521 | | 3.4905 | 3.4905 | 6.0000e-005 | | 3.4918 |
| Vendor | 9.8800e-003 | 0.0446 | 0.1331 | 7.0000e-005 | 1.0409 | 3.1000e-004 | 1.0412 | 0.1039 | 2.9000e-004 | 0.1041 | | 6.2548 | 6.2548 | 8.0000e-005 | | 6.2565 |
| Worker | 0.0380 | 7.7300e-003 | 0.0938 | 1.1000e-004 | 7.8054 | 1.5000e-004 | 7.8056 | 0.7784 | 1.4000e-004 | 0.7785 | | 8.6510 | 8.6510 | 6.1000e-004 | | 8.6639 |
| **Total** | **0.0534** | **0.0768** | **0.3269** | **2.2000e-004** | **9.3668** | **6.2000e-004** | **9.3674** | **0.9341** | **5.7000e-004** | **0.9347** | | **18.3962** | **18.3962** | **7.5000e-004** | | **18.4121** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 5.5400e-003 | 0.0244 | 0.1000 | 4.0000e-005 | 0.2072 | 1.6000e-004 | 0.2073 | 0.0206 | 1.4000e-004 | 0.0207 | | 3.4905 | 3.4905 | 6.0000e-005 | | 3.4918 |
| Vendor | 9.8800e-003 | 0.0446 | 0.1331 | 7.0000e-005 | 0.4144 | 3.1000e-004 | 0.4147 | 0.0412 | 2.9000e-004 | 0.0415 | | 6.2548 | 6.2548 | 8.0000e-005 | | 6.2565 |
| Worker | 0.0380 | 7.7300e-003 | 0.0938 | 1.1000e-004 | 3.1063 | 1.5000e-004 | 3.1065 | 0.3085 | 1.4000e-004 | 0.3086 | | 8.6510 | 8.6510 | 6.1000e-004 | | 8.6639 |
| **Total** | **0.0534** | **0.0768** | **0.3269** | **2.2000e-004** | **3.7278** | **6.2000e-004** | **3.7284** | **0.3703** | **5.7000e-004** | **0.3708** | | **18.3962** | **18.3962** | **7.5000e-004** | | **18.4121** |

# World Logistics Center - Construction Plot 4 (Year 2017)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 5,600.00 | 1000sqft | 301.50 | 5,600,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 8400000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 13.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 13.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 620.00 | 155.00 |
| tblConstructionPhase | NumDays | 620.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/30/2017 | 4/30/2017 |
| tblConstructionPhase | PhaseStartDate | 7/1/2017 | 3/1/2017 |
| tblGrading | AcresOfGrading | 2,615.63 | 3,875.00 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 128.56 | 301.50 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 10.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 5,264.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 52.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 88.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 1,295,000,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2017 | 46.7436 | 590.5000 | 316.9423 | 0.5857 | 76.0762 | 23.0811 | 99.1574 | 28.4462 | 21.2347 | 49.6809 | 0.0000 | 59,509.5800 | 59,509.5800 | 17.3729 | 0.0000 | 59,874.4099 |
| **Total** | **46.7436** | **590.5000** | **316.9423** | **0.5857** | **76.0762** | **23.0811** | **99.1574** | **28.4462** | **21.2347** | **49.6809** | **0.0000** | **59,509.5800** | **59,509.5800** | **17.3729** | **0.0000** | **59,874.4099** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Year | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | 9.6121 | 157.0099 | 308.8841 | 0.5857 | 24.7890 | 1.0355 | 25.8244 | 9.1430 | 1.0250 | 10.1680 | 0.0000 | 59,509.5800 | 59,509.5800 | 17.3729 | 0.0000 | 59,874.4099 |
| **Total** | **9.6121** | **157.0099** | **308.8841** | **0.5857** | **24.7890** | **1.0355** | **25.8244** | **9.1430** | **1.0250** | **10.1680** | **0.0000** | **59,509.5800** | **59,509.5800** | **17.3729** | **0.0000** | **59,874.4099** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **79.44** | **73.41** | **2.54** | **0.00** | **67.42** | **95.51** | **73.96** | **67.86** | **95.17** | **79.53** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2017 | 6/30/2017 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2017 | 4/30/2017 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 3 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 10 | 10.00 | 550 | 0.48 |

| | | | | | |
|---|---|---|---|---|---|
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 35 | 50.00 | 9.00 | 1,705.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 52.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2017

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 49.0953 | 0.0000 | 49.0953 | 15.2761 | 0.0000 | 15.2761 | | | 0.0000 | | | 0.0000 |
| Off-Road | 44.5564 | 568.0510 | 299.2883 | 0.5417 | | 21.9819 | 21.9819 | | 20.2234 | 20.2234 | | 55,398.6662 | 55,398.6662 | 16.9741 | | 55,755.1212 |
| **Total** | **44.5564** | **568.0510** | **299.2883** | **0.5417** | **49.0953** | **21.9819** | **71.0773** | **15.2761** | **20.2234** | **35.4995** | | **55,398.6662** | **55,398.6662** | **16.9741** | | **55,755.1212** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1767 | 3.2821 | 1.9456 | 9.7200e-003 | 0.2398 | 0.0612 | 0.3010 | 0.0657 | 0.0563 | 0.1220 | | 965.8245 | 965.8245 | 5.9500e-003 | | 965.9495 |
| Vendor | 0.1160 | 2.0543 | 1.1316 | 6.4100e-003 | 0.2046 | 0.0463 | 0.2509 | 0.0584 | 0.0426 | 0.1010 | | 636.0333 | 636.0333 | 3.5200e-003 | | 636.1073 |
| Worker | 0.2043 | 0.3315 | 4.1669 | 0.0113 | 0.9501 | 5.5100e-003 | 0.9556 | 0.2519 | 5.0800e-003 | 0.2570 | | 898.3995 | 898.3995 | 0.0364 | | 899.1635 |
| **Total** | **0.4970** | **5.6679** | **7.2441** | **0.0274** | **1.3945** | **0.1131** | **1.5076** | **0.3760** | **0.1040** | **0.4800** | | **2,500.2573** | **2,500.2573** | **0.0459** | | **2,501.2203** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 15.2196 | 0.0000 | 15.2196 | 4.7356 | 0.0000 | 4.7356 | | | 0.0000 | | | 0.0000 |
| Off-Road | 8.8440 | 145.7162 | 291.7384 | 0.5417 | | 0.8871 | 0.8871 | | 0.8871 | 0.8871 | 0.0000 | 55,398.6661 | 55,398.6661 | 16.9741 | | 55,755.1211 |
| **Total** | **8.8440** | **145.7162** | **291.7384** | **0.5417** | **15.2196** | **0.8871** | **16.1067** | **4.7356** | **0.8871** | **5.6227** | **0.0000** | **55,398.6661** | **55,398.6661** | **16.9741** | | **55,755.1211** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1767 | 3.2821 | 1.9456 | 9.7200e-003 | 0.2398 | 0.0612 | 0.3010 | 0.0657 | 0.0563 | 0.1220 | | 965.8245 | 965.8245 | 5.9500e-003 | | 965.9495 |
| Vendor | 0.1160 | 2.0543 | 1.1316 | 6.4100e-003 | 0.2046 | 0.0463 | 0.2509 | 0.0584 | 0.0426 | 0.1010 | | 636.0333 | 636.0333 | 3.5200e-003 | | 636.1073 |
| Worker | 0.2043 | 0.3315 | 4.1669 | 0.0113 | 0.9501 | 5.5100e-003 | 0.9556 | 0.2519 | 5.0800e-003 | 0.2570 | | 898.3995 | 898.3995 | 0.0364 | | 899.1635 |
| **Total** | **0.4970** | **5.6679** | **7.2441** | **0.0274** | **1.3945** | **0.1131** | **1.5076** | **0.3760** | **0.1040** | **0.4800** | | **2,500.2573** | **2,500.2573** | **0.0459** | | **2,501.2203** |

## 3.3 Finish grading - 2017

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.5871 | 15.9268 | 8.7314 | 0.0109 | | 0.9687 | 0.9687 | | 0.8912 | 0.8912 | | 1,111.9937 | 1,111.9937 | 0.3407 | | 1,119.1487 |
| **Total** | **1.5871** | **15.9268** | **8.7314** | **0.0109** | **25.2341** | **0.9687** | **26.2027** | **12.6996** | **0.8912** | **13.5908** | | **1,111.9937** | **1,111.9937** | **0.3407** | | **1,119.1487** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0161 | 0.2984 | 0.1769 | 8.8000e-004 | 0.0218 | 5.5600e-003 | 0.0274 | 5.9700e-003 | 5.1200e-003 | 0.0111 | | 87.8022 | 87.8022 | 5.4000e-004 | | 87.8136 |
| Vendor | 0.0258 | 0.4565 | 0.2515 | 1.4200e-003 | 0.0455 | 0.0103 | 0.0558 | 0.0130 | 9.4700e-003 | 0.0224 | | 141.3407 | 141.3407 | 7.8000e-004 | | 141.3572 |
| Worker | 0.0613 | 0.0995 | 1.2501 | 3.3900e-003 | 0.2850 | 1.6500e-003 | 0.2867 | 0.0756 | 1.5200e-003 | 0.0771 | | 269.5199 | 269.5199 | 0.0109 | | 269.7491 |
| **Total** | **0.1031** | **0.8543** | **1.6784** | **5.6900e-003** | **0.3523** | **0.0175** | **0.3698** | **0.0945** | **0.0161** | **0.1106** | | **498.6628** | **498.6628** | **0.0122** | | **498.9198** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1680 | 4.7714 | 8.2232 | 0.0109 | | 0.0178 | 0.0178 | | 0.0178 | 0.0178 | 0.0000 | 1,111.9937 | 1,111.9937 | 0.3407 | | 1,119.1487 |
| **Total** | **0.1680** | **4.7714** | **8.2232** | **0.0109** | **7.8226** | **0.0178** | **7.8403** | **3.9369** | **0.0178** | **3.9547** | **0.0000** | **1,111.9937** | **1,111.9937** | **0.3407** | | **1,119.1487** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0161 | 0.2984 | 0.1769 | 8.8000e-004 | 0.0218 | 5.5600e-003 | 0.0274 | 5.9700e-003 | 5.1200e-003 | 0.0111 | | 87.8022 | 87.8022 | 5.4000e-004 | | 87.8136 |
| Vendor | 0.0258 | 0.4565 | 0.2515 | 1.4200e-003 | 0.0455 | 0.0103 | 0.0558 | 0.0130 | 9.4700e-003 | 0.0224 | | 141.3407 | 141.3407 | 7.8000e-004 | | 141.3572 |
| Worker | 0.0613 | 0.0995 | 1.2501 | 3.3900e-003 | 0.2850 | 1.6500e-003 | 0.2867 | 0.0756 | 1.5200e-003 | 0.0771 | | 269.5199 | 269.5199 | 0.0109 | | 269.7491 |
| **Total** | **0.1031** | **0.8543** | **1.6784** | **5.6900e-003** | **0.3523** | **0.0175** | **0.3698** | **0.0945** | **0.0161** | **0.1106** | | **498.6628** | **498.6628** | **0.0122** | | **498.9198** |

# World Logistics Center - Construction Plot 9 (Year 2019) DUST

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 10,400.00 | 1000sqft | 485.80 | 10,400,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 4,185.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 104.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 15.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 285.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 45.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2019 | 6/30/2019 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2019 | 4/30/2019 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 114 | 50.00 | 15.00 | 4,185.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 18 | 15.00 | 6.00 | 104.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2019

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1271 | 0.5988 | 2.5166 | 9.8000e-004 | 14.0516 | 4.1300e-003 | 14.0557 | 1.4017 | 3.7900e-003 | 1.4055 | | 90.9638 | 90.9638 | 1.7400e-003 | | 91.0002 |
| Vendor | 0.0620 | 0.2978 | 0.9079 | 4.9000e-004 | 7.8068 | 2.0300e-003 | 7.8088 | 0.7789 | 1.8600e-003 | 0.7808 | | 45.3118 | 45.3118 | 6.3000e-004 | | 45.3250 |
| Worker | 0.1090 | 0.0208 | 0.2561 | 3.6000e-004 | 26.0181 | 5.1000e-004 | 26.0186 | 2.5946 | 4.8000e-004 | 2.5951 | | 26.7145 | 26.7145 | 1.6700e-003 | | 26.7497 |
| **Total** | **0.2981** | **0.9174** | **3.6806** | **1.8300e-003** | **47.8765** | **6.6700e-003** | **47.8831** | **4.7752** | **6.1300e-003** | **4.7813** | | **162.9901** | **162.9901** | **4.0400e-003** | | **163.0750** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1271 | 0.5988 | 2.5166 | 9.8000e-004 | 5.5932 | 4.1300e-003 | 5.5973 | 0.5558 | 3.7900e-003 | 0.5596 | | 90.9638 | 90.9638 | 1.7400e-003 | | 91.0002 |
| Vendor | 0.0620 | 0.2978 | 0.9079 | 4.9000e-004 | 3.1076 | 2.0300e-003 | 3.1097 | 0.3090 | 1.8600e-003 | 0.3109 | | 45.3118 | 45.3118 | 6.3000e-004 | | 45.3250 |
| Worker | 0.1090 | 0.0208 | 0.2561 | 3.6000e-004 | 10.3544 | 5.1000e-004 | 10.3549 | 1.0282 | 4.8000e-004 | 1.0287 | | 26.7145 | 26.7145 | 1.6700e-003 | | 26.7497 |
| **Total** | **0.2981** | **0.9174** | **3.6806** | **1.8300e-003** | **19.0552** | **6.6700e-003** | **19.0618** | **1.8930** | **6.1300e-003** | **1.8992** | | **162.9901** | **162.9901** | **4.0400e-003** | | **163.0750** |

## 3.3 Finish grading - 2019

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 9.4100e-003 | 0.0444 | 0.1864 | 7.0000e-005 | 1.0409 | 3.1000e-004 | 1.0412 | 0.1038 | 2.8000e-004 | 0.1041 | | 6.7381 | 6.7381 | 1.3000e-004 | | 6.7408 |
| Vendor | 0.0248 | 0.1191 | 0.3632 | 1.9000e-004 | 3.1227 | 8.1000e-004 | 3.1235 | 0.3116 | 7.5000e-004 | 0.3123 | | 18.1247 | 18.1247 | 2.5000e-004 | | 18.1300 |
| Worker | 0.0327 | 6.2300e-003 | 0.0768 | 1.1000e-004 | 7.8054 | 1.5000e-004 | 7.8056 | 0.7784 | 1.4000e-004 | 0.7785 | | 8.0144 | 8.0144 | 5.0000e-004 | | 8.0249 |
| **Total** | **0.0669** | **0.1697** | **0.6264** | **3.7000e-004** | **11.9690** | **1.2700e-003** | **11.9703** | **1.1938** | **1.1700e-003** | **1.1949** | | **32.8771** | **32.8771** | **8.8000e-004** | | **32.8957** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 9.4100e-003 | 0.0444 | 0.1864 | 7.0000e-005 | 0.4143 | 3.1000e-004 | 0.4146 | 0.0412 | 2.8000e-004 | 0.0415 | | 6.7381 | 6.7381 | 1.3000e-004 | | 6.7408 |
| Vendor | 0.0248 | 0.1191 | 0.3632 | 1.9000e-004 | 1.2431 | 8.1000e-004 | 1.2439 | 0.1236 | 7.5000e-004 | 0.1243 | | 18.1247 | 18.1247 | 2.5000e-004 | | 18.1300 |
| Worker | 0.0327 | 6.2300e-003 | 0.0768 | 1.1000e-004 | 3.1063 | 1.5000e-004 | 3.1065 | 0.3085 | 1.4000e-004 | 0.3086 | | 8.0144 | 8.0144 | 5.0000e-004 | | 8.0249 |
| **Total** | **0.0669** | **0.1697** | **0.6264** | **3.7000e-004** | **4.7637** | **1.2700e-003** | **4.7649** | **0.4732** | **1.1700e-003** | **0.4744** | | **32.8771** | **32.8771** | **8.8000e-004** | | **32.8957** |

# World Logistics Center - Construction Plot 9 (Year 2019)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 10,400.00 | 1000sqft | 485.80 | 10,400,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 15600000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 18.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 6.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 39.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 30.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 6.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 775.00 | 155.00 |
| tblConstructionPhase | NumDays | 775.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 6/29/2019 | 6/30/2019 |
| tblConstructionPhase | PhaseEndDate | 8/29/2019 | 4/30/2019 |
| tblConstructionPhase | PhaseStartDate | 7/1/2019 | 3/1/2019 |
| tblGrading | AcresOfGrading | 6,103.13 | 9,881.25 |
| tblGrading | AcresOfGrading | 0.00 | 390.00 |
| tblLandUse | LotAcreage | 238.75 | 485.80 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 10.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 20.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 9,776.00 | 0.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 4,185.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 104.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 15.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 210.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 45.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 2,405,000,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2019 | 103.9391 | 1,273.3990 | 691.7927 | 1.4484 | 213.4022 | 48.9909 | 262.3931 | 83.2757 | 45.0717 | 128.3474 | 0.0000 | 142,942.6462 | 142,942.6462 | 43.7162 | 0.0000 | 143,860.6857 |
| **Total** | **103.9391** | **1,273.3990** | **691.7927** | **1.4484** | **213.4022** | **48.9909** | **262.3931** | **83.2757** | **45.0717** | **128.3474** | **0.0000** | **142,942.6462** | **142,942.6462** | **43.7162** | **0.0000** | **143,860.6857** |

## Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2019 | 23.6418 | 391.9058 | 769.0160 | 1.4484 | 67.7725 | 2.5457 | 70.3181 | 26.2549 | 2.5246 | 28.7795 | 0.0000 | 142,942.6461 | 142,942.6461 | 43.7162 | 0.0000 | 143,860.6856 |
| **Total** | **23.6418** | **391.9058** | **769.0160** | **1.4484** | **67.7725** | **2.5457** | **70.3181** | **26.2549** | **2.5246** | **28.7795** | **0.0000** | **142,942.6461** | **142,942.6461** | **43.7162** | **0.0000** | **143,860.6856** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **77.25** | **69.22** | **-11.16** | **0.00** | **68.24** | **94.80** | **73.20** | **68.47** | **94.40** | **77.58** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

# 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2019 | 6/30/2019 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2019 | 4/30/2019 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 6 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 6 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 6 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 10 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 20 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 3 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 3 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 3 | 10.00 | 193 | 0.41 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 6 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 3 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 8 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 3 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 6 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 3 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 3 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 3 | 1.00 | 167 | 0.40 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 84 | 50.00 | 15.00 | 4,185.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 18 | 15.00 | 6.00 | 104.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 135.3554 | 0.0000 | 135.3554 | 44.5400 | 0.0000 | 44.5400 | | | 0.0000 | | | 0.0000 |
| Off-Road | 99.2140 | 1,223.5986 | 654.9242 | 1.3607 | | 46.4892 | 46.4892 | | 42.7700 | 42.7700 | | 134,739.5764 | 134,739.5764 | 42.6302 | | 135,634.8100 |
| **Total** | **99.2140** | **1,223.5986** | **654.9242** | **1.3607** | **135.3554** | **46.4892** | **181.8445** | **44.5400** | **42.7700** | **87.3101** | | **134,739.5764** | **134,739.5764** | **42.6302** | | **135,634.8100** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.4121 | 6.9658 | 4.6034 | 0.0238 | 0.5887 | 0.1496 | 0.7383 | 0.1612 | 0.1376 | 0.2989 | | 2,290.7153 | 2,290.7153 | 0.0148 | | 2,291.0254 |
| Vendor | 0.1744 | 2.8408 | 1.7340 | 0.0107 | 0.3408 | 0.0689 | 0.4097 | 0.0972 | 0.0634 | 0.1606 | | 1,023.4313 | 1,023.4313 | 5.6500e-003 | | 1,023.5499 |
| Worker | 0.1658 | 0.2741 | 3.4545 | 0.0113 | 0.9501 | 5.3800e-003 | 0.9555 | 0.2519 | 4.9900e-003 | 0.2569 | | 832.1087 | 832.1087 | 0.0315 | | 832.7691 |
| **Total** | **0.7524** | **10.0806** | **9.7919** | **0.0458** | **1.8796** | **0.2239** | **2.1035** | **0.5104** | **0.2060** | **0.7164** | | **4,146.2553** | **4,146.2553** | **0.0519** | | **4,147.3445** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 41.9602 | 0.0000 | 41.9602 | 13.8074 | 0.0000 | 13.8074 | | | 0.0000 | | | 0.0000 |
| Off-Road | 22.2354 | 365.7766 | 732.4837 | 1.3607 | | 2.2282 | 2.2282 | | 2.2282 | 2.2282 | 0.0000 | 134,739.5762 | 134,739.5762 | 42.6302 | | 135,634.8098 |
| **Total** | **22.2354** | **365.7766** | **732.4837** | **1.3607** | **41.9602** | **2.2282** | **44.1884** | **13.8074** | **2.2282** | **16.0357** | **0.0000** | **134,739.5762** | **134,739.5762** | **42.6302** | | **135,634.8098** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.4121 | 6.9658 | 4.6034 | 0.0238 | 0.5887 | 0.1496 | 0.7383 | 0.1612 | 0.1376 | 0.2989 | | 2,290.7153 | 2,290.7153 | 0.0148 | | 2,291.0254 |
| Vendor | 0.1744 | 2.8408 | 1.7340 | 0.0107 | 0.3408 | 0.0689 | 0.4097 | 0.0972 | 0.0634 | 0.1606 | | 1,023.4313 | 1,023.4313 | 5.6500e-003 | | 1,023.5499 |
| Worker | 0.1658 | 0.2741 | 3.4545 | 0.0113 | 0.9501 | 5.3800e-003 | 0.9555 | 0.2519 | 4.9900e-003 | 0.2569 | | 832.1087 | 832.1087 | 0.0315 | | 832.7691 |
| **Total** | **0.7524** | **10.0806** | **9.7919** | **0.0458** | **1.8796** | **0.2239** | **2.1035** | **0.5104** | **0.2060** | **0.7164** | | **4,146.2553** | **4,146.2553** | **0.0519** | | **4,147.3445** |

## 3.3 Finish grading - 2019

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 75.7022 | 0.0000 | 75.7022 | 38.0989 | 0.0000 | 38.0989 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.8228 | 37.9853 | 25.0057 | 0.0326 | | 2.2376 | 2.2376 | | 2.0586 | 2.0586 | | 3,228.1268 | 3,228.1268 | 1.0214 | | 3,249.5751 |
| **Total** | **3.8228** | **37.9853** | **25.0057** | **0.0326** | **75.7022** | **2.2376** | **77.9398** | **38.0989** | **2.0586** | **40.1575** | | **3,228.1268** | **3,228.1268** | **1.0214** | | **3,249.5751** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0305 | 0.5160 | 0.3410 | 1.7600e-003 | 0.0436 | 0.0111 | 0.0547 | 0.0119 | 0.0102 | 0.0221 | | 169.6826 | 169.6826 | 1.0900e-003 | | 169.7056 |
| Vendor | 0.0698 | 1.1363 | 0.6936 | 4.2600e-003 | 0.1363 | 0.0276 | 0.1639 | 0.0389 | 0.0254 | 0.0642 | | 409.3725 | 409.3725 | 2.2600e-003 | | 409.4200 |
| Worker | 0.0497 | 0.0822 | 1.0363 | 3.3900e-003 | 0.2850 | 1.6100e-003 | 0.2867 | 0.0756 | 1.5000e-003 | 0.0771 | | 249.6326 | 249.6326 | 9.4300e-003 | | 249.8307 |
| **Total** | **0.1500** | **1.7345** | **2.0709** | **9.4100e-003** | **0.4650** | **0.0402** | **0.5052** | **0.1264** | **0.0370** | **0.1635** | | **828.6878** | **828.6878** | **0.0128** | | **828.9563** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 23.4677 | 0.0000 | 23.4677 | 11.8107 | 0.0000 | 11.8107 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5041 | 14.3142 | 24.6695 | 0.0326 | | 0.0533 | 0.0533 | | 0.0533 | 0.0533 | 0.0000 | 3,228.1268 | 3,228.1268 | 1.0214 | | 3,249.5751 |
| **Total** | **0.5041** | **14.3142** | **24.6695** | **0.0326** | **23.4677** | **0.0533** | **23.5210** | **11.8107** | **0.0533** | **11.8640** | **0.0000** | **3,228.1268** | **3,228.1268** | **1.0214** | | **3,249.5751** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0305 | 0.5160 | 0.3410 | 1.7600e-003 | 0.0436 | 0.0111 | 0.0547 | 0.0119 | 0.0102 | 0.0221 | | 169.6826 | 169.6826 | 1.0900e-003 | | 169.7056 |
| Vendor | 0.0698 | 1.1363 | 0.6936 | 4.2600e-003 | 0.1363 | 0.0276 | 0.1639 | 0.0389 | 0.0254 | 0.0642 | | 409.3725 | 409.3725 | 2.2600e-003 | | 409.4200 |
| Worker | 0.0497 | 0.0822 | 1.0363 | 3.3900e-003 | 0.2850 | 1.6100e-003 | 0.2867 | 0.0756 | 1.5000e-003 | 0.0771 | | 249.6326 | 249.6326 | 9.4300e-003 | | 249.8307 |
| **Total** | **0.1500** | **1.7345** | **2.0709** | **9.4100e-003** | **0.4650** | **0.0402** | **0.5052** | **0.1264** | **0.0370** | **0.1635** | | **828.6878** | **828.6878** | **0.0128** | | **828.9563** |

# World Logistics Center - Construction Plots 1, 3, 20 (Year 2021) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 2,700.00 | 1000sqft | 198.10 | 2,700,000.00 | 0 |
| General Light Industry | 45.50 | 1000sqft | 16.10 | 45,500.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,085.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 156.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 8.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 88.00 | 50.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 0.00 |
| tblVehicleTrips | CNW_TTP | 13.00 | 41.00 |
| tblVehicleTrips | ST_TR | 1.32 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2021 | 6/30/2021 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2021 | 4/30/2021 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 35 | 50.00 | 8.00 | 1,085.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 156.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2021

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0304 | 0.1343 | 0.6364 | 2.5000e-004 | 3.6430 | 1.0500e-003 | 3.6441 | 0.3634 | 9.7000e-004 | 0.3644 | | 23.0124 | 23.0124 | 4.8000e-004 | | 23.0224 |
| Vendor | 0.0299 | 0.1276 | 0.4613 | 2.6000e-004 | 4.1636 | 8.9000e-004 | 4.1645 | 0.4154 | 8.1000e-004 | 0.4162 | | 23.6016 | 23.6016 | 3.5000e-004 | | 23.6090 |
| Worker | 0.0971 | 0.0174 | 0.2176 | 3.6000e-004 | 26.0181 | 5.5000e-004 | 26.0187 | 2.5946 | 5.1000e-004 | 2.5951 | | 25.2144 | 25.2144 | 1.4400e-003 | | 25.2446 |
| **Total** | **0.1574** | **0.2794** | **1.3153** | **8.7000e-004** | **33.8247** | **2.4900e-003** | **33.8272** | **3.3734** | **2.2900e-003** | **3.3757** | | **71.8283** | **71.8283** | **2.2700e-003** | | **71.8760** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0304 | 0.1343 | 0.6364 | 2.5000e-004 | 1.4501 | 1.0500e-003 | 1.4511 | 0.1441 | 9.7000e-004 | 0.1451 | | 23.0124 | 23.0124 | 4.8000e-004 | | 23.0224 |
| Vendor | 0.0299 | 0.1276 | 0.4613 | 2.6000e-004 | 1.6574 | 8.9000e-004 | 1.6583 | 0.1648 | 8.1000e-004 | 0.1656 | | 23.6016 | 23.6016 | 3.5000e-004 | | 23.6090 |
| Worker | 0.0971 | 0.0174 | 0.2176 | 3.6000e-004 | 10.3544 | 5.5000e-004 | 10.3549 | 1.0282 | 5.1000e-004 | 1.0287 | | 25.2144 | 25.2144 | 1.4400e-003 | | 25.2446 |
| **Total** | **0.1574** | **0.2794** | **1.3153** | **8.7000e-004** | **13.4619** | **2.4900e-003** | **13.4643** | **1.3371** | **2.2900e-003** | **1.3394** | | **71.8283** | **71.8283** | **2.2700e-003** | | **71.8760** |

## 3.3 Finish grading - 2021

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0130 | 0.0576 | 0.2727 | 1.1000e-004 | 1.5318 | 4.5000e-004 | 1.5323 | 0.1528 | 4.2000e-004 | 0.1532 | | 9.8624 | 9.8624 | 2.0000e-004 | | 9.8668 |
| Vendor | 7.4800e-003 | 0.0319 | 0.1153 | 6.0000e-005 | 1.0409 | 2.2000e-004 | 1.0411 | 0.1039 | 2.0000e-004 | 0.1041 | | 5.9004 | 5.9004 | 9.0000e-005 | | 5.9023 |
| Worker | 0.0291 | 5.2100e-003 | 0.0653 | 1.1000e-004 | 7.8054 | 1.6000e-004 | 7.8056 | 0.7784 | 1.5000e-004 | 0.7785 | | 7.5643 | 7.5643 | 4.3000e-004 | | 7.5734 |
| **Total** | **0.0496** | **0.0947** | **0.4533** | **2.8000e-004** | **10.3782** | **8.3000e-004** | **10.3790** | **1.0350** | **7.7000e-004** | **1.0358** | | **23.3272** | **23.3272** | **7.2000e-004** | | **23.3424** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0130 | 0.0576 | 0.2727 | 1.1000e-004 | 0.6097 | 4.5000e-004 | 0.6102 | 0.0606 | 4.2000e-004 | 0.0610 | | 9.8624 | 9.8624 | 2.0000e-004 | | 9.8668 |
| Vendor | 7.4800e-003 | 0.0319 | 0.1153 | 6.0000e-005 | 0.4144 | 2.2000e-004 | 0.4146 | 0.0412 | 2.0000e-004 | 0.0414 | | 5.9004 | 5.9004 | 9.0000e-005 | | 5.9023 |
| Worker | 0.0291 | 5.2100e-003 | 0.0653 | 1.1000e-004 | 3.1063 | 1.6000e-004 | 3.1065 | 0.3085 | 1.5000e-004 | 0.3086 | | 7.5643 | 7.5643 | 4.3000e-004 | | 7.5734 |
| **Total** | **0.0496** | **0.0947** | **0.4533** | **2.8000e-004** | **4.1304** | **8.3000e-004** | **4.1312** | **0.4103** | **7.7000e-004** | **0.4110** | | **23.3272** | **23.3272** | **7.2000e-004** | | **23.3424** |

# World Logistics Center - Construction Plots 1, 3, 20 (Year 2021)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 2,700.00 | 1000sqft | 198.10 | 2,700,000.00 | 0 |
| General Light Industry | 45.50 | 1000sqft | 16.10 | 45,500.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 4118250 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 9.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 465.00 | 155.00 |
| tblConstructionPhase | NumDays | 465.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/30/2021 | 4/30/2021 |
| tblConstructionPhase | PhaseStartDate | 7/1/2021 | 3/1/2021 |
| tblEnergyUse | LightingElect | 3.36 | 0.00 |
| tblEnergyUse | NT24E | 5.02 | 0.00 |
| tblEnergyUse | NT24NG | 17.13 | 0.00 |
| tblEnergyUse | T24E | 2.69 | 0.00 |
| tblEnergyUse | T24NG | 16.16 | 0.00 |
| tblGrading | AcresOfGrading | 2,034.38 | 2,906.25 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 1.04 | 16.10 |
| tblLandUse | LotAcreage | 61.98 | 198.10 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 9.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 56.42 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 2,538.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,085.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 156.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 8.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 68.00 | 50.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 0.00 |
| tblVehicleTrips | CNW_TTP | 13.00 | 41.00 |
| tblVehicleTrips | ST_TR | 1.32 | 0.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 10,521,875.00 | 0.00 |
| tblWater | IndoorWaterUseRate | 624,375,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 25.8428 | 297.8603 | 176.2739 | 0.4291 | 54.3255 | 11.5146 | 65.8401 | 19.4363 | 10.5935 | 30.0298 | 0.0000 | 41,113.0865 | 41,113.0865 | 12.5296 | 0.0000 | 41,376.2084 |
| **Total** | **25.8428** | **297.8603** | **176.2739** | **0.4291** | **54.3255** | **11.5146** | **65.8401** | **19.4363** | **10.5935** | **30.0298** | **0.0000** | **41,113.0865** | **41,113.0865** | **12.5296** | **0.0000** | **41,376.2084** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2021 | 6.9441 | 113.4092 | 224.7263 | 0.4291 | 17.9997 | 0.7544 | 18.7541 | 6.3370 | 0.7463 | 7.0833 | 0.0000 | 41,113.0865 | 41,113.0865 | 12.5296 | 0.0000 | 41,376.2084 |
| **Total** | **6.9441** | **113.4092** | **224.7263** | **0.4291** | **17.9997** | **0.7544** | **18.7541** | **6.3370** | **0.7463** | **7.0833** | **0.0000** | **41,113.0865** | **41,113.0865** | **12.5296** | **0.0000** | **41,376.2084** |

| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Bio- CO2** | **NBio-CO2** | **Total CO2** | **CH4** | **N20** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **73.13** | **61.93** | **-27.49** | **0.00** | **66.87** | **93.45** | **71.52** | **67.40** | **92.95** | **76.41** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2021 | 6/30/2021 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2021 | 4/30/2021 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 1 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 9 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 3 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 27 | 50.00 | 8.00 | 1,085.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 156.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 27.4120 | 0.0000 | 27.4120 | 6.2848 | 0.0000 | 6.2848 | | | 0.0000 | | | 0.0000 |
| Off-Road | 24.2657 | 283.1163 | 161.4014 | 0.3877 | | 10.7806 | 10.7806 | | 9.9182 | 9.9182 | | 37,546.1827 | 37,546.1827 | 12.1432 | | 37,801.1898 |
| **Total** | **24.2657** | **283.1163** | **161.4014** | **0.3877** | **27.4120** | **10.7806** | **38.1926** | **6.2848** | **9.9182** | **16.2030** | | **37,546.1827** | **37,546.1827** | **12.1432** | | **37,801.1898** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1044 | 1.3839 | 1.1869 | 6.1500e-003 | 0.1526 | 0.0387 | 0.1913 | 0.0418 | 0.0356 | 0.0774 | | 579.1489 | 579.1489 | 3.8700e-003 | | 579.2301 |
| Vendor | 0.0862 | 1.0688 | 0.8806 | 5.6600e-003 | 0.1817 | 0.0311 | 0.2128 | 0.0518 | 0.0286 | 0.0804 | | 532.0469 | 532.0469 | 2.8800e-003 | | 532.1074 |
| Worker | 0.1450 | 0.2381 | 3.0062 | 0.0113 | 0.9501 | 5.4100e-003 | 0.9556 | 0.2519 | 5.0200e-003 | 0.2570 | | 786.0611 | 786.0611 | 0.0284 | | 786.6565 |
| **Total** | **0.3356** | **2.6907** | **5.0737** | **0.0231** | **1.2845** | **0.0751** | **1.3596** | **0.3456** | **0.0692** | **0.4147** | | **1,897.2569** | **1,897.2569** | **0.0351** | | **1,897.9940** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.4977 | 0.0000 | 8.4977 | 1.9483 | 0.0000 | 1.9483 | | | 0.0000 | | | 0.0000 |
| Off-Road | 6.3307 | 105.0153 | 209.7988 | 0.3877 | | 0.6355 | 0.6355 | | 0.6355 | 0.6355 | 0.0000 | 37,546.1827 | 37,546.1827 | 12.1432 | | 37,801.1898 |
| **Total** | **6.3307** | **105.0153** | **209.7988** | **0.3877** | **8.4977** | **0.6355** | **9.1332** | **1.9483** | **0.6355** | **2.5838** | **0.0000** | **37,546.1827** | **37,546.1827** | **12.1432** | | **37,801.1898** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1044 | 1.3839 | 1.1869 | 6.1500e-003 | 0.1526 | 0.0387 | 0.1913 | 0.0418 | 0.0356 | 0.0774 | | 579.1489 | 579.1489 | 3.8700e-003 | | 579.2301 |
| Vendor | 0.0862 | 1.0688 | 0.8806 | 5.6600e-003 | 0.1817 | 0.0311 | 0.2128 | 0.0518 | 0.0286 | 0.0804 | | 532.0469 | 532.0469 | 2.8800e-003 | | 532.1074 |
| Worker | 0.1450 | 0.2381 | 3.0062 | 0.0113 | 0.9501 | 5.4100e-003 | 0.9556 | 0.2519 | 5.0200e-003 | 0.2570 | | 786.0611 | 786.0611 | 0.0284 | | 786.6565 |
| **Total** | **0.3356** | **2.6907** | **5.0737** | **0.0231** | **1.2845** | **0.0751** | **1.3596** | **0.3456** | **0.0692** | **0.4147** | | **1,897.2569** | **1,897.2569** | **0.0351** | | **1,897.9940** |

## 3.3 Finish grading - 2021

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.1317 | 11.1215 | 8.1681 | 0.0109 | | 0.6330 | 0.6330 | | 0.5823 | 0.5823 | | 1,052.6102 | 1,052.6102 | 0.3404 | | 1,059.7593 |
| **Total** | **1.1317** | **11.1215** | **8.1681** | **0.0109** | **25.2341** | **0.6330** | **25.8670** | **12.6996** | **0.5823** | **13.2819** | | **1,052.6102** | **1,052.6102** | **0.3404** | | **1,059.7593** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0448 | 0.5931 | 0.5087 | 2.6400e-003 | 0.0645 | 0.0166 | 0.0810 | 0.0177 | 0.0152 | 0.0329 | | 248.2067 | 248.2067 | 1.6600e-003 | | 248.2415 |
| Vendor | 0.0215 | 0.2672 | 0.2202 | 1.4100e-003 | 0.0454 | 7.7600e-003 | 0.0532 | 0.0130 | 7.1400e-003 | 0.0201 | | 133.0117 | 133.0117 | 7.2000e-004 | | 133.0269 |
| Worker | 0.0435 | 0.0714 | 0.9019 | 3.4000e-003 | 0.2850 | 1.6200e-003 | 0.2867 | 0.0756 | 1.5100e-003 | 0.0771 | | 235.8183 | 235.8183 | 8.5100e-003 | | 235.9970 |
| **Total** | **0.1098** | **0.9317** | **1.6307** | **7.4500e-003** | **0.3950** | **0.0259** | **0.4209** | **0.1062** | **0.0239** | **0.1301** | | **617.0367** | **617.0367** | **0.0109** | | **617.2653** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1680 | 4.7714 | 8.2232 | 0.0109 | | 0.0178 | 0.0178 | | 0.0178 | 0.0178 | 0.0000 | 1,052.6102 | 1,052.6102 | 0.3404 | | 1,059.7593 |
| **Total** | **0.1680** | **4.7714** | **8.2232** | **0.0109** | **7.8226** | **0.0178** | **7.8403** | **3.9369** | **0.0178** | **3.9547** | **0.0000** | **1,052.6102** | **1,052.6102** | **0.3404** | | **1,059.7593** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0448 | 0.5931 | 0.5087 | 2.6400e-003 | 0.0645 | 0.0166 | 0.0810 | 0.0177 | 0.0152 | 0.0329 | | 248.2067 | 248.2067 | 1.6600e-003 | | 248.2415 |
| Vendor | 0.0215 | 0.2672 | 0.2202 | 1.4100e-003 | 0.0454 | 7.7600e-003 | 0.0532 | 0.0130 | 7.1400e-003 | 0.0201 | | 133.0117 | 133.0117 | 7.2000e-004 | | 133.0269 |
| Worker | 0.0435 | 0.0714 | 0.9019 | 3.4000e-003 | 0.2850 | 1.6200e-003 | 0.2867 | 0.0756 | 1.5100e-003 | 0.0771 | | 235.8183 | 235.8183 | 8.5100e-003 | | 235.9970 |
| **Total** | **0.1098** | **0.9317** | **1.6307** | **7.4500e-003** | **0.3950** | **0.0259** | **0.4209** | **0.1062** | **0.0239** | **0.1301** | | **617.0367** | **617.0367** | **0.0109** | | **617.2653** |

# World Logistics Center - Construction Plots 5,10 (Year 2022) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 3,300.00 | 1000sqft | 204.10 | 3,300,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,102.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,085.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 208.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 7.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 75.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 20.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 763,125,000.00 | 0.00 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2022 | 6/30/2022 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2022 | 4/30/2022 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 30 | 50.00 | 7.00 | 1,085.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 8 | 15.00 | 4.00 | 208.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2022

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0292 | 0.1254 | 0.6257 | 2.5000e-004 | 3.6430 | 1.0400e-003 | 3.6441 | 0.3634 | 9.6000e-004 | 0.3644 | | 22.9901 | 22.9901 | 4.9000e-004 | | 23.0005 |
| Vendor | 0.0251 | 0.1029 | 0.3936 | 2.3000e-004 | 3.6432 | 7.6000e-004 | 3.6439 | 0.3635 | 7.0000e-004 | 0.3642 | | 20.6326 | 20.6326 | 3.2000e-004 | | 20.6393 |
| Worker | 0.0922 | 0.0161 | 0.2030 | 3.6000e-004 | 26.0181 | 5.6000e-004 | 26.0187 | 2.5946 | 5.2000e-004 | 2.5951 | | 24.8117 | 24.8117 | 1.3500e-003 | | 24.8400 |
| **Total** | **0.1466** | **0.2444** | **1.2222** | **8.4000e-004** | **33.3043** | **2.3600e-003** | **33.3067** | **3.3215** | **2.1800e-003** | **3.3237** | | **68.4344** | **68.4344** | **2.1600e-003** | | **68.4798** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0292 | 0.1254 | 0.6257 | 2.5000e-004 | 1.4501 | 1.0400e-003 | 1.4511 | 0.1441 | 9.6000e-004 | 0.1451 | | 22.9901 | 22.9901 | 4.9000e-004 | | 23.0005 |
| Vendor | 0.0251 | 0.1029 | 0.3936 | 2.3000e-004 | 1.4502 | 7.6000e-004 | 1.4510 | 0.1442 | 7.0000e-004 | 0.1449 | | 20.6326 | 20.6326 | 3.2000e-004 | | 20.6393 |
| Worker | 0.0922 | 0.0161 | 0.2030 | 3.6000e-004 | 10.3544 | 5.6000e-004 | 10.3549 | 1.0282 | 5.2000e-004 | 1.0287 | | 24.8117 | 24.8117 | 1.3500e-003 | | 24.8400 |
| **Total** | **0.1466** | **0.2444** | **1.2222** | **8.4000e-004** | **13.2547** | **2.3600e-003** | **13.2571** | **1.3165** | **2.1800e-003** | **1.3187** | | **68.4344** | **68.4344** | **2.1600e-003** | | **68.4798** |

## 3.3 Finish grading - 2022

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0167 | 0.0717 | 0.3575 | 1.4000e-004 | 2.0425 | 6.0000e-004 | 2.0430 | 0.2037 | 5.5000e-004 | 0.2043 | | 13.1372 | 13.1372 | 2.8000e-004 | | 13.1432 |
| Vendor | 0.0144 | 0.0588 | 0.2249 | 1.3000e-004 | 2.0818 | 4.4000e-004 | 2.0822 | 0.2077 | 4.0000e-004 | 0.2081 | | 11.7901 | 11.7901 | 1.8000e-004 | | 11.7939 |
| Worker | 0.0277 | 4.8300e-003 | 0.0609 | 1.1000e-004 | 7.8054 | 1.7000e-004 | 7.8056 | 0.7784 | 1.6000e-004 | 0.7785 | | 7.4435 | 7.4435 | 4.0000e-004 | | 7.4520 |
| **Total** | **0.0587** | **0.1353** | **0.6433** | **3.8000e-004** | **11.9297** | **1.2100e-003** | **11.9309** | **1.1898** | **1.1100e-003** | **1.1909** | | **32.3708** | **32.3708** | **8.6000e-004** | | **32.3890** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0167 | 0.0717 | 0.3575 | 1.4000e-004 | 0.8130 | 6.0000e-004 | 0.8136 | 0.0808 | 5.5000e-004 | 0.0813 | | 13.1372 | 13.1372 | 2.8000e-004 | | 13.1432 |
| Vendor | 0.0144 | 0.0588 | 0.2249 | 1.3000e-004 | 0.8287 | 4.4000e-004 | 0.8291 | 0.0824 | 4.0000e-004 | 0.0828 | | 11.7901 | 11.7901 | 1.8000e-004 | | 11.7939 |
| Worker | 0.0277 | 4.8300e-003 | 0.0609 | 1.1000e-004 | 3.1063 | 1.7000e-004 | 3.1065 | 0.3085 | 1.6000e-004 | 0.3086 | | 7.4435 | 7.4435 | 4.0000e-004 | | 7.4520 |
| **Total** | **0.0587** | **0.1353** | **0.6433** | **3.8000e-004** | **4.7480** | **1.2100e-003** | **4.7492** | **0.4717** | **1.1100e-003** | **0.4728** | | **32.3708** | **32.3708** | **8.6000e-004** | | **32.3890** |

# World Logistics Center - Construction Plots 5,10 (Year 2022)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 3,300.00 | 1000sqft | 204.10 | 3,300,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 4950000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 9.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 6.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 465.00 | 155.00 |
| tblConstructionPhase | NumDays | 465.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/30/2022 | 4/30/2022 |
| tblConstructionPhase | PhaseStartDate | 7/1/2022 | 3/1/2022 |
| tblGrading | AcresOfGrading | 1,259.38 | 2,131.25 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 75.76 | 204.10 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,102.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,085.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 208.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 7.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 58.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 20.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 763,125,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2022 | 19.3505 | 215.5586 | 135.8874 | 0.3343 | 49.0672 | 8.4213 | 57.4885 | 18.8761 | 7.7476 | 26.6237 | 0.0000 | 31,908.0202 | 31,908.0202 | 9.5096 | 0.0000 | 32,107.7224 |
| **Total** | **19.3505** | **215.5586** | **135.8874** | **0.3343** | **49.0672** | **8.4213** | **57.4885** | **18.8761** | **7.7476** | **26.6237** | **0.0000** | **31,908.0202** | **31,908.0202** | **9.5096** | **0.0000** | **32,107.7224** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2022 | 5.7625 | 88.6605 | 168.9679 | 0.3343 | 16.4001 | 0.7593 | 17.1594 | 6.1719 | 0.7360 | 6.9079 | 0.0000 | 31,908.0202 | 31,908.0202 | 9.5096 | 0.0000 | 32,107.7223 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **5.7625** | **88.6605** | **168.9679** | **0.3343** | **16.4001** | **0.7593** | **17.1594** | **6.1719** | **0.7360** | **6.9079** | **0.0000** | **31,908.0202** | **31,908.0202** | **9.5096** | **0.0000** | **32,107.7223** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **70.22** | **58.87** | **-24.34** | **0.00** | **66.58** | **90.98** | **70.15** | **67.30** | **90.50** | **74.05** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2022 | 6/30/2022 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2022 | 4/30/2022 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 0 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 6 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |

| | | | | | |
|---|---|---|---|---|---|
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Off-Highway Trucks | 1 | 10.00 | 400 | 0.38 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 23 | 50.00 | 7.00 | 1,085.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 8 | 15.00 | 4.00 | 208.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 22.1095 | 0.0000 | 22.1095 | 5.7123 | 0.0000 | 5.7123 | | | 0.0000 | | | 0.0000 |
| Off-Road | 17.8359 | 201.8402 | 120.1794 | 0.2898 | | 7.7495 | 7.7495 | | 7.1296 | 7.1296 | | 28,069.0857 | 28,069.0857 | 9.0781 | | 28,259.7260 |
| **Total** | **17.8359** | **201.8402** | **120.1794** | **0.2898** | **22.1095** | **7.7495** | **29.8590** | **5.7123** | **7.1296** | **12.8419** | | **28,069.0857** | **28,069.0857** | **9.0781** | | **28,259.7260** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1046 | 1.2609 | 1.1850 | 6.1400e-003 | 0.1526 | 0.0383 | 0.1909 | 0.0418 | 0.0352 | 0.0770 | | 578.4898 | 578.4898 | 3.9500e-003 | | 578.5728 |
| Vendor | 0.0749 | 0.8426 | 0.7608 | 4.9400e-003 | 0.1590 | 0.0269 | 0.1859 | 0.0454 | 0.0247 | 0.0701 | | 464.9982 | 464.9982 | 2.5700e-003 | | 465.0521 |
| Worker | 0.1371 | 0.2244 | 2.8430 | 0.0113 | 0.9501 | 5.4500e-003 | 0.9556 | 0.2519 | 5.0500e-003 | 0.2570 | | 773.8023 | 773.8023 | 0.0272 | | 774.3735 |
| **Total** | **0.3165** | **2.3279** | **4.7888** | **0.0224** | **1.2618** | **0.0706** | **1.3324** | **0.3391** | **0.0650** | **0.4041** | | **1,817.2903** | **1,817.2903** | **0.0337** | | **1,817.9984** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.8539 | 0.0000 | 6.8539 | 1.7708 | 0.0000 | 1.7708 | | | 0.0000 | | | 0.0000 |
| Off-Road | 5.1166 | 79.6586 | 152.9013 | 0.2898 | | 0.6296 | 0.6296 | | 0.6151 | 0.6151 | 0.0000 | 28,069.0856 | 28,069.0856 | 9.0781 | | 28,259.7260 |
| **Total** | **5.1166** | **79.6586** | **152.9013** | **0.2898** | **6.8539** | **0.6296** | **7.4836** | **1.7708** | **0.6151** | **2.3859** | **0.0000** | **28,069.0856** | **28,069.0856** | **9.0781** | | **28,259.7260** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1046 | 1.2609 | 1.1850 | 6.1400e-003 | 0.1526 | 0.0383 | 0.1909 | 0.0418 | 0.0352 | 0.0770 | | 578.4898 | 578.4898 | 3.9500e-003 | | 578.5728 |
| Vendor | 0.0749 | 0.8426 | 0.7608 | 4.9400e-003 | 0.1590 | 0.0269 | 0.1859 | 0.0454 | 0.0247 | 0.0701 | | 464.9982 | 464.9982 | 2.5700e-003 | | 465.0521 |
| Worker | 0.1371 | 0.2244 | 2.8430 | 0.0113 | 0.9501 | 5.4500e-003 | 0.9556 | 0.2519 | 5.0500e-003 | 0.2570 | | 773.8023 | 773.8023 | 0.0272 | | 774.3735 |
| **Total** | **0.3165** | **2.3279** | **4.7888** | **0.0224** | **1.2618** | **0.0706** | **1.3324** | **0.3391** | **0.0650** | **0.4041** | | **1,817.2903** | **1,817.2903** | **0.0337** | | **1,817.9984** |

## 3.3 Finish grading - 2022

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.0543 | 10.1213 | 8.9544 | 0.0123 | | 0.5622 | 0.5622 | | 0.5173 | 0.5173 | | 1,193.2247 | 1,193.2247 | 0.3859 | | 1,201.3289 |
| **Total** | **1.0543** | **10.1213** | **8.9544** | **0.0123** | **25.2341** | **0.5622** | **25.7963** | **12.6996** | **0.5173** | **13.2169** | | **1,193.2247** | **1,193.2247** | **0.3859** | | **1,201.3289** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0598 | 0.7205 | 0.6771 | 3.5100e-003 | 0.0860 | 0.0219 | 0.1079 | 0.0236 | 0.0201 | 0.0437 | | 330.5656 | 330.5656 | 2.2600e-003 | | 330.6130 |
| Vendor | 0.0428 | 0.4815 | 0.4348 | 2.8300e-003 | 0.0909 | 0.0154 | 0.1062 | 0.0259 | 0.0141 | 0.0400 | | 265.7133 | 265.7133 | 1.4700e-003 | | 265.7441 |
| Worker | 0.0411 | 0.0673 | 0.8529 | 3.4000e-003 | 0.2850 | 1.6300e-003 | 0.2867 | 0.0756 | 1.5200e-003 | 0.0771 | | 232.1407 | 232.1407 | 8.1600e-003 | | 232.3120 |
| **Total** | **0.1437** | **1.2693** | **1.9648** | **9.7400e-003** | **0.4619** | **0.0389** | **0.5007** | **0.1251** | **0.0358** | **0.1609** | | **828.4196** | **828.4196** | **0.0119** | | **828.6691** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1857 | 5.4047 | 9.3130 | 0.0123 | | 0.0201 | 0.0201 | | 0.0201 | 0.0201 | 0.0000 | 1,193.2247 | 1,193.2247 | 0.3859 | | 1,201.3288 |
| **Total** | **0.1857** | **5.4047** | **9.3130** | **0.0123** | **7.8226** | **0.0201** | **7.8427** | **3.9369** | **0.0201** | **3.9570** | **0.0000** | **1,193.2247** | **1,193.2247** | **0.3859** | | **1,201.3288** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0598 | 0.7205 | 0.6771 | 3.5100e-003 | 0.0860 | 0.0219 | 0.1079 | 0.0236 | 0.0201 | 0.0437 | | 330.5656 | 330.5656 | 2.2600e-003 | | 330.6130 |
| Vendor | 0.0428 | 0.4815 | 0.4348 | 2.8300e-003 | 0.0909 | 0.0154 | 0.1062 | 0.0259 | 0.0141 | 0.0400 | | 265.7133 | 265.7133 | 1.4700e-003 | | 265.7441 |
| Worker | 0.0411 | 0.0673 | 0.8529 | 3.4000e-003 | 0.2850 | 1.6300e-003 | 0.2867 | 0.0756 | 1.5200e-003 | 0.0771 | | 232.1407 | 232.1407 | 8.1600e-003 | | 232.3120 |
| **Total** | **0.1437** | **1.2693** | **1.9648** | **9.7400e-003** | **0.4619** | **0.0389** | **0.5007** | **0.1251** | **0.0358** | **0.1609** | | **828.4196** | **828.4196** | **0.0119** | | **828.6691** |

# World Logistics Center - Construction Plots 5,10 (Year 2023) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 3,300.00 | 1000sqft | 204.10 | 3,300,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,102.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,170.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 260.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 165.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 28.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 763,125,000.00 | 0.00 |

## 2.0 Emissions Summary

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2023 | 6/30/2023 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2023 | 4/30/2023 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 66 | 50.00 | 10.00 | 2,170.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 11 | 15.00 | 4.00 | 260.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2023

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0568 | 0.2314 | 1.2408 | 5.0000e-004 | 7.2860 | 2.0700e-003 | 7.2881 | 0.7268 | 1.9100e-003 | 0.7287 | | 45.7789 | 45.7789 | 9.6000e-004 | | 45.7991 |
| Vendor | 0.0346 | 0.1382 | 0.5519 | 3.2000e-004 | 5.2045 | 1.0800e-003 | 5.2056 | 0.5193 | 9.9000e-004 | 0.5203 | | 29.3935 | 29.3935 | 4.5000e-004 | | 29.4029 |
| Worker | 0.0878 | 0.0150 | 0.1902 | 3.6000e-004 | 26.0181 | 5.8000e-004 | 26.0187 | 2.5946 | 5.4000e-004 | 2.5951 | | 24.4493 | 24.4493 | 1.2700e-003 | | 24.4760 |
| **Total** | **0.1791** | **0.3846** | **1.9829** | **1.1800e-003** | **38.5086** | **3.7300e-003** | **38.5124** | **3.8407** | **3.4400e-003** | **3.8441** | | **99.6216** | **99.6216** | **2.6800e-003** | | **99.6780** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0568 | 0.2314 | 1.2408 | 5.0000e-004 | 2.9002 | 2.0700e-003 | 2.9022 | 0.2882 | 1.9100e-003 | 0.2901 | | 45.7789 | 45.7789 | 9.6000e-004 | | 45.7991 |
| Vendor | 0.0346 | 0.1382 | 0.5519 | 3.2000e-004 | 2.0718 | 1.0800e-003 | 2.0728 | 0.2060 | 9.9000e-004 | 0.2070 | | 29.3935 | 29.3935 | 4.5000e-004 | | 29.4029 |
| Worker | 0.0878 | 0.0150 | 0.1902 | 3.6000e-004 | 10.3544 | 5.8000e-004 | 10.3549 | 1.0282 | 5.4000e-004 | 1.0288 | | 24.4493 | 24.4493 | 1.2700e-003 | | 24.4760 |
| **Total** | **0.1791** | **0.3846** | **1.9829** | **1.1800e-003** | **15.3263** | **3.7300e-003** | **15.3300** | **1.5224** | **3.4400e-003** | **1.5259** | | **99.6216** | **99.6216** | **2.6800e-003** | | **99.6780** |

## 3.3 Finish grading - 2023

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0203 | 0.0826 | 0.4431 | 1.8000e-004 | 2.6022 | 7.4000e-004 | 2.6029 | 0.2596 | 6.8000e-004 | 0.2603 | | 16.3496 | 16.3496 | 3.4000e-004 | | 16.3568 |
| Vendor | 0.0138 | 0.0553 | 0.2208 | 1.3000e-004 | 2.0818 | 4.3000e-004 | 2.0822 | 0.2077 | 4.0000e-004 | 0.2081 | | 11.7574 | 11.7574 | 1.8000e-004 | | 11.7611 |
| Worker | 0.0263 | 4.5100e-003 | 0.0571 | 1.1000e-004 | 7.8054 | 1.7000e-004 | 7.8056 | 0.7784 | 1.6000e-004 | 0.7785 | | 7.3348 | 7.3348 | 3.8000e-004 | | 7.3428 |
| **Total** | **0.0605** | **0.1424** | **0.7210** | **4.2000e-004** | **12.4894** | **1.3400e-003** | **12.4907** | **1.2457** | **1.2400e-003** | **1.2469** | | **35.4418** | **35.4418** | **9.0000e-004** | | **35.4608** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0203 | 0.0826 | 0.4431 | 1.8000e-004 | 1.0358 | 7.4000e-004 | 1.0365 | 0.1029 | 6.8000e-004 | 0.1036 | | 16.3496 | 16.3496 | 3.4000e-004 | | 16.3568 |
| Vendor | 0.0138 | 0.0553 | 0.2208 | 1.3000e-004 | 0.8287 | 4.3000e-004 | 0.8291 | 0.0824 | 4.0000e-004 | 0.0828 | | 11.7574 | 11.7574 | 1.8000e-004 | | 11.7611 |
| Worker | 0.0263 | 4.5100e-003 | 0.0571 | 1.1000e-004 | 3.1063 | 1.7000e-004 | 3.1065 | 0.3085 | 1.6000e-004 | 0.3086 | | 7.3348 | 7.3348 | 3.8000e-004 | | 7.3428 |
| **Total** | **0.0605** | **0.1424** | **0.7210** | **4.2000e-004** | **4.9708** | **1.3400e-003** | **4.9721** | **0.4938** | **1.2400e-003** | **0.4950** | | **35.4418** | **35.4418** | **9.0000e-004** | | **35.4608** |

# World Logistics Center - Construction Plots 5,10 (Year 2023)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 3,300.00 | 1000sqft | 204.10 | 3,300,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 4950000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 21.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 18.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 465.00 | 155.00 |
| tblConstructionPhase | NumDays | 465.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/30/2023 | 4/30/2023 |
| tblConstructionPhase | PhaseStartDate | 7/1/2023 | 3/1/2023 |
| tblGrading | AcresOfGrading | 3,681.25 | 5,812.50 |
| tblGrading | AcresOfGrading | 0.00 | 228.00 |
| tblLandUse | LotAcreage | 75.76 | 204.10 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 12.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,102.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,170.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 260.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 130.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 28.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 763,125,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2023 | 50.1707 | 547.8028 | 352.2893 | 0.8776 | 121.6622 | 21.3516 | 143.0137 | 46.7057 | 19.6435 | 66.3492 | 0.0000 | 84,479.7742 | 84,479.7742 | 26.2462 | 0.0000 | 85,030.9452 |
| **Total** | **50.1707** | **547.8028** | **352.2893** | **0.8776** | **121.6622** | **21.3516** | **143.0137** | **46.7057** | **19.6435** | **66.3492** | **0.0000** | **84,479.7742** | **84,479.7742** | **26.2462** | **0.0000** | **85,030.9452** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2023 | 14.2105 | 233.1261 | 463.8573 | 0.8776 | 39.0728 | 1.5343 | 40.6071 | 14.8456 | 1.5213 | 16.3669 | 0.0000 | 84,479.7741 | 84,479.7741 | 26.2462 | 0.0000 | 85,030.9452 |
| **Total** | **14.2105** | **233.1261** | **463.8573** | **0.8776** | **39.0728** | **1.5343** | **40.6071** | **14.8456** | **1.5213** | **16.3669** | **0.0000** | **84,479.7741** | **84,479.7741** | **26.2462** | **0.0000** | **85,030.9452** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **71.68** | **57.44** | **-31.67** | **0.00** | **67.88** | **92.81** | **71.61** | **68.21** | **92.26** | **75.33** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2023 | 6/30/2023 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2023 | 4/30/2023 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 6 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 12 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 2 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 2 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 2 | 10.00 | 193 | 0.41 |
| Mass excavation | Off-Highway Trucks | 2 | 10.00 | 400 | 0.38 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 3 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 52 | 50.00 | 10.00 | 2,170.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 11 | 15.00 | 4.00 | 260.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 77.4068 | 0.0000 | 77.4068 | 24.9830 | 0.0000 | 24.9830 | | | 0.0000 | | | 0.0000 |
| Off-Road | 47.7053 | 525.4670 | 328.3082 | 0.8147 | | 20.1856 | 20.1856 | | 18.5707 | 18.5707 | | 78,895.2933 | 78,895.2933 | 25.5163 | | 79,431.1364 |
| **Total** | **47.7053** | **525.4670** | **328.3082** | **0.8147** | **77.4068** | **20.1856** | **97.5924** | **24.9830** | **18.5707** | **43.5537** | | **78,895.2933** | **78,895.2933** | **25.5163** | | **79,431.1364** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1844 | 1.7867 | 2.2115 | 0.0122 | 0.3053 | 0.0762 | 0.3814 | 0.0836 | 0.0701 | 0.1537 | | 1,148.5204 | 1,148.5204 | 6.8100e-003 | | 1,148.6633 |
| Vendor | 0.0961 | 0.9013 | 1.0119 | 7.0300e-003 | 0.2271 | 0.0379 | 0.2650 | 0.0648 | 0.0349 | 0.0997 | | 660.7689 | 660.7689 | 3.2200e-003 | | 660.8366 |
| Worker | 0.1298 | 0.2125 | 2.6980 | 0.0113 | 0.9501 | 5.4800e-003 | 0.9556 | 0.2519 | 5.0800e-003 | 0.2570 | | 762.8538 | 762.8538 | 0.0262 | | 763.4041 |
| **Total** | **0.4103** | **2.9005** | **5.9213** | **0.0306** | **1.4825** | **0.1195** | **1.6021** | **0.4003** | **0.1100** | **0.5104** | | **2,572.1431** | **2,572.1431** | **0.0362** | | **2,572.9040** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 23.9961 | 0.0000 | 23.9961 | 7.7447 | 0.0000 | 7.7447 | | | 0.0000 | | | 0.0000 |
| Off-Road | 13.3209 | 219.6205 | 439.4857 | 0.8147 | | 1.3352 | 1.3352 | | 1.3352 | 1.3352 | 0.0000 | 78,895.2932 | 78,895.2932 | 25.5163 | | 79,431.1363 |
| **Total** | **13.3209** | **219.6205** | **439.4857** | **0.8147** | **23.9961** | **1.3352** | **25.3313** | **7.7447** | **1.3352** | **9.0800** | **0.0000** | **78,895.2932** | **78,895.2932** | **25.5163** | | **79,431.1363** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1844 | 1.7867 | 2.2115 | 0.0122 | 0.3053 | 0.0762 | 0.3814 | 0.0836 | 0.0701 | 0.1537 | | 1,148.5204 | 1,148.5204 | 6.8100e-003 | | 1,148.6633 |
| Vendor | 0.0961 | 0.9013 | 1.0119 | 7.0300e-003 | 0.2271 | 0.0379 | 0.2650 | 0.0648 | 0.0349 | 0.0997 | | 660.7689 | 660.7689 | 3.2200e-003 | | 660.8366 |
| Worker | 0.1298 | 0.2125 | 2.6980 | 0.0113 | 0.9501 | 5.4800e-003 | 0.9556 | 0.2519 | 5.0800e-003 | 0.2570 | | 762.8538 | 762.8538 | 0.0262 | | 763.4041 |
| **Total** | **0.4103** | **2.9005** | **5.9213** | **0.0306** | **1.4825** | **0.1195** | **1.6021** | **0.4003** | **0.1100** | **0.5104** | | **2,572.1431** | **2,572.1431** | **0.0362** | | **2,572.9040** |

## 3.3 Finish grading - 2023

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 42.2879 | 0.0000 | 42.2879 | 21.1910 | 0.0000 | 21.1910 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.9119 | 18.3729 | 16.0559 | 0.0218 | | 1.0024 | 1.0024 | | 0.9222 | 0.9222 | | 2,108.9883 | 2,108.9883 | 0.6821 | | 2,123.3121 |
| **Total** | **1.9119** | **18.3729** | **16.0559** | **0.0218** | **42.2879** | **1.0024** | **43.2904** | **21.1910** | **0.9222** | **22.1132** | | **2,108.9883** | **2,108.9883** | **0.6821** | | **2,123.3121** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0659 | 0.6381 | 0.7898 | 4.3600e-003 | 0.1090 | 0.0272 | 0.1362 | 0.0299 | 0.0250 | 0.0549 | | 410.1859 | 410.1859 | 2.4300e-003 | | 410.2369 |
| Vendor | 0.0384 | 0.3605 | 0.4048 | 2.8100e-003 | 0.0909 | 0.0152 | 0.1060 | 0.0259 | 0.0140 | 0.0399 | | 264.3076 | 264.3076 | 1.2900e-003 | | 264.3346 |
| Worker | 0.0390 | 0.0637 | 0.8094 | 3.4000e-003 | 0.2850 | 1.6400e-003 | 0.2867 | 0.0756 | 1.5200e-003 | 0.0771 | | 228.8562 | 228.8562 | 7.8600e-003 | | 229.0212 |
| **Total** | **0.1432** | **1.0624** | **2.0040** | **0.0106** | **0.4849** | **0.0440** | **0.5289** | **0.1314** | **0.0405** | **0.1718** | | **903.3496** | **903.3496** | **0.0116** | | **903.5928** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 13.1093 | 0.0000 | 13.1093 | 6.5692 | 0.0000 | 6.5692 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.3360 | 9.5428 | 16.4464 | 0.0218 | | 0.0356 | 0.0356 | | 0.0356 | 0.0356 | 0.0000 | 2,108.9882 | 2,108.9882 | 0.6821 | | 2,123.3121 |
| **Total** | **0.3360** | **9.5428** | **16.4464** | **0.0218** | **13.1093** | **0.0356** | **13.1448** | **6.5692** | **0.0356** | **6.6048** | **0.0000** | **2,108.9882** | **2,108.9882** | **0.6821** | | **2,123.3121** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0659 | 0.6381 | 0.7898 | 4.3600e-003 | 0.1090 | 0.0272 | 0.1362 | 0.0299 | 0.0250 | 0.0549 | | 410.1859 | 410.1859 | 2.4300e-003 | | 410.2369 |
| Vendor | 0.0384 | 0.3605 | 0.4048 | 2.8100e-003 | 0.0909 | 0.0152 | 0.1060 | 0.0259 | 0.0140 | 0.0399 | | 264.3076 | 264.3076 | 1.2900e-003 | | 264.3346 |
| Worker | 0.0390 | 0.0637 | 0.8094 | 3.4000e-003 | 0.2850 | 1.6400e-003 | 0.2867 | 0.0756 | 1.5200e-003 | 0.0771 | | 228.8562 | 228.8562 | 7.8600e-003 | | 229.0212 |
| **Total** | **0.1432** | **1.0624** | **2.0040** | **0.0106** | **0.4849** | **0.0440** | **0.5289** | **0.1314** | **0.0405** | **0.1718** | | **903.3496** | **903.3496** | **0.0116** | | **903.5928** |

# World Logistics Center - Construction Plots 7, 8, 21, and 22 (Year 2024) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 2,200.00 | 1000sqft | 153.20 | 2,200,000.00 | 0 |
| General Light Industry | 154.50 | 1000sqft | 21.00 | 154,500.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 191.58 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 2,068.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 312.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 115.00 | 50.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | CNW_TTP | 13.00 | 41.00 |
| tblVehicleTrips | ST_TR | 1.32 | 0.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 35,728,125.00 | 0.00 |
| tblWater | IndoorWaterUseRate | 508,750,000.00 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2024 | 6/30/2024 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2024 | 4/30/2024 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 46 | 50.00 | 9.00 | 1,705.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 312.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2024

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0438 | 0.1804 | 0.9691 | 4.0000e-004 | 5.6880 | 1.6200e-003 | 5.6897 | 0.5674 | 1.4900e-003 | 0.5689 | | 35.9992 | 35.9992 | 7.6000e-004 | | 36.0152 |
| Vendor | 0.0304 | 0.1230 | 0.4894 | 2.9000e-004 | 4.6841 | 9.6000e-004 | 4.6850 | 0.4673 | 8.9000e-004 | 0.4682 | | 26.4758 | 26.4758 | 4.0000e-004 | | 26.4842 |
| Worker | 0.0836 | 0.0141 | 0.1795 | 3.6000e-004 | 26.0181 | 6.0000e-004 | 26.0187 | 2.5946 | 5.5000e-004 | 2.5951 | | 24.1453 | 24.1453 | 1.2100e-003 | | 24.1707 |
| **Total** | **0.1578** | **0.3176** | **1.6381** | **1.0500e-003** | **36.3902** | **3.1800e-003** | **36.3934** | **3.6293** | **2.9300e-003** | **3.6323** | | **86.6203** | **86.6203** | **2.3700e-003** | | **86.6700** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0438 | 0.1804 | 0.9691 | 4.0000e-004 | 2.2641 | 1.6200e-003 | 2.2657 | 0.2250 | 1.4900e-003 | 0.2265 | | 35.9992 | 35.9992 | 7.6000e-004 | | 36.0152 |
| Vendor | 0.0304 | 0.1230 | 0.4894 | 2.9000e-004 | 1.8646 | 9.6000e-004 | 1.8656 | 0.1854 | 8.9000e-004 | 0.1863 | | 26.4758 | 26.4758 | 4.0000e-004 | | 26.4842 |
| Worker | 0.0836 | 0.0141 | 0.1795 | 3.6000e-004 | 10.3544 | 6.0000e-004 | 10.3550 | 1.0282 | 5.5000e-004 | 1.0288 | | 24.1453 | 24.1453 | 1.2100e-003 | | 24.1707 |
| **Total** | **0.1578** | **0.3176** | **1.6381** | **1.0500e-003** | **14.4830** | **3.1800e-003** | **14.4862** | **1.4386** | **2.9300e-003** | **1.4415** | | **86.6203** | **86.6203** | **2.3700e-003** | | **86.6700** |

## 3.3 Finish grading - 2024

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0239 | 0.0984 | 0.5286 | 2.2000e-004 | 3.1226 | 8.8000e-004 | 3.1235 | 0.3115 | 8.1000e-004 | 0.3123 | | 19.6359 | 19.6359 | 4.1000e-004 | | 19.6446 |
| Vendor | 6.7400e-003 | 0.0273 | 0.1088 | 6.0000e-005 | 1.0409 | 2.1000e-004 | 1.0411 | 0.1039 | 2.0000e-004 | 0.1041 | | 5.8835 | 5.8835 | 9.0000e-005 | | 5.8854 |
| Worker | 0.0251 | 4.2300e-003 | 0.0539 | 1.1000e-004 | 7.8054 | 1.8000e-004 | 7.8056 | 0.7784 | 1.7000e-004 | 0.7785 | | 7.2436 | 7.2436 | 3.6000e-004 | | 7.2512 |
| **Total** | **0.0557** | **0.1300** | **0.6912** | **3.9000e-004** | **11.9689** | **1.2700e-003** | **11.9702** | **1.1937** | **1.1800e-003** | **1.1949** | | **32.7630** | **32.7630** | **8.6000e-004** | | **32.7812** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0239 | 0.0984 | 0.5286 | 2.2000e-004 | 1.2429 | 8.8000e-004 | 1.2438 | 0.1235 | 8.1000e-004 | 0.1243 | | 19.6359 | 19.6359 | 4.1000e-004 | | 19.6446 |
| Vendor | 6.7400e-003 | 0.0273 | 0.1088 | 6.0000e-005 | 0.4144 | 2.1000e-004 | 0.4146 | 0.0412 | 2.0000e-004 | 0.0414 | | 5.8835 | 5.8835 | 9.0000e-005 | | 5.8854 |
| Worker | 0.0251 | 4.2300e-003 | 0.0539 | 1.1000e-004 | 3.1063 | 1.8000e-004 | 3.1065 | 0.3085 | 1.7000e-004 | 0.3086 | | 7.2436 | 7.2436 | 3.6000e-004 | | 7.2512 |
| **Total** | **0.0557** | **0.1300** | **0.6912** | **3.9000e-004** | **4.7636** | **1.2700e-003** | **4.7649** | **0.4732** | **1.1800e-003** | **0.4744** | | **32.7630** | **32.7630** | **8.6000e-004** | | **32.7812** |

# World Logistics Center - Construction Plots 7, 8, 21, and 22 (Year 2024)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 2,200.00 | 1000sqft | 153.20 | 2,200,000.00 | 0 |
| General Light Industry | 154.50 | 1000sqft | 21.00 | 154,500.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 3531750 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 13.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 310.00 | 155.00 |
| tblConstructionPhase | NumDays | 310.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 6/28/2024 | 6/30/2024 |
| tblConstructionPhase | PhaseEndDate | 8/29/2024 | 4/30/2024 |
| tblConstructionPhase | PhaseStartDate | 7/1/2024 | 3/1/2024 |
| tblEnergyUse | LightingElect | 3.36 | 0.00 |
| tblEnergyUse | NT24E | 5.02 | 0.00 |
| tblEnergyUse | NT24NG | 17.13 | 0.00 |
| tblEnergyUse | T24E | 2.69 | 0.00 |
| tblEnergyUse | T24NG | 16.16 | 0.00 |
| tblGrading | AcresOfGrading | 2,421.88 | 3,681.25 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 3.55 | 21.00 |
| tblLandUse | LotAcreage | 50.51 | 153.20 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 9.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 191.58 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 2,068.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 312.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 88.00 | 50.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 0.00 |
| tblVehicleTrips | CNW_TTP | 13.00 | 41.00 |
| tblVehicleTrips | ST_TR | 1.32 | 0.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 35,728,125.00 | 0.00 |
| tblWater | IndoorWaterUseRate | 508,750,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2024 | 31.2004 | 332.7074 | 221.4630 | 0.5775 | 74.8583 | 12.8886 | 87.7469 | 28.3326 | 11.8575 | 40.1901 | 0.0000 | 55,408.14 46 | 55,408.144 6 | 16.9611 | 0.0000 | 55,764.328 1 |
| **Total** | **31.2004** | **332.7074** | **221.4630** | **0.5775** | **74.8583** | **12.8886** | **87.7469** | **28.3326** | **11.8575** | **40.1901** | **0.0000** | **55,408.14 46** | **55,408.144 6** | **16.9611** | **0.0000** | **55,764.328 1** |

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2024 | 9.3059 | 150.7217 | 300.6873 | 0.5775 | 24.4857 | 1.0261 | 25.5118 | 9.1281 | 1.0149 | 10.1430 | 0.0000 | 55,408.14 46 | 55,408.144 6 | 16.9611 | 0.0000 | 55,764.328 0 |
| **Total** | **9.3059** | **150.7217** | **300.6873** | **0.5775** | **24.4857** | **1.0261** | **25.5118** | **9.1281** | **1.0149** | **10.1430** | **0.0000** | **55,408.14 46** | **55,408.144 6** | **16.9611** | **0.0000** | **55,764.328 0** |

| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Bio- CO2** | **NBio-CO2** | **Total CO2** | **CH4** | **N20** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **70.17** | **54.70** | **-35.77** | **0.00** | **67.29** | **92.04** | **70.93** | **67.78** | **91.44** | **74.76** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2024 | 6/30/2024 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2024 | 4/30/2024 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 3 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 9 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Off-Highway Trucks | 1 | 10.00 | 400 | 0.38 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 35 | 50.00 | 9.00 | 1,705.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 312.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 47.7697 | 0.0000 | 47.7697 | 15.1330 | 0.0000 | 15.1330 | | | 0.0000 | | | 0.0000 |
| Off-Road | 29.8327 | 321.0284 | 206.3682 | 0.5293 | | 12.3040 | 12.3040 | | 11.3197 | 11.3197 | | 51,249.3008 | 51,249.3008 | 16.5751 | | 51,597.3771 |
| **Total** | **29.8327** | **321.0284** | **206.3682** | **0.5293** | **47.7697** | **12.3040** | **60.0737** | **15.1330** | **11.3197** | **26.4526** | | **51,249.3008** | **51,249.3008** | **16.5751** | | **51,597.3771** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1458 | 1.4026 | 1.7327 | 9.6000e-003 | 0.2387 | 0.0596 | 0.2983 | 0.0654 | 0.0549 | 0.1203 | | 903.6529 | 903.6529 | 5.4300e-003 | | 903.7670 |
| Vendor | 0.0865 | 0.8091 | 0.8998 | 6.3300e-003 | 0.2044 | 0.0340 | 0.2384 | 0.0583 | 0.0313 | 0.0896 | | 595.5476 | 595.5476 | 2.9500e-003 | | 595.6095 |
| Worker | 0.1234 | 0.2021 | 2.5907 | 0.0113 | 0.9501 | 5.5400e-003 | 0.9557 | 0.2519 | 5.1400e-003 | 0.2571 | | 753.9786 | 753.9786 | 0.0255 | | 754.5133 |
| **Total** | **0.3557** | **2.4138** | **5.2233** | **0.0273** | **1.3932** | **0.0992** | **1.4924** | **0.3756** | **0.0913** | **0.4669** | | **2,253.1791** | **2,253.1791** | **0.0338** | | **2,253.8897** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 14.8086 | 0.0000 | 14.8086 | 4.6912 | 0.0000 | 4.6912 | | | 0.0000 | | | 0.0000 |
| Off-Road | 8.6465 | 142.5310 | 285.3185 | 0.5293 | | 0.8674 | 0.8674 | | 0.8674 | 0.8674 | 0.0000 | 51,249.3007 | 51,249.3007 | 16.5751 | | 51,597.3771 |
| **Total** | **8.6465** | **142.5310** | **285.3185** | **0.5293** | **14.8086** | **0.8674** | **15.6760** | **4.6912** | **0.8674** | **5.5586** | **0.0000** | **51,249.3007** | **51,249.3007** | **16.5751** | | **51,597.3771** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1458 | 1.4026 | 1.7327 | 9.6000e-003 | 0.2387 | 0.0596 | 0.2983 | 0.0654 | 0.0549 | 0.1203 | | 903.6529 | 903.6529 | 5.4300e-003 | | 903.7670 |
| Vendor | 0.0865 | 0.8091 | 0.8998 | 6.3300e-003 | 0.2044 | 0.0340 | 0.2384 | 0.0583 | 0.0313 | 0.0896 | | 595.5476 | 595.5476 | 2.9500e-003 | | 595.6095 |
| Worker | 0.1234 | 0.2021 | 2.5907 | 0.0113 | 0.9501 | 5.5400e-003 | 0.9557 | 0.2519 | 5.1400e-003 | 0.2571 | | 753.9786 | 753.9786 | 0.0255 | | 754.5133 |
| **Total** | **0.3557** | **2.4138** | **5.2233** | **0.0273** | **1.3932** | **0.0992** | **1.4924** | **0.3756** | **0.0913** | **0.4669** | | **2,253.1791** | **2,253.1791** | **0.0338** | | **2,253.8897** |

## 3.3 Finish grading - 2024

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8763 | 8.2597 | 7.9492 | 0.0109 | | 0.4437 | 0.4437 | | 0.4082 | 0.4082 | | 1,054.2257 | 1,054.2257 | 0.3410 | | 1,061.3858 |
| **Total** | **0.8763** | **8.2597** | **7.9492** | **0.0109** | **25.2341** | **0.4437** | **25.6777** | **12.6996** | **0.4082** | **13.1078** | | **1,054.2257** | **1,054.2257** | **0.3410** | | **1,061.3858** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0795 | 0.7651 | 0.9451 | 5.2400e-003 | 0.1308 | 0.0325 | 0.1634 | 0.0358 | 0.0299 | 0.0658 | | 492.9016 | 492.9016 | 2.9600e-003 | | 492.9638 |
| Vendor | 0.0192 | 0.1798 | 0.2000 | 1.4100e-003 | 0.0454 | 7.5600e-003 | 0.0530 | 0.0130 | 6.9500e-003 | 0.0199 | | 132.3439 | 132.3439 | 6.5000e-004 | | 132.3577 |
| Worker | 0.0370 | 0.0606 | 0.7772 | 3.4000e-003 | 0.2850 | 1.6600e-003 | 0.2867 | 0.0756 | 1.5400e-003 | 0.0771 | | 226.1936 | 226.1936 | 7.6400e-003 | | 226.3540 |
| **Total** | **0.1358** | **1.0055** | **1.9223** | **0.0101** | **0.4613** | **0.0418** | **0.5030** | **0.1244** | **0.0384** | **0.1628** | | **851.4391** | **851.4391** | **0.0113** | | **851.6754** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1680 | 4.7714 | 8.2232 | 0.0109 | | 0.0178 | 0.0178 | | 0.0178 | 0.0178 | 0.0000 | 1,054.2257 | 1,054.2257 | 0.3410 | | 1,061.3858 |
| **Total** | **0.1680** | **4.7714** | **8.2232** | **0.0109** | **7.8226** | **0.0178** | **7.8403** | **3.9369** | **0.0178** | **3.9547** | **0.0000** | **1,054.2257** | **1,054.2257** | **0.3410** | | **1,061.3858** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0795 | 0.7651 | 0.9451 | 5.2400e-003 | 0.1308 | 0.0325 | 0.1634 | 0.0358 | 0.0299 | 0.0658 | | 492.9016 | 492.9016 | 2.9600e-003 | | 492.9638 |
| Vendor | 0.0192 | 0.1798 | 0.2000 | 1.4100e-003 | 0.0454 | 7.5600e-003 | 0.0530 | 0.0130 | 6.9500e-003 | 0.0199 | | 132.3439 | 132.3439 | 6.5000e-004 | | 132.3577 |
| Worker | 0.0370 | 0.0606 | 0.7772 | 3.4000e-003 | 0.2850 | 1.6600e-003 | 0.2867 | 0.0756 | 1.5400e-003 | 0.0771 | | 226.1936 | 226.1936 | 7.6400e-003 | | 226.3540 |
| **Total** | **0.1358** | **1.0055** | **1.9223** | **0.0101** | **0.4613** | **0.0418** | **0.5030** | **0.1244** | **0.0384** | **0.1628** | | **851.4391** | **851.4391** | **0.0113** | | **851.6754** |

# World Logistics Center - Construction Plot 11 (Year 2025) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Popu |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 8,000.00 | 1000sqft | 500.00 | 8,000,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 7,520.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,170.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 364.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 165.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 28.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 1,850,000,000.00 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2025 | 6/30/2025 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2025 | 4/30/2025 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 66 | 50.00 | 10.00 | 2,170.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 11 | 15.00 | 4.00 | 364.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2025

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0543 | 0.2277 | 1.2209 | 5.0000e-004 | 7.2860 | 2.0700e-003 | 7.2881 | 0.7268 | 1.9100e-003 | 0.7287 | | 45.8141 | 45.8141 | 9.7000e-004 | | 45.8345 |
| Vendor | 0.0328 | 0.1353 | 0.5352 | 3.2000e-004 | 5.2045 | 1.0700e-003 | 5.2056 | 0.5193 | 9.9000e-004 | 0.5203 | | 29.4187 | 29.4187 | 4.5000e-004 | | 29.4281 |
| Worker | 0.0800 | 0.0133 | 0.1704 | 3.6000e-004 | 26.0181 | 6.1000e-004 | 26.0187 | 2.5946 | 5.7000e-004 | 2.5952 | | 23.8625 | 23.8625 | 1.1500e-003 | | 23.8867 |
| **Total** | **0.1671** | **0.3763** | **1.9266** | **1.1800e-003** | **38.5086** | **3.7500e-003** | **38.5124** | **3.8407** | **3.4700e-003** | **3.8441** | | **99.0954** | **99.0954** | **2.5700e-003** | | **99.1494** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0543 | 0.2277 | 1.2209 | 5.0000e-004 | 2.9002 | 2.0700e-003 | 2.9022 | 0.2882 | 1.9100e-003 | 0.2901 | | 45.8141 | 45.8141 | 9.7000e-004 | | 45.8345 |
| Vendor | 0.0328 | 0.1353 | 0.5352 | 3.2000e-004 | 2.0718 | 1.0700e-003 | 2.0728 | 0.2060 | 9.9000e-004 | 0.2070 | | 29.4187 | 29.4187 | 4.5000e-004 | | 29.4281 |
| Worker | 0.0800 | 0.0133 | 0.1704 | 3.6000e-004 | 10.3544 | 6.1000e-004 | 10.3550 | 1.0282 | 5.7000e-004 | 1.0288 | | 23.8625 | 23.8625 | 1.1500e-003 | | 23.8867 |
| **Total** | **0.1671** | **0.3763** | **1.9266** | **1.1800e-003** | **15.3263** | **3.7500e-003** | **15.3300** | **1.5224** | **3.4700e-003** | **1.5259** | | **99.0954** | **99.0954** | **2.5700e-003** | | **99.1494** |

## 3.3 Finish grading - 2025

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0272 | 0.1138 | 0.6105 | 2.5000e-004 | 3.6430 | 1.0400e-003 | 3.6440 | 0.3634 | 9.5000e-004 | 0.3644 | | 22.9071 | 22.9071 | 4.8000e-004 | | 22.9172 |
| Vendor | 0.0131 | 0.0541 | 0.2141 | 1.3000e-004 | 2.0818 | 4.3000e-004 | 2.0822 | 0.2077 | 4.0000e-004 | 0.2081 | | 11.7675 | 11.7675 | 1.8000e-004 | | 11.7713 |
| Worker | 0.0240 | 4.0000e-003 | 0.0511 | 1.1000e-004 | 7.8054 | 1.8000e-004 | 7.8056 | 0.7784 | 1.7000e-004 | 0.7786 | | 7.1588 | 7.1588 | 3.5000e-004 | | 7.1660 |
| **Total** | **0.0643** | **0.1719** | **0.8757** | **4.9000e-004** | **13.5302** | **1.6500e-003** | **13.5319** | **1.3495** | **1.5200e-003** | **1.3510** | | **41.8333** | **41.8333** | **1.0100e-003** | | **41.8545** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0272 | 0.1138 | 0.6105 | 2.5000e-004 | 1.4501 | 1.0400e-003 | 1.4511 | 0.1441 | 9.5000e-004 | 0.1451 | | 22.9071 | 22.9071 | 4.8000e-004 | | 22.9172 |
| Vendor | 0.0131 | 0.0541 | 0.2141 | 1.3000e-004 | 0.8287 | 4.3000e-004 | 0.8291 | 0.0824 | 4.0000e-004 | 0.0828 | | 11.7675 | 11.7675 | 1.8000e-004 | | 11.7713 |
| Worker | 0.0240 | 4.0000e-003 | 0.0511 | 1.1000e-004 | 3.1063 | 1.8000e-004 | 3.1065 | 0.3085 | 1.7000e-004 | 0.3086 | | 7.1588 | 7.1588 | 3.5000e-004 | | 7.1660 |
| **Total** | **0.0643** | **0.1719** | **0.8757** | **4.9000e-004** | **5.3851** | **1.6500e-003** | **5.3867** | **0.5350** | **1.5200e-003** | **0.5365** | | **41.8333** | **41.8333** | **1.0100e-003** | | **41.8545** |

# World Logistics Center - Construction Plot 11 (Year 2025)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 8,000.00 | 1000sqft | 500.00 | 8,000,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 12000000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 21.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 18.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 775.00 | 155.00 |
| tblConstructionPhase | NumDays | 775.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/29/2025 | 4/30/2025 |
| tblConstructionPhase | PhaseStartDate | 7/1/2025 | 3/1/2025 |
| tblGrading | AcresOfGrading | 3,681.25 | 5,812.50 |
| tblGrading | AcresOfGrading | 0.00 | 227.50 |
| tblLandUse | LotAcreage | 183.65 | 500.00 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 12.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 7,520.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 2,170.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 364.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 130.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 28.00 | 15.00 |
| tblWater | IndoorWaterUseRate | 1,850,000,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Tota | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2025 | 44.0652 | 447.2197 | 321.1810 | 0.8804 | 121.6956 | 17.4030 | 139.0986 | 46.7166 | 16.0108 | 62.7274 | 0.0000 | 84,704.8027 | 84,704.8027 | 26.2714 | 0.0000 | 85,256.5030 |
| **Total** | **44.0652** | **447.2197** | **321.1810** | **0.8804** | **121.6956** | **17.4030** | **139.0986** | **46.7166** | **16.0108** | **62.7274** | **0.0000** | **84,704.8027** | **84,704.8027** | **26.2714** | **0.0000** | **85,256.5030** |

## Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2025 | 14.2205 | 233.3378 | 463.8472 | 0.8804 | 39.1133 | 1.5457 | 40.6590 | 14.8573 | 1.5318 | 16.3890 | 0.0000 | 84,704.8027 | 84,704.8027 | 26.2714 | 0.0000 | 85,256.5029 |
| **Total** | **14.2205** | **233.3378** | **463.8472** | **0.8804** | **39.1133** | **1.5457** | **40.6590** | **14.8573** | **1.5318** | **16.3890** | **0.0000** | **84,704.8027** | **84,704.8027** | **26.2714** | **0.0000** | **85,256.5029** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **67.73** | **47.82** | **-44.42** | **0.00** | **67.86** | **91.12** | **70.77** | **68.20** | **90.43** | **73.87** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

# 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2025 | 6/30/2025 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2025 | 4/30/2025 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 6 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 12 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 2 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 2 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 2 | 10.00 | 193 | 0.41 |
| Mass excavation | Off-Highway Trucks | 2 | 10.00 | 400 | 0.38 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 3 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 52 | 50.00 | 10.00 | 2,170.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 11 | 15.00 | 4.00 | 364.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2025

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 77.4068 | 0.0000 | 77.4068 | 24.9830 | 0.0000 | 24.9830 | | | 0.0000 | | | 0.0000 |
| Off-Road | 41.9625 | 428.8563 | 297.5955 | 0.8157 | | 16.4979 | 16.4979 | | 15.1781 | 15.1781 | | 78,973.7145 | 78,973.7145 | 25.5417 | | 79,510.0901 |
| **Total** | **41.9625** | **428.8563** | **297.5955** | **0.8157** | **77.4068** | **16.4979** | **93.9047** | **24.9830** | **15.1781** | **40.1611** | | **78,973.7145** | **78,973.7145** | **25.5417** | | **79,510.0901** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1846 | 1.7801 | 2.1964 | 0.0122 | 0.3053 | 0.0763 | 0.3816 | 0.0836 | 0.0702 | 0.1538 | | 1,149.9606 | 1,149.9606 | 6.9400e-003 | | 1,150.1064 |
| Vendor | 0.0953 | 0.8950 | 0.9895 | 7.0300e-003 | 0.2272 | 0.0380 | 0.2651 | 0.0648 | 0.0350 | 0.0997 | | 661.7239 | 661.7239 | 3.2900e-003 | | 661.7930 |
| Worker | 0.1178 | 0.1934 | 2.4888 | 0.0113 | 0.9501 | 5.5800e-003 | 0.9557 | 0.2519 | 5.1800e-003 | 0.2571 | | 745.5359 | 745.5359 | 0.0247 | | 746.0551 |
| **Total** | **0.3978** | **2.8685** | **5.6746** | **0.0306** | **1.4826** | **0.1199** | **1.6025** | **0.4003** | **0.1103** | **0.5107** | | **2,557.2205** | **2,557.2205** | **0.0350** | | **2,557.9544** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 23.9961 | 0.0000 | 23.9961 | 7.7447 | 0.0000 | 7.7447 | | | 0.0000 | | | 0.0000 |
| Off-Road | 13.3209 | 219.6205 | 439.4857 | 0.8157 | | 1.3352 | 1.3352 | | 1.3352 | 1.3352 | 0.0000 | 78,973.7144 | 78,973.7144 | 25.5417 | | 79,510.0901 |
| **Total** | **13.3209** | **219.6205** | **439.4857** | **0.8157** | **23.9961** | **1.3352** | **25.3313** | **7.7447** | **1.3352** | **9.0800** | **0.0000** | **78,973.7144** | **78,973.7144** | **25.5417** | | **79,510.0901** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1846 | 1.7801 | 2.1964 | 0.0122 | 0.3053 | 0.0763 | 0.3816 | 0.0836 | 0.0702 | 0.1538 | | 1,149.9606 | 1,149.9606 | 6.9400e-003 | | 1,150.1064 |
| Vendor | 0.0953 | 0.8950 | 0.9895 | 7.0300e-003 | 0.2272 | 0.0380 | 0.2651 | 0.0648 | 0.0350 | 0.0997 | | 661.7239 | 661.7239 | 3.2900e-003 | | 661.7930 |
| Worker | 0.1178 | 0.1934 | 2.4888 | 0.0113 | 0.9501 | 5.5800e-003 | 0.9557 | 0.2519 | 5.1800e-003 | 0.2571 | | 745.5359 | 745.5359 | 0.0247 | | 746.0551 |
| **Total** | **0.3978** | **2.8685** | **5.6746** | **0.0306** | **1.4826** | **0.1199** | **1.6025** | **0.4003** | **0.1103** | **0.5107** | | **2,557.2205** | **2,557.2205** | **0.0350** | | **2,557.9544** |

## 3.3 Finish grading - 2025

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 42.2777 | 0.0000 | 42.2777 | 21.1899 | 0.0000 | 21.1899 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.5392 | 14.1889 | 15.6703 | 0.0218 | | 0.7302 | 0.7302 | | 0.6718 | 0.6718 | | 2,110.5371 | 2,110.5371 | 0.6826 | | 2,124.8715 |
| **Total** | **1.5392** | **14.1889** | **15.6703** | **0.0218** | **42.2777** | **0.7302** | **43.0079** | **21.1899** | **0.6718** | **21.8617** | | **2,110.5371** | **2,110.5371** | **0.6826** | | **2,124.8715** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0923 | 0.8901 | 1.0982 | 6.1100e-003 | 0.1526 | 0.0382 | 0.1908 | 0.0418 | 0.0351 | 0.0769 | | 574.9803 | 574.9803 | 3.4700e-003 | | 575.0532 |
| Vendor | 0.0381 | 0.3580 | 0.3958 | 2.8100e-003 | 0.0909 | 0.0152 | 0.1061 | 0.0259 | 0.0140 | 0.0399 | | 264.6896 | 264.6896 | 1.3200e-003 | | 264.7172 |
| Worker | 0.0353 | 0.0580 | 0.7466 | 3.4000e-003 | 0.2850 | 1.6700e-003 | 0.2867 | 0.0756 | 1.5500e-003 | 0.0771 | | 223.6608 | 223.6608 | 7.4200e-003 | | 223.8165 |
| **Total** | **0.1658** | **1.3061** | **2.2406** | **0.0123** | **0.5285** | **0.0550** | **0.5836** | **0.1433** | **0.0506** | **0.1939** | | **1,063.3307** | **1,063.3307** | **0.0122** | | **1,063.5869** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 13.1061 | 0.0000 | 13.1061 | 6.5689 | 0.0000 | 6.5689 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.3360 | 9.5428 | 16.4464 | 0.0218 | | 0.0356 | 0.0356 | | 0.0356 | 0.0356 | 0.0000 | 2,110.5371 | 2,110.5371 | 0.6826 | | 2,124.8715 |
| **Total** | **0.3360** | **9.5428** | **16.4464** | **0.0218** | **13.1061** | **0.0356** | **13.1417** | **6.5689** | **0.0356** | **6.6044** | **0.0000** | **2,110.5371** | **2,110.5371** | **0.6826** | | **2,124.8715** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0923 | 0.8901 | 1.0982 | 6.1100e-003 | 0.1526 | 0.0382 | 0.1908 | 0.0418 | 0.0351 | 0.0769 | | 574.9803 | 574.9803 | 3.4700e-003 | | 575.0532 |
| Vendor | 0.0381 | 0.3580 | 0.3958 | 2.8100e-003 | 0.0909 | 0.0152 | 0.1061 | 0.0259 | 0.0140 | 0.0399 | | 264.6896 | 264.6896 | 1.3200e-003 | | 264.7172 |
| Worker | 0.0353 | 0.0580 | 0.7466 | 3.4000e-003 | 0.2850 | 1.6700e-003 | 0.2867 | 0.0756 | 1.5500e-003 | 0.0771 | | 223.6608 | 223.6608 | 7.4200e-003 | | 223.8165 |
| **Total** | **0.1658** | **1.3061** | **2.2406** | **0.0123** | **0.5285** | **0.0550** | **0.5836** | **0.1433** | **0.0506** | **0.1939** | | **1,063.3307** | **1,063.3307** | **0.0122** | | **1,063.5869** |

# World Logistics Center - Construction Plot 11 (Year 2027) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 8,000.00 | 1000sqft | 500.00 | 8,000,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 7,520.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 416.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 12.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 155.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 28.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 1,850,000,000.00 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2027 | 6/30/2027 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2027 | 4/30/2027 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 62 | 50.00 | 12.00 | 1,705.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 11 | 15.00 | 4.00 | 416.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2027

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0418 | 0.1757 | 0.9559 | 4.0000e-004 | 5.7247 | 1.5400e-003 | 5.7263 | 0.5711 | 1.4200e-003 | 0.5725 | | 35.9838 | 35.9838 | 7.6000e-004 | | 35.9997 |
| Vendor | 0.0382 | 0.1591 | 0.6333 | 3.8000e-004 | 6.2454 | 1.2400e-003 | 6.2467 | 0.6231 | 1.1400e-003 | 0.6243 | | 35.3008 | 35.3008 | 5.4000e-004 | | 35.3120 |
| Worker | 0.0737 | 0.0121 | 0.1560 | 3.6000e-004 | 26.0181 | 6.4000e-004 | 26.0188 | 2.5946 | 6.0000e-004 | 2.5952 | | 23.4116 | 23.4116 | 1.0600e-003 | | 23.4339 |
| **Total** | **0.1537** | **0.3469** | **1.7453** | **1.1400e-003** | **37.9882** | **3.4200e-003** | **37.9917** | **3.7888** | **3.1600e-003** | **3.7919** | | **94.6962** | **94.6962** | **2.3600e-003** | | **94.7457** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0418 | 0.1757 | 0.9559 | 4.0000e-004 | 2.2787 | 1.5400e-003 | 2.2802 | 0.2265 | 1.4200e-003 | 0.2279 | | 35.9838 | 35.9838 | 7.6000e-004 | | 35.9997 |
| Vendor | 0.0382 | 0.1591 | 0.6333 | 3.8000e-004 | 2.4861 | 1.2400e-003 | 2.4874 | 0.2472 | 1.1400e-003 | 0.2483 | | 35.3008 | 35.3008 | 5.4000e-004 | | 35.3120 |
| Worker | 0.0737 | 0.0121 | 0.1560 | 3.6000e-004 | 10.3544 | 6.4000e-004 | 10.3550 | 1.0282 | 6.0000e-004 | 1.0288 | | 23.4116 | 23.4116 | 1.0600e-003 | | 23.4339 |
| **Total** | **0.1537** | **0.3469** | **1.7453** | **1.1400e-003** | **15.1192** | **3.4200e-003** | **15.1226** | **1.5018** | **3.1600e-003** | **1.5050** | | **94.6962** | **94.6962** | **2.3600e-003** | | **94.7457** |

## 3.3 Finish grading - 2027

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0304 | 0.1278 | 0.6952 | 2.9000e-004 | 4.0849 | 1.1200e-003 | 4.0860 | 0.4075 | 1.0300e-003 | 0.4085 | | 26.1701 | 26.1701 | 5.5000e-004 | | 26.1816 |
| Vendor | 0.0127 | 0.0530 | 0.2111 | 1.3000e-004 | 2.0818 | 4.1000e-004 | 2.0822 | 0.2077 | 3.8000e-004 | 0.2081 | | 11.7669 | 11.7669 | 1.8000e-004 | | 11.7707 |
| Worker | 0.0221 | 3.6400e-003 | 0.0468 | 1.1000e-004 | 7.8054 | 1.9000e-004 | 7.8056 | 0.7784 | 1.8000e-004 | 0.7786 | | 7.0235 | 7.0235 | 3.2000e-004 | | 7.0302 |
| **Total** | **0.0653** | **0.1845** | **0.9531** | **5.3000e-004** | **13.9721** | **1.7200e-003** | **13.9739** | **1.3936** | **1.5900e-003** | **1.3952** | | **44.9605** | **44.9605** | **1.0500e-003** | | **44.9825** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0304 | 0.1278 | 0.6952 | 2.9000e-004 | 1.6260 | 1.1200e-003 | 1.6271 | 0.1616 | 1.0300e-003 | 0.1626 | | 26.1701 | 26.1701 | 5.5000e-004 | | 26.1816 |
| Vendor | 0.0127 | 0.0530 | 0.2111 | 1.3000e-004 | 0.8287 | 4.1000e-004 | 0.8291 | 0.0824 | 3.8000e-004 | 0.0828 | | 11.7669 | 11.7669 | 1.8000e-004 | | 11.7707 |
| Worker | 0.0221 | 3.6400e-003 | 0.0468 | 1.1000e-004 | 3.1063 | 1.9000e-004 | 3.1065 | 0.3085 | 1.8000e-004 | 0.3086 | | 7.0235 | 7.0235 | 3.2000e-004 | | 7.0302 |
| **Total** | **0.0653** | **0.1845** | **0.9531** | **5.3000e-004** | **5.5610** | **1.7200e-003** | **5.5627** | **0.5524** | **1.5900e-003** | **0.5541** | | **44.9605** | **44.9605** | **1.0500e-003** | | **44.9825** |

# World Logistics Center - Construction Plot 11 (Year 2027)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 8,000.00 | 1000sqft | 500.00 | 8,000,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 12000000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 14.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 21.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 15.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 775.00 | 155.00 |
| tblConstructionPhase | NumDays | 775.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 8/30/2027 | 4/30/2027 |
| tblConstructionPhase | PhaseStartDate | 7/1/2027 | 3/1/2027 |
| tblGrading | AcresOfGrading | 3,100.00 | 5,231.25 |
| tblGrading | AcresOfGrading | 0.00 | 228.00 |
| tblLandUse | LotAcreage | 183.65 | 500.00 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 4.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 11.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 7,520.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 416.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 12.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 123.00 | 50.00 |
| tblTripsAndVMT | WorkerTripNumber | 28.00 | 15.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 1,850,000,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2027 | 39.6897 | 410.3114 | 290.3862 | 0.7634 | 117.7284 | 16.0382 | 133.7665 | 46.2887 | 14.7552 | 61.0439 | 0.0000 | 73,366.7139 | 73,366.7139 | 22.6183 | 0.0000 | 73,841.6974 |
| **Total** | **39.6897** | **410.3114** | **290.3862** | **0.7634** | **117.7284** | **16.0382** | **133.7665** | **46.2887** | **14.7552** | **61.0439** | **0.0000** | **73,366.7139** | **73,366.7139** | **22.6183** | **0.0000** | **73,841.6974** |

## Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2027 | 12.2682 | 202.5191 | 401.6768 | 0.7634 | 37.8830 | 1.3433 | 39.2264 | 14.7249 | 1.3303 | 16.0552 | 0.0000 | 73,366.7138 | 73,366.7138 | 22.6183 | 0.0000 | 73,841.6974 |
| **Total** | **12.2682** | **202.5191** | **401.6768** | **0.7634** | **37.8830** | **1.3433** | **39.2264** | **14.7249** | **1.3303** | **16.0552** | **0.0000** | **73,366.7138** | **73,366.7138** | **22.6183** | **0.0000** | **73,841.6974** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **69.09** | **50.64** | **-38.33** | **0.00** | **67.82** | **91.62** | **70.68** | **68.19** | **90.98** | **73.70** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

# 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2027 | 6/30/2027 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2027 | 4/30/2027 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 4 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 11 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 2 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 2 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 2 | 10.00 | 193 | 0.41 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 3 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 5 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 5 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 3 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 2 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 2 | 1.00 | 167 | 0.40 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 49 | 50.00 | 12.00 | 1,705.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 11 | 15.00 | 4.00 | 416.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2027

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 73.4299 | 0.0000 | 73.4299 | 24.5536 | 0.0000 | 24.5536 | | | 0.0000 | | | 0.0000 |
| Off-Road | 37.6239 | 392.2301 | 267.2379 | 0.6991 | | 15.1445 | 15.1445 | | 13.9329 | 13.9329 | | 67,686.1122 | 67,686.1122 | 21.8911 | | 68,145.8244 |
| **Total** | **37.6239** | **392.2301** | **267.2379** | **0.6991** | **73.4299** | **15.1445** | **88.5744** | **24.5536** | **13.9329** | **38.4865** | | **67,686.1122** | **67,686.1122** | **21.8911** | | **68,145.8244** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1384 | 1.3242 | 1.6868 | 9.5900e-003 | 0.2399 | 0.0566 | 0.2964 | 0.0657 | 0.0520 | 0.1177 | | 902.9787 | 902.9787 | 5.1900e-003 | | 903.0876 |
| Vendor | 0.1100 | 1.0289 | 1.1539 | 8.4400e-003 | 0.2726 | 0.0438 | 0.3164 | 0.0778 | 0.0403 | 0.1181 | | 793.9059 | 793.9059 | 3.8100e-003 | | 793.9858 |
| Worker | 0.1083 | 0.1795 | 2.3276 | 0.0113 | 0.9501 | 5.6700e-003 | 0.9558 | 0.2519 | 5.2600e-003 | 0.2572 | | 732.1792 | 732.1792 | 0.0235 | | 732.6732 |
| **Total** | **0.3568** | **2.5326** | **5.1683** | **0.0294** | **1.4626** | **0.1061** | **1.5687** | **0.3954** | **0.0976** | **0.4930** | | **2,429.0638** | **2,429.0638** | **0.0325** | | **2,429.7466** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 22.7633 | 0.0000 | 22.7633 | 7.6116 | 0.0000 | 7.6116 | | | 0.0000 | | | 0.0000 |
| Off-Road | 11.4056 | 189.0839 | 377.7525 | 0.6991 | | 1.1443 | 1.1443 | | 1.1443 | 1.1443 | 0.0000 | 67,686.1121 | 67,686.1121 | 21.8911 | | 68,145.8244 |
| **Total** | **11.4056** | **189.0839** | **377.7525** | **0.6991** | **22.7633** | **1.1443** | **23.9076** | **7.6116** | **1.1443** | **8.7559** | **0.0000** | **67,686.1121** | **67,686.1121** | **21.8911** | | **68,145.8244** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1384 | 1.3242 | 1.6868 | 9.5900e-003 | 0.2399 | 0.0566 | 0.2964 | 0.0657 | 0.0520 | 0.1177 | | 902.9787 | 902.9787 | 5.1900e-003 | | 903.0876 |
| Vendor | 0.1100 | 1.0289 | 1.1539 | 8.4400e-003 | 0.2726 | 0.0438 | 0.3164 | 0.0778 | 0.0403 | 0.1181 | | 793.9059 | 793.9059 | 3.8100e-003 | | 793.9858 |
| Worker | 0.1083 | 0.1795 | 2.3276 | 0.0113 | 0.9501 | 5.6700e-003 | 0.9558 | 0.2519 | 5.2600e-003 | 0.2572 | | 732.1792 | 732.1792 | 0.0235 | | 732.6732 |
| **Total** | **0.3568** | **2.5326** | **5.1683** | **0.0294** | **1.4626** | **0.1061** | **1.5687** | **0.3954** | **0.0976** | **0.4930** | | **2,429.0638** | **2,429.0638** | **0.0325** | | **2,429.7466** |

## 3.3 Finish grading - 2027

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 42.2879 | 0.0000 | 42.2879 | 21.1910 | 0.0000 | 21.1910 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.5392 | 14.1889 | 15.6703 | 0.0218 | | 0.7302 | 0.7302 | | 0.6718 | 0.6718 | | 2,110.5371 | 2,110.5371 | 0.6826 | | 2,124.8715 |
| **Total** | **1.5392** | **14.1889** | **15.6703** | **0.0218** | **42.2879** | **0.7302** | **43.0181** | **21.1910** | **0.6718** | **21.8628** | | **2,110.5371** | **2,110.5371** | **0.6826** | | **2,124.8715** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1007 | 0.9631 | 1.2268 | 6.9700e-003 | 0.1720 | 0.0411 | 0.2131 | 0.0472 | 0.0379 | 0.0850 | | 656.7118 | 656.7118 | 3.7700e-003 | | 656.7910 |
| Vendor | 0.0367 | 0.3430 | 0.3846 | 2.8100e-003 | 0.0909 | 0.0146 | 0.1055 | 0.0259 | 0.0134 | 0.0394 | | 264.6353 | 264.6353 | 1.2700e-003 | | 264.6619 |
| Worker | 0.0325 | 0.0539 | 0.6983 | 3.4000e-003 | 0.2850 | 1.7000e-003 | 0.2867 | 0.0756 | 1.5800e-003 | 0.0772 | | 219.6538 | 219.6538 | 7.0600e-003 | | 219.8020 |
| **Total** | **0.1698** | **1.3599** | **2.3097** | **0.0132** | **0.5479** | **0.0575** | **0.6053** | **0.1487** | **0.0529** | **0.2015** | | **1,141.0008** | **1,141.0008** | **0.0121** | | **1,141.2549** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 13.1093 | 0.0000 | 13.1093 | 6.5692 | 0.0000 | 6.5692 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.3360 | 9.5428 | 16.4464 | 0.0218 | | 0.0356 | 0.0356 | | 0.0356 | 0.0356 | 0.0000 | 2,110.5371 | 2,110.5371 | 0.6826 | | 2,124.8715 |
| **Total** | **0.3360** | **9.5428** | **16.4464** | **0.0218** | **13.1093** | **0.0356** | **13.1448** | **6.5692** | **0.0356** | **6.6048** | **0.0000** | **2,110.5371** | **2,110.5371** | **0.6826** | | **2,124.8715** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1007 | 0.9631 | 1.2268 | 6.9700e-003 | 0.1720 | 0.0411 | 0.2131 | 0.0472 | 0.0379 | 0.0850 | | 656.7118 | 656.7118 | 3.7700e-003 | | 656.7910 |
| Vendor | 0.0367 | 0.3430 | 0.3846 | 2.8100e-003 | 0.0909 | 0.0146 | 0.1055 | 0.0259 | 0.0134 | 0.0394 | | 264.6353 | 264.6353 | 1.2700e-003 | | 264.6619 |
| Worker | 0.0325 | 0.0539 | 0.6983 | 3.4000e-003 | 0.2850 | 1.7000e-003 | 0.2867 | 0.0756 | 1.5800e-003 | 0.0772 | | 219.6538 | 219.6538 | 7.0600e-003 | | 219.8020 |
| **Total** | **0.1698** | **1.3599** | **2.3097** | **0.0132** | **0.5479** | **0.0575** | **0.6053** | **0.1487** | **0.0529** | **0.2015** | | **1,141.0008** | **1,141.0008** | **0.0121** | | **1,141.2549** |

# World Logistics Center - Construction Plot 12 (Year 2028)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 3,500.00 | 1000sqft | 231.30 | 3,500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,290.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 468.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 115.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2028 | 6/30/2028 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2028 | 4/30/2028 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 46 | 50.00 | 9.00 | 1,705.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 468.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2028

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0414 | 0.1750 | 0.9542 | 4.0000e-004 | 5.6880 | 1.5300e-003 | 5.6896 | 0.5674 | 1.4100e-003 | 0.5688 | | 35.9804 | 35.9804 | 7.6000e-004 | | 35.9962 |
| Vendor | 0.0283 | 0.1186 | 0.4722 | 2.9000e-004 | 4.6841 | 9.3000e-004 | 4.6850 | 0.4673 | 8.5000e-004 | 0.4682 | | 26.4756 | 26.4756 | 4.0000e-004 | | 26.4840 |
| Worker | 0.0709 | 0.0117 | 0.1503 | 3.6000e-004 | 26.0181 | 6.6000e-004 | 26.0188 | 2.5946 | 6.1000e-004 | 2.5952 | | 23.2338 | 23.2338 | 1.0300e-003 | | 23.2553 |
| **Total** | **0.1406** | **0.3052** | **1.5766** | **1.0500e-003** | **36.3902** | **3.1200e-003** | **36.3933** | **3.6293** | **2.8700e-003** | **3.6322** | | **85.6897** | **85.6897** | **2.1900e-003** | | **85.7356** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0414 | 0.1750 | 0.9542 | 4.0000e-004 | 2.2641 | 1.5300e-003 | 2.2656 | 0.2250 | 1.4100e-003 | 0.2264 | | 35.9804 | 35.9804 | 7.6000e-004 | | 35.9962 |
| Vendor | 0.0283 | 0.1186 | 0.4722 | 2.9000e-004 | 1.8646 | 9.3000e-004 | 1.8655 | 0.1854 | 8.5000e-004 | 0.1862 | | 26.4756 | 26.4756 | 4.0000e-004 | | 26.4840 |
| Worker | 0.0709 | 0.0117 | 0.1503 | 3.6000e-004 | 10.3544 | 6.6000e-004 | 10.3550 | 1.0282 | 6.1000e-004 | 1.0288 | | 23.2338 | 23.2338 | 1.0300e-003 | | 23.2553 |
| **Total** | **0.1406** | **0.3052** | **1.5766** | **1.0500e-003** | **14.4830** | **3.1200e-003** | **14.4862** | **1.4386** | **2.8700e-003** | **1.4415** | | **85.6897** | **85.6897** | **2.1900e-003** | | **85.7356** |

## 3.3 Finish grading - 2028

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0339 | 0.1432 | 0.7807 | 3.2000e-004 | 4.6839 | 1.2500e-003 | 4.6851 | 0.4672 | 1.1500e-003 | 0.4684 | | 29.4385 | 29.4385 | 6.2000e-004 | | 29.4515 |
| Vendor | 6.2800e-003 | 0.0264 | 0.1049 | 6.0000e-005 | 1.0409 | 2.1000e-004 | 1.0411 | 0.1039 | 1.9000e-004 | 0.1040 | | 5.8835 | 5.8835 | 9.0000e-005 | | 5.8853 |
| Worker | 0.0213 | 3.5000e-003 | 0.0451 | 1.1000e-004 | 7.8054 | 2.0000e-004 | 7.8056 | 0.7784 | 1.8000e-004 | 0.7786 | | 6.9701 | 6.9701 | 3.1000e-004 | | 6.9766 |
| **Total** | **0.0615** | **0.1730** | **0.9307** | **4.9000e-004** | **13.5302** | **1.6600e-003** | **13.5319** | **1.3495** | **1.5200e-003** | **1.3510** | | **42.2921** | **42.2921** | **1.0200e-003** | | **42.3134** |

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0339 | 0.1432 | 0.7807 | 3.2000e-004 | 1.8644 | 1.2500e-003 | 1.8656 | 0.1853 | 1.1500e-003 | 0.1864 | | 29.4385 | 29.4385 | 6.2000e-004 | | 29.4515 |
| Vendor | 6.2800e-003 | 0.0264 | 0.1049 | 6.0000e-005 | 0.4144 | 2.1000e-004 | 0.4146 | 0.0412 | 1.9000e-004 | 0.0414 | | 5.8835 | 5.8835 | 9.0000e-005 | | 5.8853 |
| Worker | 0.0213 | 3.5000e-003 | 0.0451 | 1.1000e-004 | 3.1063 | 2.0000e-004 | 3.1065 | 0.3085 | 1.8000e-004 | 0.3087 | | 6.9701 | 6.9701 | 3.1000e-004 | | 6.9766 |
| **Total** | **0.0615** | **0.1730** | **0.9307** | **4.9000e-004** | **5.3851** | **1.6600e-003** | **5.3867** | **0.5349** | **1.5200e-003** | **0.5365** | | **42.2921** | **42.2921** | **1.0200e-003** | | **42.3134** |

# World Logistics Center - Construction Plot 12 (Year 2028)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 3,500.00 | 1000sqft | 231.30 | 3,500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 5250000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 13.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 12.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 465.00 | 155.00 |
| tblConstructionPhase | NumDays | 465.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 6/29/2028 | 6/30/2028 |
| tblConstructionPhase | PhaseEndDate | 8/30/2028 | 4/30/2028 |
| tblConstructionPhase | PhaseStartDate | 7/1/2028 | 3/1/2028 |
| tblGrading | AcresOfGrading | 2,421.88 | 3,681.25 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 80.35 | 231.30 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 9.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,290.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 468.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 88.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 809,375,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2028 | 28.4048 | 289.1624 | 207.5608 | 0.5806 | 74.9239 | 11.2013 | 86.1252 | 28.3506 | 10.3053 | 38.6558 | 0.0000 | 55,663.3126 | 55,663.3126 | 16.9735 | 0.0000 | 56,019.7560 |
| **Total** | **28.4048** | **289.1624** | **207.5608** | **0.5806** | **74.9239** | **11.2013** | **86.1252** | **28.3506** | **10.3053** | **38.6558** | **0.0000** | **55,663.3126** | **55,663.3126** | **16.9735** | **0.0000** | **56,019.7560** |

## Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2028 | 9.2991 | 150.8415 | 300.5860 | 0.5806 | 24.5513 | 1.0343 | 25.5856 | 9.1461 | 1.0225 | 10.1685 | 0.0000 | 55,663.3125 | 55,663.3125 | 16.9735 | 0.0000 | 56,019.7560 |
| **Total** | **9.2991** | **150.8415** | **300.5860** | **0.5806** | **24.5513** | **1.0343** | **25.5856** | **9.1461** | **1.0225** | **10.1685** | **0.0000** | **55,663.3125** | **55,663.3125** | **16.9735** | **0.0000** | **56,019.7560** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **67.26** | **47.84** | **-44.82** | **0.00** | **67.23** | **90.77** | **70.29** | **67.74** | **90.08** | **73.69** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

# 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2028 | 6/30/2028 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2028 | 4/30/2028 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 3 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 9 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Off-Highway Trucks | 1 | 10.00 | 400 | 0.38 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 35 | 50.00 | 9.00 | 1,705.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 468.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2028

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 47.7697 | 0.0000 | 47.7697 | 15.1330 | 0.0000 | 15.1330 | | | 0.0000 | | | 0.0000 |
| Off-Road | 27.1506 | 278.5289 | 192.6814 | 0.5298 | | 10.6871 | 10.6871 | | 9.8321 | 9.8321 | | 51,293.7983 | 51,293.7983 | 16.5895 | | 51,642.1768 |
| **Total** | **27.1506** | **278.5289** | **192.6814** | **0.5298** | **47.7697** | **10.6871** | **58.4568** | **15.1330** | **9.8321** | **24.9651** | | **51,293.7983** | **51,293.7983** | **16.5895** | | **51,642.1768** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1371 | 1.3088 | 1.6791 | 9.5900e-003 | 0.2387 | 0.0560 | 0.2947 | 0.0654 | 0.0515 | 0.1170 | | 902.8230 | 902.8230 | 5.1400e-003 | | 902.9309 |
| Vendor | 0.0817 | 0.7640 | 0.8587 | 6.3300e-003 | 0.2045 | 0.0327 | 0.2371 | 0.0583 | 0.0300 | 0.0884 | | 595.4004 | 595.4004 | 2.8400e-003 | | 595.4599 |
| Worker | 0.1042 | 0.1737 | 2.2630 | 0.0113 | 0.9501 | 5.7000e-003 | 0.9558 | 0.2519 | 5.2900e-003 | 0.2572 | | 726.9522 | 726.9522 | 0.0230 | | 727.4358 |
| **Total** | **0.3230** | **2.2464** | **4.8008** | **0.0273** | **1.3933** | **0.0944** | **1.4877** | **0.3757** | **0.0869** | **0.4625** | | **2,225.1756** | **2,225.1756** | **0.0310** | | **2,225.8267** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 14.8086 | 0.0000 | 14.8086 | 4.6912 | 0.0000 | 4.6912 | | | 0.0000 | | | 0.0000 |
| Off-Road | 8.6465 | 142.5310 | 285.3185 | 0.5298 | | 0.8674 | 0.8674 | | 0.8674 | 0.8674 | 0.0000 | 51,293.7982 | 51,293.7982 | 16.5895 | | 51,642.1767 |
| **Total** | **8.6465** | **142.5310** | **285.3185** | **0.5298** | **14.8086** | **0.8674** | **15.6760** | **4.6912** | **0.8674** | **5.5586** | **0.0000** | **51,293.7982** | **51,293.7982** | **16.5895** | | **51,642.1767** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1371 | 1.3088 | 1.6791 | 9.5900e-003 | 0.2387 | 0.0560 | 0.2947 | 0.0654 | 0.0515 | 0.1170 | | 902.8230 | 902.8230 | 5.1400e-003 | | 902.9309 |
| Vendor | 0.0817 | 0.7640 | 0.8587 | 6.3300e-003 | 0.2045 | 0.0327 | 0.2371 | 0.0583 | 0.0300 | 0.0884 | | 595.4004 | 595.4004 | 2.8400e-003 | | 595.4599 |
| Worker | 0.1042 | 0.1737 | 2.2630 | 0.0113 | 0.9501 | 5.7000e-003 | 0.9558 | 0.2519 | 5.2900e-003 | 0.2572 | | 726.9522 | 726.9522 | 0.0230 | | 727.4358 |
| **Total** | **0.3230** | **2.2464** | **4.8008** | **0.0273** | **1.3933** | **0.0944** | **1.4877** | **0.3757** | **0.0869** | **0.4625** | | **2,225.1756** | **2,225.1756** | **0.0310** | | **2,225.8267** |

## 3.3 Finish grading - 2028

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.7696 | 7.0944 | 7.8352 | 0.0109 | | 0.3651 | 0.3651 | | 0.3359 | 0.3359 | | 1,055.2686 | 1,055.2686 | 0.3413 | | 1,062.4358 |
| **Total** | **0.7696** | **7.0944** | **7.8352** | **0.0109** | **25.2341** | **0.3651** | **25.5992** | **12.6996** | **0.3359** | **13.0355** | | **1,055.2686** | **1,055.2686** | **0.3413** | | **1,062.4358** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1122 | 1.0708 | 1.3738 | 7.8500e-003 | 0.1963 | 0.0458 | 0.2421 | 0.0538 | 0.0422 | 0.0959 | | 738.6734 | 738.6734 | 4.2100e-003 | | 738.7617 |
| Vendor | 0.0182 | 0.1698 | 0.1908 | 1.4100e-003 | 0.0454 | 7.2600e-003 | 0.0527 | 0.0130 | 6.6800e-003 | 0.0196 | | 132.3112 | 132.3112 | 6.3000e-004 | | 132.3244 |
| Worker | 0.0313 | 0.0521 | 0.6789 | 3.4000e-003 | 0.2850 | 1.7100e-003 | 0.2868 | 0.0756 | 1.5900e-003 | 0.0772 | | 218.0857 | 218.0857 | 6.9100e-003 | | 218.2308 |
| **Total** | **0.1616** | **1.2927** | **2.2435** | **0.0127** | **0.5268** | **0.0548** | **0.5815** | **0.1423** | **0.0504** | **0.1927** | | **1,089.0702** | **1,089.0702** | **0.0118** | | **1,089.3168** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1680 | 4.7714 | 8.2232 | 0.0109 | | 0.0178 | 0.0178 | | 0.0178 | 0.0178 | 0.0000 | 1,055.2686 | 1,055.2686 | 0.3413 | | 1,062.4358 |
| **Total** | **0.1680** | **4.7714** | **8.2232** | **0.0109** | **7.8226** | **0.0178** | **7.8403** | **3.9369** | **0.0178** | **3.9547** | **0.0000** | **1,055.2686** | **1,055.2686** | **0.3413** | | **1,062.4358** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1122 | 1.0708 | 1.3738 | 7.8500e-003 | 0.1963 | 0.0458 | 0.2421 | 0.0538 | 0.0422 | 0.0959 | | 738.6734 | 738.6734 | 4.2100e-003 | | 738.7617 |
| Vendor | 0.0182 | 0.1698 | 0.1908 | 1.4100e-003 | 0.0454 | 7.2600e-003 | 0.0527 | 0.0130 | 6.6800e-003 | 0.0196 | | 132.3112 | 132.3112 | 6.3000e-004 | | 132.3244 |
| Worker | 0.0313 | 0.0521 | 0.6789 | 3.4000e-003 | 0.2850 | 1.7100e-003 | 0.2868 | 0.0756 | 1.5900e-003 | 0.0772 | | 218.0857 | 218.0857 | 6.9100e-003 | | 218.2308 |
| **Total** | **0.1616** | **1.2927** | **2.2435** | **0.0127** | **0.5268** | **0.0548** | **0.5815** | **0.1423** | **0.0504** | **0.1927** | | **1,089.0702** | **1,089.0702** | **0.0118** | | **1,089.3168** |

# World Logistics Center - Construction Plot 6 (Year 2030) Unpaved road dust

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 500.00 | 1000sqft | 115.30 | 500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Off-road Equipment Mitigation - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | AverageVehicleWeight | 2.40 | 5.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | MeanVehicleSpeed | 40.00 | 20.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | VendorPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | WorkerPercentPave | 100.00 | 0.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 470.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 0.50 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 520.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 0.50 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 0.50 |
| tblTripsAndVMT | WorkerTripNumber | 100.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2030 | 6/30/2030 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2030 | 4/30/2030 | 6 | 52 | |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 40 | 50.00 | 9.00 | 1,705.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 520.00 | 0.50 | 0.50 | 0.50 | LD_Mix | HDT_Mix | HHDT |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Unpaved Roads

Clean Paved Roads

### 3.2 Mass excavation - 2030

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0411 | 0.1746 | 0.9568 | 4.0000e-004 | 5.7247 | 1.5300e-003 | 5.7263 | 0.5711 | 1.4100e-003 | 0.5725 | | 35.9774 | 35.9774 | 7.6000e-004 | | 35.9933 |
| Vendor | 0.0277 | 0.1177 | 0.4692 | 2.9000e-004 | 4.6841 | 9.3000e-004 | 4.6850 | 0.4673 | 8.5000e-004 | 0.4682 | | 26.4764 | 26.4764 | 4.0000e-004 | | 26.4849 |
| Worker | 0.0655 | 0.0108 | 0.1402 | 3.6000e-004 | 26.0181 | 6.7000e-004 | 26.0188 | 2.5946 | 6.3000e-004 | 2.5952 | | 22.9547 | 22.9547 | 9.6000e-004 | | 22.9749 |
| **Total** | **0.1343** | **0.3031** | **1.5661** | **1.0500e-003** | **36.4269** | **3.1300e-003** | **36.4300** | **3.6330** | **2.8900e-003** | **3.6359** | | **85.4085** | **85.4085** | **2.1200e-003** | | **85.4531** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0411 | 0.1746 | 0.9568 | 4.0000e-004 | 2.2787 | 1.5300e-003 | 2.2802 | 0.2265 | 1.4100e-003 | 0.2279 | | 35.9774 | 35.9774 | 7.6000e-004 | | 35.9933 |
| Vendor | 0.0277 | 0.1177 | 0.4692 | 2.9000e-004 | 1.8646 | 9.3000e-004 | 1.8655 | 0.1854 | 8.5000e-004 | 0.1862 | | 26.4764 | 26.4764 | 4.0000e-004 | | 26.4849 |
| Worker | 0.0655 | 0.0108 | 0.1402 | 3.6000e-004 | 10.3544 | 6.7000e-004 | 10.3550 | 1.0282 | 6.3000e-004 | 1.0288 | | 22.9547 | 22.9547 | 9.6000e-004 | | 22.9749 |
| **Total** | **0.1343** | **0.3031** | **1.5661** | **1.0500e-003** | **14.4977** | **3.1300e-003** | **14.5008** | **1.4401** | **2.8900e-003** | **1.4429** | | **85.4085** | **85.4085** | **2.1200e-003** | | **85.4531** |

## 3.3 Finish grading - 2030

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0374 | 0.1587 | 0.8698 | 3.6000e-004 | 5.2043 | 1.3900e-003 | 5.2057 | 0.5191 | 1.2800e-003 | 0.5204 | | 32.7067 | 32.7067 | 6.9000e-004 | | 32.7212 |
| Vendor | 6.1500e-003 | 0.0262 | 0.1043 | 6.0000e-005 | 1.0409 | 2.1000e-004 | 1.0411 | 0.1039 | 1.9000e-004 | 0.1040 | | 5.8836 | 5.8836 | 9.0000e-005 | | 5.8855 |
| Worker | 0.0196 | 3.2500e-003 | 0.0421 | 1.1000e-004 | 7.8054 | 2.0000e-004 | 7.8056 | 0.7784 | 1.9000e-004 | 0.7786 | | 6.8864 | 6.8864 | 2.9000e-004 | | 6.8925 |
| **Total** | **0.0632** | **0.1881** | **1.0161** | **5.3000e-004** | **14.0506** | **1.8000e-003** | **14.0524** | **1.4014** | **1.6600e-003** | **1.4030** | | **45.4768** | **45.4768** | **1.0700e-003** | | **45.4992** |

### Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0374 | 0.1587 | 0.8698 | 3.6000e-004 | 2.0715 | 1.3900e-003 | 2.0729 | 0.2059 | 1.2800e-003 | 0.2072 | | 32.7067 | 32.7067 | 6.9000e-004 | | 32.7212 |
| Vendor | 6.1500e-003 | 0.0262 | 0.1043 | 6.0000e-005 | 0.4144 | 2.1000e-004 | 0.4146 | 0.0412 | 1.9000e-004 | 0.0414 | | 5.8836 | 5.8836 | 9.0000e-005 | | 5.8855 |
| Worker | 0.0196 | 3.2500e-003 | 0.0421 | 1.1000e-004 | 3.1063 | 2.0000e-004 | 3.1065 | 0.3085 | 1.9000e-004 | 0.3087 | | 6.8864 | 6.8864 | 2.9000e-004 | | 6.8925 |
| **Total** | **0.0632** | **0.1881** | **1.0161** | **5.3000e-004** | **5.5922** | **1.8000e-003** | **5.5940** | **0.5555** | **1.6600e-003** | **0.5572** | | **45.4768** | **45.4768** | **1.0700e-003** | | **45.4992** |

# World Logistics Center - Construction Plot 6 (Year 2030)

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 500.00 | 1000sqft | 115.30 | 500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 750000 | 6001960 |
| tblConstDustMitigation | WaterExposedAreaPM10PercentReduction | 61 | 69 |
| tblConstDustMitigation | WaterExposedAreaPM25PercentReduction | 61 | 69 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 10.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 13.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 6.00 |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Interim |
| tblConstructionPhase | NumDays | 310.00 | 155.00 |
| tblConstructionPhase | NumDays | 310.00 | 52.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | PhaseEndDate | 6/29/2030 | 6/30/2030 |
| tblConstructionPhase | PhaseEndDate | 8/29/2030 | 4/30/2030 |
| tblConstructionPhase | PhaseStartDate | 7/1/2030 | 3/1/2030 |
| tblGrading | AcresOfGrading | 1,259.38 | 2,518.75 |
| tblGrading | AcresOfGrading | 0.00 | 130.00 |
| tblLandUse | LotAcreage | 11.48 | 115.30 |
| tblOffRoadEquipment | HorsePower | 174.00 | 193.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 580.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 410.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 305.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 140.00 |
| tblOffRoadEquipment | HorsePower | 255.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 361.00 | 550.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |
| tblOffRoadEquipment | HorsePower | 97.00 | 85.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | HorsePower | 8.00 | 354.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 6.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 10.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 470.00 | 0.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripLength | 20.00 | 25.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,705.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 520.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripLength | 6.90 | 25.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripLength | 14.70 | 25.00 |
| tblTripsAndVMT | WorkerTripNumber | 70.00 | 50.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | IndoorWaterUseRate | 115,625,000.00 | 0.00 |

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

**Unmitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2030 | 21.3941 | 101.6802 | 111.6516 | 0.4097 | 66.9931 | 3.8948 | 70.8879 | 27.4980 | 3.8825 | 31.3805 | 0.0000 | 44,515.5041 | 44,515.5041 | 1.9071 | 0.0000 | 44,555.5532 |
| **Total** | **21.3941** | **101.6802** | **111.6516** | **0.4097** | **66.9931** | **3.8948** | **70.8879** | **27.4980** | **3.8825** | **31.3805** | **0.0000** | **44,515.5041** | **44,515.5041** | **1.9071** | **0.0000** | **44,555.5532** |

## Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2030 | 6.2387 | 101.5549 | 201.0838 | 0.4097 | 22.1086 | 0.7338 | 22.8425 | 8.8861 | 0.7215 | 9.6076 | 0.0000 | 44,515.5041 | 44,515.5041 | 1.9071 | 0.0000 | 44,555.5531 |
| **Total** | **6.2387** | **101.5549** | **201.0838** | **0.4097** | **22.1086** | **0.7338** | **22.8425** | **8.8861** | **0.7215** | **9.6076** | **0.0000** | **44,515.5041** | **44,515.5041** | **1.9071** | **0.0000** | **44,555.5531** |

| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Bio- CO2** | **NBio-CO2** | **Total CO2** | **CH4** | **N20** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **70.84** | **0.12** | **-80.10** | **0.00** | **67.00** | **81.16** | **67.78** | **67.68** | **81.42** | **69.38** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

# 3.0 Construction Detail

## Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Mass excavation | Grading | 1/1/2030 | 6/30/2030 | 6 | 155 | |
| 2 | Finish grading | Grading | 3/1/2030 | 4/30/2030 | 6 | 52 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 580 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 410 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 305 | 0.40 |
| Mass excavation | Scrapers | 0 | 10.00 | 550 | 0.48 |
| Mass excavation | Scrapers | 6 | 10.00 | 550 | 0.48 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Plate Compactors | 1 | 10.00 | 354 | 0.43 |
| Mass excavation | Graders | 1 | 10.00 | 193 | 0.41 |
| Mass excavation | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Mass excavation | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Mass excavation | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Mass excavation | Other Material Handling Equipment | 4 | 1.00 | 167 | 0.40 |
| Finish grading | Rubber Tired Dozers | 1 | 10.00 | 140 | 0.40 |
| Finish grading | Rubber Tired Dozers | 2 | 10.00 | 85 | 0.40 |
| Finish grading | Tractors/Loaders/Backhoes | 1 | 10.00 | 85 | 0.37 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |
| Finish grading | Other Material Handling Equipment | 1 | 1.00 | 167 | 0.40 |

## Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass excavation | 28 | 50.00 | 9.00 | 1,705.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |
| Finish grading | 6 | 15.00 | 2.00 | 520.00 | 25.00 | 25.00 | 25.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Mass excavation - 2030

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 39.8160 | 0.0000 | 39.8160 | 14.2741 | 0.0000 | 14.2741 | | | 0.0000 | | | 0.0000 |
| Off-Road | 20.1633 | 94.2308 | 96.7326 | 0.3556 | | 3.5739 | 3.5739 | | 3.5739 | 3.5739 | | 39,867.0459 | 39,867.0459 | 1.7996 | | 39,904.8371 |
| **Total** | **20.1633** | **94.2308** | **96.7326** | **0.3556** | **39.8160** | **3.5739** | **43.3898** | **14.2741** | **3.5739** | **17.8480** | | **39,867.0459** | **39,867.0459** | **1.7996** | | **39,904.8371** |

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1370 | 1.3014 | 1.6840 | 9.5900e-003 | 0.2399 | 0.0562 | 0.2961 | 0.0657 | 0.0517 | 0.1174 | | 902.6769 | 902.6769 | 5.1500e-003 | | 902.7851 |
| Vendor | 0.0811 | 0.7586 | 0.8540 | 6.3300e-003 | 0.2045 | 0.0328 | 0.2373 | 0.0583 | 0.0302 | 0.0885 | | 595.3874 | 595.3874 | 2.8400e-003 | | 595.4471 |
| Worker | 0.0964 | 0.1631 | 2.1472 | 0.0113 | 0.9501 | 5.7400e-003 | 0.9559 | 0.2519 | 5.3300e-003 | 0.2573 | | 718.7978 | 718.7978 | 0.0221 | | 719.2623 |
| **Total** | **0.3145** | **2.2231** | **4.6852** | **0.0273** | **1.3945** | **0.0947** | **1.4893** | **0.3760** | **0.0872** | **0.4632** | | **2,216.8620** | **2,216.8620** | **0.0301** | | **2,217.4945** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 12.3430 | 0.0000 | 12.3430 | 4.4250 | 0.0000 | 4.4250 | | | 0.0000 | | | 0.0000 |
| Off-Road | 5.5847 | 93.1598 | 185.8107 | 0.3556 | | 0.5612 | 0.5612 | | 0.5612 | 0.5612 | 0.0000 | 39,867.0459 | 39,867.0459 | 1.7996 | | 39,904.8371 |
| **Total** | **5.5847** | **93.1598** | **185.8107** | **0.3556** | **12.3430** | **0.5612** | **12.9042** | **4.4250** | **0.5612** | **4.9862** | **0.0000** | **39,867.0459** | **39,867.0459** | **1.7996** | | **39,904.8371** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1370 | 1.3014 | 1.6840 | 9.5900e-003 | 0.2399 | 0.0562 | 0.2961 | 0.0657 | 0.0517 | 0.1174 | | 902.6769 | 902.6769 | 5.1500e-003 | | 902.7851 |
| Vendor | 0.0811 | 0.7586 | 0.8540 | 6.3300e-003 | 0.2045 | 0.0328 | 0.2373 | 0.0583 | 0.0302 | 0.0885 | | 595.3874 | 595.3874 | 2.8400e-003 | | 595.4471 |
| Worker | 0.0964 | 0.1631 | 2.1472 | 0.0113 | 0.9501 | 5.7400e-003 | 0.9559 | 0.2519 | 5.3300e-003 | 0.2573 | | 718.7978 | 718.7978 | 0.0221 | | 719.2623 |
| **Total** | **0.3145** | **2.2231** | **4.6852** | **0.0273** | **1.3945** | **0.0947** | **1.4893** | **0.3760** | **0.0872** | **0.4632** | | **2,216.8620** | **2,216.8620** | **0.0301** | | **2,217.4945** |

## 3.3 Finish grading - 2030

### Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 25.2341 | 0.0000 | 25.2341 | 12.6996 | 0.0000 | 12.6996 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.7448 | 3.8257 | 7.8691 | 0.0133 | | 0.1661 | 0.1661 | | 0.1661 | 0.1661 | | 1,263.0332 | 1,263.0332 | 0.0655 | | 1,264.4076 |
| **Total** | **0.7448** | **3.8257** | **7.8691** | **0.0133** | **25.2341** | **0.1661** | **25.4002** | **12.6996** | **0.1661** | **12.8657** | | **1,263.0332** | **1,263.0332** | **0.0655** | | **1,264.4076** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1246 | 1.1831 | 1.5309 | 8.7200e-003 | 0.2181 | 0.0511 | 0.2692 | 0.0597 | 0.0470 | 0.1068 | | 820.6154 | 820.6154 | 4.6800e-003 | | 820.7137 |
| Vendor | 0.0180 | 0.1686 | 0.1898 | 1.4100e-003 | 0.0454 | 7.2800e-003 | 0.0527 | 0.0130 | 6.7000e-003 | 0.0197 | | 132.3083 | 132.3083 | 6.3000e-004 | | 132.3216 |
| Worker | 0.0289 | 0.0489 | 0.6442 | 3.4000e-003 | 0.2850 | 1.7200e-003 | 0.2868 | 0.0756 | 1.6000e-003 | 0.0772 | | 215.6393 | 215.6393 | 6.6400e-003 | | 215.7787 |
| **Total** | **0.1715** | **1.4006** | **2.3648** | **0.0135** | **0.5486** | **0.0601** | **0.6087** | **0.1483** | **0.0553** | **0.2036** | | **1,168.5630** | **1,168.5630** | **0.0120** | | **1,168.8140** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 7.8226 | 0.0000 | 7.8226 | 3.9369 | 0.0000 | 3.9369 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1680 | 4.7714 | 8.2232 | 0.0133 | | 0.0178 | 0.0178 | | 0.0178 | 0.0178 | 0.0000 | 1,263.0332 | 1,263.0332 | 0.0655 | | 1,264.4076 |
| **Total** | **0.1680** | **4.7714** | **8.2232** | **0.0133** | **7.8226** | **0.0178** | **7.8403** | **3.9369** | **0.0178** | **3.9547** | **0.0000** | **1,263.0332** | **1,263.0332** | **0.0655** | | **1,264.4076** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1246 | 1.1831 | 1.5309 | 8.7200e-003 | 0.2181 | 0.0511 | 0.2692 | 0.0597 | 0.0470 | 0.1068 | | 820.6154 | 820.6154 | 4.6800e-003 | | 820.7137 |
| Vendor | 0.0180 | 0.1686 | 0.1898 | 1.4100e-003 | 0.0454 | 7.2800e-003 | 0.0527 | 0.0130 | 6.7000e-003 | 0.0197 | | 132.3083 | 132.3083 | 6.3000e-004 | | 132.3216 |
| Worker | 0.0289 | 0.0489 | 0.6442 | 3.4000e-003 | 0.2850 | 1.7200e-003 | 0.2868 | 0.0756 | 1.6000e-003 | 0.0772 | | 215.6393 | 215.6393 | 6.6400e-003 | | 215.7787 |
| **Total** | **0.1715** | **1.4006** | **2.3648** | **0.0135** | **0.5486** | **0.0601** | **0.6087** | **0.1483** | **0.0553** | **0.2036** | | **1,168.5630** | **1,168.5630** | **0.0120** | | **1,168.8140** |

# A.5 - Construction Waste

## Construction Waste

World Logistics Center
Prepared by FirstCarbon Solutions

**Skechers Construction Waste Summary** Skechers Building size: 1800000 sf

data provided by Waste Management; 7/11/12

| | tons of waste | tons/sf | pounds/sf |
|---|---|---|---|
| Total mixed C&D waste | 550.13 | 3.1E-04 | 0.611 |
| Mixed C&D diverted (recycled/reused) | 412.7 | 2.3E-04 | 0.459 |
| Green waste | 5 | 2.8E-06 | 0.006 |
| Percent of total recycled | 75% | | |

**Construction Waste Summary for Project**

| | | |
|---|---|---|
| Square feet for project | 40610000 | sf |
| Mixed C&D waste | 12,412 | tons |
| Green waste | 113 | tons |
| Total waste | 12,524 | tons |
| Recycled waste | 6,423 | tons |
| Percent recycled | 51% | |

Mixed C&D and green waste for the project is based on the tons/sf for Skechers. The recycled waste is based on reducing the select sources (see the "recycled" column below) by 75%. Actual recycling may be greater; a conservative estimate is presented. The minimum required by law is 50% recycled.

**Construction Waste Percentage**

| | For Project | | | References | |
|---|---|---|---|---|---|
| **Waste Type** | **Percent C&D Waste** | **Waste landfilled (tons)** | **Recycled (tons)** | **Study 1** | **Study 2** |
| Glass | 1% | 124 | 93 | | 0.2% |
| Corrugated Containers | 8% | 993 | 745 | 5.7% | 2.0% |
| Dimensional Lumber | 17% | 2,110 | 1,582 | 31.9% | 23.3% |
| Medium-density Fiberboard | 7% | 869 | 652 | 7.8% | 3.8% |
| Food Waste (non-meat) | | 0 | | | 0.9% |
| Yard Trimmings (GREEN WASTE) | | 113 | | | 2.3% |
| Grass | | 0 | | | 2.7% |
| Branches | | 0 | | | 1.8% |
| Mixed Paper (general) | 3% | 372 | 279 | | 3.6% |
| Mixed Paper (primarily residential) | | 0 | | | |
| Mixed Paper (primarily from offices) | | 0 | | | |
| Mixed Metals | 13% | 1,614 | 1,210 | 13.2% | 4.9% |
| Mixed Plastics | 6% | 745 | 559 | 4.5% | 5.5% |
| Mixed Recyclables | | 0 | | | |
| Mixed Organics | | 0 | | | |
| Mixed MSW | 25% | 3,103 | | 26.6% | 32.4% |
| Carpet | 2% | 248 | | | 3.9% |
| Clay Bricks | | 0 | | | |
| Concrete | 10% | 1,241 | 931 | 10.3% | 2.0% |
| Fly Ash | | 0 | | | |
| Tires | | 0 | | | |
| Asphalt Concrete | 2% | 248 | 186 | | 1.5% |
| Asphalt Shingles | | 0 | | | 9.2% |
| Drywall | 2% | 248 | 186 | | |
| Fiberglass Insulation | 4% | 496 | | | |
| Vinyl Flooring | | 0 | | | |
| Wood Flooring | | 0 | | | |
| **Total** | **100%** | **12,524** | **6,423** | **100.0%** | **100.0%** |

**WARM Model Results**

| | Total MTCO2e | Averaged MTCO2e (30 years) |
|---|---|---|
| Unmitigated | (333) | (11) |
| Mitigated | (13,548) | (452) |

Mitigated is estimated by WARM by using the recycled tons as shown above.

**References for Construction Waste Percentages**

| Study 1 | Tons | Percentage |
|---|---|---|
| Wood palettes | 1423 | 31.9% |
| Cardboard | 256 | 5.7% |
| Metals | 590 | 13.2% |
| Gypsum board | 349 | 7.8% |
| Plastics | 202 | 4.5% |
| Concrete | 459 | 10.3% |
| Mixed | 1183 | 26.5% |
| Total | 4462 | 100.0% |

Waste percentages for the proposed project were estimated based on the following studies:

Study 1: California Integrated Waste Management Board. 2003. The Capitol Area East End Office Complex: A Case for Construction and Demolition Waste Diversion. Data from Table 2b. Website: http://www.calrecycle.ca.gov/Publications/Documents/GreenBuilding/43303023.pdf

Study 2: California Environmental Protection Agency. 2009. California 2008 Statewide Waste Characterization Study. Prepared by Cascadia Consulting Group. Data from Table 25: Composition of Commercial Self-Hauled Disposed Waste (includes all sources of self-hauled waste, not just from construction and demolition). Website: http://www.calrecycle.ca.gov/publications/Documents/General/2009023.pdf

Version 13

# Waste Reduction Model (WARM) -- Inputs

**Use this worksheet to describe the baseline and alternative MSW management scenarios that you want to compare. The blue shaded areas indicate where you need to enter information.**

**1. Describe the baseline generation and management for the MSW materials listed below. If the material is not generated in your community or you do not want to analyze it, leave it blank or enter 0. Make sure that the total quantity generated equals the total quantity managed.**

**2. Describe the alternative management scenario for the MSW materials generated in the baseline. Any decrease in generation should be entered in the Source Reduction column Any increase in generation should be entered in the Source Reduction column as a negative value (Make sure that the total quantity generated equals the total quantity managed.)**

| Material | Tons Recycled | Tons Landfilled | Tons Combusted | Tons Composted | Tons Generated | Tons Source Reduced | Tons Recycled | Tons Landfilled | Tons Combusted | Tons Composted |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum Cans | | | | NA | 0.0 | | - | - | | NA |
| Aluminum Ingot | | | | NA | 0.0 | | - | - | | NA |
| Steel Cans | | | | NA | 0.0 | | - | - | | NA |
| Copper Wire | | | | NA | 0.0 | | - | - | | NA |
| Glass | | 124.1 | | NA | 124.1 | | 93.1 | 31.0 | | NA |
| HDPE | | - | | NA | 0.0 | | - | - | | NA |
| LDPE | NA | - | | NA | 0.0 | | NA | | | NA |
| PET | | - | | NA | 0.0 | | - | - | | NA |
| LLDPE | NA | - | | NA | 0.0 | | NA | | | NA |
| PP | NA | - | | NA | 0.0 | | NA | | | NA |
| PS | NA | - | | NA | 0.0 | | NA | | | NA |
| PVC | NA | - | | NA | 0.0 | | NA | | | NA |
| PLA | NA | - | | | 0.0 | | NA | | | |
| Corrugated Containers | | 992.9 | | NA | 992.9 | | 744.7 | 248.2 | | NA |
| Magazines/Third-class Mail | | - | | NA | 0.0 | | - | - | | NA |
| Newspaper | | - | | NA | 0.0 | | - | - | | NA |
| Office Paper | | - | | NA | 0.0 | | - | - | | NA |
| Phonebooks | | - | | NA | 0.0 | | - | - | | NA |
| Textbooks | | - | | NA | 0.0 | | - | - | | NA |
| Dimensional Lumber | | 2,110.0 | | NA | 2110.0 | | 1,582.5 | 527.5 | | NA |
| Medium-density Fiberboard | | 868.8 | | NA | 868.8 | | 651.6 | 217.2 | | NA |
| Food Waste (non-meat) [1] | NA | - | | | 0.0 | | NA | - | | |
| Grains | NA | - | | | 0.0 | | NA | - | | |
| Bread | NA | - | | | 0.0 | | NA | - | | |
| Fruits and Vegetables | NA | - | | | 0.0 | | NA | - | | |
| Dairy Products | NA | - | | | 0.0 | | NA | - | | |
| Yard Trimmings | NA | 112.8 | | | 112.8 | NA | NA | 112.8 | | |
| Grass | NA | - | | | 0.0 | NA | NA | - | | |
| Leaves | NA | - | | | 0.0 | NA | NA | - | | |
| Branches | NA | - | | | 0.0 | NA | NA | - | | |
| Mixed Paper (general) | | 372.3 | | NA | 372.3 | NA | 279.3 | 93.1 | | NA |
| Mixed Paper (primarily residential) | | - | | NA | 0.0 | NA | - | - | | NA |
| Mixed Paper (primarily from offices) | | - | | NA | 0.0 | NA | - | - | | NA |
| Mixed Metals | | 1,613.5 | | NA | 1613.5 | NA | 1,210.1 | 403.4 | | NA |
| Mixed Plastics | | 744.7 | | NA | 744.7 | NA | 558.5 | 186.2 | | NA |
| Mixed Recyclables | | - | | NA | 0.0 | NA | - | - | | NA |
| Mixed Organics | NA | - | | | 0.0 | NA | NA | - | | |
| Mixed MSW | NA | 3,102.9 | | NA | 3102.9 | NA | NA | 3,102.9 | | NA |
| Carpet | | 248.2 | | NA | 248.2 | | | 248.2 | | NA |
| Personal Computers | | - | | NA | 0.0 | | | - | | NA |
| Clay Bricks | NA | - | NA | NA | 0.0 | | NA | - | NA | NA |
| Concrete [2] | | 1,241.2 | NA | NA | 1241.2 | NA | 930.9 | 310.3 | NA | NA |
| Fly Ash [3] | | - | NA | NA | 0.0 | NA | - | - | NA | NA |
| Tires [4] | | - | | NA | 0.0 | | - | - | | NA |
| Asphalt Concrete | | 248.2 | NA | NA | 248.2 | | 186.2 | 62.1 | NA | NA |
| Asphalt Shingles | | - | | NA | 0.0 | | - | - | | NA |
| Drywall | | 248.2 | NA | NA | 248.2 | | 186.2 | 62.1 | NA | NA |
| Fiberglass Insulation | NA | 496.5 | NA | NA | 496.5 | | NA | 496.5 | NA | NA |
| Vinyl Flooring | NA | - | | NA | 0.0 | | NA | - | | NA |
| Wood Flooring | NA | - | | NA | 0.0 | | NA | - | | NA |

Please enter data in short tons (1 short ton = 2,000 lbs.)
Please refer to the User's Guide if you need assistance completing this table.

[1] Source reduction factors do not yet include meat types.

[2] Recycled concrete used as aggregate in the production of new concrete.

[3] Recycled fly ash is utilized to displace portland cement in concrete production.

[4] Recycling tires is defined in this analysis as using tires for crumb rubber applications and tire-derived aggregate uses in civil engineering applications.

**3. In order to account for the avoided electricity-related emissions in the landfilling and combustion pathways, EPA assigns the appropriate regional "marginal" electricity grid mix emission factor based on your location Select state for which you are conducting this analysis.**

| | |
|---|---|
| Please select state or select national average: | California |
| Region Location: | Pacific |

**4. To estimate the benefits from source reduction, EPA usually assumes that the material that is source reduced would have been manufactured from the current mix of virgin and recycled inputs. However, you may choose to estimate the emission reductions from source reduction under the assumption that the material would have been manufactured from 100% virgin inputs in order to obtain an upper bound estimate of the benefits from source reduction. Select which assumption you want to use in the analysis. Note that for materials for which information on the share of recycled inputs used in production is unavailable or is not a common practice; EPA assumes that the current mix is comprised of 100% virgin inputs. Consequently, the source reduction benefits of both the "Current mix" and "100% virgin" inputs are the same**

- (●) Current Mix
- ( ) 100% Virgin

**5. The emissions from landfilling depends on whether the landfill where your waste is disposed has a landfill gas (LFG) control system. If you do not know whether your landfill has LFG control, selec "National Average" to calculate emissions based on the estimated proportions of landfills with LFG control in 2012 and proceed to question 7. If your landfill does not have a LFG system, select "No LFG Recovery" and proceed to question 8. If a LFG system is in place at your landfill, select "LFG Recovery" and click one of the options in 6a to indicate whether LFG is recovered for energy or flared.**

- (●) National Average
- ( ) LFG Recovery
- ( ) No LFG Recovery

**6a. If your landfill has gas recovery, does it recover the methane for energy or flare it?**

- (●) Recover for energy
- ( ) Flare

**6b. For landfills that recover gas, the landfill gas collection efficiency will vary throughout the life of the landfill. Based on a literature review of field measurements and expert discussion, a range of collectio efficiencies was estimated for a series of different landfill scenarios. The "typical" landfill is judged to represent the average U.S. landfill, although it must be recognized that every landfill is unique and a typical landfill is an approximation of reality. The worst-case collection scenario represents a landfill that is in compliance with EPA's New Source Performance Standards (NSPS). The aggressive gas collection scenario includes landfills where the operator is aggressive in gas collection relative to a typical landfill. Bioreactor landfills, which are operated to accelerate decomposition, are assumed to collect gas aggressively. The California regulatory collection scenario allows users to estimate and view landfill management results based on California regulatory requirements**

- (●) Typical operation - DEFAULT
- ( ) Worst-case collection
- ( ) Aggressive gas collection
- ( ) California regulatory collection

| | *Landfill gas collection efficiency (%) assumptions* |
|---|---|
| *Typical* | *Years 0-1: 0%; Years 2-4: 50%; Years 5-14: 75%; Years 15 to 1 year before final cover: 82.5%; Final cover: 90%* |
| *Worst-case* | *Years 0-4: 0%; Years 5-9: 50%; Years 10-14: 75%; Years 15 to 1 year before final cover: 82.5%; Final cover: 90%* |
| *Aggressive* | *Year 0: 0%; Years 0.5-2: 50%; Years 3-14: 75%; Years 15 to 1 year before final cover: 82.5%; Final cover: 90%* |
| *California* | *Year 0: 0%; Year 1: 50%; Years 2-7: 80%; Years 8 to 1 year before final cover: 85%; Final cover: 90%* |

**7. Which of the following moisture conditions and associated bulk MSW decay rate (k) most accurately describes the average conditions at the landfill? The decay rates, also referred to as k values, describe the rate of change per year (yr-1) for the decomposition of organic waste in landfills. A higher average decay rate means that waste decomposes faster in the landfill.**

- ( ) National average - DEFAULT
- (●) Dry (k=0.02)
- ( ) Moderate (k = 0.04)
- ( ) Wet (k = 0.06)
- ( ) Bioreactor (k = 0.12)

| | *Moisture condition assumptions* |
|---|---|
| *Dry (k=0.02)* | *Less than 20 inches of precipitation per year* |
| *Moderate (k=0.04)* | *Between 20 and 40 inches of precipitation per year* |
| *Wet (k=0.06)* | *Greater than 40 inches of precipitation per year* |
| *Bioreactor (k=0.12)* | *Water is added until the moisture content reaches 40 percent moisture on a wet weight basis* |
| *National average* | *Weighted average based on the share of waste received at each landfill type* |

**8a. Emissions that occur during transport of materials to the management facility are included in this model. You may use default transport distances, indicated in the table below, or provide information on the transport distances for the various MSW management options.**

- ○ Use Default Distances
- ◉ Provide Information

**8b. If you have chosen to provide information, please fill in the table below. Distances should be from the curb to the landfill, combustor, or material recovery facility (MRF)**
***Please note that if you chose to provide information, you must provide distances for both the baseline and the alternative scenarios**

| Management Option | Default Distance (Miles) | Distance (Miles) |
|---|---|---|
| Landfill | 20 | 35 |
| Combustion | 20 | 35 |
| Recycling | 20 | 35 |
| Composting | 20 | 35 |

**9. If you wish to personalize your results report, input your name & organization, and also specify the project period corresponding to the data you entered above.**

| | |
|---|---|
| Name | FirstCarbon Solutions |
| Organization | World Logistics Center |

| | | | | |
|---|---|---|---|---|
| Project Period | From | 01/01/16 | to | 12/31/30 |

**Congratulations! You have finished all the inputs.**
**A summary of your results awaits you on the sheet(s) titled "Summary Report."**
**For more detailed analyses of GHG emissions, see the sheet(s) titled "Analysis Results."**

## GHG Emissions Analysis -- Summary Report

Version 13

**GHG Emissions Waste Management Analysis for World Logistics Center**

**Prepared by: FirstCarbon Solutions**

**Project Period for this Analysis: 01/01/16 to 12/31/30**

*Note: If you wish to save these results, rename this file (e.g., WARM-MN1) and save it. Then the "Analysis Inputs" sheet of the "WARM" file will be blank when you are ready to make another model run.*

**GHG Emissions from Baseline Waste Management ($MTCO_2E$): (333)**

| Commodity | Tons Recycled | Tons Landfilled | Tons Combusted | Tons Composted | Total $MTCO_2E$ |
|---|---|---|---|---|---|
| Glass | - | 124.1 | - | NA | 5 |
| Corrugated Containers | - | 992.9 | - | NA | 494 |
| Dimensional Lumber | - | 2,110.0 | - | NA | (2,067) |
| Medium-density Fiberboard | - | 868.8 | - | NA | (746) |
| Yard Trimmings | NA | 112.8 | - | - | (23) |
| Mixed Paper (general) | - | 372.3 | - | NA | 168 |
| Mixed Metals | - | 1,613.5 | - | NA | 66 |
| Mixed Plastics | - | 744.7 | - | NA | 30 |
| Mixed MSW | NA | 3,102.9 | - | NA | 1,659 |
| Carpet | - | 248.2 | - | NA | 10 |
| Concrete | - | 1,241.2 | NA | NA | 51 |
| Asphalt Concrete | - | 248.2 | NA | NA | 10 |
| Drywall | - | 248.2 | NA | NA | (10) |
| Fiberglass Insulation | NA | 496.5 | NA | NA | 20 |
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*Note: a negative value (i.e., a value in parentheses) indicates an emission reduction; a positive value indicates an emission increase.*

a) For explanation of methodology, see the EPA WARM Documentation:

Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks
-- available on the Internet at http://epa.gov/epawaste/conserve/tools/warm/SWMGHGreport.html

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

c) The GHG emissions results estimated in WARM indicate the full life-cycle benefits waste management alternatives. Due to the timing of the GHG emissions from the waste management pathways, (e.g., avoided landfilling and increased recycling), the actual GHG implications may accrue over the long-term. Therefore, one should not interpret the GHG emissions implications as occurring all in one year, but rather through time.

**GHG Emissions from Alternative Waste Management Scenario ($MTCO_2E$): (13,548)**

| Commodity | Tons Source Reduced | Tons Recycled | Tons Landfilled | Tons Combusted | Tons Composted | Total $MTCO_2E$ | Change (Alt - Base) $MTCO_2E$ |
|---|---|---|---|---|---|---|---|
| Glass | - | 93.1 | 31.0 | - | NA | (24) | (29) |
| Corrugated Containers | - | 744.7 | 248.2 | - | NA | (2,198) | (2,691) |
| Dimensional Lumber | - | 1,582.5 | 527.5 | - | NA | (4,408) | (2,342) |
| Medium-density Fiberboard | - | 651.6 | 217.2 | - | NA | (1,795) | (1,049) |
| Yard Trimmings | NA | NA | 112.8 | - | - | (23) | 0 |
| Mixed Paper (general) | NA | 279.3 | 93.1 | - | NA | (942) | (1,110) |
| Mixed Metals | NA | 1,210.1 | 403.4 | - | NA | (5,276) | (5,342) |
| Mixed Plastics | NA | 558.5 | 186.2 | - | NA | (568) | (598) |
| Mixed MSW | NA | NA | 3,102.9 | - | NA | 1,659 | 0 |
| Carpet | - | - | 248.2 | - | NA | 10 | 0 |
| Concrete | NA | 930.9 | 310.3 | NA | NA | 7 | (44) |
| Asphalt Concrete | - | 186.2 | 62.1 | NA | NA | (12) | (22) |
| Drywall | - | 186.2 | 62.1 | NA | NA | 3 | 13 |
| Fiberglass Insulation | - | NA | 496.5 | NA | NA | 20 | 0 |
| | | | | | | 0 | 0 |
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| | | | | | | 0 | 0 |
| | | | | | | 0 | 0 |
| | | | | | | 0 | 0 |

**Total Change in GHG Emissions ($MTCO_2E$): (13,215)**

| This is equivalent to… | | |
|---|---|---|
| Removing annual emissions from | **2,782** | Passenger Vehicles |
| Conserving | **1,487,021** | Gallons of Gasoline |
| Conserving | **550,631** | Cylinders of Propane Used for Home Barbeques |
| Conserving | **71** | Railway Cars of Coal |
| | **0.00076%** | Annual $CO_2$ emissions from the U.S. transportation sector |
| | **0.00065%** | Annual $CO_2$ emissions from the U.S. electricity sector |

# Appendix B:
# Caline4 Output

2022 Alessandro Blvd and Chicago Ave - AM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2022 Alessandro Blvd and Chicago Ave - A
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S            Z0= 100. CM           ALT=   349. (M)
    BRG= WORST CASE           VD=  0.0 CM/S
   CLAS=     7 (G)            VS=  0.0 CM/S
   MIXH= 1000. M             AMB=  0.0 PPM
  SIGTH=    5. DEGREES       TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 14 | 0 | 14 | 600 | AG | 3360 | 4.2 | 0.0 | 17.1 |
| B. NB Approach | 14 | 600 | 14 | 757 | AG | 2790 | 5.2 | 0.0 | 17.1 |
| C. NB Depart | 14 | 757 | 14 | 914 | AG | 1940 | 5.2 | 0.0 | 17.1 |
| D. NB External | 14 | 914 | 14 | 1514 | AG | 1940 | 4.2 | 0.0 | 17.1 |
| E. NB Left | 14 | 600 | 7 | 757 | AG | 570 | 5.2 | 0.0 | 17.1 |
| F. SB Left | 0 | 914 | 7 | 757 | AG | 30 | 5.2 | 0.0 | 17.1 |
| G. SB External | 0 | 1514 | 0 | 914 | AG | 1150 | 4.2 | 0.0 | 17.1 |
| H. SB Approach | 0 | 914 | 0 | 757 | AG | 1120 | 5.2 | 0.0 | 17.1 |
| I. SB Depart | 0 | 757 | 0 | 600 | AG | 1920 | 5.2 | 0.0 | 17.1 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 1920 | 4.2 | 0.0 | 17.1 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 1730 | 4.2 | 0.0 | 17.1 |
| L. EB Approach | -150 | 750 | 7 | 750 | AG | 1680 | 5.2 | 0.0 | 17.1 |
| M. EB Depart | 7 | 750 | 164 | 750 | AG | 1950 | 5.2 | 0.0 | 17.1 |
| N. EB External | 164 | 750 | 764 | 750 | AG | 1950 | 4.2 | 0.0 | 17.1 |
| O. WB External | 764 | 764 | 164 | 764 | AG | 1170 | 4.2 | 0.0 | 17.1 |
| P. WB Approach | 164 | 764 | 7 | 764 | AG | 980 | 5.2 | 0.0 | 17.1 |
| Q. WB Depart | 7 | 764 | -150 | 764 | AG | 1600 | 5.2 | 0.0 | 17.1 |
| R. WB External | -150 | 764 | -750 | 764 | AG | 1600 | 4.2 | 0.0 | 17.1 |
| S. EB Left | -150 | 750 | 7 | 757 | AG | 50 | 5.2 | 0.0 | 17.1 |
| T. WB Left | 164 | 764 | 7 | 757 | AG | 190 | 5.2 | 0.0 | 17.1 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2022 Alessandro Blvd and Chicago Ave - A
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -10 | 740 | 2.0 |
| 2. Receptor | 24 | 740 | 2.0 |
| 3. Receptor | 24 | 774 | 2.0 |
| 4. Receptor | -10 | 774 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 2.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 2.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 186. | 2.2 | 0.2 | 1.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 174. | 2.0 | 0.4 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.3 | 0.0 | 0.0 | 0.1 | 0.7 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.2 | 0.0 | 0.1 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 |
| 3. Receptor | 0.1 | 0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 0.7 | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |

♀

2022 Alessandro Blvd and Chicago Ave - PM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2022 Alessandro Blvd and Chicago Ave - P
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   349. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 14 | 0 | 14 | 600 | AG | 2490 | 4.2 | 0.0 | 17.1 |
| B. NB Approach | 14 | 600 | 14 | 757 | AG | 2210 | 5.2 | 0.0 | 17.1 |
| C. NB Depart | 14 | 757 | 14 | 914 | AG | 1760 | 5.2 | 0.0 | 17.1 |
| D. NB External | 14 | 914 | 14 | 1514 | AG | 1760 | 4.2 | 0.0 | 17.1 |
| E. NB Left | 14 | 600 | 7 | 757 | AG | 280 | 5.2 | 0.0 | 17.1 |
| F. SB Left | 0 | 914 | 7 | 757 | AG | 30 | 5.2 | 0.0 | 17.1 |
| G. SB External | 0 | 1514 | 0 | 914 | AG | 2160 | 4.2 | 0.0 | 17.1 |
| H. SB Approach | 0 | 914 | 0 | 757 | AG | 2130 | 5.2 | 0.0 | 17.1 |
| I. SB Depart | 0 | 757 | 0 | 600 | AG | 3270 | 5.2 | 0.0 | 17.1 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 3270 | 4.2 | 0.0 | 17.1 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 1790 | 4.2 | 0.0 | 17.1 |
| L. EB Approach | -150 | 750 | 7 | 750 | AG | 1750 | 5.2 | 0.0 | 17.1 |
| M. EB Depart | 7 | 750 | 164 | 750 | AG | 1660 | 5.2 | 0.0 | 17.1 |
| N. EB External | 164 | 750 | 764 | 750 | AG | 1660 | 4.2 | 0.0 | 17.1 |
| O. WB External | 764 | 764 | 164 | 764 | AG | 1910 | 4.2 | 0.0 | 17.1 |
| P. WB Approach | 164 | 764 | 7 | 764 | AG | 1330 | 5.2 | 0.0 | 17.1 |
| Q. WB Depart | 7 | 764 | -150 | 764 | AG | 1660 | 5.2 | 0.0 | 17.1 |
| R. WB External | -150 | 764 | -750 | 764 | AG | 1660 | 4.2 | 0.0 | 17.1 |
| S. EB Left | -150 | 750 | 7 | 757 | AG | 40 | 5.2 | 0.0 | 17.1 |
| T. WB Left | 164 | 764 | 7 | 757 | AG | 580 | 5.2 | 0.0 | 17.1 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2022 Alessandro Blvd and Chicago Ave - P
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -10 | 740 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 24 | 740 | 2.0 |
| 3. Receptor | 24 | 774 | 2.0 |
| 4. Receptor | -10 | 774 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 2.2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 2.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 186. | 2.2 | 0.1 | 0.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 174. | 2.4 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.6 | 0.0 | 0.0 | 0.1 | 0.7 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 2. Receptor | 0.4 | 0.0 | 0.1 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 |
| 3. Receptor | 0.2 | 0.3 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4. Receptor | 1.1 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |

2022 Allessandro Blvd and Sycamore Canyon Rd - PM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2022 Allessandro Blvd and Sycamore Canyo
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   470. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 15 | 0 | 15 | 600 | AG | 290 | 4.2 | 0.0 | 18.0 |
| B. NB Approach | 15 | 600 | 15 | 760 | AG | 70 | 5.2 | 0.0 | 18.0 |
| C. NB Depart | 15 | 760 | 15 | 920 | AG | 330 | 5.2 | 0.0 | 18.0 |
| D. NB External | 15 | 920 | 15 | 1520 | AG | 330 | 4.2 | 0.0 | 18.0 |
| E. NB Left | 15 | 600 | 7 | 760 | AG | 220 | 5.2 | 0.0 | 18.0 |
| F. SB Left | 0 | 920 | 7 | 760 | AG | 170 | 5.2 | 0.0 | 18.0 |
| G. SB External | 0 | 1520 | 0 | 920 | AG | 790 | 4.2 | 0.0 | 18.0 |
| H. SB Approach | 0 | 920 | 0 | 760 | AG | 620 | 5.2 | 0.0 | 18.0 |
| I. SB Depart | 0 | 760 | 0 | 600 | AG | 450 | 5.2 | 0.0 | 18.0 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 450 | 4.2 | 0.0 | 18.0 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 2160 | 4.2 | 0.0 | 23.3 |
| L. EB Approach | -150 | 750 | 7 | 750 | AG | 2020 | 5.2 | 0.0 | 23.3 |
| M. EB Depart | 7 | 750 | 165 | 750 | AG | 2010 | 5.2 | 0.0 | 23.3 |
| N. EB External | 165 | 750 | 765 | 750 | AG | 2010 | 4.2 | 0.0 | 23.3 |
| O. WB External | 765 | 770 | 165 | 770 | AG | 2450 | 4.2 | 0.0 | 23.3 |
| P. WB Approach | 165 | 770 | 7 | 770 | AG | 2430 | 5.2 | 0.0 | 23.3 |
| Q. WB Depart | 7 | 770 | -150 | 770 | AG | 2900 | 5.2 | 0.0 | 23.3 |
| R. WB External | -150 | 770 | -750 | 770 | AG | 2900 | 4.2 | 0.0 | 23.3 |
| S. EB Left | -150 | 750 | 7 | 760 | AG | 140 | 5.2 | 0.0 | 23.3 |
| T. WB Left | 165 | 770 | 7 | 760 | AG | 20 | 5.2 | 0.0 | 23.3 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2022 Allessandro Blvd and Sycamore Canyo
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -10 | 737 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 25 | 737 | 2.0 |
| 3. Receptor | 25 | 783 | 2.0 |
| 4. Receptor | -10 | 783 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 264. | 1.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4. Receptor | 96. | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.1 | 0.0 | 0.0 | 0.1 | 0.7 | 0.2 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.1 | 0.0 | 0.2 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 |
| 3. Receptor | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.9 | 0.2 | 0.0 | 0.0 |
| 4. Receptor | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.2 | 0.8 | 0.1 | 0.0 | 0.0 | 0.0 |

2022 Cactus Ave and Elsworth St - PM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2022 Cactus Ave and Elsworth St - PM
     RUN: Hour 1          (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S            Z0= 100. CM          ALT=   321. (M)
    BRG= WORST CASE           VD=  0.0 CM/S
   CLAS=     7 (G)            VS=  0.0 CM/S
   MIXH= 1000. M             AMB=  0.0 PPM
  SIGTH=    5. DEGREES       TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 10 | 0 | 10 | 600 | AG | 1410 | 4.2 | 0.0 | 12.6 |
| B. NB Approach | 10 | 600 | 10 | 757 | AG | 430 | 5.2 | 0.0 | 12.6 |
| C. NB Depart | 10 | 757 | 10 | 913 | AG | 490 | 5.2 | 0.0 | 12.6 |
| D. NB External | 10 | 913 | 10 | 1513 | AG | 490 | 4.2 | 0.0 | 12.6 |
| E. NB Left | 10 | 600 | 5 | 757 | AG | 980 | 5.2 | 0.0 | 12.6 |
| F. SB Left | 0 | 913 | 5 | 757 | AG | 140 | 5.2 | 0.0 | 12.6 |
| G. SB External | 0 | 1513 | 0 | 913 | AG | 450 | 4.2 | 0.0 | 12.6 |
| H. SB Approach | 0 | 913 | 0 | 757 | AG | 310 | 5.2 | 0.0 | 12.6 |
| I. SB Depart | 0 | 757 | 0 | 600 | AG | 130 | 5.2 | 0.0 | 12.6 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 130 | 4.2 | 0.0 | 12.6 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 2060 | 4.2 | 0.0 | 16.4 |
| L. EB Approach | -150 | 750 | 5 | 750 | AG | 1870 | 5.2 | 0.0 | 16.4 |
| M. EB Depart | 5 | 750 | 160 | 750 | AG | 2210 | 5.2 | 0.0 | 16.4 |
| N. EB External | 160 | 750 | 760 | 750 | AG | 2210 | 4.2 | 0.0 | 16.4 |
| O. WB External | 760 | 763 | 160 | 763 | AG | 1960 | 4.2 | 0.0 | 16.4 |
| P. WB Approach | 160 | 763 | 5 | 763 | AG | 1920 | 5.2 | 0.0 | 16.4 |
| Q. WB Depart | 5 | 763 | -150 | 763 | AG | 3050 | 5.2 | 0.0 | 16.4 |
| R. WB External | -150 | 763 | -750 | 763 | AG | 3050 | 4.2 | 0.0 | 16.4 |
| S. EB Left | -150 | 750 | 5 | 757 | AG | 190 | 5.2 | 0.0 | 16.4 |
| T. WB Left | 160 | 763 | 5 | 757 | AG | 40 | 5.2 | 0.0 | 16.4 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2022 Cactus Ave and Elsworth St - PM
     RUN: Hour 1          (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -8 | 740 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 17 | 740 | 2.0 |
| 3. Receptor | 17 | 773 | 2.0 |
| 4. Receptor | -8 | 773 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 1.6 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 1.7 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 264. | 1.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 263. | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.1 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.0 | 0.0 | 0.1 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.1 | 0.0 |
| 3. Receptor | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.2 | 0.0 | 0.0 |
| 4. Receptor | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.2 | 0.0 | 0.0 |

2022 Cactus Ave and Graham St - PM_Results

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 2022 Cactus Ave and Graham St - PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S Z0= 100. CM ALT= 473. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 7 (G) VS= 0.0 CM/S
MIXH= 1000. M AMB= 0.0 PPM
SIGTH= 5. DEGREES TEMP= 16.3 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 14 | 0 | 14 | 600 | AG | 2370 | 4.2 | 0.0 | 16.8 |
| B. NB Approach | 14 | 600 | 14 | 756 | AG | 850 | 5.2 | 0.0 | 16.8 |
| C. NB Depart | 14 | 756 | 14 | 911 | AG | 960 | 5.2 | 0.0 | 16.8 |
| D. NB External | 14 | 911 | 14 | 1511 | AG | 960 | 4.2 | 0.0 | 16.8 |
| E. NB Left | 14 | 600 | 7 | 756 | AG | 1520 | 5.2 | 0.0 | 16.8 |
| F. SB Left | 0 | 911 | 7 | 756 | AG | 220 | 5.2 | 0.0 | 16.8 |
| G. SB External | 0 | 1511 | 0 | 911 | AG | 540 | 4.2 | 0.0 | 16.8 |
| H. SB Approach | 0 | 911 | 0 | 756 | AG | 320 | 5.2 | 0.0 | 16.8 |
| I. SB Depart | 0 | 756 | 0 | 600 | AG | 900 | 5.2 | 0.0 | 16.8 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 900 | 4.2 | 0.0 | 16.8 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 2550 | 4.2 | 0.0 | 14.5 |
| L. EB Approach | -150 | 750 | 7 | 750 | AG | 2440 | 5.2 | 0.0 | 14.5 |
| M. EB Depart | 7 | 750 | 164 | 750 | AG | 2130 | 5.2 | 0.0 | 14.5 |
| N. EB External | 164 | 750 | 764 | 750 | AG | 2130 | 4.2 | 0.0 | 14.5 |
| O. WB External | 764 | 761 | 164 | 761 | AG | 1120 | 4.2 | 0.0 | 14.5 |
| P. WB Approach | 164 | 761 | 7 | 761 | AG | 1080 | 5.2 | 0.0 | 14.5 |
| Q. WB Depart | 7 | 761 | -150 | 761 | AG | 2590 | 5.2 | 0.0 | 14.5 |
| R. WB External | -150 | 761 | -750 | 761 | AG | 2590 | 4.2 | 0.0 | 14.5 |
| S. EB Left | -150 | 750 | 7 | 756 | AG | 110 | 5.2 | 0.0 | 14.5 |
| T. WB Left | 164 | 761 | 7 | 756 | AG | 40 | 5.2 | 0.0 | 14.5 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 2022 Cactus Ave and Graham St - PM
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -10 | 741 | 2.0 |

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| | | | |
|---|---|---|---|
| 2. Receptor | 24 | 741 | 2.0 |
| 3. Receptor | 24 | 770 | 2.0 |
| 4. Receptor | -10 | 770 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 1.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 2.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 264. | 1.9 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 170. | 1.8 | 0.1 | 0.1 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.2 | 0.0 | 0.0 | 0.1 | 0.8 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.1 | 0.0 | 0.1 | 0.9 | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 |
| 3. Receptor | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.1 | 0.0 | 0.0 |
| 4. Receptor | 0.4 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |

2035 Alessandro Blvd and Canyon Crest Dr - AM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2035 Alessandro Blvd and Canyon Crest Dr
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   467. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 15 | 0 | 15 | 600 | AG | 4390 | 4.2 | 0.0 | 18.3 |
| B. NB Approach | 15 | 600 | 15 | 756 | AG | 3380 | 5.2 | 0.0 | 18.3 |
| C. NB Depart | 15 | 756 | 15 | 912 | AG | 3020 | 5.2 | 0.0 | 18.3 |
| D. NB External | 15 | 912 | 15 | 1512 | AG | 3020 | 4.2 | 0.0 | 18.3 |
| E. NB Left | 15 | 600 | 8 | 756 | AG | 1010 | 5.2 | 0.0 | 18.3 |
| F. SB Left | 0 | 912 | 8 | 756 | AG | 100 | 5.2 | 0.0 | 18.3 |
| G. SB External | 0 | 1512 | 0 | 912 | AG | 1820 | 4.2 | 0.0 | 18.3 |
| H. SB Approach | 0 | 912 | 0 | 756 | AG | 1720 | 5.2 | 0.0 | 18.3 |
| I. SB Depart | 0 | 756 | 0 | 600 | AG | 2690 | 5.2 | 0.0 | 18.3 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 2690 | 4.2 | 0.0 | 18.3 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 680 | 4.2 | 0.0 | 15.1 |
| L. EB Approach | -150 | 750 | 8 | 750 | AG | 630 | 5.2 | 0.0 | 15.1 |
| M. EB Depart | 8 | 750 | 165 | 750 | AG | 850 | 5.2 | 0.0 | 15.1 |
| N. EB External | 165 | 750 | 765 | 750 | AG | 850 | 4.2 | 0.0 | 15.1 |
| O. WB External | 765 | 762 | 165 | 762 | AG | 810 | 4.2 | 0.0 | 15.1 |
| P. WB Approach | 165 | 762 | 8 | 762 | AG | 190 | 5.2 | 0.0 | 15.1 |
| Q. WB Depart | 8 | 762 | -150 | 762 | AG | 1140 | 5.2 | 0.0 | 15.1 |
| R. WB External | -150 | 762 | -750 | 762 | AG | 1140 | 4.2 | 0.0 | 15.1 |
| S. EB Left | -150 | 750 | 8 | 756 | AG | 50 | 5.2 | 0.0 | 15.1 |
| T. WB Left | 165 | 762 | 8 | 756 | AG | 620 | 5.2 | 0.0 | 15.1 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2035 Alessandro Blvd and Canyon Crest Dr
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -11 | 741 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 26 | 741 | 2.0 |
| 3. Receptor | 26 | 771 | 2.0 |
| 4. Receptor | -11 | 771 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 170. | 1.9 | 0.3 | 0.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 187. | 2.2 | 0.2 | 1.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 187. | 2.4 | 0.2 | 1.2 | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 173. | 2.2 | 0.4 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 0.2 | 0.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4. Receptor | 1.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |

2035 Alessandro Blvd and Canyon Crest Dr - PM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2035 Alessandro Blvd and Canyon Crest Dr
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   467. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 15 | 0 | 15 | 600 | AG | 3540 | 4.2 | 0.0 | 18.3 |
| B. NB Approach | 15 | 600 | 15 | 756 | AG | 2500 | 5.2 | 0.0 | 18.3 |
| C. NB Depart | 15 | 756 | 15 | 912 | AG | 2150 | 5.2 | 0.0 | 18.3 |
| D. NB External | 15 | 912 | 15 | 1512 | AG | 2150 | 4.2 | 0.0 | 18.3 |
| E. NB Left | 15 | 600 | 8 | 756 | AG | 1040 | 5.2 | 0.0 | 18.3 |
| F. SB Left | 0 | 912 | 8 | 756 | AG | 40 | 5.2 | 0.0 | 18.3 |
| G. SB External | 0 | 1512 | 0 | 912 | AG | 2760 | 4.2 | 0.0 | 18.3 |
| H. SB Approach | 0 | 912 | 0 | 756 | AG | 2720 | 5.2 | 0.0 | 18.3 |
| I. SB Depart | 0 | 756 | 0 | 600 | AG | 4030 | 5.2 | 0.0 | 18.3 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 4030 | 4.2 | 0.0 | 18.3 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 890 | 4.2 | 0.0 | 15.1 |
| L. EB Approach | -150 | 750 | 8 | 750 | AG | 650 | 5.2 | 0.0 | 15.1 |
| M. EB Depart | 8 | 750 | 165 | 750 | AG | 660 | 5.2 | 0.0 | 15.1 |
| N. EB External | 165 | 750 | 765 | 750 | AG | 660 | 4.2 | 0.0 | 15.1 |
| O. WB External | 765 | 762 | 165 | 762 | AG | 1040 | 4.2 | 0.0 | 15.1 |
| P. WB Approach | 165 | 762 | 8 | 762 | AG | 300 | 5.2 | 0.0 | 15.1 |
| Q. WB Depart | 8 | 762 | -150 | 762 | AG | 1390 | 5.2 | 0.0 | 15.1 |
| R. WB External | -150 | 762 | -750 | 762 | AG | 1390 | 4.2 | 0.0 | 15.1 |
| S. EB Left | -150 | 750 | 8 | 756 | AG | 240 | 5.2 | 0.0 | 15.1 |
| T. WB Left | 165 | 762 | 8 | 756 | AG | 740 | 5.2 | 0.0 | 15.1 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2035 Alessandro Blvd and Canyon Crest Dr
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -11 | 741 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 26 | 741 | 2.0 |
| 3. Receptor | 26 | 771 | 2.0 |
| 4. Receptor | -11 | 771 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 171. | 2.2 | 0.3 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 187. | 2.0 | 0.2 | 1.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 187. | 2.2 | 0.1 | 0.9 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 173. | 2.6 | 0.3 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 1.5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 0.2 | 0.4 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4. Receptor | 1.4 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |

2035 Alessandro Blvd and Chicago Ave - AM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2035 Alessandro Blvd and Chicago Ave - A
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   349. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 14 | 0 | 14 | 600 | AG | 3230 | 4.2 | 0.0 | 17.1 |
| B. NB Approach | 14 | 600 | 14 | 757 | AG | 2780 | 5.2 | 0.0 | 17.1 |
| C. NB Depart | 14 | 757 | 14 | 914 | AG | 1920 | 5.2 | 0.0 | 17.1 |
| D. NB External | 14 | 914 | 14 | 1514 | AG | 1920 | 4.2 | 0.0 | 17.1 |
| E. NB Left | 14 | 600 | 7 | 757 | AG | 450 | 5.2 | 0.0 | 17.1 |
| F. SB Left | 0 | 914 | 7 | 757 | AG | 60 | 5.2 | 0.0 | 17.1 |
| G. SB External | 0 | 1514 | 0 | 914 | AG | 1130 | 4.2 | 0.0 | 17.1 |
| H. SB Approach | 0 | 914 | 0 | 757 | AG | 1070 | 5.2 | 0.0 | 17.1 |
| I. SB Depart | 0 | 757 | 0 | 600 | AG | 1880 | 5.2 | 0.0 | 17.1 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 1880 | 4.2 | 0.0 | 17.1 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 2150 | 4.2 | 0.0 | 17.1 |
| L. EB Approach | -150 | 750 | 7 | 750 | AG | 2090 | 5.2 | 0.0 | 17.1 |
| M. EB Depart | 7 | 750 | 164 | 750 | AG | 2320 | 5.2 | 0.0 | 17.1 |
| N. EB External | 164 | 750 | 764 | 750 | AG | 2320 | 4.2 | 0.0 | 17.1 |
| O. WB External | 764 | 764 | 164 | 764 | AG | 1590 | 4.2 | 0.0 | 17.1 |
| P. WB Approach | 164 | 764 | 7 | 764 | AG | 1420 | 5.2 | 0.0 | 17.1 |
| Q. WB Depart | 7 | 764 | -150 | 764 | AG | 1980 | 5.2 | 0.0 | 17.1 |
| R. WB External | -150 | 764 | -750 | 764 | AG | 1980 | 4.2 | 0.0 | 17.1 |
| S. EB Left | -150 | 750 | 7 | 757 | AG | 60 | 5.2 | 0.0 | 17.1 |
| T. WB Left | 164 | 764 | 7 | 757 | AG | 170 | 5.2 | 0.0 | 17.1 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2035 Alessandro Blvd and Chicago Ave - A
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -10 | 740 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 24 | 740 | 2.0 |
| 3. Receptor | 24 | 774 | 2.0 |
| 4. Receptor | -10 | 774 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 2.2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 2.2 | 0.0 | 0.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 186. | 2.3 | 0.2 | 1.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 174. | 2.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.3 | 0.0 | 0.0 | 0.1 | 0.9 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.2 | 0.0 | 0.1 | 0.8 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 | 0.0 |
| 3. Receptor | 0.1 | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 0.7 | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |

2035 Alessandro Blvd and Chicago Ave - PM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2035 Alessandro Blvd and Chicago Ave - P
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   349. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 14 | 0 | 14 | 600 | AG | 2210 | 4.2 | 0.0 | 17.1 |
| B. NB Approach | 14 | 600 | 14 | 757 | AG | 2040 | 5.2 | 0.0 | 17.1 |
| C. NB Depart | 14 | 757 | 14 | 914 | AG | 1600 | 5.2 | 0.0 | 17.1 |
| D. NB External | 14 | 914 | 14 | 1514 | AG | 1600 | 4.2 | 0.0 | 17.1 |
| E. NB Left | 14 | 600 | 7 | 757 | AG | 170 | 5.2 | 0.0 | 17.1 |
| F. SB Left | 0 | 914 | 7 | 757 | AG | 70 | 5.2 | 0.0 | 17.1 |
| G. SB External | 0 | 1514 | 0 | 914 | AG | 2040 | 4.2 | 0.0 | 17.1 |
| H. SB Approach | 0 | 914 | 0 | 757 | AG | 1970 | 5.2 | 0.0 | 17.1 |
| I. SB Depart | 0 | 757 | 0 | 600 | AG | 2990 | 5.2 | 0.0 | 17.1 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 2990 | 4.2 | 0.0 | 17.1 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 2730 | 4.2 | 0.0 | 17.1 |
| L. EB Approach | -150 | 750 | 7 | 750 | AG | 2560 | 5.2 | 0.0 | 17.1 |
| M. EB Depart | 7 | 750 | 164 | 750 | AG | 2620 | 5.2 | 0.0 | 17.1 |
| N. EB External | 164 | 750 | 764 | 750 | AG | 2620 | 4.2 | 0.0 | 17.1 |
| O. WB External | 764 | 764 | 164 | 764 | AG | 2000 | 4.2 | 0.0 | 17.1 |
| P. WB Approach | 164 | 764 | 7 | 764 | AG | 1530 | 5.2 | 0.0 | 17.1 |
| Q. WB Depart | 7 | 764 | -150 | 764 | AG | 1770 | 5.2 | 0.0 | 17.1 |
| R. WB External | -150 | 764 | -750 | 764 | AG | 1770 | 4.2 | 0.0 | 17.1 |
| S. EB Left | -150 | 750 | 7 | 757 | AG | 170 | 5.2 | 0.0 | 17.1 |
| T. WB Left | 164 | 764 | 7 | 757 | AG | 470 | 5.2 | 0.0 | 17.1 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2035 Alessandro Blvd and Chicago Ave - P
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -10 | 740 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 24 | 740 | 2.0 |
| 3. Receptor | 24 | 774 | 2.0 |
| 4. Receptor | -10 | 774 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 2.5 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 2.4 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 186. | 2.2 | 0.1 | 0.8 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 4. Receptor | 174. | 2.4 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.1 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 2. Receptor | 0.3 | 0.0 | 0.2 | 0.9 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.0 |
| 3. Receptor | 0.2 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4. Receptor | 1.1 | 0.2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |

2035 Alessandro Blvd and Mission Grove Pkwy - PM_Results

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: 2035 Alessandro Blvd and Mission Grove P
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
      U=   1.0 M/S              Z0= 100. CM            ALT=   490. (M)
    BRG= WORST CASE             VD=  0.0 CM/S
   CLAS=     7 (G)              VS=  0.0 CM/S
   MIXH= 1000. M               AMB=  0.0 PPM
  SIGTH=    5. DEGREES        TEMP= 16.3 DEGREE (C)
```

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NB External | 11 | 0 | 11 | 600 | AG | 970 | 4.2 | 0.0 | 14.3 |
| B. NB Approach | 11 | 600 | 11 | 759 | AG | 560 | 5.2 | 0.0 | 14.3 |
| C. NB Depart | 11 | 759 | 11 | 919 | AG | 580 | 5.2 | 0.0 | 14.3 |
| D. NB External | 11 | 919 | 11 | 1519 | AG | 580 | 4.2 | 0.0 | 14.3 |
| E. NB Left | 11 | 600 | 6 | 759 | AG | 410 | 5.2 | 0.0 | 14.3 |
| F. SB Left | 0 | 919 | 6 | 759 | AG | 150 | 5.2 | 0.0 | 14.3 |
| G. SB External | 0 | 1519 | 0 | 919 | AG | 550 | 4.2 | 0.0 | 14.3 |
| H. SB Approach | 0 | 919 | 0 | 759 | AG | 400 | 5.2 | 0.0 | 14.3 |
| I. SB Depart | 0 | 759 | 0 | 600 | AG | 1030 | 5.2 | 0.0 | 14.3 |
| J. SB External | 0 | 600 | 0 | 0 | AG | 1030 | 4.2 | 0.0 | 14.3 |
| K. EB External | -750 | 750 | -150 | 750 | AG | 2810 | 4.2 | 0.0 | 21.9 |
| L. EB Approach | -150 | 750 | 6 | 750 | AG | 2620 | 5.2 | 0.0 | 21.9 |
| M. EB Depart | 6 | 750 | 161 | 750 | AG | 2810 | 5.2 | 0.0 | 21.9 |
| N. EB External | 161 | 750 | 761 | 750 | AG | 2810 | 4.2 | 0.0 | 21.9 |
| O. WB External | 761 | 769 | 161 | 769 | AG | 3100 | 4.2 | 0.0 | 21.9 |
| P. WB Approach | 161 | 769 | 6 | 769 | AG | 2570 | 5.2 | 0.0 | 21.9 |
| Q. WB Depart | 6 | 769 | -150 | 769 | AG | 3010 | 5.2 | 0.0 | 21.9 |
| R. WB External | -150 | 769 | -750 | 769 | AG | 3010 | 4.2 | 0.0 | 21.9 |
| S. EB Left | -150 | 750 | 6 | 759 | AG | 190 | 5.2 | 0.0 | 21.9 |
| T. WB Left | 161 | 769 | 6 | 759 | AG | 530 | 5.2 | 0.0 | 21.9 |

```
CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   2

     JOB: 2035 Alessandro Blvd and Mission Grove P
     RUN: Hour 1           (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
```

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. Receptor | -9 | 738 | 2.0 |

Page 1

| | | | |
|---|---|---|---|
| 2. Receptor | 20 | 738 | 2.0 |
| 3. Receptor | 20 | 781 | 2.0 |
| 4. Receptor | -9 | 781 | 2.0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

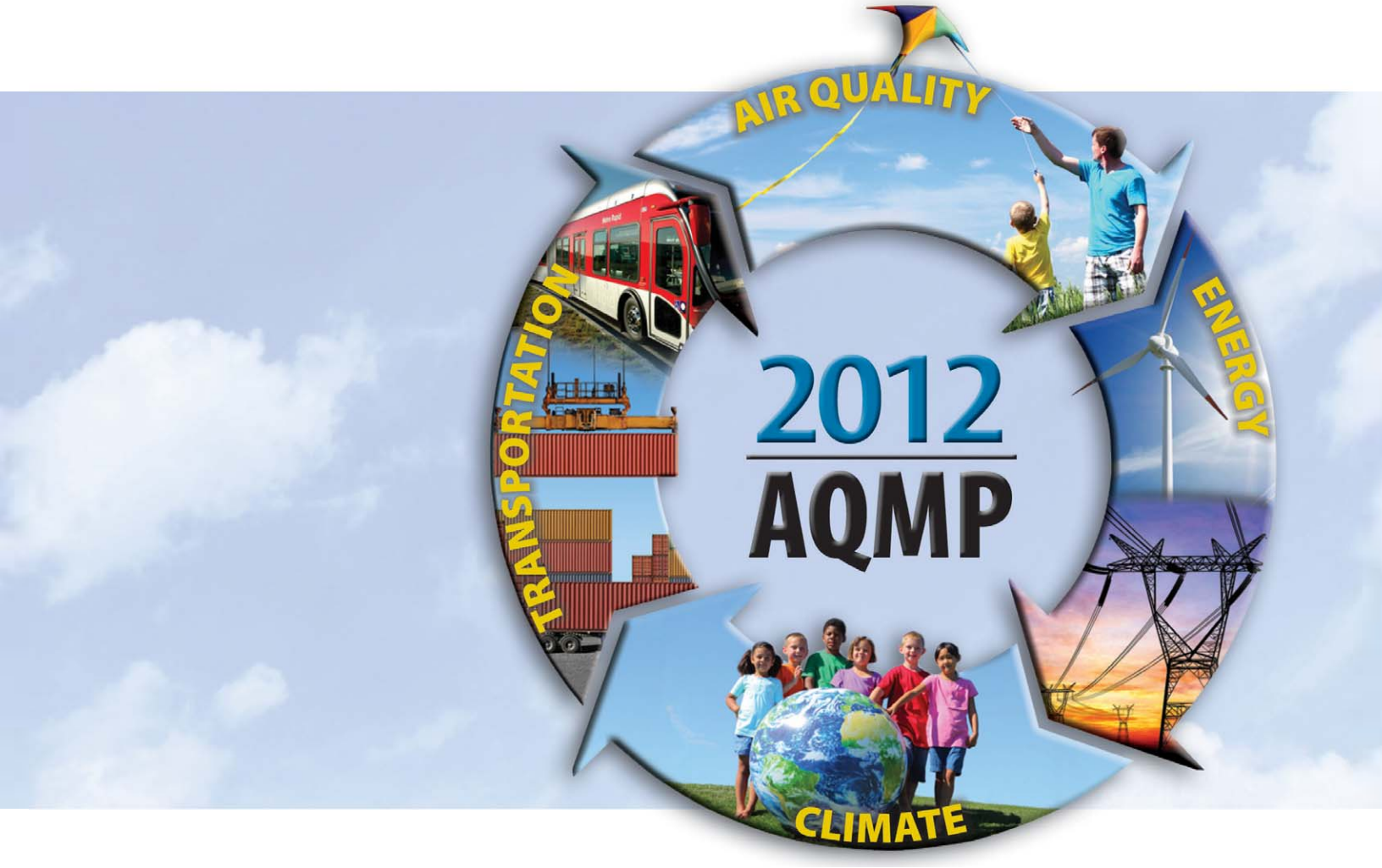
| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 84. | 2.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 276. | 2.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 3. Receptor | 264. | 2.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4. Receptor | 96. | 2.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Receptor | 0.2 | 0.0 | 0.0 | 0.1 | 1.0 | 0.2 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2. Receptor | 0.1 | 0.0 | 0.2 | 0.9 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 |
| 3. Receptor | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 1.1 | 0.2 | 0.0 | 0.0 |
| 4. Receptor | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.2 | 0.9 | 0.1 | 0.0 | 0.0 | 0.1 |

# Appendix C:
# Air Pollutant Health Effects Information

# Appendix I

Air Quality Management Plan




## Health Effects

February 2013

South Coast Air Quality Management District
*Cleaning the air that we breathe...™*

# FINAL 2012 AQMP
# APPENDIX I

## HEALTH EFFECTS

**FEBRUARY 2013**

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
# GOVERNING BOARD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Speaker of the Assembly Appointee

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Cities of Orange County

## EXECUTIVE OFFICER:

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In Conjunction with
California Air Resources Board

And

In Consultation with
California Office of Health Hazards Assessment

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**ATTACHMENT 1**
Roster of the 2012 AQMP Advisory Council

**ATTACHMENT 2**
CARB and OEHHA Comments

**ATTACHMENT 3**
Comments Received on Draft Appendix I from SCAQMD Advisory Council

**ATTACHMENT 4**
External Reviewers' Comments

**ATTACHMENT 5**
Public Comments

## INTRODUCTION

This document presents a summary of scientific findings on the health effects of ambient air pollutants. The California Health and Safety Code Section 40471(b) requires that the South Coast Air Quality Management District prepare a report on the health impacts of particulate matter in the South Coast Air Basin (SCAB) in conjunction with the preparation of the Air Quality Management Plan revisions. This document, which was prepared to satisfy that requirement, also includes the effects of the other major pollutants.

## HEALTH EFFECTS OF AIR POLLUTION

Ambient air pollution is a major public health concern. Excess deaths and increases in illnesses associated with high air pollution levels have been documented in several episodes as early as 1930 in Meuse Valley, Belgium; 1948 in Donora, Pennsylvania; and 1952 in London. Although levels of pollutants that occurred during these acute episodes are now unlikely in the United States, ambient air pollution continues to be linked to increases in illness and other health effects (morbidity) and increases in death rates (mortality).

The adverse health effects associated with air pollution are diverse and include:

- Premature mortality
- Cardiovascular effects
- Increased health care utilization (hospitalization, physician and emergency room visits)
- Increased respiratory illness and other morbidity (symptoms, infections, and asthma exacerbation)
- Decreased lung function (breathing capacity)
- Lung inflammation
- Potential immunological changes

- Increased airway reactivity to a known pharmacological agent exposure - a method used in laboratories to evaluate the tendency of airways to have an increased possibility of developing an asthmatic response
- A decreased tolerance for exercise
- Adverse birth outcomes such as low birth weights

The evidence linking these effects to air pollutants is derived from population-based observational and field studies (epidemiological) as well as controlled laboratory studies involving human subjects and animals. There have been an increasing number of studies focusing on the mechanisms (that is, on learning how specific organs, cell types, and biomarkers are involved in the human body's response to air pollution) and specific pollutants responsible for individual effects. Yet the underlying biological pathways for these effects are not always clearly understood.

Although individuals inhale pollutants as a mixture under ambient conditions, the regulatory framework and the control measures developed are pollutant-specific for six major outdoor pollutants covered under Sections 108 and 109 of the Clean Air Act. This is appropriate, in that different pollutants usually differ in their sources, their times and places of occurrence, the kinds of health effects they may cause, and their overall levels of health risk. Different pollutants, from the same or different sources, oftentimes occur together. Evidence for more than additive effects has not been strong and, as a practical matter, health scientists, as well as regulatory officials, usually must deal with one pollutant at a time in adopting air quality standards. To meet the air quality standards, comprehensive plans are developed such as the Air Quality Management Plan (AQMP), and to minimize toxica exposure a local air toxics control plan is also prepared. These plans examine multiple pollutants, cumulative impacts, and transport issues related to attaining healthful air quality. A brief overview of the effects observed and attributed to various air pollutants is presented in this document.

This summary is drawn substantially from reviews presented previously (SCAQMD, 1996, 2003, 2007), and from reviews on the effects of air pollution by the American Thoracic Society (ATS, 1996), the U.S. EPA reviews for ozone (U.S. EPA, 2006), Carbon Monoxide (U.S. EPA, 2010), and Particulate Matter (U.S. EPA, 2004, 2009), from a published review of the health effects of air pollution (Brunekreef and Holgate, 2002), and from reviews prepared by the California Air Resources Board and the California EPA Office of the Environmental Health Hazard Assessment for

Particulate Matter (CARB, 2002), for Ozone (CARB, 2005) and for NO2 (CARB, 2007). Additional materials are from U.S. EPA's current and ongoing review of the ozone standard and health effects (U.S. EPA, 2012c, d). More detailed citations and discussions on air pollution health effects can be found in these references.[1]

Also included are tables showing summaries of the U.S. EPA conclusions regarding the causality of air pollution health effects. The .

**TABLE I -1** below shows the five descriptors used by U.S. EPA.

**TABLE I -1**

Weight of Evidence Descriptions for Causal Determination

| DETERMINATION | WEIGHT OF EVIDENCE |
|---|---|
| Causal Relationship | Evidence is sufficient to conclude that there is a causal relationship with relevant pollutant exposures. That is, the pollutant has been shown to result in health effects in studies in which chance, bias, and confounding could be ruled out with reasonable confidence. For example: a) controlled human exposure studies that demonstrate consistent effects; or b) observational studies that cannot be explained by plausible alternatives or are supported by other lines of evidence (e.g., animal studies or mode of action information). Evidence includes replicated and consistent high-quality studies by multiple investigators. Evidence is sufficient to conclude that there is a causal relationship with relevant pollutant exposures. That is, the pollutant has been shown to result in effects in studies in which chance, bias, and confounding could be ruled out with reasonable confidence. Controlled exposure studies (laboratory or small- to medium-scale field studies) provide the strongest evidence for causality, but the scope of inference may be limited. Generally, determination is based on multiple studies conducted by multiple research groups, and evidence that is considered sufficient to infer a causal relationship is usually obtained from the joint consideration of many lines of evidence that reinforce each other. |

[1] Most of the studies referred to in this appendix are cited in the above sources. Only more recent specific references selected references to provide examples of the types of health effects will be cited in this summary.

**TABLE I -2 (Concluded)**

Weight of Evidence Descriptions for Causal Determination

| DETERMINATION | WEIGHT OF EVIDENCE |
|---|---|
| Likely To Be A Causal Relationship | Evidence is sufficient to conclude that a causal relationship is likely to exist with relevant pollutant exposures, but important uncertainties remain. That is, the pollutant has been shown to result in health effects in studies in which chance and bias can be ruled out with reasonable confidence but potential issues remain. For example: a) observational studies show an association, but copollutant exposures are difficult to address and/or other lines of evidence (controlled human exposure, animal, or mode of action information) are limited or inconsistent; or b) animal toxicological evidence from multiple studies from different laboratories that demonstrate effects, but limited or no human data are available. Evidence generally includes replicated and high-quality studies by multiple investigators. |
| Suggestive Of A Causal Relationship | Evidence is suggestive of a causal relationship with relevant pollutant exposures, but is limited because chance, bias and confounding cannot be ruled out. For example, at least one high-quality epidemiologic study shows an association with a given health outcome but the results of other studies are inconsistent. |
| Inadequate To Infer A Causal Relationship | Evidence is inadequate to determine that a causal relationship exists with relevant pollutant exposures. The available studies are of insufficient quantity, quality, consistency or statistical power to permit a conclusion regarding the presence or absence of an effect. |
| Not Likely To Be A Causal Relationship | Evidence is suggestive of no causal relationship with relevant pollutant exposures. Several adequate studies, covering the full range of levels of exposure that human beings are known to encounter and considering susceptible populations, are mutually consistent in not showing an effect at any level of exposure. |

Adapted from U.S. EPA, 2009

## OZONE

Ozone is a highly reactive compound, and is a strong oxidizing agent. When ozone comes into contact with the respiratory tract, it can react with tissues and cause damage in the airways. Since it is a gas, it can penetrate into the gas exchange region of the deep lung.

The U.S. EPA primary standard for ozone, adopted in 2008, is 0.075 ppm averaged over eight hours. The California Air Resources Board (CARB) has established standards of 0.09 ppm averaged over one hour and at 0.070 ppm averaged over eight hours.

A number of population groups are potentially at increased risk for ozone exposure effects. In the ongoing review of ozone, the U.S. EPA has identified populations as having adequate evidence for increased risk from ozone exposures include individuals with asthma, younger and older age groups, individuals with reduced intake of certain nutrients such as Vitamins C and E, and outdoor workers. There is suggestive evidence for other potential factors, such as variations in genes related to oxidative metabolism or inflammation, gender, socioeconomic status, and obesity. However further evidence is needed.

The adverse effects reported with short-term ozone exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of ozone reaching the lungs. Children may be a particularly vulnerable population to air pollution effects because they spend more time outdoors, are generally more active, and have a higher specific ventilation rate than adults (i.e. after normalization for body mass).

A number of adverse health effects associated with ambient ozone levels have been identified from laboratory and epidemiological studies (U.S. EPA, 1996; 2006, 2011; ATS, 1996). These include increased respiratory symptoms, damage to cells of the respiratory tract, decrease in lung function, increased susceptibility to respiratory infection, an increased risk of hospitalization, and increased risk of mortality.

Increases in ozone levels are associated with increased numbers of absences from school. The Children's Health Study, conducted by researchers at the University of Southern California, followed a cohort of children that live in 12 communities in Southern California with differing levels of air pollution for several years. A publication from this study reported that school absences in fourth graders for respiratory illnesses were positively associated with ambient ozone levels. An increase of 20 ppb ozone was associated with an 83% increase in illness-related absence rates (Gilliland, 2001).

The number of hospital admissions and emergency room visits for all respiratory causes (infections, respiratory failure, chronic bronchitis, etc.) including asthma shows a consistent increase as ambient ozone levels increase in a community. These

excess hospital admissions and emergency room visits are observed when hourly ozone concentrations are as low as 0.06 to 0.10 ppm.

Numerous recent studies have found positive associations between increases in ozone levels and excess risk of mortality. These associations are strongest during warmer months but overall persist even when other variables including season and levels of particulate matter are accounted for. This indicates that ozone mortality effects may be independent of other pollutants (Bell, 2004).

Multicity studies of short-term ozone exposures (days) and mortality have also examined regional differences. Evidence was provided that there were generally higher ozone-mortality risk estimates in northeastern U.S. cities, with the southwest and urban mid-west cities showing lower or no associations (Smith, 2009; Bell, 2008). Another long-term study of a national cohort found that long-term exposures to ozone were associated with respiratory-related causes of mortality, but not cardiovascular-related causes, when PM2.5 exposure was also included in the analysis.

In the ongoing U.S. EPA review, it was concluded that there is adequate evidence for asthmatics to be a potentially at risk population (U.S. EPA, 2012c). Several population-based studies suggest that asthmatics are at risk from ambient ozone levels, as evidenced by changes in lung function, increased hospitalizations and emergency room visits.

Laboratory studies have also compared the degree of lung function change seen in age and gender-matched healthy individuals versus asthmatics and those with chronic obstructive pulmonary disease. In studies of individuals with chronic obstructive pulmonary decease, the degree of change evidenced did not differ significantly. That finding, however, may not accurately reflect the true impact of exposure on these respiration-compromised individuals. Since the respiration-compromised group may have lower lung function to begin with, the same total change may represent a substantially greater relative adverse effect overall. Other studies have found that subjects with asthma are more sensitive to the short-term effects of ozone in terms of lung function and inflammatory response.

Another publication from the Children's Health Study focused on children and outdoor exercise. In Southern California communities with high ozone concentrations, the relative risk of developing asthma in children playing three or more sports was found to be over three times higher than in children playing no

sports (McConnell, 2002). These findings indicate that new cases of asthma in children may be associated with performance of heavy exercise in communities with high levels of ozone. While it has long been known that air pollution can exacerbate symptoms in individuals with preexisting respiratory disease, this is among the first studies that indicate ozone exposure may be causally linked to asthma onset.

In addition, human and animal studies involving both short-term (few hours) and long-term (months to years) exposures indicate a wide range of effects induced or associated with ambient ozone exposure. These are summarized in Table I-2.

Some lung function responses (volume and airway resistance changes) observed after a single exposure to ozone exhibit attenuation or a reduction in magnitude with repeated exposures. Although it has been argued that the observed shift in response is evidence of a probable adaptation phenomenon, it appears that while functional changes may exhibit attenuation, biochemical and cellular changes which may be associated with episodic and chronic exposure effects may not exhibit similar adaptation. That is, internal damage to the respiratory system may continue with repeated ozone exposures, even if externally observable effects (chest symptoms and reduced lung function) disappear. Additional argument against adaptation is that after several days or weeks without ozone exposures, the responsiveness in terms of lung function as well as symptoms returns.

In a laboratory, exposure of human subjects to low levels of ozone causes reversible decrease in lung function as assessed by various measures such as respiratory volumes, airway resistance and reactivity, irritative cough and chest discomfort. Lung function changes have been observed with ozone exposure as low as 0.06 to 0.12 ppm for 6-8 hours under moderate exercising conditions. Similar lung volume changes have also been observed in adults and children under ambient exposure conditions (0.10 - 0.15 ppm 1-hour average). The responses reported are indicative of decreased breathing capacity and are reversible.

**TABLE I -3**

Adverse Health Effects of Ozone (O3) - Summary of Key Findings

| OZONE CONCENTRATION AND EXPOSURE (ppm, hr) | HEALTH EFFECT |
|---|---|
| Ambient air containing 0.10 - 0.15 ppm daily 1-hr max over days to weeks; | Decreased breathing capacity in children, adolescents, and adults exposed to O3 outdoors |
| < 0.06 ppm (Max 8-hour average) | Positive associations of ambient O3 with respiratory hospital admissions and Emergency Department (ED) visits in the U.S., Europe, and Canada with supporting evidence from single-city studies. Generally, these studies had mean 8-h max O3 concentrations less than 0.06 ppm. |
| < 0.069 ppm (Mean 8-hour average) | Positive associations between short-term exposure to ambient O3 and respiratory symptoms (e.g., cough, wheeze, and shortness of breath) in children with asthma. Generally, these studies had mean 8-hr max O3 concentrations less than 0.069 ppm. |
| ≥0.12 ppm (1-3hr)<br>≥0.06 ppm (6.6hr)<br>(chamber exposures) | Decrements in lung function (reduced ability to take a deep breath), increased respiratory symptoms (cough, shortness of breath, pain upon deep inspiration), increased airway responsiveness and increased airway inflammation in exercising adults<br>Effects are similar in individuals with preexisting disease except for a greater increase in airway responsiveness for asthmatic and allergic subjects<br>Older subjects (>50 yrs old) have smaller and less reproducible changes in lung function<br>Attenuation of response with repeated exposure |
| ≥0.12 ppm with prolonged, repeated exposure (chamber exposures) | Changes in lung structure, function, elasticity, and biochemistry in laboratory animals that are indicative of airway irritation and inflammation with possible development of chronic lung disease<br>Increased susceptibility to bacterial respiratory infections in laboratory animals |

From: SCAQMD, 1996; U.S. EPA, 2007, U.S. EPA, 2012c, Kim 2011

The results of several studies where human volunteers were exposed to ozone for 6.6 hours at levels between 0.04 and 0.12 ppm were recently summarized (Brown, 2008).

As shown in the figure below, there is an increasing response on lung function with increasing exposure levels in moderately exercising subjects. A more recent study (Kim, 2010) exposed young healthy adults to 0.06 ppm ozone for 6.6 hours while engaging in intermittent moderate exercise. The subjects exhibited a reduction in lung function (FEV1) after exposure.

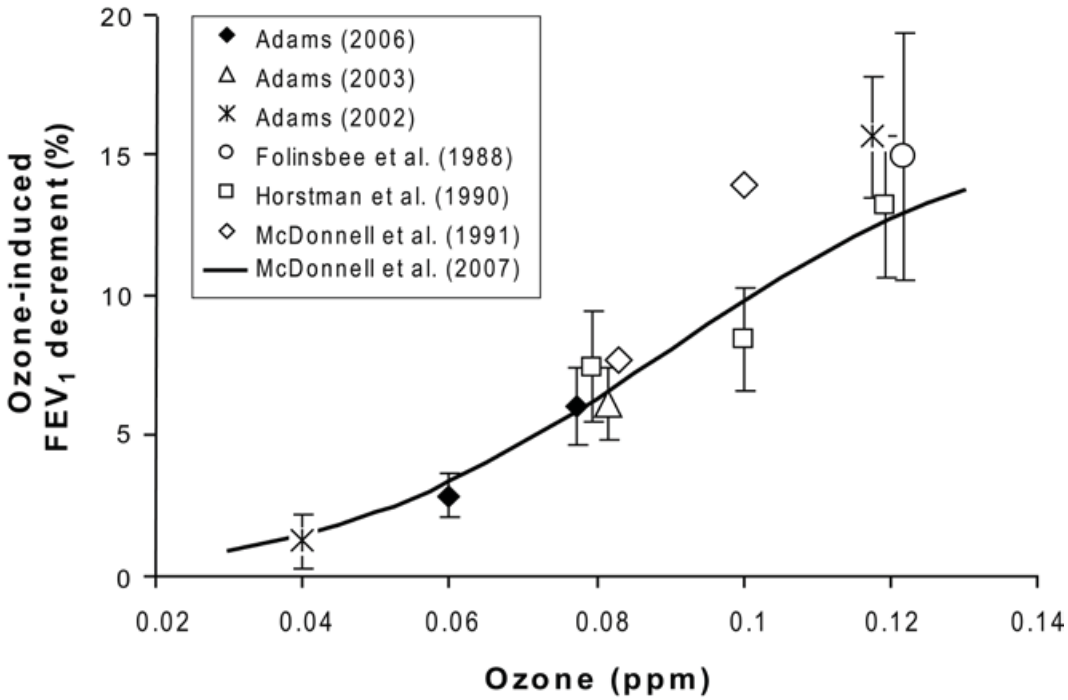


**FIGURE I -1**

Comparison of mean ozone-induced decrements in lung function following 6.6 hours of ozone exposure (from Brown, 2008)

In addition to controlled laboratory conditions, studies of individuals exercising outdoors, including children attending summer camp, have shown associations of reduced lung function with ozone exposure. There were wide ranges in responses among individuals. U.S. EPA's recent review indicates reductions of <1 to 4% in lung function when standardized to an increase of 0.03 ppm for an 8-hour maximum (U.S. EPA, 2012).

Results of epidemiology studies support the relationship between ozone exposure and respiratory effects. Several, but not all, studies have found associations of short-term ozone levels and hospital admissions and emergency department admissions for respiratory-related conditions (U.S. EPA, 2011).

In laboratory studies, cellular and biochemical changes associated with respiratory tract inflammation have also been consistently found in the airway lining after low-level exposure to ozone. These changes include an increase in specific cell types and in the concentration of biochemical mediators of inflammation and injury such as Interleukin-1, Tumor Necrosis Factor α, and fibronectin. Indications of lung injury and inflammatory changes have been observed in healthy adults exposed to ozone in the range of 0.06 to 0.10 ppm for up to 6.6 hours with intermittent moderate exercise.

There may be interactions between ozone and other ambient pollutants. The susceptibility to ozone observed under ambient conditions could be modified due to the combination of pollutants that coexist in the atmosphere or ozone might sensitize these subgroups to the effects of other pollutants.

Some animal studies show results that indicate possible chronic effects including functional and structural changes of the lung. These changes indicate that repeated inflammation associated with ozone exposure over a lifetime may result in cumulative damage to respiratory tissue such that individuals later in life may experience a reduced quality of life in terms of respiratory function and activity level achievable. An autopsy study involving Los Angeles County residents, although conducted many years ago when pollutant levels were higher than currently measured, provided supportive evidence of lung tissue damage (structural changes) attributable to air pollution.

A study of birth outcomes in Southern California found an increased risk for birth defects in the aortic and pulmonary arteries associated with ozone exposure in the second month of pregnancy (Ritz et al., 2002). This was the first study linking ambient air pollutants to birth defects in humans. Studies conducted since mostly focusing on cardiac and oral cleft defects have found mixed results, with some showing associations, but others did not.

In summary, adverse effects associated with ozone exposures have been well documented. Although the specific mechanisms of actions are not fully identified, there is a strong likelihood that oxidation of key enzymes and proteins and inflammatory responses play important roles.

It may be instructive to provide the overall U.S. EPA staff preliminary conclusions on the causality on ozone health effects for the health outcomes evaluated (U.S. EPA, 2011). These are provided in Tables I-3 and I-4. On the basis of the most recent

evaluations of ozone health effects, U.S. EPA's Clean Air Scientific Advisory Committee has recommended that the National Ambient Air Quality Standard (NAAQS) for ozone be reduced and recommended a range in which 0.070 ppm would be the upper limit. This would be consistent with the California air quality standard.

## TABLE I -4

Summary of Causal Determinations for Short-Term Exposures to Ozone

| HEALTH CATEGORY | CAUSAL DETERMINATION |
|---|---|
| Respiratory Effects | Causal relationship |
| Cardiovascular Effects | Suggestive of a causal relationship |
| Central Nervous System Effects | Suggestive of a causal relationship |
| Effects on Liver and Xenobiotic Metabolism | Inadequate to infer a causal relationship |
| Effects on Cutaneous and Ocular Tissues | Inadequate to infer a causal relationship |
| Mortality | Likely to be a causal relationship |

From U.S. EPA, 2011

## TABLE I - 5

Summary of Causal Determinations for Long-Term Exposures to Ozone

| HEALTH CATEGORY | CAUSAL DETERMINATION |
|---|---|
| Respiratory Effects | Likely to be a causal relationship |
| Cardiovascular Effects | Suggestive of a causal relationship |
| Reproductive and Developmental Effects | Suggestive of a causal relationship |
| Central Nervous System Effects | Suggestive of a causal relationship |
| Carcinogenicity and Genotoxicity | Inadequate to infer a causal relationship |
| Mortality | Suggestive of a causal relationship |

From U.S. EPA, 2012c

## PARTICULATE MATTER

Airborne particulates are a complex group of pollutants that vary in source, size and composition, depending on location and time. The components include nitrates, sulfates, elemental carbon, organic carbon compounds, acid aerosols, trace metals, and material from the earth's crust. Substances of biological origin, such as pollen and spores, may also be present.

The National Ambient Air Quality Standard for particulate matter was established in 1971, and set limits on the ambient level of Total Suspended Particulates (TSP). In 1987, the national particulate matter standards were revised to cover particles sized 10 μm (micrometers) aerodynamic diameter and smaller. These can be inhaled through the upper airways and deposited in the lower airways and gas exchange tissues in the lung. These particles are referred to as PM10. U.S. EPA initially promulgated ambient air quality standards for PM10 of 150 $\mu g/m^3$ averaged over a 24-hour period, and 50 $\mu g/m^3$ for an annual average. U.S. EPA has since rescinded the annual PM10 standard, but kept the 24-hour standard.

In more recent years additional focus has been placed on particles having an aerodynamic diameter of 2.5 μm or less (PM2.5). A greater fraction of particles in this size range can penetrate and deposit deep in the lungs. The U.S. EPA established standards for PM2.5 in 1997 and in 2006 lowered the air quality standards for PM2.5 to 35 $\mu g/m^3$ for a 24-hour average and reaffirmed 15 $\mu g/m^3$ for an annual average standard. There was considerable controversy and debate surrounding the review of particulate matter health effects and the consideration of ambient air quality standards (Kaiser, 1997; Vedal, 1997) when the U.S. EPA promulgated the initial PM2.5 standards in 1997. The California Air Resources Board adopted an air quality standard for PM2.5 in 2002 at 12 $\mu g/m^3$ annual average.

Since that time, numerous studies have been published, and some of the key studies were closely scrutinized and the data reanalyzed by additional investigators. The reanalyses confirmed the findings of significant result, and there are now substantial new data confirming and extending the range of the adverse health effects of PM2.5 exposures.

There are also differences in the composition and sources of particles in the different size ranges that may have implications for health effects. The particles larger than 2.5 μm (often referred to as the coarse fraction) are mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting

and grinding, and resuspension of particles from the ground or road surfaces by wind and human activities.

In contrast, particles smaller than 2.5 μm are mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary combustion sources. The particles are either directly emitted or are formed in the atmosphere from gases that are emitted. Components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Attention to another range of very small particles has been increasing over the last few years. These are generally referred to as "ultrafine" particles, with diameters of 0.1 μm or less. These particles are mainly from fresh emissions of combustion sources, but are also formed in the atmosphere by condensation of vapors that are emitted or by chemical or photochemical reactions with other contaminants in the air.

Ultrafine particles have relatively short half lives (minutes to hours) and rapidly grow through condensation and coagulation processes into larger particles within the PM2.5 size range. These particles are garnering interest since a limited number of epidemiological and some laboratory studies, though not all, indicate that their toxicity may be higher on a mass basis than larger particles. There is also evidence that these small particles, or toxic components carried on their surface, can translocate from the lung to the blood and to other organs of the body.

There have been several reviews of the health effects of ambient particulate matter (ATS, 1996; Brunekreef, 2002; U.S. EPA, 2004; U.S. EPA, 2009; Brook, 2012). In addition, the California Air Resources Board (CARB) and the Office of Environmental Health and Hazard Assessment (OEHHA) have reviewed the adequacy of the California Air Quality Standards for Particulate Matter (Cal EPA, 2002).

The major types of effects associated with particulate matter include:

- Increased mortality
- Exacerbation of respiratory disease and of cardiovascular disease as evidenced by increases in:
    - Respiratory symptoms
    - Cardiovascular symptoms, non-fatal myocardial infarction

- Hospital admissions and emergency room visits
- Physician office visits
- School absences
- Adverse birth outcomes

- Effects on lung function
- Changes in lung morphology

The California Air Resources Board has also set air quality standards for particulate matter. The current federal and California standards are listed in Table I-5.

**TABLE I - 6**

Ambient Air Quality Standards for Particulate Matter

| STANDARD | FEDERAL | CALIFORNIA |
|---|---|---|
| PM10 24-Hour average | 150 $\mu g/m^3$ | 50 $\mu g/m^3$ |
| PM10 Annual Average | -- | 20 $\mu g/m^3$ |
| PM 2.5 24-Hour Average | 35 $\mu g/m^3$ | -- |
| PM 2.5 Annual Average | 15 $\mu g/m^3$ | 12 $\mu g/m^3$ |

## Short-Term Exposure Effects

Epidemiological studies have provided evidence for most of the effects listed above. An association between increased daily or several-day-average concentrations of PM10 and excess mortality and morbidity is consistently reported from studies involving communities across the U.S. as well as in Europe, Asia, and South America. A review and analysis of epidemiological literature for acute adverse effects of particulate matter was published by the American Thoracic Society in 1996. Several adverse effects were listed as associated with daily PM10 exposures, as listed in Table I-6. It also appears that individuals who are elderly or have preexistent lung or heart disease are more susceptible than others to the adverse effects of PM10 (ATS, 1996).

Since then many more recent studies have confirmed that excess mortality and morbidity are associated with short-term particulate matter levels (Pope, 2006).

Estimates of mortality effects from studies of PM10 exposures range from 0.3 to 1.7% increase for a 10 μg/m$^3$ increase in PM10 levels. The National Morbidity, Mortality, and Air Pollution Study (NMMAPS), a study of 20 of the largest U.S. cities, determined a combined risk estimate of about a 0.5% increase in total mortality for a 10 μg/m$^3$ increase in PM10 (Samet, 2000a). This study also analyzed the effects of gaseous co-pollutants. The results indicated that the association of PM10 and mortality was not confounded by the presence of the gaseous pollutants. When the gaseous pollutants were included in the analyses, the significance of the PM10 estimates remained. The PM10 effects were reduced somewhat when O3 was also considered and tended to be variably decreased when $NO_2$, CO, and $SO_2$ were added to the analysis. These results argue that the effects are likely due to the particulate exposures; they cannot readily be explained by coexisting weather stresses or other pollutants.

## TABLE I - 7

Combined Effect Estimates of Daily Mean Particulate Pollution (PM10)

| | **% CHANGE IN HEALTH INDICATOR PER EACH 10 μg/m$^3$ INCREASE IN PM10** |
|---|---|
| Increase in Daily Mortality | |
| Total deaths | 1.0 |
| Respiratory deaths | 3.4 |
| Cardiovascular deaths | 1.4 |
| Increase in Hospital Usage (all respiratory diagnoses) | |
| Admissions | 1.4 |
| Emergency department visits | 0.9 |
| Exacerbation of Asthma | |
| Asthmatic attacks | 3.0 |
| Bronchodilator use | 12.2 |
| Emergency department visits* | 3.4 |
| Hospital admissions | 1.9 |
| Increase in Respiratory Symptom Reports | |
| Lower respiratory | 3.0 |
| Upper respiratory | 0.7 |
| Cough | 2.5 |

| Decrease in Lung Function | |
|---|---|
| Forced expiratory volume | 0.15 |
| Peak expiratory flow | 0.08 |

* One study only

(Source: American Journal of Respiratory and Critical Care Medicine, Vol. 153, 113-50, 1996)

An expansion of the NMMAPS study to 90 U.S. Cities also reported association with PM10 levels and mortality (Samet 2000b; HEI, 2003). It was discovered that this study was one that used a software package with inappropriate default settings. The investigators have reanalyzed the data using corrected settings for the software (Dominici, 2002a, Dominici 2002b). When the estimates for the 90 cities in the study were recalculated, the estimate changed from 0.41% increase in mortality for a 10 $\mu g/m^3$ increase in PM10 to a 0.27% increase. There remained a strong positive association between acute exposure to PM10 and mortality. When an alternate model was used, the average estimate was 0.21% increase in mortality per 10ug/m3 increase in PM10 (HEI, 2003). Thus while the quantitative estimate was reduced, the major findings of the study did not change.

Studies of short-term exposures to PM2.5 have also found associations with increases in mortality. The NMMAPS study conducted a national analysis of PM2.5 mortality association for 1999-2000. The risk estimates were 0.29% for all-cause mortality and 0.38% for cardio-respiratory mortality (Dominici. 2007). In its recent review U.S. EPA determined that estimates for PM2.5 generally are in the range of 0.29 to 1.21% increase in total deaths per 10 $\mu g/m^3$ increase in 24-hour PM2.5 levels. The estimates for cardiovascular related mortality range from 0.03 to 1.03% per 10 $\mu g/m^3$, and for respiratory mortality estimates range from 1.01 to 2.2% per 10 $\mu g/m^3$ 24-hour PM2.5 (U.S. EPA, 2009). FIGURE I -2 shows a summary of recent studies of mortality and short-term PM2.5 exposures.

Several studies have attempted to assess the relative importance of particles smaller than 2.5 μm and those between 2.5 μm and 10 μm (PM10-2.5). While some studies report that PM2.5 levels are better predictors of mortality effects, others suggest that PM10-2.5 is also important. Most of the studies found higher mortality associated with PM2.5 levels than with PM10-2.5. For example, a study of six cities in the U.S. found that particulate matter less than 2.5 μm was associated with increased mortality, but that the larger particles were not. In the U.S. EPA review, (U.S. EPA, 2009) several studies were presented that that found associations of PM10-2.5 and mortality. Some of the studies showed differences by region of the U.S. In one

study of 47 U.S. cities that had both PM2.5 and PM10 data available to calculate PM10-2.5 as a difference, overall, the study found a significant association between the computed PM10—2.5 and all cause, cardiovascular, and respiratory mortality. The study also reported difference by season and climate area.

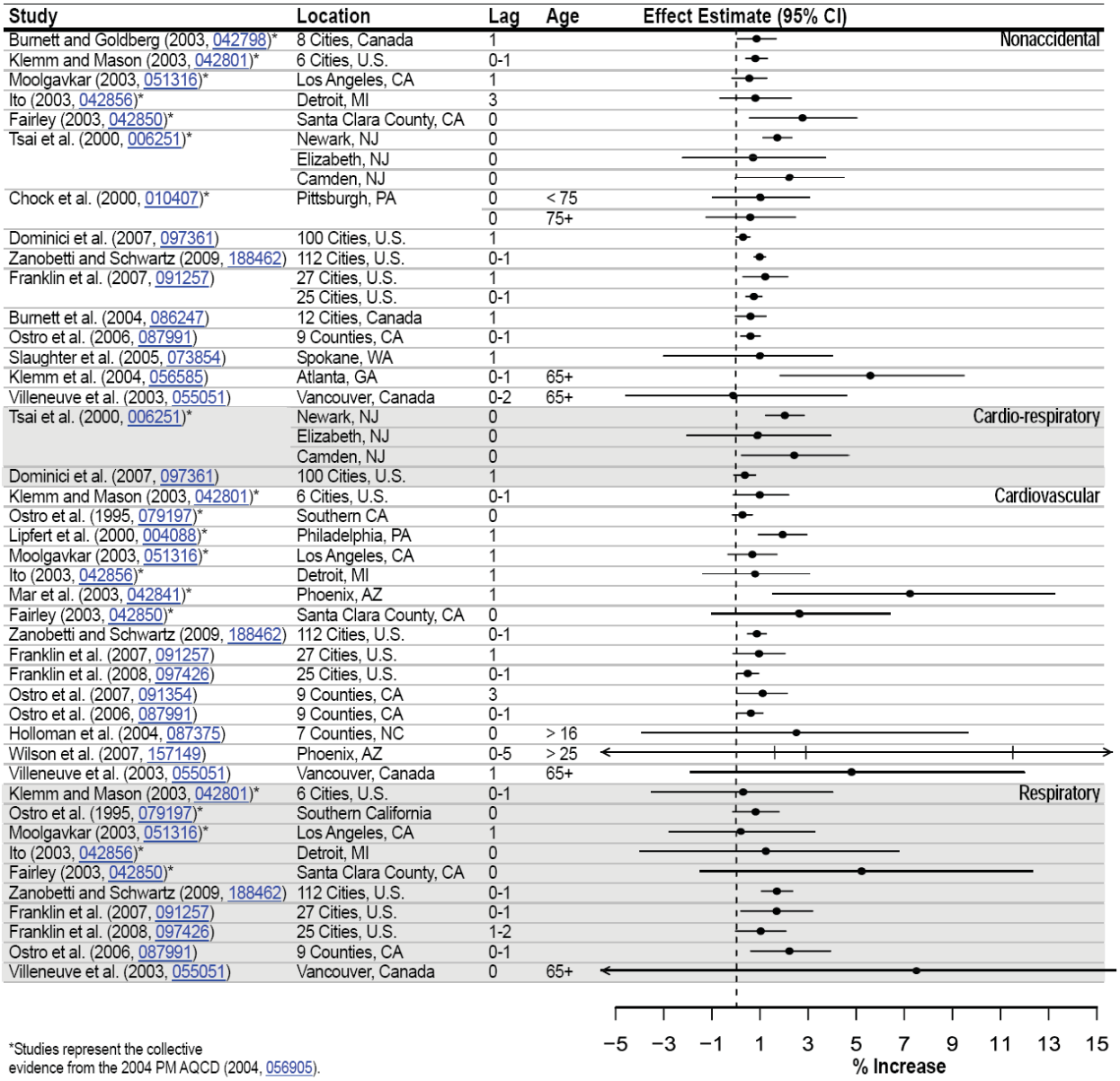


**FIGURE I -2**

Summary of Nonaccidental Mortality per 10 µg/m3 Increase in PM2.5 Short-term Exposures (from U.S. EPA 2009)

The relative importance of both PM2.5 and PM10-2.5 may vary in different regions depending on the relative concentrations and components, which can also vary by season. A major knowledge gap is the relative paucity of direct measurements of PM2.5-10. Most estimates are made by subtracting PM2.5 from PM10 measured at co-located samplers, a process that is subject to errors that are inherent in the subtracting of one relatively large number from another. More research is needed to better assess the relative effects of fine (PM2.5) and coarse (PM10-2.5) fractions of particulate matter on mortality. A graph from the U.S. EPA review is included below to demonstrate ranges of mortality findings.

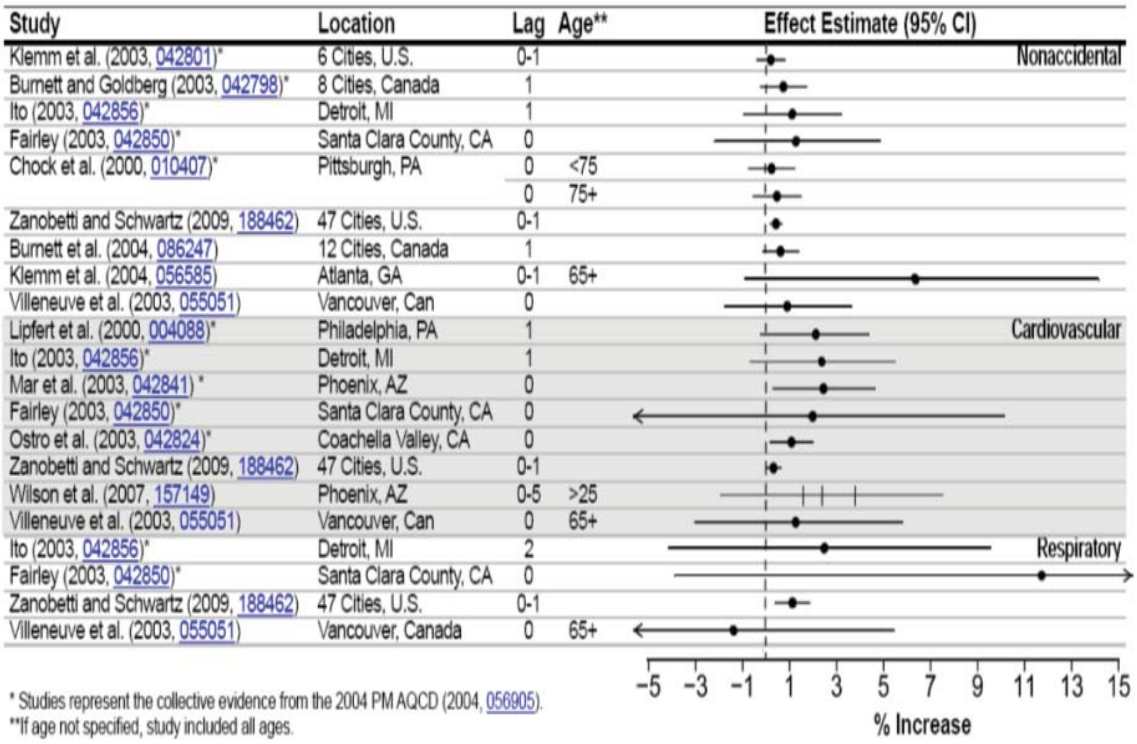


**FIGURE I - 3**

Summary of Percent Increase in Total (Nonaccidental) and Cause-Specific Mortality Per 10 µg/m3 Increase in PM10-2.5 (from U.S. EPA. 2009)

A number of studies have evaluated the association between particulate matter exposure and indices of morbidity such as hospital admissions, emergency room visits or physician office visits for respiratory and cardiovascular diseases. The effects estimates are generally higher than the effects for mortality. The effects are associated with measures of PM10 and PM2.5. Effects are also associated with PM10-2.5.

In the NMMAPS study, hospital admissions for those 65 years or older were assessed in 14 cities. Several models were compared to estimate associations of hospital admissions for specific disease categories and short-term PM10 levels. Hospital admissions showed an increase ranging from 0.68 – 1.47% for cardiovascular diseases, a range of 1.46 – 2.88% increase for chronic obstructive pulmonary disease, and a range of 1.31 – 2.86% increase for pneumonia per 10 $\mu g/m^3$ increase in PM10 (Samet, 2000). In the reanalysis of the study, (HEI 2003), it was found that when using different models the pollution coefficients were on average lower. However the authors note that most of the conclusions of associations with PM10 exposures and hospital admissions held.

Similarly, school absences, lost workdays and restricted activity days have also been used in some studies as indirect indicators of acute respiratory conditions. The results are suggestive of both immediate and delayed impact on these parameters following elevated particulate matter exposures. These observations are consistent with the hypothesis that increased susceptibility to infection follows particulate matter exposures, which is consistent with mechanistic studies that show PM exposures may suppress the immune system.

Some studies have reported that short-term particulate matter exposure is associated with changes in lung function (lung capacity and breathing volume); upper respiratory symptoms (hoarseness and sore throat); and lower respiratory symptoms (increased sputum, chest pain and wheeze). The severity of these effects is widely varied and is dependent on the population studied, such as adults or children with and without asthma. Sensitive individuals, such as those with asthma or pre-existing respiratory disease, may have increased or aggravated symptoms associated with short-term particulate matter exposures. Several studies have followed the number of medical visits associated with pollutant exposures. A range of increases from 1 to 4% for medical visits for respiratory illnesses was found corresponding to a 10 $\mu g/m^3$ change in PM10. A number of studies also looked at levels of PM2.5 or PM10-2.5. The findings suggest that both the fine and coarse fractions may have associations with some respiratory symptoms (U.S. EPA, 2009).

The biological mechanisms by which particulate matter can produce health effects are being investigated in laboratory studies. Inflammatory responses in the respiratory system in humans and animals exposed to concentrated ambient particles have been measured. These include effects such as increases in neutrophils in the lungs. Other changes reported include increased release of cytokines and interleukins,

chemicals released as part of the inflammatory process. The effects of particulate matter may be mediated in part through the production of reactive oxygen species during the inflammatory process. Several reviews discuss mechanistic studies in more detail (Brunekreef, 2002; Brook, 2004;Brook, 2010).

## Long-Term Exposure Effects

While most studies have evaluated the acute effects, some studies specifically focused on evaluating the effects of chronic exposure to PM10 and PM2.5. Studies have analyzed the mortality of adults living in different U.S. cities. After adjusting for important risk factors, taken as a whole these studies found a positive association of deaths and exposure to particulate matter. A similar association was observable in both total number of deaths and deaths due to specific causes. The largest effects were observed from cardiovascular causes and ischemic heart disease. A shortening of lifespan was also reported in these studies.

Since the initial promulgation by U.S. EPA of the National Ambient Air Quality Standards for PM2.5, controversy has remained over the association of mortality and exposures to PM2.5. Thus an expanded discussion of this issue is presented below.

Significant associations for PM2.5 for both total mortality and cardiorespiratory mortality were reported in a study following a national cohort recruited by the American Cancer Society for its Cancer Preventions Study II over several years. A re-analysis of the data from this study confirmed the initial finding (Krewski, 2000). In this study, mortality rates and PM2.5 levels were analyzed for 51 metropolitan areas of the U.S. Average levels from monitors in each area were used to estimate exposures. At these levels of aggregation, regional differences in the association of PM2.5 and mortality were noted, with higher associations in the northeast, and lower or non-significant associations in the west.

The Harvard Six Cities Study evaluated several size ranges of particulate matter and reported significant associations with PM15, PM2.5, sulfates, and non-sulfate particles, but not with coarse particles (PM15 – PM2.5). An extension of the Harvard Six Cities Cohort confirmed the association of mortality with PM2.5 levels (Laden, 2006). These studies provide evidence that the fine particles, as measured by PM2.5, may be more strongly associated with mortality effects from long-term particulate matter exposures than are coarse compounds. An update to this study covering a follow-up over the years 1974 to 2009 (Lepeule, 2012) was recently published. Findings indicated a linear relationship of PM2.5 levels and mortality

from all causes, cardiovascular causes, and from lung cancer. According to the authors, the PM2.5 levels decreased over time, but no evidence of a threshold for these effects was found.

A recent study conducted in Canada on long-term particulate exposures and mortality found a 15% increase in all-cause mortality and a 31% increase in ischemic heart disease mortality for a 10 $\mu g.m^3$ increase in PM2.5. The mean concentration among all study subjects was 8.7 $\mu g/m^3$ (Crouse, 2012)

A follow-up study of the American Cancer Society cohort confirmed and extended the findings in the initial study. The researchers estimated that, on average, a 10 µg/m3 increase in fine particulates was associated with approximately a 4% increase in total mortality, a 6% increase in cardiopulmonary mortality, and an 8% increase risk of lung cancer mortality (Pope, 2002). The magnitude of effects is larger in the long-term studies than in the short-term investigations. In an additional reanalysis and extension of the American Cancer Society cohort from 1982 to 2000 (Krewski, 2009), and including additional metropolitan areas for the most recent years, effects estimates on mortality were similar, though somewhat higher, than those reported previously. The extended analyses included an additional 11 years of cohort follow-up. The authors reported positive and significant association between a 10 $\mu g/m^3$ change in PM2.5 level and all cause, cardiopulmonary disease, and ischemic heart disease deaths. Mortality from ischemic heart disease was associated with the largest risk estimates.

Other national studies include an analysis of mortality and PM2.5 exposures in a Medicare population. Zeger and Associates (2008) assembled a Medicare cohort by including all Medicare enrollees residing in zip codes with centroids within six miles of a PM2.5 monitor. PM2.5 data was obtained from the monitoring stations, and mean annual levels were called for the zip codes within six miles of each monitor. The estimated associations between exposures to PM2.5 and mortality for the eastern and central portions of the U.S. were similar to those previously published in the Six Cities Study and the American Cancer Society cohorts. The authors reported that there were no significant associations between zip code levels of PM2.5 and mortality rates in the western region of the U.S. This lack of association was attributed largely to the higher PM2.5 levels in Los Angeles area counties compared to other western urban areas, but there were not higher mortality rates in these counties. The authors further reported that they found no associations of PM2.5 with mortality in persons aged 85 years or higher.

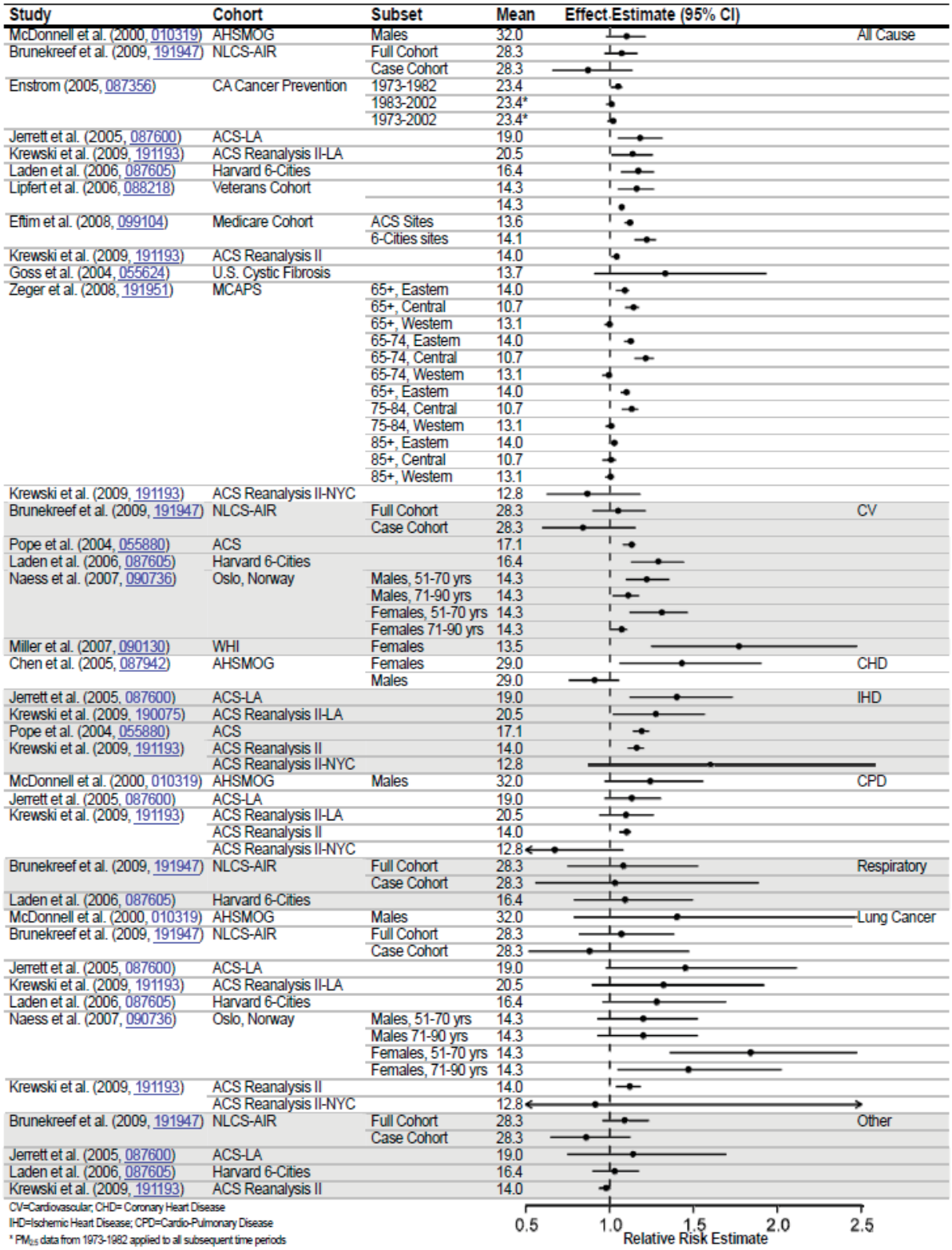


**FIGURE I - 4**

Mortality Risk Estimates, Long-Term Exposure to PM2.5 in Recent Cohort Studies
From U.S. EPA, 2009

Analyses of mortality and PM2.5 levels specific to California have also been reported. A cohort of elderly individuals (average age of 65 yr in 1973) recruited from 11 California counties was followed over several years (Enstrom, 2005). An association for exposure with all-cause deaths was reported from 1973–1982. However, no significant association was found in the later time period of 1983–2002. Pollutant levels were taken from ambient monitors and averaged over each county to estimate exposures.

Two recent reports have been released looking at air pollution and health effects in California cohorts. One study (Lipsett, 2011) followed school teachers recruited in 1995, and followed through 2005. Pollutant exposures at the subject residence were estimated using data from ambient monitors, and extrapolated using a distance weighted method. The authors reported significant association of PM2.5 levels and mortality from ischemic heart disease, but no associations were found with all-cause, cardiovascular, or respiratory disease.

The second study (Jerrett, 2011) followed individuals in California from the American Cancer Society II cohort recruited starting in 1982, with follow up to 2000. Pollutant levels at subject residences were estimated using several methods and models. All but one of the methods found no association of all-cause mortality with PM2.5 levels. All exposure estimation methods were reported to have found significant associations with ischemic heart disease mortality, however. The authors noted that mortality rates differ in urban areas compared to non-urban areas, and so included a variable for this in a land use regression model to estimate effects on mortality. When the authors applied the land use regression model including an urban indicator to estimate exposures, all-cause mortality, mortality from cardiovascular disease, and mortality from ischemic heart disease were all significantly associated with PM2.5 levels.

Some other studies have focused on particulate matter exposure and health effects in residents of Southern California. Two analyses of the American Cancer Society cohort, for example, focused specifically on the Los Angeles Metropolitan area using methods to estimate exposures on a finer geographical scale than previous studies that used geographic scales at the county or metropolitan area. Using data from monitoring stations in the Los Angeles area, one study applied interpolation methods (Jerrett, 2005) and another applied land use regression techniques (Krewski, 2009) to estimate exposures to the study individuals. Significant associations of PM2.5 with mortality from all causes and cardiopulmonary disease were reported, with the

magnitude of risks being higher than those from the national studies of the American Cancer Society cohort. This provides evidence that using methods to provide more detailed exposure estimates can result in stronger associations of PM2.5 and mortality. It should be noted that various analyses were presented in these, as well as other, studies to estimate the influence on various individual level and ecologic variables that might also be related to health effects risks. Including such variable generally reduces the association of PM2.5 and mortality. It may be illustrative to describe some of the estimates from the various calculations as presented by the authors of the Los Angeles area cohort (Krewski, 2009). In the descriptions in Table I-7, HR refers to Hazard Ratio expressed for a 10 ug/m$^3$ change in PM2.5 exposure, followed by the 95% Confidence Interval. For example, if the Hazard Ratio is 2, the risk would be twice as high, and conversely if the Hazard Ration is 0.5, the risk would be one-half of that of the reference group. Several of the analyses results follow as excerpted from Krewski, 2009. Table I-7 includes PM2.5, plus various additional individual and ecological variables.

## TABLE I - 8

Influence of Adding Confounding Variables (From Krewski, 2009)

| VARIABLE INCLUDED | HAZARD RATIO |
|---|---|
| PM2.5 alone (stratified for age, sex, and race) | 1.197 (95% CI, 1.082–1.325); |
| PM2.5 with 44 individual-level covariates | 1.143 (95% CI, 1.033–1.266) |
| With 44 individual-level covariates and the ecologic covariate of unemployment | 1.127 (95% CI, 1.015–1.252) |
| With 44 individual-level covariates and social factors extracted from the principal component analysis (which account for 81% of the total variance in the social variables) | 1.142 (95% CI, 1.026–1.272). |
| With 44 individual-level covariates and all ecologic covariates that were individually associated with mortality in bivariate models with PM2.5 exposure | 1.115 (95% CI, 1.003–1.239) |
| Parsimonious model that included 44 individual-level covariates and ecologic confounder variables that both reduced the pollution coefficient and had associations with mortality | 1.126 (95% CI, 1.014–1.251) |

Another study looked at measuring of atherosclerosis in Southern California residents Kunzli, 2005). An assessment of the carotid intima-media thickness (CIMT) was used as a measure of subclinical atherosclerosis. The subjects' residential areas were geocoded and a geospatial extrapolation of ambient monitoring data was used to assign annual mean concentrations of ambient PM2.5. The authors report results of an association between atherosclerosis and ambient air pollution as measured by PM2.5. The associations of PM2.5 and CIMT were strongest in women ≥ 60 years of age.

The U.S. EPA has recently proposed to lower the annual National Ambient Air Quality Standard for PM2.5 (U.S. EPA, 2012a). U.S. EPA also released a Regulatory Impact Analysis (U.S. EPA 2012b) which looked at the costs and benefits of alternate PM2.5 stand levels. As part of the analysis, U.S. EPA also looked at California specific studies regarding PM2.5 and mortality published in the scientific literature. The U.S. EPA analysis concluded "most of the cohort studies conducted in California report central effect estimates similar to the (nation-wide) all-cause mortality risk estimate we applied from Krewski et al. (2009) and Laden et al. (2006) albeit with wider confidence intervals. A couple cohort studies conducted in California indicate higher risks than the risk estimates we applied." Thus in U.S. EPA's judgment the California related studies provided estimates of mortality consistent with or higher than those from the national studies.

Other studies report evidence indicating that particulate matter exposure early in pregnancy may be associated with lowered birth weights (Bobak, 1999). Studies from the U.S., the Czech Republic and Mexico City have reported that neonatal and early postnatal exposure to particulate matter may lead to increased infant mortality. A more recent study in Southern California found increased risks for infant deaths associated with exposures to particulates and other pollutants (Ritz, 2006). These results suggest that fetuses and infants may be subgroups affected by particulate matter exposures.

In addition, some long-term effect studies have reported an increased risk of mortality from lung cancer associated with particulate matter exposures. A study involving California Seventh Day Adventists (very few of whom smoke) has reported an association of lung cancer mortality with PM10 levels. It is not clear from these studies whether the association relates to causation of disease, or whether individuals with cancer are more susceptible to other effects of particles leading to the observed mortality association. A study that followed a large number of

individuals living in the largest U.S. cities found elevated lung cancer risk associated with long-term average PM2.5 levels (Pope, 2002).

Several studies have assessed the effects of long-term particulate matter exposure on respiratory symptoms and lung function changes. Associations have been found with symptoms of chronic bronchitis and decreased lung function. A study of school children in 12 communities in Southern California showed significant association of particulate matter with bronchitis or phlegm in children with asthma. These effects were also associated with $NO_2$ and acid vapor levels (McConnell, 1999).

A cohort of fourth graders from the Southern California communities was followed over a period of four years by the Children's Health Study. A lower rate of growth in lung function was found in children living in areas with higher levels of particulate pollution (Gauderman, 2000). Decreases in lung function growth were associated with PM10, PM2.5, PM10-2.5, acid vapor, and $NO_2$. There was no association with ozone levels. The investigators were not able to identify independent effects of the pollutants, but noted that motor vehicle emissions are a major source of the pollutants.

A follow-up study on a second cohort of children confirmed the findings that decreased lung function growth was associated with particulates, nitric oxides, and elemental carbon levels (Gauderman, 2002). Elemental carbon is often used as a measure for diesel particulate. Additionally, children who moved to areas with less air pollution were found to regain some of the lung function growth rate (Avol, 2001). By the time the fourth graders graduated from high school, a significant number showed lower lung function. The risk of lower lung function was about five times higher in children with the highest PM2.5 exposure when compared to the lowest exposure communities (Gauderman, 2004). These deficits are likely to persist since the children were at the end of their growth period.

Despite data gaps, the extensive body of epidemiological studies has both qualitative and quantitative consistency suggestive of causality. A considerable body of evidence from these studies suggests that ambient particulate matter, alone or in combination with other coexisting pollutants, is associated with significant increases in mortality and morbidity in a community.

In summary, the scientific literature indicates that an increased risk of mortality and morbidity is associated with particulate matter at ambient levels. The evidence for particulate matter effects is mostly derived from population studies with supportive

evidence from clinical and animal studies. Although most of the effects are attributable to particulate matter, co-pollutant effects cannot be ruled out on the basis of existing studies. The difficulty of separating the effects may be due to the fact that particulate levels co-vary with other combustion source pollutants. That is, the particle measurements serve as an index of overall exposure to combustion-related pollution, and some component(s) of combustion pollution other than particles might be at least partly responsible for the observed health effects.

U.S. EPA staff has presented conclusions on the particulate matter causal determination of several health effects based on a recent review of the available scientific studies (U.S. EPA, 2009). These are depicted in the Tables I-8 and I-9.

## TABLE I - 9

Summary of Causal Determination of PM10-2.5 by Exposure Duration and Health Outcome

| **SHORT-TERM EXPOSURES** | |
|---|---|
| **Health Outcome** | **Causality Determination** |
| Cardiovascular effects | Suggestive |
| Respiratory effects | Suggestive |
| Mortality | Suggestive |
| **LONG-TERM EXPOSURES** | |
| **Health Outcome** | **Causality Determination** |
| Cardiovascular effects | Inadequate |
| Respiratory effects | Inadequate |
| Mortality | Inadequate |
| Reproductive and developmental | Inadequate |

From U.S. EPA, 2009

## TABLE I - 10

Summary of Causal Determination of PM2.5 by Exposure Duration and Health Outcome

| SHORT-TERM EXPOSURES | |
|---|---|
| **Health Outcome** | **Causality Determination** |
| Cardiovascular effects | Causal |
| Respiratory effects | Likely to be causal |
| Central nervous system | Inadequate information to assess |
| Mortality | Causal |
| **LONG-TERM EXPOSURES** | |
| **Health Outcome** | **Causality Determination** |
| Cardiovascular effects | Causal |
| Respiratory effects | Likely to be causal |
| Mortality | Causal |
| Reproductive and developmental | Suggestive of a causal relationship |
| Cancer, Mutagenicity, Genotoxicity | Suggestive of a causal relationship |

From U.S. EPA, 2009

In terms of estimating health burdens of air pollution exposure, CARB has conducted analyses in the past estimating exposures and quantitative health effects from exposures to particulate matter, as well as other pollutants. The most recent assessment focused on premature mortality and PM2.5 (CARB 2010). The analysis used the U.S. EPA's risk assessment methodology for calculating premature mortality, and used ambient air quality measurements averaged over a three-year period of 2006-2008. The analysis indicated that PM2.5 related premature deaths in California as 9,200 with an uncertainty range of 7,300 – 11,000. Estimates were also made for the California Air Basins. For the South Coast Air Basin, the estimate was 4,900 with an uncertainty range of 3,900 – 6,000. These estimates were calculated using the associations of cardiopulmonary mortality and PM2.5 from the second exposure period from Krewski (2009). The associations from the first exposure period from Krewski, 2009 as well as other cause of death estimates were also presented.

Another analysis of health impacts in the South Coast was conducted as part of the Draft Socioeconomic Report for the 2012 AQMP. The analysis estimates the anticipated costs and benefits of adopting the measures in the Final 2012 AQMP. Adopting these measures is projected to result in attainment of the national PM2.5 standards by 2014. The total average annual quantifiable benefits associated with implementing the Final 2012 AQMP were calculated and represent the currently quantifiable benefit of moving beyond today's regulations to the level needed to meet the federal PM2.5 standards. Table I-10 shows the number of avoided cases (or person-days) by health effect when the Basin attains the PM2.5 standard in 2014 and also in 2023 that result (SCAQMD 2012). The estimates pertain to the projected PM2.5 reductions only.

## TABLE I - 11

Changes in Number of Health Effects for Future Years*
for Measures Contained in the Final 2012 AQMP

| Health Outcome | Number of Avoided Cases | |
|---|---|---|
| | **2014** | **2023** |
| Mortality | 668 | 275 |
| Acute Bronchitis | 597 | 186 |
| Non-Fatal Heart Attacks | 29 - 261 | 12 – 105 |
| Lower & Upper Respiratory Symptoms | 18,384 | 5,750 |
| Emergency Room Visits | 153 | 53 |
| Hospital Admissions | 151 | 62 |
| Minor Restricted Activity Days | 287,447 | 95,093 |
| Work Loss Days | 48,805 | 16,055 |
| Asthma Attacks | 26,910 | 3,628 |

*Changes reflect differences in base and control cases for a given year. Positive numbers are reductions in symptoms due to the Final 2012 AQMP.

**Person-days.

## ULTRAFINE PARTICLES

As noted above, numerous studies have found association of particulate matter levels with adverse effects, including mortality, hospital admissions, and respiratory disease symptoms. The vast majority of these studies used particle mass of PM10 or PM2.5 as the measure of exposure. Some researchers have postulated, however, that ultrafine particles may be responsible for some of the observed associations of particulate matter and health outcomes (Oberdorster, et al, 1995; Seaton, et al, 1995). Ultrafine particles have aerodynamic diameter of less than 0.1 μm.

Several potential mechanisms have been brought forward to suggest that the ultrafine portion may be important in determining the toxicity of ambient particulates, some of which are discussed below.

For a given mass concentration, ultrafine particles have much higher numbers and surface area compared to larger particles. Particles can act as carriers for other adsorbed agents, such as trace metals and organic compounds; and the larger surface area may transport more of such toxic agents than larger particles.

Smaller particles can also be inhaled deep into the lungs. As much as 50% of 0.02 μm diameter particles are estimated to be deposited in the alveolar region of the lung. The relation between deposition and particle size is of complex nature. The ultrafine particles generally have higher fractional deposition in the alveolar region. However, for the smaller nucleation mode (particles less than 0.01 μm size) the deposition in the alveolar region declines, but increases in the extrathoracic region.

Exposures of laboratory animals to ultrafine particles have found cardiovascular and respiratory effects. Using an animal model of atherosclerotic disease, mice exposed to concentrated ultrafine particles near a roadway in Southern California showed larger early atherosclerotic lesions than mice exposed to concentrated PM2.5 or to filtered air (Araujo, 2008). In a mouse allergy model, exposures to concentrated ultrafine particles resulted in a greater response to antigen challenge to ovalbumin (Li, 2010), indicating that vehicular traffic exposure could exacerbate allergic inflammation in already-sensitized animals.

Controlled exposures of human volunteers to ultrafine particles either laboratory generated or as products of combustion, such as diesel exhaust containing particles, have found physiological changes related to vascular effects. Mills, 2011, for example found exposure to diesel exhaust particulate attenuated both acetylcholine and sodium-nitroprusside-induced vasorelaxation.

There are no long-term studies of human population exposure to ultrafine particles, as there is a lack of a monitoring network in the U.S. There have been several cross sectional epidemiological studies of ultrafine particles, mainly from Europe. Some of these studies found effects on hospital admissions, and emergency department visits, for respiratory and cardiovascular effects. Other studies, however, have not found such effects (U.S. EPA, 2009). Concentrations of ultrafine particles can vary geographically, and it is not clear how well central site monitors may capture actual exposures.

U.S. EPA staff has presented conclusions on causal determination of several health effects of ultrafine PM based on a recent review of the available scientific studies (U.S. EPA, 2009). These are depicted in Table I-11.

Additional discussion on the sources and health effects of ultrafine particles can be found in Chapter 9 of the 2012 AQMP.

## TABLE I - 12

Summary of Causal Determination of Ultrafine PM by Exposure Duration and Health Outcome

| **SHORT-TERM EXPOSURES** | |
|---|---|
| **Health Outcome** | **Causality Determination** |
| Cardiovascular effects | Suggestive |
| Respiratory effects | Suggestive |
| Central nervous system | Inadequate information to assess |
| Mortality | Inadequate |
| **LONG-TERM EXPOSURES** | |
| **Health Outcome** | **Causality Determination** |
| Cardiovascular effects | Inadequate |
| Respiratory effects | Inadequate |
| Mortality | Inadequate |
| Reproductive and developmental | Inadequate |
| Cancer, Mutagenicity, Genotoxicity | Inadequate |

From U.S. EPA, 2009

## CARBON MONOXIDE

The high affinity of carbon monoxide (CO) to bond with oxygen-carrying proteins (hemoglobin and myoglobin) results in reduced oxygen supply in the bloodstream of exposed individuals. The reduced oxygen supply is responsible for the toxic effects of CO which are typically manifested in the oxygen-sensitive organ systems. The effects have been studied in controlled laboratory environments involving exposure of humans and animals to CO, as well as in population-based studies of ambient CO exposure effects. People with deficient blood supply to the heart (ischemic heart disease) are known to be susceptible to the effects of CO. Protection of this group is the basis of the existing National Ambient Air Quality Standards for CO at 35 ppm for one hour and 9 ppm averaged over eight hours. The health effects of ambient CO have been recently reviewed (U.S. EPA, 2000, 2010).

Inhaled CO has no known direct toxic effect on lungs but rather exerts its effects by interfering with oxygen transport through the formation of carboxyhemoglobin (COHb, a chemical complex of CO and hemoglobin). Exposure to CO is often evaluated in terms of COHb levels in blood measured as percentage of total hemoglobin bound to CO. COHb levels in non-smokers range between 0.3 and 0.7% and 5 to 10% in smokers. COHb levels in excess of 1.5% in a significant proportion of urban non-smoking populations can be considered as evidence of widespread exposure to environmental CO.

Under controlled laboratory conditions, healthy subjects exposed to CO sufficient to result in 5% COHb levels exhibited reduced duration of maximal exercise performance and consumption of oxygen. Studies involving subjects with coronary artery disease who engaged in exercise during CO exposures have shown that COHb levels as low as 2.4% can lead to earlier onset of electrocardiograph changes indicative of deficiency of oxygen supply to the heart. Other effects include an earlier onset of chest pain, an increase in the duration of chest pain, and a decrease in oxygen consumption.

Findings of epidemiologic studies have observed associations between ambient CO concentration and emergency department visits and hospital emissions for ischemic heart disease and other cardiovascular diseases.

Animal studies associated with long-term exposure to CO resulting in COHb levels that are equivalent to those observed in smokers have shown indication of reduction in birth weight and impaired neurobehavior in the offspring of exposed animals.

Epidemiological studies conducted in Southern California have indicated an association with CO exposure during pregnancy to increases in pre-term births (Ritz, 2000). However, the results were not consistent in different areas studied. The increase in the pre-term births was also associated with PM10 levels. Another study found increased risks for cardiac-related birth defects with carbon monoxide exposure in the second month of pregnancy (Ritz, 2002). Toxicological studies in laboratory animals with higher than ambient levels of CO have also reported decrements in birth weight and prenatal growth.

U.S. EPA staff has presented conclusions on causal determination of the health effects of carbon monoxide based on a recent review of the available scientific studies (U.S. EPA, 2010). These are depicted in Table I-12.

**TABLE I - 13**

Causal Determination for Health Effects of Carbon Monoxide

| **SHORT-TERM EXPOSURES** | |
|---|---|
| **Health Outcome** | **Causality Determination** |
| Cardiovascular morbidity | Likely to be a causal relationship |
| Central nervous system | Suggestive |
| Respiratory morbidity | Suggestive |
| Mortality | Suggestive |
| **LONG-TERM EXPOSURES** | |
| **Health Outcome** | **Causality Determination** |
| Cardiovascular morbidity | Inadequate |
| Central nervous system | Suggestive |
| **Birth outcomes and developmental effects** | Suggestive |
| Respiratory morbidity | Inadequate |
| Mortality | Not likely to be a causal relationship |

From U.S. EPA, 2010

## NITROGEN DIOXIDE

The U.S. EPA has recently reviewed the health effects of nitrogen dioxide (U.S. EPA, 2008a). Evidence for low-level nitrogen dioxide ($NO_2$) exposure effects is derived from laboratory studies of asthmatics and from epidemiological studies. Additional supportive evidence is derived from animal studies.

Some epidemiological studies using the presence of an unvented gas stove as a surrogate for indoor $NO_2$ exposures suggest an increased incidence of respiratory infections or symptoms in children. However the evidence is mixed.

Recent studies related to outdoor exposure have found health effects associated with ambient $NO_2$ levels, including respiratory symptoms, respiratory illness, decreased lung function, increased emergency room visits for asthma, and cardiopulmonary mortality. However, since $NO_2$ exposure generally occurs in the presence of other pollutants, such as particulate matter, these studies are often unable to determine the specific role of $NO_2$ in causing effects.

The Children's Health Study in Southern California found associations of air pollution, including $NO_2$, PM10, and PM2.5, with respiratory symptoms in asthmatics (McConnell, 1999). Particles and $NO_2$ were correlated, and effects of individual pollutants could not be discerned. A subsequent analysis indicated a stronger role for $NO_2$ (McConnell, 2002).

Ambient levels of $NO_2$ were also associated with a decrease in lung function growth in a group of children followed for eight years. In addition to $NO_2$, the decreased growth was also associated with particulate matter and airborne acids. The study authors postulated this may be a result of a package of pollutants from traffic sources (Gauderman, 2004).

Results from controlled exposure studies of asthmatics demonstrate an increase in the tendency of airways to contract in response to a chemical stimulus (bronchial reactivity) or after inhaled allergens. Effects were observed with exposures from 0.1 to 0.3 ppm $NO_2$ for periods ranging from 30 minutes to three hours. A similar response is reported in some studies with healthy subjects at higher levels of exposure (1.5 - 2.0 ppm). Mixed results have been reported when people with chronic obstructive lung disease are exposed to low levels of $NO_2$.

Short-term controlled studies of animals exposed to $NO_2$ over a period of several hours indicate cellular changes associated with allergic and inflammatory response and interference with detoxification processes in the liver. In some animal studies

the severity of the lung structural damage observed after relatively high levels of short-term ozone exposure is observed to increase when animals are exposed to a combination of ozone and $NO_2$.

In animals, longer-term (3-6 months) repeated exposures at 0.25 ppm appear to decrease one of the essential cell-types (T-cells) of the immune system. Non-specific changes in cells involved in maintaining immune functions (cytotoxic T-cells and natural killer cells) have been observed in humans after repeated exposure (4-6 days) to >0.6 ppm of $NO_2$ (20 min. - 2 hours). All these changes collectively support the observation reported both in population and animal studies of increased susceptibility to infections, as a result of $NO_2$ exposure.

The U.S. EPA recently adopted a new short-term standard of 100 ppb (0.1 ppm) averaged over 1 hour. The standard was designed to protect against increases in airway reactivity in individuals with asthma observed in controlled exposure studies, as well as respiratory symptoms observed in epidemiological studies. The new standard also requires additional monitoring for $NO_2$ near roadways.

## SULFUR DIOXIDE

Controlled laboratory studies involving human volunteers have clearly identified asthmatics as a very sensitive group to the effects of ambient sulfur dioxide ($SO_2$) exposures. Healthy subjects have failed to demonstrate any short-term respiratory functional changes at exposure levels up to 1.0 ppm over 1-3 hours.

In exercising asthmatics, brief exposure (5-10 minutes) to $SO_2$ at levels between 0.2-0.6 ppm can result in significant alteration of lung function, such as increases in airway resistance and decreases in breathing capacity. In some, the exposure can result in severe symptoms necessitating the use of medication for relief. The response to $SO_2$ inhalation is observable within two minutes of exposure, increases further with continuing exposure up to five minutes then remains relatively steady as exposure continues. $SO_2$ exposure is generally not associated with any delayed reactions or repetitive asthmatic attacks.

In epidemiologic studies, associations of $SO_2$ levels with increases in respiratory symptoms, increases in emergency department visits and hospital admissions for respiratory-related causes have been reported. Coupled with the human clinical studies, these data suggest that $SO_2$ can trigger asthmatic episodes in individuals with pre-existing asthma.

The U.S. EPA has recently revised the $SO_2$ air quality standard. The previous 24-hour standard was rescinded and replaced with a new 1-hour standard at 75 ppb (0.075 ppm) to protect against acute asthma attacks in sensitive individuals.

Animal studies have shown that despite $SO_2$ being a respiratory irritant, it does not cause substantial acute or chronic toxicity in animals exposed at ambient concentrations. However, relatively high exposures (10 ppm of $SO_2$ for 72 hours) in mice can lead to tissue damage, fluid accumulation and sloughing of respiratory lining. Sensitization to allergies is observable in guinea pigs repeatedly exposed to high levels (72 ppm) of $SO_2$. This effect needs further evaluation in clinical and population studies to identify any chronic exposure impact on both asthmatic incidence and attacks in a population.

Some epidemiological studies indicate that the mortality and morbidity effects associated with the fine fraction of particles show a similar association with ambient $SO_2$ levels. In these studies, efforts to separate the effects of $SO_2$ from fine particles have not been successful. Thus, it is not clear whether the two pollutants act synergistically, or whether being generated from similar combustion sources, they represent the same pollution index for the observed effects.

## SULFATES

Based on a level determined necessary to protect the most sensitive individuals, the California Air Resources Board (CARB) in 1976 adopted a standard of 25 $\mu g/m^3$ (24-hour average) for sulfates. There is no federal air quality standard for sulfates.

In recent years, a vast majority of effects (mortality and morbidity) associated with fine particles (PM2.5) and sulfur dioxide have shown a similar association with ambient sulfate levels in some population studies. The efforts to fully separate the effects of sulfates from other coexisting pollutants have not been successful. This may be due to the fact that these pollutants covary under ambient conditions, having been emitted from common sources; and the effects observed may be due to the combination of pollutants, rather than a single pollutant.

A clinical study involving exposure of human subjects to sulfuric acid aerosol indicated that adolescent asthmatics may be a susceptible population subgroup with some changes in lung function observed with exposures below 100 $\mu g/m^3$. In

general, however, laboratory exposures of human volunteers to sulfates at or near ambient levels have not found significant changes in lung function.

Results from animal studies involving exposures to sulfuric acid aerosol, ammonium bisulfate and ammonium sulfate indicate that acidic particles (former two) are more toxic than non-acidic particles (latter). In addition, the severity or magnitude of both mortality and morbidity effects is relatively higher in population studies of the eastern United States and Canada where sulfate concentrations are higher than for those observed in the western United States. Mixed results have been reported from studies which attempted to ascertain the role of acidity in determining the observed toxicity.

## LEAD

The U.S. EPA has recently reviewed the health effects of ambient lead exposures in conjunction with a review of the NAAQS for lead (U.S. EPA 2006b; U.S. EPA 2007b). The following summary is taken from these reviews.

There are a number of potential public health effects at low level exposures. The health implications are generally indexed by blood lead levels, which are related to lead exposures both from inhalation as well as from ingestion. As identified by U.S. EPA, effects include impacts on population IQ, as well as heart disease and kidney disease. The array of health effects includes the following.

- Heme biosynthesis and related functions;
- Neurological development and function;
- Reproduction and physical development;
- Kidney function;
- Cardiovascular function
- Immune function

Children appear to be sensitive to the neurological toxicity of lead, with effects observed at blood lead concentration ranges of 5 – 10 μg/dL, or possibly lower. No clear threshold has yet been established for such effects.

According to the U.S. EPA review, the most important effects observed are neurotoxic effects in children and cardiovascular effects in adults. The effects in children include impacts on intellectual attainment and school performance.

U.S. EPA has recently revised the NAAQS for lead to a level of 0.15 µg/m$^3$ averaged over a rolling three-month period to protect against lead toxicity. Figures I-5 and I-6, taken from the U.S. EPA review, depict the health effects of lead in relation to blood levels. In the figure, the question marks indicate that there are no demonstrated threshold blood lead levels for health effects. The Centers for Disease Control (CDC) has recently revised their lead hazard information and replaced their level of concern for adverse effects of 10 µg/dL blood lead level with a childhood blood lead level reference value of 5 µg/dL to identify children and environments associated with lead-exposure hazards (CDC, 2012).

| Lowest Observed Effect Blood Lead Level | Neurological Effects | Hematological Effects | Immune Effects |
|---|---|---|---|
| 30 µg/dL | | Increased urinary δ-aminolevulinic acid | |
| 15 µg/dL | Behavioral disturbances (e.g., inattention, delinquency)<br><br>Altered electrophysiological responses | Erythrocyte protoporphyrin (EP) elevation | |
| 10 µg/dL | Effects on neuromotor function<br><br>CNS cognitive effects (e.g., IQ deficits) | Inhibition of δ-aminolevulinic acid dehydratase (ALAD)<br>\|<br>Pyrimidine-5′-nuclotidase (Py5N) activity inhibition | Effects on humoral (↑ serum IgE) and cell-mediated (↓ T-cell abundance) immunity |
| 5 µg/dL | ↓ | ↓ | |
| | (???) | (???) | |
| 0 µg/dL | | | |

**FIGURE I - 5**

Summary of Lowest Observed Effect Levels for Key Lead-Induced Health Effects in Children (From U.S. EPA 2007b)

| Lowest Observed Effect Blood Lead Level | Neurological Effects | Hematological Effects | Cardiovascular Effects | Renal Effects |
|---|---|---|---|---|
| 30 µg/dL | Peripheral sensory nerve impairment | Erythrocyte protoporphyrin (EP) elevation in males | | Impaired Renal Tubular Function |
| 20 µg/dL | Cognitive impairment | | | |
| 15 µg/dL | Postural sway | Erythrocyte protoporphyrin (EP) elevation in females | | |
| | | Increased urinary δ-aminolevulinic acid | | |
| 10 µg/dL | | Inhibition of δ-aminolevulinic acid dehydratase (ALAD) | Elevated blood pressure | |
| 5 µg/dL | | | ↓ (???) | Elevated serum creatine (↓ creatine clearance) |
| 0 µg/dL | | | | |

**FIGURE I - 6**

Summary of Lowest Observed Effect Levels for Key Lead-Induced Health Effects in Adults (From U.S. EPA 2007b)

## TOXIC AIR CONTAMINANTS

Toxic air contaminants are pollutants for which there generally are no ambient air quality standards. The Toxic Air Contaminant Identification and Control Act (AB1807, Tanner 1983) created California's program to reduce exposures to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB2588, Connelly, 1987) supplements the program by requiring statewide air toxics inventories, notification of people exposure to significant health risks, and facility plans to reduce these risks. Under California's Air Toxics Program, CARB staff and Office of Environmental Health Hazard Assessment (OEHHA) assess the health effects of substances that may pose a risk of adverse health effects. These effects are usually an increased risk for cancer, adverse birth outcomes and respiratory effects. After review by the state Scientific Review Panel, CARB holds a public hearing on whether to formally list substances that may pose a significant risk to public health as a Toxic Air Contaminant.

OEHHA also establishes potency factors for air toxics that are carcinogenic. The potency factors can be used to estimate the additional cancer risk from ambient levels of toxics. This estimate represents the chance of contracting cancer in an individual

over a lifetime exposure to a given level of an air toxic and is usually expressed in terms of additional cancer cases per million people exposed.

For non-cancer health effects, OEHHA has developed acute and chronic Reference Exposure Levels (RELs). RELs are concentrations in the air below which adverse health effects are not likely to occur. Acute RELs refer to short-term exposures, generally of 1-hour duration. Chronic RELs refer to long-term exposures of several years. OEHHA has also established 8-hour RELs for several substances. The ratio of ambient concentration to the appropriate REL can be used to calculate a Hazard Index. A Hazard Index of less than one would not be expected to result in adverse effects. The measured levels from the most recent study were below the applicable Reference Exposure Levels.

The District conducted studies on the ambient concentrations and estimated the potential health risks from air toxics (SCAQMD, 2008). In the latest study, a two -year monitoring program was undertaken at 10 sites throughout the SCAB over the time period 2004-2006. Over 30 substances were measured, and annual average levels were calculated. The results showed that the overall risk for excess cancer from a 70-year lifetime exposure to the levels of air toxics calculated as the average level at the 10 sites was about 1,200 in a million. The largest contributor to this risk was diesel particulate matter, accounting for about 84% of the air toxics risk. A breakdown of the major contributors to the air toxics risk is shown in Figure I-7. The average levels measured were also compared to the non-cancer Reference Exposure Levels. The measurements were below the established RELs.

The California Air Resources Board listed Diesel Particulate Matter as a Toxic Air Contaminant in 1989. The International Agency for Research on Cancer, an arm of the World Health Organization, classified diesel exhaust as probably carcinogenic to humans in 1989. Recently IARC convened an international panel of scientists to review the published literature since the initial classification regarding the carcinogenicity of diesel combustion emissions. The panel concluded that diesel exhaust is a substance that causes lung cancer in humans (Benbrahim-Tallaa, 2012).

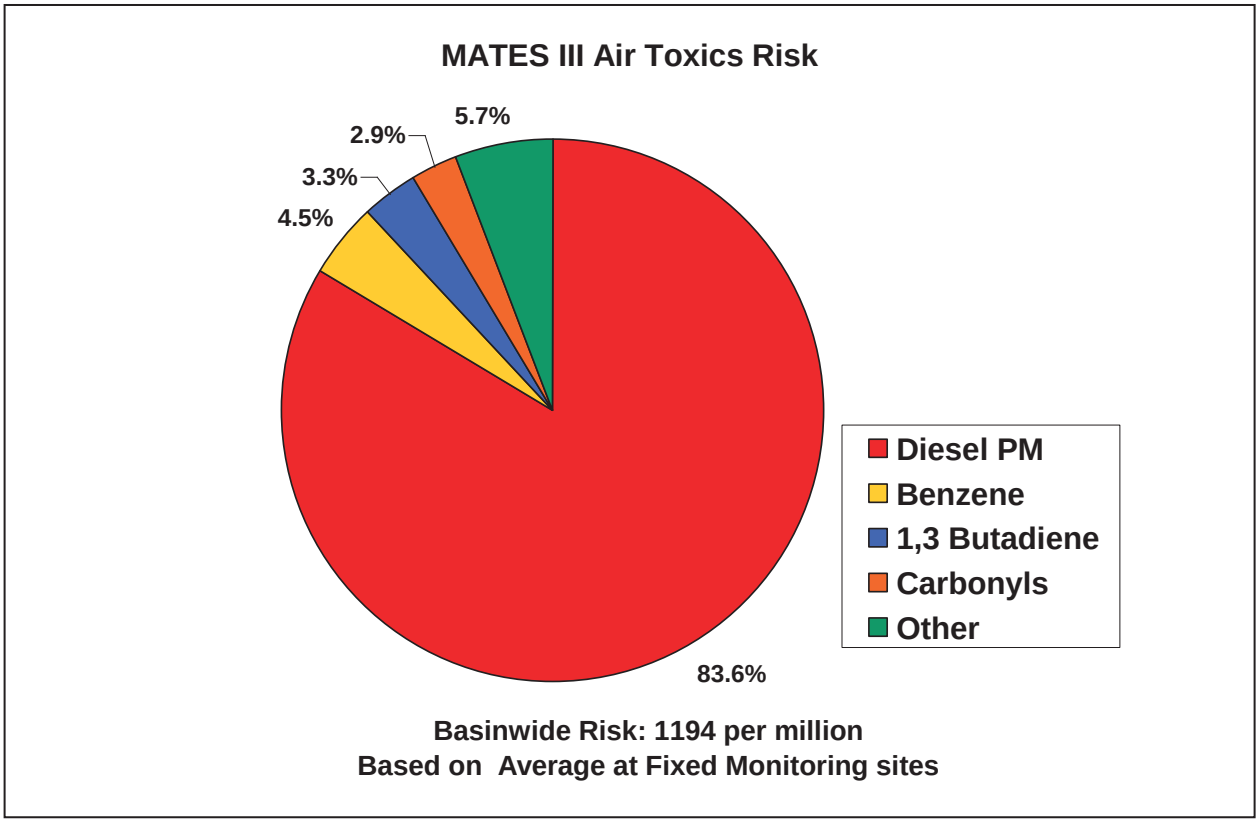


**FIGURE I - 7**

Major Pollutants Contributing to Air Toxics Cancer Risk in the South Coast Air Basin

The key air toxics contributing to risk from mobile and stationary sources are listed in Table I-13.

**TABLE I - 14**

Key Toxic Air Contaminants in the SCAB

| MOBILE SOURCES | STATIONARY SOURCES |
|---|---|
| Acetaldehyde | Hexavalent Chromium |
| Benzene | Methylene Chloride |
| 1,3 Butadiene | Nickel |
| Diesel Particulate Matter | Perchloroethylene |
| Formaldehyde | Trichloroethylene |

## CONCLUSION

A large body of scientific evidence shows that the adverse impacts of air pollution in human and animal health are clear. A considerable number of population-based and laboratory studies have established a link between air pollution and increased morbidity and, in some instances, earlier mortality.

As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. The new findings have, in turn, led to the revision and lowering of National Ambient Air Quality Standards which, in the judgment of the Administrator of the U.S. EPA, are necessary to protect public health. Figures I-8 and I-9 are meant to convey some of the historical context to recent revisions to the NAAQS for ozone and for particulate matter.

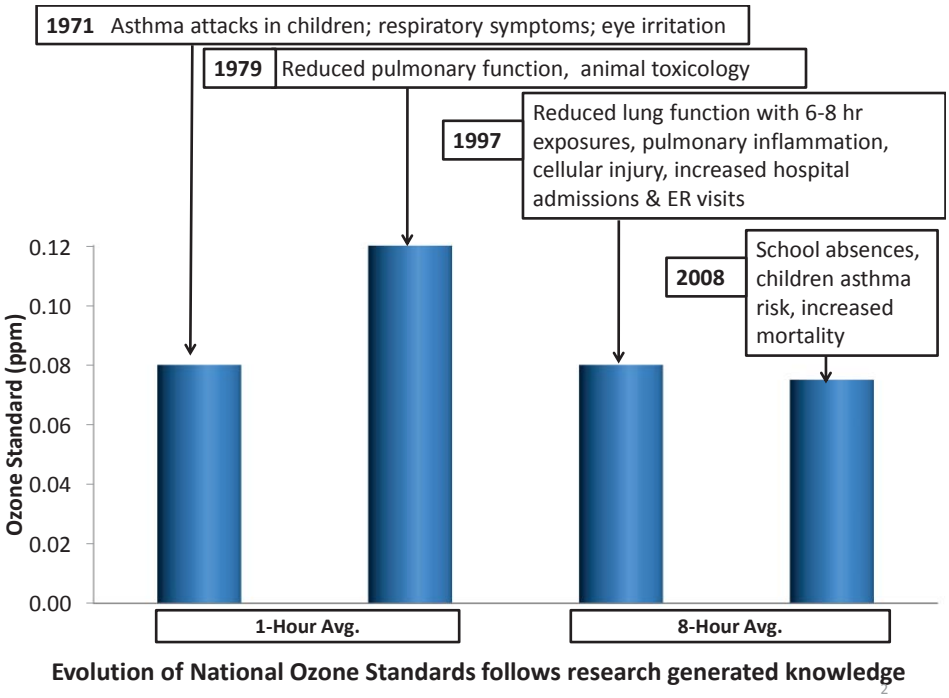


**FIGURE I - 8**

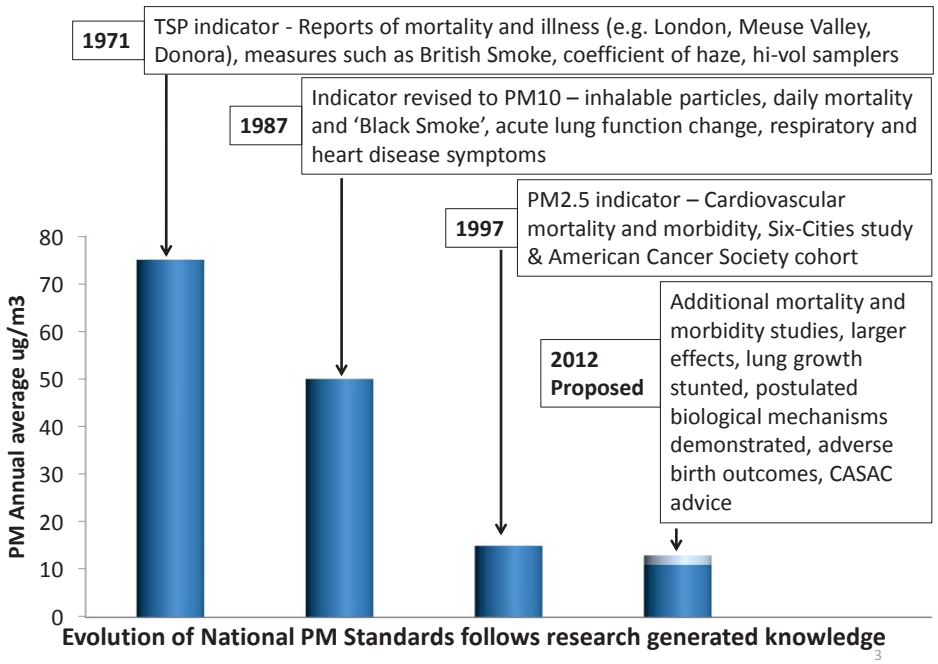
1971
TSP indicator - Reports of mortality and illness (e.g. London, Meuse Valley, Donora), measures such as British Smoke, coefficient of haze, hi-vol samplers
1987
Indicator revised to PM10 – inhalable particles, daily mortality and 'Black Smoke', acute lung function change, respiratory and heart disease symptoms
1997
PM2.5 indicator – Cardiovascular mortality and morbidity, Six-Cities study & American Cancer Society cohort
2012 Proposed
Additional mortality and morbidity studies, larger effects, lung growth stunted, postulated biological mechanisms demonstrated, adverse birth outcomes, CASAC advice
PM Annual average ug/m3
80
70
60
50
40
30
20
10
0
Evolution of National PM Standards follows research generated knowledge
3

**FIGURE I - 9**

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# Appendix D:
# Greenhouse Gas Information

# D.1 - Supplemental AB 32 Cap-and-Trade Information

ACCOUNTING FOR GREENHOUSE GAS EMISSIONS
ASSOCIATED WITH CAPPED SOURCES

The California Cap-and-Trade Program, found at 17 California Code of Regulations ("CCR") §§ 95800 to 96023, is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide greenhouse gases ("GHG") emissions and employing market mechanisms to achieve Assembly Bill ("AB") 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program's duration. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, almost all, if not all, of the Project's GHG emissions associated with electricity use will be covered by the Cap-and-Trade Program. **This means that the Project's GHG emissions associated with the use of electricity will be accounted for by the cap on electricity generators and there will be no need for mitigation of GHG emissions associated with the Project's use of electricity**.

**It should be noted that the South Coast Air Quality Management District (the "SCAQMD") has recognized that the GHG emissions associated with capped sources should not be counted for the purpose of determining what the GHG emissions are for facilities that will use electricity generated elsewhere. See the negative declarations adopted by the SCAQMD for the Ultramar Inc. Wilmington Refinery Proposed Cogeneration Project, SCH No. 2012041014, April, 2013[1] and the Phillips 66 Los Angeles Refinery Carson Plant - Crude Oil Storage Capacity Project, SCH No. 2013091029 (September 2013).[2]**

Under the Cap-and-Trade Program, the Air Resources Board ("ARB") issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 MTCO2e per year must comply with the Cap-and-Trade Program. Triggering of the 25,000 MTCO2e per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or "MRR").

Each covered entity with a compliance obligation will be required to surrender "compliance instruments" for each MTCO2e of GHG it emits. Covered entities will be allocated free allowances in whole or part (if eligible), buy allowances at auction, purchase allowances from others, or purchase offset credits. A "compliance period" is the time frame during which the compliance obligation is calculated. The years 2013 and 2014 are the first compliance period, the years 2015–2017 are the second compliance period, and the third compliance period is from 2018–2020. At the end of each compliance period, each facility will be required to surrender compliance instruments to ARB equivalent to its total GHG emissions throughout the

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[1] Available at http://www.aqmd.gov/ceqa/documents/2013/nonaqmd/Ultramar_Neg_Dec.pdf

[2] Available at http://www.aqmd.gov/ceqa/documents/2013/nonaqmd/Draft_ND_Phillips_66_Crude_Storage.pdf

compliance period. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year. For example, by November 2014, a covered entity must submit compliance instruments to cover 30% of its 2013 GHG emissions.

The Cap-and-Trade Program covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels, and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. (17 CCR §§ 95811 and 95812(d).) While the Cap-and-Trade Program technically already covers fuel suppliers, they will not have a compliance obligation (i.e., they will not be fully regulated) until 2015:

> "Suppliers of natural gas, suppliers of RBOB [Reformulated Gasoline Blendstock for Oxygenate Blending] and distillate fuel oils, suppliers of liquefied petroleum gas, and suppliers of liquefied natural gas specified in sections 95811(c), (d), (e), (f), and (g) that meet or exceed the annual threshold in section 95812(d) will have a compliance obligation beginning with the second compliance period." 17 CCR § 95851(b).

In 2015, the Cap-and-Trade Program will cover approximately 85% of California's GHG emissions.

The GHG emissions associated with transportation fuels that count against the 25,000 MTCO2e per year inclusion threshold are those "that would result from full combustion or oxidation of the quantities of the fuels … which are imported and/or delivered to California." (17 CCR § 95852(d)(1).) For example, ARB defines the compliance obligation for suppliers of the category of fuels that include gasoline and diesel as follows:

> "Suppliers of RBOB and Distillate Fuel Oils. A supplier of petroleum products covered under sections 95811(d) or 95812(d) has a compliance obligation for every metric ton CO2e of GHG emissions included in an emissions data report that has received a positive or qualified positive emissions data verification statement or for which emissions have been assigned that would result from full combustion or oxidation of the quantities of the following fuels that are removed from the rack in California, sold to entities not licensed by the California Board of Equalization as a fuel supplier, or imported into California and not directly delivered to the bulk-transfer/terminal system as defined in section 95102 of MRR, except for products for which a final destination outside California can be demonstrated…. " 17 CCR § 95852(d).

In short, the Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). However, transportation fuels that are "supplied" in California, but can be demonstrated to have a final destination outside California do not generate a compliance obligation. The underlying concept here is that ARB is seeking to capture tailpipe GHG emissions from the combustion of transportation fuels supplied to California end-users. Accordingly, almost all, if not all, of the

Project's GHG emissions associated with vehicle-miles traveled will be covered by the Cap-and-Trade Program. This means that the Project's GHG emissions resulting from the vehicles that will serve the Pr**oject will be accounted for by the cap on fuel producers and there will be no need for mitigation of GHG emissions resulting from the vehicles**.

**The current Cap-and-Trade Program runs through 2020. It is likely that the Program will be extended through at least 2050. See, *e.g.*, Governor Brown's Executive Order No. B-16-2012, discussed on page 4.7-25 of the revised DEIR, and the ARB's *Proposed First Update to the Climate Change Scoping Plan: Building the Framework*, ES-5, 15, 38-39 and 110 (February 10, 2014).**[3]

[3] Available at www.arb.ca.gov/cc/scopingplan/...update/draft_proposed_first_update.pdf

# D.2 - Project Consistency with Moreno Valley Energy Efficiency and Climate Action Strategy

The following energy efficiency measures are from the City of Moreno Valley Climate Action Strategy and are suggested as policies for the City of Moreno Valley as a community. Project consistency with the strategies is shown in Table D-1. The mitigation measures referred to in the table are in the Air Quality, Greenhouse Gas, and Health Risk Assessment Report and in the Final Environmental Impact Report.

**Table D-1: Project Consistency with City of Moreno Valley Climate Action Strategy**

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C1. | Install light colored "cool" roofs and cool pavements. (Cool roofs are now a requirement per State Title 24/CalGreen Building Standards). | Consistent with Title 24/CalGreen and Mitigation Measure (MM) 4.16.4.6.1A |
| C2. | Require Energy Star equipment and appliances in new construction & renovations. | Consistent with MM 4.16.4.6.1A. |
| C3. | Specify no- or low-VOC (Volatile Organic Compound) materials. | Consistent with MM 4.3.6.2C. |
| C4. | Install photovoltaic or other solar technology for city owned facilities wherever feasible. | Not applicable because the project is not a city owned facility; however, the project would install solar (MM 4.16.4.6.1C). |
| C5. | Partner with the largest consumers of energy to encourage and promote their energy efficiency activities. | Not applicable. |
| C6. | Promote and implement programs to encourage load shifting to off- peak house and explore demand response solutions. | Not applicable. |
| C7. | Provide education on energy efficiency to residents, customers and/or tenants. | Consistent with MM 4.3.6.4A. |
| C8. | Create new Partnership brand to integrate City and Utility marketing campaigns to customers. Develop Marketing Team to coordinate City and Utility marketing. Advertise routinely on local media: radio, TV, newspaper, City newsletter, and website. | Not applicable. |

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C9. | Increase marketing efforts in the City by organizing the following community activities:<br>• City sponsored ideas expo and participating at other regional energy events;<br>• City presenting program to local businesses at Chamber of Commerce meetings;<br>• City working with community organizations, local service clubs, HOA's and chambers of commerce to educate and sign-up participants;<br>• Contractors conducting face-to-face marketing to both residential and business customers;<br>• City Council recognizing "energy champions" at televised meetings | Not applicable. |
| C10. | Implement low impact development practices that maintain existing hydrology of the site to manage storm water and protect the environment. (Use of low impact development practices is required by the new regional water quality permit) | Please refer to the EIR section on water quality. |
| C11. | Require that developer recycle existing street material for use as base for new streets. | Consistent with implementation of MM 4.7.6.1A. |
| C12. | Work with Waste Management to utilize billing statements or MVTV-3 to encourage businesses and residents to enroll in a recycling program. | Not applicable. However, MM 4.7.6.1A encourages recycling and requires waste reduction. |
| C13. | Explore grants to pay for recycling collection devices and their maintenance to be placed with public trash bins | Not applicable. |
| C14. | Increase recycling at public events. | Not applicable. |
| C15. | Install water-efficient irrigation systems and devices and use water-efficient irrigation methods. | Consistent. The project has water conservation features as a project design feature and it will comply with existing water conservation requirements. |
| C16. | Promote use of City's multi-use trail system. | Consistent. As a project design feature, the project would connect the City's multi-use trail system. |
| C17. | Establish Energy Efficiency and Conservation baselines. | Not applicable; however, the project would comply with Title 24 requirements. |
| C18. | Maintain City's Community Partnership program with Southern California Edison, The Gas Company, and Moreno Valley Electric Utility through the Energy Coalition. This partnership allows for funding the City can use for energy conservation marketing, education, and outreach efforts. | Not applicable. |

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C19. | City act as a model of energy conservation stewardship. Build upon historical and current energy conservation efforts as the foundation for continued efforts and education of the community on the value of efficiency and conservation in cost savings and environmental benefits. | Not applicable. However, the project would provide energy efficiency information to its tenants (MM 4.3.6.4A). |
| C20. | Require new large developments (projects of regional significance) participate in the Savings by Design program, funded by Utility customers and administered by private utilities under the auspices of the State Public Utilities Commission. Program identifies ways to improve energy efficiency of proposed construction. | The project would be incorporating several of these concepts through its project design. |
| C21. | Encourage community use of Southern California Edison, Moreno Valley Utility, Eastern Municipal Water District, and The Gas Company financial incentives / rebate opportunities. | Not applicable. If the applicant or tenants wish to obtain financial incentives or rebate opportunities, they can do so. |
| C22. | Adopt a dark sky ordinance and reduce unnecessary lighting. | Not applicable. |
| C23. | Encourage passive solar design. | Not applicable; the project consists of large warehouse buildings. |
| C24. | Provide customer financing to assist customers with purchasing energy efficiency equipment. WRCOG will take lead in developing a financing plan through property taxes based on the guidelines proposed in Assembly Bill 811. | Not applicable. |
| C25. | Encourage Point-of-Sale Rebates, since they are the simplest methods for customers to qualify for incentives. Pursue adding more retailer participants within community. | Not applicable. |
| C26. | Review and update the landscape ordinance to continue lowering use of potable water for landscape irrigation. (City updated landscape standards in 2009 to further encourage water conservation.) | Not applicable. |
| C27. | Provide education about water conservation and available programs and incentives. | Not applicable. |
| C28. | Protect existing trees and encourage the planting of new drought tolerant trees. Adopt a tree protection and replacement ordinance. | Consistent. Refer to Specific Plan site design best management practices. |
| C29. | Work with developers to increase housing near transit through recently adopted mixed use zones. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Not applicable. |
| C30. | Designate Transit-Oriented Development district(s). (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Not applicable. |

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C31. | Explore building footprint, setbacks, height, scale, hardscape requirements to create compact building design techniques. | Not applicable. |
| C32. | Explore reduced parking minimums required for mixed-use developments to encourage transit and non-motorized transportation. | Not applicable. The project does not contain mixed use. |
| C33. | Apply urban planning principles that encourage high density, mixed-use, walkable/bikeable neighborhoods, and coordinate land-use and transportation with open space systems and promote the efficient delivery of services and goods. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Not applicable. However, the project would install bicycle and pedestrian friendly features (MM 4.3.6.4A). |
| C34. | Promote "Energy Efficiency" at City events or events that the City participates in such as 4th of July and the March Air Show. | Not applicable. |
| C35. | Develop original programming on MVTV-3 that promotes energy efficiency, e.g. a program that follows a residential energy audit, to demonstrate how residents can make their homes more energy efficient. | Not applicable. |
| C36. | Work with RTA to expand access to public transit by adding routes, and shelters and benches within 1/4 mile of as many residential areas, employment centers, commercial centers, schools, and parks as possible. Evaluate lighting at all shelters to improve safety. | The project description states the following: Local bus routes will be extended into the project area when adequate demand is generated as determined by RTA. All roadways within the WLC area will be designed to accommodate bus access. The need for bus stops, turnouts, etc. will be determined by the RTA during the review of subsequent project-specific applications. |
| C37. | Promote rideshare and trip reduction programs such as carpools/vanpools and preferential parking areas with City staff and other large employers. | Consistent with MM 4.3.6.4A. |
| C38. | Promote school rideshare programs to assist parents/students forming carpools. | Not applicable. |
| C39. | Adopt a Non-Motorized Transportation Plan. With focuses on pedestrian and bicycle routes and Master Sidewalk Plan. (GHG Policy R2- T1 Land Use Based Trips and VMT Reduction Policies) | The project includes safe pedestrian and bicycle routes (MM 4.3.6.4A). |
| C40. | Work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles. | Not applicable. |

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C41. | Set goals consistent with State's Long Term Strategic Plan: All new residential construction in California will be zero net energy by 2020. All new commercial construction in California will be zero net energy by 2030. | Not applicable, since the goals are for the City to meet. However, the project would exceed 2008 Title 24 requirements and would install solar (MM 4.16.4.6.1C). |
| C42. | Encourage installation of solar and wind power systems and solar hot water heaters. | Consistent. The project will install solar (MM 4.1.6.4.6.1C). |
| C43. | Establish City guideline that identifies criteria for using rubberized asphalt concrete for public streets. | Not applicable. |
| C44. | Establish City guideline that identifies criteria for using 'green concrete' that has been made with recycled aggregate for public improvements. Results in reduced $CO_2$ emissions and reduces solid waste sent to landfills. | MM 4.7.6.1A requires that the project recycle the existing onsite concrete where feasible. |
| C45. | Prepare a Master Sidewalk Plan that identifies "missing links" where sidewalks are necessary and identifies streets for which no sidewalk is required. | The project would include pedestrian features and links to the outside community. |
| C46. | Adopt and implement a policy to increase the use of renewable energy. | Not applicable. |
| C47. | Promote residential surveys to educate residents on energy saving behaviors, and direct leads and data to appropriate marketing channels to encourage more extensive energy upgrades. | Not applicable. |
| C48. | Encourage installation of solar panels on unused roof and ground space and over carports and parking areas. | Consistent. The project would install rooftop solar (MM 4.16.4.6.1A). |
| C49. | Include energy storage where appropriate to optimize renewable energy generation systems and avoid peak energy use. | Not applicable. |
| C50. | Conduct gray water, rainfall runoff, and other system research and pilot study. | Not applicable. |
| C51. | Actively explore new items to add to the list of accepted recycled materials with the City's franchised waste hauler. | Not applicable. |
| C52. | Implement programs to encourage and increase participation of diverted waste from landfills to meet or exceed state regulation requirements. | Not applicable; however, the project is incorporating waste reduction measures through project design and MM 4.7.6.1A. |
| C53. | Provide easy and convenient recycling opportunities for residents, the public, and businesses. | Consistent with project design and MM 4.7.6.1A. |
| C54. | Provide education and publicity about reducing waste and available recycling services. | Consistent with project design and MM 4.7.6.1A. |

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C55. | Require shaded and accessible pedestrian paths of travel between building entrances and parking lots, sidewalks, adjacent properties, and public transportation stops. | Consistent with project design and MM 4.3.6.4A. |
| C56. | Increase housing density near transit. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Not applicable. |
| C57. | Steer development towards infill rather than greenfield areas. Consider differential impact fee system with lower fees for areas with infrastructure. | Not applicable. |
| C58. | Revise municipal code to ensure solar access is maintained for future solar electric and solar hot water installations. | Not applicable, since the project would not revise the municipal code. However, the project would install solar (MM 4.16.4.6.1C). |
| C59 | Consider a shade tree ordinance and utility incentives for shading south and west faces of dwelling units. | Not applicable. However, the project would install new trees. |
| C60. | Designate city staff person responsible for coordinating climate action by city departments. | Not applicable. |
| C61. | Promote local demonstration gardens at Western Municipal Water District and the planned garden at the southeast corner of Cactus and Heacock, around the EMWD pump station. | Not applicable. This is located to the west of the project site. |
| C62. | Encourage harvestable landscape. | The project would integrate native drought tolerant landscaping. Harvestable landscape is not feasible. |
| C63. | Promote free shuttle service connecting to Metrolink station. | MM 4.3.6.4A would provide employees with assistance in using alternate travel, which could potentially include this measure, if desired at the time. |
| C64. | Create travel routes that ensure destinations may be reached conveniently by public transit, bicycling and walking. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Consistent with project design and MM 4.3.6.4A. |
| C65. | Work with WRCOG to develop a new master plan to encourage use of neighborhood electric vehicles, which are environmentally friendly street legal vehicles. | Not applicable. However, the project would have electrical hookups for mobile vehicles (MM 4.3.6.4A). |
| C66. | Coordinate with school districts to adopt the League of America Bicyclists' Cycling curriculum so students learn safest way to bike. | Not applicable. |
| C67. | Implement "Smart Bus" technology - GPS with electronic displays at stops to provide actual time data to passengers. | Not applicable. |
| C68. | Develop renewable fuel locations and electric plug-in stations including a map for drivers to find refueling locations. | Consistent. The project would install electric plug-in stations (MM 4.3.6.4A). |

| No. | Moreno Valley Climate Action Strategy | Project Consistency |
|---|---|---|
| C69. | Implement a regional transit program between educational facilities. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Not applicable. |
| C70. | Incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments. (GHG Policy R2- T1 Land Use Based Trips and VMT Reduction Policies) | Consistent with MM 4.3.6.4A and project design. |
| C71. | Explore developing a Smart Growth Development Impact Fee matrix. Fee based on trips generated by project. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Not applicable. |
| C72. | Evaluate and update existing General Plan street cross- sections to accommodate "complete streets" design standards. | Not applicable. |
| C73. | Incorporate public transit into the project's design. (GHG Policy R2-T1 Land Use Based Trips and VMT Reduction Policies) | Consistent with project design features. |
| C74. | Accelerate implementation of solar energy-based technology through permitting process (e.g., reduced permit fees, streamlined permit approval process). | Not applicable. |
| C75. | Where solar systems cannot feasibly be incorporated into the project at the outset, build "solar ready" structures. | Consistent. The project would install solar (MM 4.16.4.6.1C). |
| C76. | Consider changing existing and future illuminated streetlights to LED. The retrofit cost for LED lighting is not feasible at this point. SCE and MVU do not currently have a separate rate structure for LED. | Consistent. As a design feature, the project would implement either high pressure sodium or LED streetlights. |
| Source of Moreno Valley Climate Action Strategy: Moreno Valley Climate Action Strategy 2012.<br>Source of project consistency: Michael Brandman Associates | | |

# D.3 - Solar Information

# WLC Solar Overview

| | | |
|---|---|---|
| **Warehouse and Office Space** | | |
| Total Building Area | Square feet | 40,600,000 |
| Office Area, at 3.0% of Total | Square feet | 1,218,000 |
| Warehouse Area, at 97.0% of Total | Square feet | 0 |
| | | |
| **Peak Electricity Demand** | | |
| Peak Office Demand, at 3.70 Watts per SF | MW | 4.51 |
| Peak Warehouse Demand, at 0.00 Watts per SF | MW | 0.00 |
| | | |
| **Annual Electricity Consumption** | | |
| Electricity Consumed by Offices | | |
| Peak Office Demand | MW | 4.51 |
| Total Hours in Year | hours / year | 8,760 |
| Consumption Hours as a % of Total Hours | % | 50% |
| Average Load Factor When Consuming Electricity | % | 100% |
| Annual Electricity Consumption (100% of Total) | MWh / year | 19,739 |
| | | |
| Electricity Consumed by Warehouses | | |
| Peak Warehouse Demand | MW | 0.00 |
| Total Hours in Year | hours / year | 8,760 |
| Consumption Hours as a % of Total Hours | % | 50% |
| Average Load Factor When Consuming Electricity | % | 100% |
| Annual Electricity Consumption (0% of Total) | MWh / year | 0 |
| | | |
| **Total Annual Electricity Consumption** | **MWh / year** | **19,739** |
| | | |
| **Annual Electricity Production** | | |
| Installed Solar Capacity - Total | MW (DC) | 13.6 |
| Annual Solar Facility Operating Hours | hours / year | 1,610 |
| Annual Solar Electricity Production, Before Conversion to AC | MWh / year (DC) | 21,895 |
| Conversion Factor from DC Power to AC Power | DC to AC | 0.90 |
| **Annual Solar Electricity Production (AC)** | **MWh / year (AC)** | **19,739** |
| | | |
| **Equivalent # of Households Supplied by WLC Solar Facility** | | |
| Annual Solar Electricity Production (AC) | MWh / year (AC) | 19,739 |
| Average Annual Household Electricity Consumption | MWh / year / household (AC) | 11.28 |
| Average Number of Households Supplied by WLC Solar Facility | Households | 1,750 |

# Appendix E:
# Regional Operation Spreadsheets and Model Output

E.1 - Summary, Greenhouse Gas, VOC, Existing, and Onsite Equipment Calculations; CalEEMod Output for Area Source Emissions
E.2 - CalEEMod Output for Alternatives
E.3 - Mobile Spreadsheets: Phase 1 2012
E.4 - Mobile Spreadsheets: Full Buildout 2012
E.5 - Mobile Spreadsheets: Phase 2022 Unmitigated
E.6 - Mobile Spreadsheets: Phase 2022 Mitigated
E.7 - Mobile Spreadsheets: Phases 1 and 2, 2035 Unmitigated
E.8 - Mobile Spreadsheets: Phases 1 and 2, 2035 Mitigated

# E.1 - Summary, Greenhouse Gas, VOC, Existing, and Onsite Equipment Calculations; CalEEMod Output for Area Source Emissions

**Conceptual Buildout**
World Logistics Center
Prepared by FirstCarbon Solutions

| Year | Total (msf) | Total (sf) | Occupied (sf) | |
|---|---|---|---|---|
| 2015 | 0.00 | 0 | 0.000 | 0.000 |
| 2016 | 2.10 | 2100000 | 2.100 | 2.100 |
| 2017 | 4.20 | 4200000 | 2.100 | 2.100 |
| 2018 | 7.00 | 7000000 | 2.800 | 2.800 |
| 2019 | 9.80 | 9800000 | 2.800 | 2.800 |
| 2020 | 15.00 | 15000000 | 5.200 | 5.200 |
| 2021 | 20.20 | 20200000 | 5.200 | 5.200 |
| 2022 | 22.95 | 22945500 | 2.746 | 2.746 |
| 2023 | 24.60 | 24595500 | 1.650 | 1.650 |
| 2024 | 26.25 | 26245500 | 1.650 | 1.650 |
| 2025 | 28.60 | 28600000 | 2.355 | 2.355 |
| 2026 | 31.27 | 31270000 | 2.670 | 2.670 |
| 2027 | 33.94 | 33940000 | 2.670 | 2.670 |
| 2028 | 36.61 | 36610000 | 2.670 | 2.670 |
| 2029 | 38.36 | 38360000 | 1.750 | 1.750 |
| 2030 | 40.11 | 40110000 | 1.750 | 1.750 |
| 2031 | 40.61 | 40610000 | 0.500 | 0.500 |

## Existing Emissions
## Agriculture

World Logistics Center
Prepared by FirstCarbon Solutions
11/20/2013

**Assumptions**

| | | |
|---|---|---|
| Farmed land | 2635 | acres |

**Unpaved Road Dust**

| | | |
|---|---|---|
| Vehicle miles per acre | 4.37 | VMT/acre |
| PM10 emission factor | 2.27 | pounds PM10/VMT |
| PM10 annual emissions | 26139 | pounds/year |
| Days/year in activity | 260 | days |
| PM10 max daily emissions | 101 | pounds/day |

These emissions are from vehicular travel over unpaved roads on agricultural lands. The emissions result from the mechanical disturbance of the roadway and the vehicle generated air turbulence effects. This emission factor used is oriented towards dust emissions from light duty vehicle use, but the activity data do implicitly include some larger vehicle use for harvest and other operations.

Source: California Air Resources Board. 1997. Section 7.11, Unpaved Road Dust, Farm Roads. Website: www.arb.ca.gov/ei/areasrc/fullpdf/full7-11.pdf. Accessed 11/20/2013.

**Agricultural Land Preparation (Discing)**

| | | |
|---|---|---|
| Emission factor for crop | 3.7 | lbs PM10/acre/year (wheat) |
| Annual emissions | 9750 | lbs PM10/year |
| Days of land preparation | 92 | days/year |
| Daily emissions | 106 | lbs PM10/day |

The land preparation source category includes estimates of the airborne soil particulate emissions produced during the preparation of agricultural lands for planting and afterharvest activities. Operations included in this methodology are discing, shaping, chiseling, leveling, and other mechanical operations used to prepare the soil. Dust emissions are produced by the mechanical disturbance of the soil by the implement used and the tractor pulling it. Soil preparation activities tend to be performed in the early spring and fall months.

- Source of emission factor: California Air Resources Board. 2003. Section 7.4, Agricultural Land Preparation. Website: http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-4.pdf. Accessed November 20, 2013.
- Source of days of land preparation: United States Department of Agriculture 1997. Usual Planting and Harvesting Dates for U.S. Field Crops. (Wheat, winter, usual planting dates for California, assuming November 1 to February 1, 6 days per week). Website: www.nass.usda.gov/Publications/Usual_Planting_and_Harvesting_Dates/uph97.pdf

## Existing Emissions
## Agriculture

World Logistics Center
Prepared by FirstCarbon Solutions
11/20/2013

### Agricultural Harvest Operations

| | | |
|---|---|---|
| Emission factor | 5.8 | lbs PM10/acre (wheat) |
| Emissions - annual | 15283 | lbs PM10/year |
| Days of harvest | 61 | days/year |
| Daily emissions | 251 | lbs/day |

The activities used to harvest agricultural commodities entrain soil and plant material into the air. These emissions may simply be due to the vehicles traveling over the soil, or via the mechanical processing of the plant material and underlying soil.

- Source of emission factor: California Air Resources Board. 2003. Agricultural Harvest Operations. Website: http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-5.pdf.
- Source of days of harvest: United States Department of Agriculture 1997. Usual Planting and Harvesting Dates for U.S. Field Crops. (Wheat, winter, usual harvesting dates for California, assuming June 1 to August 1, 6 days per week). Website: www.nass.usda.gov/Publications/Usual_Planting_and_Harvesting_Dates/uph97.pdf

### Maximum Daily Emissions

| | Pounds/day | | |
|---|---|---|---|
| | **PM10** | **PM2.5** | *Percent PM2.5* |
| Road dust | 101 | 21 | *0.212* |
| Harvest operations | 251 | 56 | *0.222* |
| Total | 351 | 77 | |

PM2.5 percentages of PM10 emissions (from agricultural tilling dust and from unpaved road dust), source: South Coast Air Quality Management District. 2006. Final Methodology to Calculate PM2.5 and PM2.5 Significance Thresholds. Appendix A, Updated CEIDARS Table with PM2.5 Fractions. Website: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html

## Construction Summary

World Logistics Center
Prepared by FirstCarbon Solutions
2/25/2015

**Unmitigated Construction Emissions (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| 2015 | 128 | 1463 | 871 | 2 | 193 | 84 |
| 2016 | 267 | 841 | 530 | 1 | 126 | 50 |
| 2017 | 314 | 1432 | 849 | 2 | 192 | 82 |
| 2018 | 267 | 841 | 530 | 1 | 126 | 50 |
| 2019 | 371 | 2116 | 1226 | 2 | 267 | 124 |
| 2020 | 277 | 961 | 596 | 1 | 137 | 57 |
| 2021 | 303 | 1259 | 774 | 2 | 184 | 76 |
| 2022 | 286 | 1057 | 668 | 1 | 169 | 66 |
| 2023 | 317 | 1389 | 885 | 2 | 207 | 87 |
| 2024 | 298 | 1174 | 754 | 2 | 183 | 73 |
| 2025 | 311 | 1289 | 854 | 2 | 203 | 83 |
| 2026 | 267 | 841 | 530 | 1 | 126 | 50 |
| 2027 | 263 | 729 | 750 | 2 | 168 | 52 |
| 2028 | 252 | 607 | 667 | 2 | 149 | 42 |
| 2029 | 223 | 318 | 456 | 1 | 94 | 20 |
| 2030 | 245 | 420 | 571 | 1 | 140 | 35 |

**Mitigated Construction Summary (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| 2015 | 31 | 523 | 871 | 1.5 | 130 | 26 |
| 2016 | 134 | 371 | 530 | 1.0 | 86 | 14 |
| 2017 | 143 | 529 | 849 | 1.6 | 130 | 26 |
| 2018 | 134 | 371 | 530 | 1.0 | 86 | 14 |
| 2019 | 158 | 764 | 1226 | 2.4 | 181 | 45 |
| 2020 | 135 | 401 | 596 | 1.1 | 91 | 16 |
| 2021 | 142 | 515 | 774 | 1.5 | 128 | 25 |
| 2022 | 140 | 460 | 668 | 1.3 | 122 | 22 |
| 2023 | 148 | 605 | 885 | 1.9 | 147 | 32 |
| 2024 | 143 | 522 | 754 | 1.6 | 131 | 26 |
| 2025 | 148 | 605 | 854 | 1.9 | 148 | 32 |
| 2026 | 134 | 371 | 530 | 1.0 | 86 | 14 |
| 2027 | 145 | 571 | 750 | 1.7 | 146 | 31 |
| 2028 | 142 | 519 | 667 | 1.6 | 131 | 25 |
| 2029 | 132 | 368 | 456 | 1.0 | 86 | 13 |
| 2030 | 139 | 470 | 571 | 1.4 | 129 | 25 |

**Unmitigated Construction (pounds/day)**

| | VOC | NOx | CO | SO2 | PM10 dust | PM10 exhaust | PM10 Total | PM2.5 dust | PM2.5 exhaust | PM2.5 total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 128 | 1463 | 871 | 2 | 124 | 69 | 193 | 20 | 64 | 84 |
| 2016 | 267 | 841 | 530 | 1 | 82 | 44 | 126 | 9 | 41 | 50 |
| 2017 | 314 | 1432 | 849 | 2 | 125 | 68 | 192 | 20 | 62 | 82 |
| 2018 | 267 | 841 | 530 | 1 | 82 | 44 | 126 | 9 | 41 | 50 |
| 2019 | 371 | 2116 | 1226 | 2 | 173 | 93 | 267 | 38 | 86 | 124 |
| 2020 | 277 | 961 | 596 | 1 | 86 | 50 | 137 | 11 | 46 | 57 |
| 2021 | 303 | 1259 | 774 | 2 | 122 | 62 | 184 | 19 | 57 | 76 |
| 2022 | 286 | 1057 | 668 | 1 | 116 | 53 | 169 | 17 | 49 | 66 |
| 2023 | 317 | 1389 | 885 | 2 | 141 | 66 | 207 | 26 | 61 | 87 |
| 2024 | 298 | 1174 | 754 | 2 | 125 | 57 | 183 | 20 | 53 | 73 |
| 2025 | 311 | 1289 | 854 | 2 | 141 | 62 | 203 | 26 | 57 | 83 |
| 2026 | 267 | 841 | 530 | 1 | 82 | 44 | 126 | 9 | 41 | 50 |
| 2027 | 263 | 729 | 750 | 2 | 140 | 28 | 168 | 26 | 26 | 52 |
| 2028 | 252 | 607 | 667 | 2 | 126 | 23 | 149 | 20 | 21 | 42 |
| 2029 | 223 | 318 | 456 | 1 | 82 | 12 | 94 | 9 | 11 | 20 |
| 2030 | 245 | 420 | 571 | 1 | 124 | 16 | 140 | 20 | 15 | 35 |

**Interpolation of Motor Vehicle Emissions**
**2012 Worst-Case Scenario**
World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| **Phase 1** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emission Source | AADT (mi/day) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road dust (lbs/day) | PM10 (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road dust (lbs/day) | PM2.5 (lbs/day) | CO2 (lbs/day) | Black Carbon (lbs/day) | CH4 (lbs/day) | N2O (lbs/day) |
| Area | 7942 | 20 | 101 | 115 | | 2 | | | | 2 | | | | 24,231 | | 2.3 | 0.10 |
| Internal | 63325 | 53 | 428 | 391 | | 13 | | | | 12 | | | | 111,548 | | 4.1 | 0.73 |
| Surface | 103359 | 41 | 286 | 467 | | 8 | | | | 7 | | | | 112,537 | | 4.0 | 1.18 |
| Freeways | 411025 | 257 | 4203 | 2132 | | 135 | | | | 129 | | | | 884,316 | | 19.6 | 4.73 |
| Freeways to Ports | 5750 | 6 | 123 | 39 | | 4 | | | | 4 | | | | 20,949 | | 0.3 | 0.06 |
| **Total** | 591401 | 377 | 5141 | 3144 | | 161 | 98 | 487 | 746 | 154 | 38 | 120 | 311 | 1,153,579 | 115.7 | 30.3 | 6.80 |
| Emissions rate (pounds/day/MSF) | | 16.4 | 224.0 | 137.0 | 0.0 | 7.0 | 4.3 | 21.2 | 32.5 | 6.7 | 1.6 | 5.2 | 13.6 | 50,275 | 5.0 | 1.3 | 0.30 |
| Total (tons/day) | | 0.2 | 2.6 | 1.6 | 0.0 | 0.1 | 0.0 | 0.2 | 0.4 | 0.1 | 0.0 | 0.1 | 0.2 | 577 | 0.1 | 0.02 | 0.00 |
| Total (tons/year) | | 69 | 938 | 574 | 0 | 29 | 18 | 89 | 136 | 28 | 7 | 22 | 57 | 210,528 | 21 | 6 | 1.24 |

| **Phases 1 and 2** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emission Source | AADT (mi/day) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road dust (lbs/day) | PM10 (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road dust (lbs/day) | PM2.5 (lbs/day) | CO2 (lbs/day) | Black Carbon (lbs/day) | CH4 (lbs/day) | N2O (lbs/day) |
| Area | 14029 | 34 | 177 | 203 | | 4 | | | | 4 | | | | 42,635 | | 4.1 | 0.17 |
| Internal | 119273 | 101 | 819 | 741 | | 24 | | | | 23 | | | | 212,046 | | 7.7 | 1.38 |
| Surface | 175663 | 68 | 456 | 787 | | 12 | | | | 11 | | | | 187,031 | | 6.7 | 2.00 |
| Freeways | 718396 | 451 | 7387 | 3732 | | 237 | | | | 226 | | | | 1,550,850 | | 34.3 | 8.28 |
| Freeways to Ports | 10232 | 11 | 219 | 69 | | 7 | | | | 7 | | | | 37,276 | | 0.6 | 0.11 |
| Total | 1037593 | 666 | 9057 | 5531 | | 284 | 171 | 853 | 1308 | 272 | 66 | 209 | 547 | 2,029,838 | 203.8 | 53.4 | 11.94 |
| Emissions rate (pounds/day/MSF) | | 16.3 | 221.7 | 135.1 | 0.0 | 6.9 | 4.2 | 20.7 | 31.8 | 6.6 | 1.6 | 5.1 | 13.3 | 49,606 | 5.0 | 1.3 | 0.3 |
| Total (tons/day) | | 0.3 | 4.5 | 2.8 | 0.0 | 0.1 | 0.1 | 0.4 | 0.7 | 0.1 | 0.0 | 0.1 | 0.3 | 1,015 | 0.1 | 0.03 | 0.01 |
| Total (tons/year) | | 122 | 1653 | 1009 | 0 | 52 | 31 | 156 | 239 | 50 | 12 | 38 | 100 | 370,445 | 37 | 9.75 | 2.18 |

**Mobile Sources: Summary and Interpolation**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | *GWP:* | *1* | *760* | *21* | *310* | |
| Year | Occupied (msf) | Cumulative Occupied (msf) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road Dust (lbs/day) | PM10 Total (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road Dust (lbs/day) | PM2.5 Total (lbs/day) | CO2 (tons/year) | Black Carbon (tons/year) | CH4 (tons/year) | N2O (tons/year) | MTCO2e/year |
| 2016 | 2.1 | 2.1 | 35 | 470 | 288 | 0 | 15 | 9 | 45 | 68 | 14 | 3 | 11 | 29 | 19,268 | 2 | 1 | 0 | 18,854 |
| 2017 | 2.1 | 4.2 | 69 | 941 | 576 | 0 | 30 | 18 | 89 | 137 | 28 | 7 | 22 | 57 | 38,536 | 3.87 | 1.01 | 0.23 | 37,708 |
| 2018 | 2.8 | 7 | 115 | 1568 | 959 | 0 | 49 | 30 | 149 | 228 | 47 | 12 | 36 | 95 | 64,226 | 6.44 | 1.69 | 0.38 | 62,846 |
| 2019 | 2.8 | 9.8 | 161 | 2196 | 1343 | 0 | 69 | 42 | 208 | 319 | 66 | 16 | 51 | 133 | 89,916 | 9.02 | 2.36 | 0.53 | 87,984 |
| 2020 | 5.2 | 15 | 246 | 3360 | 2056 | 0 | 105 | 64 | 318 | 488 | 101 | 25 | 78 | 204 | 137,627 | 13.80 | 3.62 | 0.81 | 134,670 |
| 2021 | 5.2 | 20.2 | 332 | 4525 | 2768 | 0 | 142 | 86 | 429 | 657 | 136 | 33 | 105 | 274 | 185,338 | 18.59 | 4.87 | 1.09 | 181,356 |
| 2022 | 2.7455 | 22.9455 | 377 | 5141 | 3144 | 0 | 161 | 98 | 487 | 746 | 154 | 38 | 120 | 311 | 210,528 | 21.12 | 5.53 | 1.24 | 206,005 |
| 2023 | 1.65 | 24.5955 | 404 | 5506 | 3367 | 0 | 173 | 104 | 521 | 798 | 165 | 40 | 128 | 333 | 225,466 | 22.62 | 5.93 | 1.33 | 220,623 |
| 2024 | 1.65 | 26.2455 | 431 | 5872 | 3590 | 0 | 184 | 111 | 555 | 851 | 176 | 43 | 136 | 355 | 240,403 | 24.12 | 6.32 | 1.42 | 235,242 |
| 2025 | 2.3545 | 28.6 | 469 | 6394 | 3908 | 0 | 201 | 121 | 604 | 926 | 192 | 47 | 148 | 387 | 261,719 | 26.26 | 6.88 | 1.54 | 256,102 |
| 2026 | 2.67 | 31.27 | 513 | 6986 | 4269 | 0 | 219 | 132 | 659 | 1011 | 209 | 51 | 162 | 422 | 285,890 | 28.69 | 7.52 | 1.68 | 279,757 |
| 2027 | 2.67 | 33.94 | 557 | 7578 | 4630 | 0 | 238 | 144 | 715 | 1096 | 227 | 55 | 175 | 458 | 310,062 | 31.12 | 8.16 | 1.82 | 303,412 |
| 2028 | 2.67 | 36.61 | 600 | 8170 | 4991 | 0 | 256 | 155 | 770 | 1181 | 245 | 60 | 189 | 494 | 334,233 | 33.55 | 8.80 | 1.97 | 327,068 |
| 2029 | 1.75 | 38.36 | 629 | 8558 | 5227 | 0 | 268 | 162 | 806 | 1237 | 257 | 63 | 198 | 517 | 350,076 | 35.14 | 9.21 | 2.06 | 342,572 |
| 2030 | 1.75 | 40.11 | 658 | 8946 | 5464 | 0 | 280 | 169 | 843 | 1292 | 268 | 65 | 207 | 540 | 365,919 | 36.73 | 9.63 | 2.15 | 358,077 |
| Buildout | 0.5 | 40.61 | 666 | 9057 | 5531 | 0 | 284 | 171 | 853 | 1308 | 272 | 66 | 209 | 547 | 370,445 | 37.19 | 9.75 | 2.18 | 362,507 |

Sources:
- Emissions for years 2022 and buildout are estimated using the spreadsheets prepared by Michael Brandman Associates/FirstCarbon Solutions and the methods discussed in the AQ/GHG/HRA Report.
- Years 2016-2021 and 2023-2030 were interpolated from the 2022 and buildout emissions rates, respectively.

**Criteria Pollutant Summary**
**2012 Worst-Case**
World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| | Emissions (pounds/day) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **VOC*** | **NOx** | **CO** | **PM10** | **PM10** | **PM10** | **PM2.5** | **PM2.5** | **PM2.5** |
| **Operational Only** | | | | dust | exhaust | total | dust | exhaust | total |
| 2016 | 59 | 483 | 293 | 54 | 15 | 68 | 14 | 14 | 29 |
| 2017 | 118 | 967 | 585 | 107 | 30 | 137 | 29 | 29 | 57 |
| 2018 | 197 | 1611 | 975 | 178 | 50 | 228 | 48 | 48 | 95 |
| 2019 | 276 | 2256 | 1365 | 250 | 70 | 319 | 67 | 67 | 134 |
| 2020 | 422 | 3452 | 2090 | 382 | 106 | 489 | 103 | 102 | 205 |
| 2021 | 568 | 4649 | 2814 | 515 | 143 | 658 | 138 | 137 | 276 |
| 2022 | 645 | 5281 | 3197 | 585 | 163 | 747 | 157 | 156 | 313 |
| 2023 | 691 | 5657 | 3424 | 626 | 174 | 800 | 168 | 167 | 335 |
| 2024 | 738 | 6033 | 3650 | 667 | 186 | 853 | 179 | 178 | 357 |
| 2025 | 804 | 6569 | 3974 | 725 | 202 | 928 | 195 | 194 | 389 |
| 2026 | 878 | 7178 | 4341 | 792 | 221 | 1013 | 213 | 212 | 425 |
| 2027 | 953 | 7786 | 4708 | 858 | 240 | 1098 | 231 | 229 | 460 |
| 2028 | 1028 | 8394 | 5075 | 925 | 259 | 1183 | 249 | 247 | 496 |
| 2029 | 1077 | 8793 | 5315 | 968 | 271 | 1239 | 260 | 259 | 520 |
| 2030 | 1126 | 9192 | 5556 | 1012 | 283 | 1295 | 272 | 271 | 543 |
| 2031 | 1140 | 9306 | 5624 | 1024 | 287 | 1311 | 276 | 274 | 550 |

*Emissions include: mobile, forklifts, emergency generator, yard trucks, and natural gas*
** VOC emissions also include architectural coatings and consumer products*

| | **VOC** | **NOx** | **CO** | **PM10** | **PM10** | **PM10** | **PM2.5** | **PM2.5** | **PM2.5** |
|---|---|---|---|---|---|---|---|---|---|
| **Operation Detail: 2022** | | | | dust | exhaust | total | dust | exhaust | total |
| Mobile | 377 | 5141 | 3144 | 585 | 161 | 746 | 157 | 154 | 311 |
| Architectural Coatings | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Consumer Products | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Natural Gas | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite equipment | 5 | 138 | 51 | 0 | 1 | 1 | 0 | 1 | 1 |
| **Total** | **645** | **5281** | **3197** | **585** | **163** | **747** | **157** | **156** | **313** |
| | | | | | | | | | |
| **Operation Detail: Buildout** | | | | | | | | | |
| Mobile | 666 | 9057 | 5531 | 1024 | 284 | 1308 | 276 | 272 | 547 |
| Architectural Coatings | 258 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Consumer Products | 207 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Natural Gas | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yard Trucks | 7 | 175 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Generator | 2 | 62 | 11 | 0 | 2 | 2 | 0 | 2 | 2 |
| Forklifts | 0 | 8 | 75 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1140** | **9306** | **5624** | **1024** | **287** | **1311** | **276** | **274** | **550** |

**Criteria Pollutant Summary**
**2012 Worst-Case**
World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| **Operational + Construction** | | | | **PM10** | **PM10** | **PM10** | **PM2.5** | **PM2.5** | **PM2.5** |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **VOC** | **NOx** | **CO** | dust | exhaust | total | dust | exhaust | total |
| 2016 | 326 | 1324 | 823 | 135 | 59 | 195 | 24 | 55 | 79 |
| 2017 | 432 | 2399 | 1434 | 232 | 97 | 329 | 49 | 91 | 140 |
| 2018 | 463 | 2452 | 1505 | 260 | 94 | 354 | 57 | 89 | 146 |
| 2019 | 646 | 4371 | 2591 | 423 | 163 | 586 | 105 | 153 | 258 |
| 2020 | 699 | 4413 | 2686 | 469 | 157 | 625 | 114 | 148 | 262 |
| 2021 | 871 | 5909 | 3589 | 637 | 205 | 842 | 158 | 194 | 351 |
| 2022 | 931 | 6338 | 3865 | 701 | 216 | 916 | 174 | 204 | 379 |
| 2023 | 1008 | 7046 | 4309 | 767 | 240 | 1007 | 194 | 227 | 422 |
| 2024 | 1036 | 7207 | 4404 | 792 | 243 | 1035 | 200 | 231 | 430 |
| 2025 | 1114 | 7858 | 4828 | 867 | 264 | 1131 | 221 | 251 | 472 |
| 2026 | 1145 | 8019 | 4871 | 873 | 266 | 1139 | 222 | 253 | 475 |
| 2027 | 1217 | 8515 | 5457 | 998 | 268 | 1266 | 257 | 255 | 512 |
| 2028 | 1280 | 9002 | 5741 | 1051 | 282 | 1332 | 269 | 269 | 538 |
| 2029 | 1301 | 9111 | 5772 | 1050 | 283 | 1333 | 270 | 270 | 540 |
| 2030 | 1371 | 9612 | 6126 | 1136 | 299 | 1435 | 292 | 286 | 578 |
| 2031 | 1140 | 9306 | 5624 | 1024 | 287 | 1311 | 276 | 274 | 550 |

**Interpolation of Motor Vehicle Emissions**
**Unmitigated**
World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| **Project Only Phase 1 2022** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emission Source | AADT (mi/day) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road dust (lbs/day) | PM10 Total (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road dust (lbs/day) | PM2.5 Total (lbs/day) | CO2 (lbs/day) | Black Carbon (lbs/day) | CH4 (lbs/day) | N2O (lbs/day) |
| Area | 7,942 | 6 | 46 | 51 | | 0.18 | | | | 0.17 | | | | 19856 | | 1.19 | 0.10 |
| Internal | 67,972 | 17 | 174 | 149 | | 0.84 | | | | 0.79 | | | | 102702 | | 1.26 | 0.79 |
| Surface | 109,959 | 15 | 98 | 174 | | 0.70 | | | | 0.66 | | | | 109036 | | 1.30 | 1.25 |
| Freeways | 413,270 | 65 | 1196 | 669 | | 6.44 | | | | 6.13 | | | | 778816 | | 5.00 | 4.71 |
| Freeways to Ports | 10,740 | 3 | 77 | 25 | | 0.37 | | | | 0.35 | | | | 37963 | | 0.18 | 0.12 |
| Total | 609,883 | 106 | 1591 | 1068 | | 8.52 | 100 | 512 | 620 | 8.10 | 39 | 126 | 172 | 1048372 | 5.30 | 8.94 | 6.97 |
| Emissions rate (pounds/day/MSF) | | 4.6 | 69.4 | 46.6 | 0.0 | 0.4 | 4.3 | 22.3 | 27.0 | 0.4 | 1.7 | 5.5 | 7.5 | 45690 | 0.2 | 0.4 | 0.30 |
| Total (tons/day) | | 0.05 | 0.80 | 0.53 | 0.00 | 0.00 | 0.05 | 0.26 | 0.31 | 0.00 | 0.02 | 0.06 | 0.09 | 524 | 0.00 | 0.0045 | 0.0035 |
| Total (tons/year) | | 19.42 | 290.43 | 194.96 | 0.00 | 1.55 | 18.21 | 93.45 | 113.21 | 1.48 | 7.04 | 22.94 | 31.45 | 191328 | 0.97 | 1.63 | 1.27 |

| **Project Only Phase 1 and 2, Buildout** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emission Source | AADT (mi/day) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road dust (lbs/day) | PM10 Total (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road dust (lbs/day) | PM2.5 Total (lbs/day) | CO2 (lbs/day) | Black Carbon (lbs/day) | CH4 (lbs/day) | N2O (lbs/day) |
| Area | 14,029 | 7 | 59 | 71 | | 0.16 | | | | 0.15 | | | | 28698 | | 1.51 | 0.17 |
| Internal | 131,699 | 20 | 185 | 182 | | 0.70 | | | | 0.66 | | | | 170611 | | 1.15 | 1.54 |
| Surface | 223,704 | 18 | 91 | 201 | | 0.74 | | | | 0.70 | | | | 195798 | | 1.11 | 2.59 |
| Freeways | 632,086 | 71 | 653 | 787 | | 4.22 | | | | 4.02 | | | | 1134234 | | 4.43 | 7.25 |
| Freeways to Ports | 33,233 | 3 | 42 | 46 | | 0.36 | | | | 0.35 | | | | 99931 | | 0.24 | 0.36 |
| Total | 1,034,751 | 120 | 1031 | 1286 | | 6.18 | 172 | 943 | 1120 | 5.87 | 66 | 231 | 303 | 1629272 | 3.63 | 8.43 | 11.90 |
| Emissions rate (pounds/day/MSF) | | 0.74 | -31.74 | 12.33 | 0.00 | -0.13 | 4.06 | 24.38 | 28.31 | -0.13 | 1.56 | 5.98 | 7.42 | 32885 | -0.09 | -0.03 | 0.28 |
| Total (tons/day) | | 0.1 | 0.5 | 0.6 | 0.0 | 0.0 | 0.1 | 0.5 | 0.6 | 0.0 | 0.0 | 0.1 | 0.2 | 815 | 0.0 | 0.00 | 0.01 |
| Total (tons/year) | | 21.81 | 188.11 | 234.71 | 0.00 | 1.13 | 31.31 | 172.04 | 204.48 | 1.07 | 12.07 | 42.23 | 55.37 | 297342 | 0.66 | 1.54 | 2.17 |

**Mobile Sources: Summary and Interpolation**

| | | | | | | | | | | | | | | *GWP:* | *1* | *760* | *21* | *310* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Occupied (msf) | Cumulative Occupied (msf) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road Dust (lbs/day) | PM10 Total (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road Dust (lbs/day) | PM2.5 Total (lbs/day) | CO2 (tons/year) | Black Carbon (tons/year) | CH4 (tons/year) | N2O (tons/year) | MTCO2e/ year |
| 2016 | 2.10 | 2.10 | 10 | 146 | 98 | 0 | 1 | 9 | 47 | 57 | 1 | 4 | 12 | 16 | 17,511 | 0 | 0 | 0 | 15982 |
| 2017 | 2.10 | 4.20 | 19 | 291 | 196 | 0 | 2 | 18 | 94 | 114 | 1 | 7 | 23 | 32 | 35,021 | 0.18 | 0.30 | 0.23 | 31964 |
| 2018 | 2.80 | 7.00 | 32 | 485 | 326 | 0 | 3 | 30 | 156 | 189 | 2 | 12 | 38 | 53 | 58,369 | 0.30 | 0.50 | 0.39 | 53274 |
| 2019 | 2.80 | 9.80 | 45 | 680 | 456 | 0 | 4 | 43 | 219 | 265 | 3 | 16 | 54 | 74 | 81,716 | 0.41 | 0.70 | 0.54 | 74584 |
| 2020 | 5.20 | 15.00 | 70 | 1040 | 698 | 0 | 6 | 65 | 335 | 406 | 5 | 25 | 82 | 113 | 125,075 | 0.63 | 1.07 | 0.83 | 114159 |
| 2021 | 5.20 | 20.20 | 94 | 1401 | 940 | 0 | 7 | 88 | 451 | 546 | 7 | 34 | 111 | 152 | 168,435 | 0.85 | 1.44 | 1.12 | 153734 |
| 2022 | 2.75 | 22.95 | 106 | 1591 | 1068 | 0 | 9 | 100 | 512 | 620 | 8 | 39 | 126 | 172 | 191,328 | 0.97 | 1.63 | 1.27 | 174629 |
| 2023 | 1.65 | 24.60 | 108 | 1539 | 1089 | 0 | 8 | 106 | 552 | 667 | 8 | 41 | 136 | 185 | 201,230 | 0.94 | 1.62 | 1.36 | 183616 |
| 2024 | 1.65 | 26.25 | 109 | 1487 | 1109 | 0 | 8 | 113 | 592 | 714 | 8 | 44 | 145 | 197 | 211,133 | 0.91 | 1.61 | 1.44 | 192604 |
| 2025 | 2.35 | 28.60 | 111 | 1412 | 1138 | 0 | 8 | 123 | 650 | 780 | 7 | 47 | 160 | 214 | 225,264 | 0.87 | 1.60 | 1.56 | 205429 |
| 2026 | 2.67 | 31.27 | 113 | 1327 | 1171 | 0 | 7 | 134 | 715 | 856 | 7 | 52 | 175 | 234 | 241,288 | 0.82 | 1.59 | 1.70 | 219972 |
| 2027 | 2.67 | 33.94 | 115 | 1242 | 1204 | 0 | 7 | 144 | 780 | 932 | 7 | 56 | 191 | 254 | 257,312 | 0.78 | 1.57 | 1.83 | 234515 |
| 2028 | 2.67 | 36.61 | 117 | 1158 | 1237 | 0 | 7 | 155 | 845 | 1007 | 6 | 60 | 207 | 274 | 273,336 | 0.73 | 1.56 | 1.97 | 249059 |
| 2029 | 1.75 | 38.36 | 118 | 1102 | 1258 | 0 | 6 | 162 | 888 | 1057 | 6 | 63 | 218 | 287 | 283,839 | 0.70 | 1.55 | 2.06 | 258591 |
| 2030 | 1.75 | 40.11 | 119 | 1047 | 1280 | 0 | 6 | 170 | 930 | 1106 | 6 | 65 | 228 | 300 | 294,341 | 0.67 | 1.54 | 2.15 | 268123 |
| Buildout | 0.50 | 40.61 | 120 | 1031 | 1286 | 0 | 6 | 172 | 943 | 1120 | 6 | 66 | 231 | 303 | 297,342 | 0.66 | 1.54 | 2.17 | 270846 |

Sources:
- Emissions for years 2022 and buildout are estimated using the spreadsheets prepared by Michael Brandman Associates/FirstCarbon Solutions and the methods discussed in the AQ/GHG/HRA Report.
- Years 2016-2021 and 2023-2030 were interpolated from the 2022 and buildout emissions rates, respectively.

## Criteria Pollutant Summary
## Unmitigated

World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| | Emissions (pounds/day) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **VOC*** | **NOx** | **CO** | **PM10** | **PM10** | **PM10** | **PM2.5** | **PM2.5** | **PM2.5** |
| **Operational Only** | | | | dust | exhaust | total | dust | exhaust | total |
| 2016 | 34 | 159 | 103 | 56 | 1 | 57 | 15 | 1 | 16 |
| 2017 | 69 | 317 | 205 | 112 | 2 | 114 | 30 | 2 | 32 |
| 2018 | 114 | 528 | 342 | 187 | 3 | 190 | 50 | 3 | 53 |
| 2019 | 160 | 740 | 479 | 261 | 4 | 266 | 70 | 4 | 74 |
| 2020 | 245 | 1132 | 733 | 400 | 7 | 407 | 107 | 6 | 114 |
| 2021 | 330 | 1525 | 987 | 539 | 9 | 547 | 145 | 8 | 153 |
| 2022 | 374 | 1732 | 1121 | 612 | 10 | 622 | 164 | 10 | 174 |
| 2023 | 395 | 1690 | 1145 | 659 | 10 | 669 | 177 | 10 | 186 |
| 2024 | 415 | 1647 | 1169 | 706 | 10 | 715 | 189 | 9 | 199 |
| 2025 | 445 | 1587 | 1203 | 773 | 10 | 782 | 207 | 9 | 216 |
| 2026 | 478 | 1519 | 1242 | 849 | 9 | 858 | 227 | 9 | 236 |
| 2027 | 511 | 1450 | 1281 | 925 | 9 | 934 | 247 | 9 | 256 |
| 2028 | 544 | 1382 | 1321 | 1000 | 9 | 1010 | 267 | 9 | 276 |
| 2029 | 566 | 1337 | 1346 | 1050 | 9 | 1059 | 281 | 9 | 289 |
| 2030 | 588 | 1292 | 1372 | 1100 | 9 | 1109 | 294 | 9 | 302 |
| 2031 | 594 | 1280 | 1379 | 1114 | 9 | 1123 | 298 | 9 | 306 |

*Emissions include: mobile, forklifts, emergency generator, yard trucks, and natural gas*
** VOC emissions also include architectural coatings and consumer products*

| | **VOC** | **NOx** | **CO** | **PM10** | **PM10** | **PM10** | **PM2.5** | **PM2.5** | **PM2.5** |
|---|---|---|---|---|---|---|---|---|---|
| **Operation Detail: 2022** | | | | dust | exhaust | total | dust | exhaust | total |
| Mobile | 106 | 1591 | 1068 | 612 | 9 | 620 | 164 | 8 | 172 |
| Architectural Coatings | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Consumer Products | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Natural Gas | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite equipment | 5 | 138 | 51 | 0 | 1 | 1 | 0 | 1 | 1 |
| **Total** | **374** | **1732** | **1121** | **612** | **10** | **622** | **164** | **10** | **174** |
| | | | | | | | | | |
| **Operation Detail: Buildout** | | | | | | | | | |
| Mobile | 120 | 1031 | 1286 | 1114 | 6 | 1120 | 298 | 6 | 303 |
| Architectural Coatings | 258 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Consumer Products | 207 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Natural Gas | 0.4 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yard Trucks | 7 | 175 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Generator | 1.88 | 62 | 11 | 0 | 2 | 2 | 0 | 2 | 2 |
| Forklifts | 0.17 | 8 | 75 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **594** | **1280** | **1379** | **1114** | **9** | **1123** | **298** | **9** | **306** |
| **Threshold** | **55** | **55** | **550** | **None** | **None** | **150** | **None** | **None** | **55** |
| **Exceed by** | **539** | **1225** | **829** | | | **973** | | | **251** |

## Criteria Pollutant Summary
## Unmitigated

World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| **Operational + Construction** | | | | **PM10** | **PM10** | **PM10** | **PM2.5** | **PM2.5** | **PM2.5** |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **VOC** | **NOx** | **CO** | dust | exhaust | total | dust | exhaust | total |
| 2015 | 128 | 1463 | 871 | 124 | 69 | 193 | 20 | 64 | 84 |
| 2016 | 301 | 1000 | 633 | 138 | 45 | 183 | 24 | 42 | 66 |
| 2017 | 382 | 1749 | 1054 | 237 | 69 | 306 | 50 | 64 | 114 |
| 2018 | 381 | 1369 | 872 | 268 | 48 | 316 | 59 | 44 | 103 |
| 2019 | 531 | 2855 | 1705 | 435 | 98 | 532 | 108 | 90 | 198 |
| 2020 | 522 | 2093 | 1329 | 486 | 57 | 543 | 118 | 52 | 171 |
| 2021 | 633 | 2784 | 1761 | 661 | 70 | 731 | 164 | 65 | 229 |
| 2022 | 661 | 2789 | 1789 | 728 | 63 | 791 | 181 | 58 | 240 |
| 2023 | 712 | 3079 | 2030 | 800 | 76 | 876 | 203 | 70 | 273 |
| 2024 | 713 | 2822 | 1923 | 831 | 67 | 898 | 209 | 62 | 272 |
| 2025 | 756 | 2876 | 2057 | 914 | 72 | 986 | 233 | 66 | 299 |
| 2026 | 744 | 2360 | 1772 | 930 | 54 | 984 | 236 | 50 | 286 |
| 2027 | 774 | 2179 | 2031 | 1065 | 37 | 1102 | 273 | 35 | 308 |
| 2028 | 796 | 1989 | 1987 | 1127 | 32 | 1159 | 288 | 30 | 318 |
| 2029 | 789 | 1655 | 1803 | 1132 | 21 | 1153 | 290 | 20 | 309 |
| 2030 | 833 | 1712 | 1942 | 1224 | 25 | 1249 | 314 | 23 | 337 |
| 2031 | 594 | 1280 | 1379 | 1114 | 9 | 1123 | 298 | 9 | 306 |
| | | | | | | | | | |
| ***For comparison with DEIR*** | | | | | | | | | |
| *DEIR buildout* | *733* | *3064* | *3524* | | | *1705* | | | *153* |
| *Difference with revised* | *-139* | *-1784* | *-2145* | | | *-582* | | | *153* |

**Interpolation of Motor Vehicle Emissions**
**Mitigated**
World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

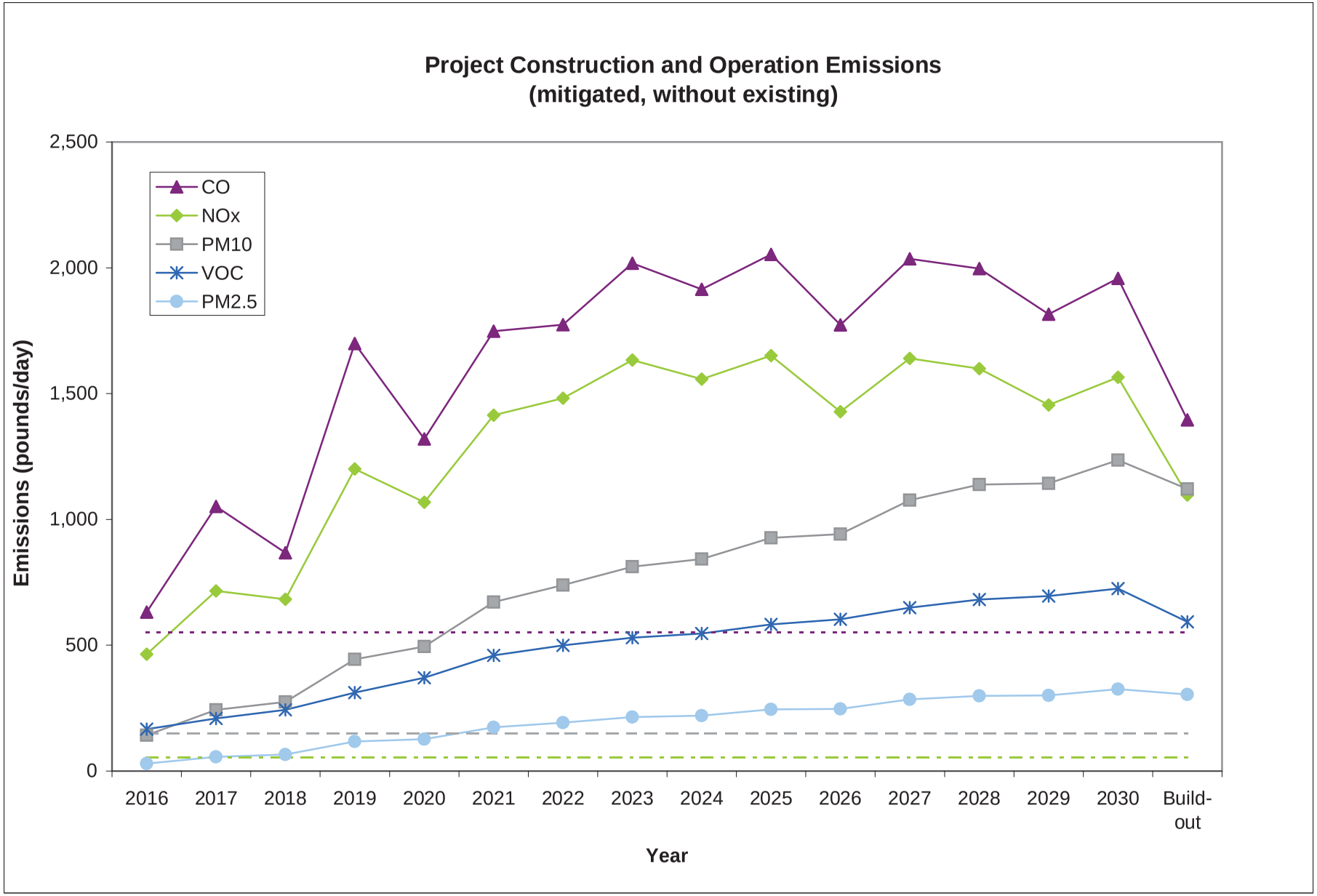
| **Project Only Phase 1 2022** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AADT | VOC | NOx | CO | SOx | PM10 Exhaust | PM10 Brake/Tire | PM10 Road dust | PM10 Total | PM2.5 Exhaust | PM2.5 Brake/Tire | PM2.5 Road dust | PM2.5 Total | CO2 | Black Carbon | CH4 | N2O |
| Emission Source | (mi/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) |
| Area | 7942 | 6 | 39 | 51 | | 0.15 | | | | 0.14 | | | | 19,570 | | 1.18 | 0.10 |
| Internal | 67972 | 15 | 130 | 146 | | 0.53 | | | | 0.50 | | | | 100,411 | | 1.16 | 0.79 |
| Surface | 109959 | 14 | 68 | 173 | | 0.52 | | | | 0.49 | | | | 107,980 | | 1.26 | 1.25 |
| Freeways | 413270 | 55 | 687 | 652 | | 3.66 | | | | 3.48 | | | | 760,250 | | 4.55 | 4.71 |
| Freeways to Ports | 10740 | 2 | 44 | 24 | | 0.18 | | | | 0.18 | | | | 36,640 | | 0.15 | 0.12 |
| Total | 609883 | 93 | 968 | 1044 | | 5.04 | 100 | 512 | 617 | 4.78 | 39 | 126 | 169 | 1,024,851 | 2.8 | 8.31 | 6.97 |
| Emissions rate (pounds/day/MSF) | | 4.0 | 42.2 | 45.5 | 0.0 | 0.2 | 4.3 | 22.3 | 26.9 | 0.2 | 1.7 | 5.5 | 7.4 | 44,665 | 0.1 | 0.4 | 0.30 |
| Total (tons/day) | | 0.05 | 0.48 | 0.52 | 0.00 | 0.00 | 0.05 | 0.26 | 0.31 | 0.00 | 0.02 | 0.06 | 0.08 | 512 | 0.001 | 0.004 | 0.003 |
| Total (tons/year) | | 16.94 | 176.57 | 190.58 | 0.00 | 0.92 | 18.21 | 93.45 | 112.57 | 0.87 | 7.04 | 22.94 | 30.84 | 187,035 | 0.50 | 1.52 | 1.27 |

| **Project Only Phase 1 and 2, buildout** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AADT | VOC | NOx | CO | SOx | PM10 Exhaust | PM10 Brake/Tire | PM10 Road dust | PM10 Total | PM2.5 Exhaust | PM2.5 Brake/Tire | PM2.5 Road dust | PM2.5 Total | CO2 | Black Carbon | CH4 | N2O |
| Emission Source | (mi/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) | (lbs/day) |
| Area | 14029 | 7 | 61 | 71 | | 0.16 | | | | 0.15 | | | | 28813 | | 1.52 | 0.17 |
| Internal | 131699 | 20 | 181 | 181 | | 0.69 | | | | 0.65 | | | | 170341 | | 1.15 | 1.54 |
| Surface | 223704 | 18 | 89 | 201 | | 0.73 | | | | 0.69 | | | | 195621 | | 1.11 | 2.59 |
| Freeways | 632086 | 71 | 630 | 787 | | 4.17 | | | | 3.97 | | | | 1132042 | | 4.42 | 7.25 |
| Freeways to Ports | 33233 | 3 | 40 | 46 | | 0.36 | | | | 0.34 | | | | 99676 | | 0.24 | 0.36 |
| Total | 1034751 | 119 | 1001 | 1286 | | 6.11 | 172 | 943 | 1120 | 5.80 | 66 | 231 | 303 | 1626494 | 3.6 | 8.43 | 11.90 |
| Emissions rate (pounds/day/MSF) | | 1.51 | 1.91 | 13.67 | 0.00 | 0.06 | 4.06 | 24.38 | 28.50 | 0.06 | 1.56 | 5.98 | 7.60 | 34059 | 0.05 | 0.01 | 0.28 |
| Total (tons/day) | | 0.06 | 0.50 | 0.64 | 0.00 | 0.00 | 0.09 | 0.47 | 0.56 | 0.00 | 0.03 | 0.12 | 0.15 | 813 | 0.00 | 0.00 | 0.01 |
| Total (tons/year) | | 21.80 | 182.72 | 234.64 | 0.00 | 1.11 | 31.31 | 172.04 | 204.46 | 1.06 | 12.07 | 42.23 | 55.36 | 296835 | 0.65 | 1.54 | 2.17 |

**Mobile Sources: Summary and Interpolation**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | *GWP:* | *1* | *760* | *21* | *310* | | |
| Year | Occupied (msf) | Cumulative Occupied (msf) | VOC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | PM10 Exhaust (lbs/day) | PM10 Brake/Tire (lbs/day) | PM10 Road Dust (lbs/day) | PM10 Total (lbs/day) | PM2.5 Exhaust (lbs/day) | PM2.5 Brake/Tire (lbs/day) | PM2.5 Road Dust (lbs/day) | PM2.5 Total (lbs/day) | CO2 (tons/year) | Black Carbon (tons/year) | CH4 (tons/year) | N2O (tons/year) | MTCO2e/ year | |
| 2016 | 2.1 | 2.1 | 8 | 89 | 96 | 0 | 0 | 9 | 47 | 56 | 0 | 4 | 12 | 15 | 17,118 | 0 | 0 | 0 | 15,596 | |
| 2017 | 2.1 | 4.2 | 17 | 177 | 191 | 0 | 1 | 18 | 94 | 113 | 1 | 7 | 23 | 31 | 34,235 | 0.09 | 0.28 | 0.23 | 31,193 | |
| 2018 | 2.8 | 7 | 28 | 295 | 319 | 0 | 2 | 30 | 156 | 188 | 1 | 12 | 38 | 52 | 57,059 | 0.15 | 0.46 | 0.39 | 51,988 | |
| 2019 | 2.8 | 9.8 | 40 | 413 | 446 | 0 | 2 | 43 | 219 | 263 | 2 | 16 | 54 | 72 | 79,883 | 0.22 | 0.65 | 0.54 | 72,783 | |
| 2020 | 5.2 | 15 | 61 | 632 | 683 | 0 | 3 | 65 | 335 | 403 | 3 | 25 | 82 | 110 | 122,269 | 0.33 | 0.99 | 0.83 | 111,403 | |
| 2021 | 5.2 | 20.2 | 82 | 852 | 919 | 0 | 4 | 88 | 451 | 543 | 4 | 34 | 111 | 149 | 164,656 | 0.44 | 1.33 | 1.12 | 150,023 | |
| 2022 | 2.7455 | 22.9455 | 93 | 968 | 1044 | 0 | 5 | 100 | 512 | 617 | 5 | 39 | 126 | 169 | 187,035 | 0.50 | 1.52 | 1.27 | 170,413 | |
| 2023 | 1.65 | 24.5955 | 95 | 971 | 1067 | 0 | 5 | 106 | 552 | 664 | 5 | 41 | 136 | 182 | 197,291 | 0.52 | 1.52 | 1.36 | 179,751 | |
| 2024 | 1.65 | 26.2455 | 98 | 974 | 1089 | 0 | 5 | 113 | 592 | 711 | 5 | 44 | 145 | 194 | 207,548 | 0.53 | 1.52 | 1.44 | 189,088 | |
| 2025 | 2.3545 | 28.6 | 101 | 978 | 1122 | 0 | 5 | 123 | 650 | 778 | 5 | 47 | 160 | 212 | 222,183 | 0.55 | 1.52 | 1.56 | 202,413 | |
| 2026 | 2.67 | 31.27 | 105 | 983 | 1158 | 0 | 6 | 134 | 715 | 854 | 5 | 52 | 175 | 232 | 238,779 | 0.58 | 1.53 | 1.70 | 217,523 | |
| 2027 | 2.67 | 33.94 | 109 | 988 | 1195 | 0 | 6 | 144 | 780 | 930 | 5 | 56 | 191 | 253 | 255,375 | 0.60 | 1.53 | 1.83 | 232,633 | |
| 2028 | 2.67 | 36.61 | 113 | 994 | 1231 | 0 | 6 | 155 | 845 | 1006 | 6 | 60 | 207 | 273 | 271,972 | 0.62 | 1.53 | 1.97 | 247,743 | |
| 2029 | 1.75 | 38.36 | 116 | 997 | 1255 | 0 | 6 | 162 | 888 | 1056 | 6 | 63 | 218 | 286 | 282,849 | 0.63 | 1.54 | 2.06 | 257,647 | |
| 2030 | 1.75 | 40.11 | 119 | 1000 | 1279 | 0 | 6 | 170 | 930 | 1106 | 6 | 65 | 228 | 300 | 293,727 | 0.65 | 1.54 | 2.15 | 267,550 | |
| 2031 | 0.5 | 40.61 | 119 | 1001 | 1286 | 0 | 6 | 172 | 943 | 1120 | 6 | 66 | 231 | 303 | 296,835 | 0.65 | 1.54 | 2.17 | 270,380 | |

Sources:
- Emissions for years 2022 and 2035 are estimated using the spreadsheets prepared by Michael Brandman Associates and the methods discussed in the AQ/GHG/HRA Report.
- The other years were interpolated from the 2022 and 2035 estimates.


Project Construction and Operation Emissions
(mitigated, without existing)
Emissions (pounds/day)
2,500
2,000
1,500
1,000
500
0
CO
NOx
PM10
VOC
PM2.5
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
Build-out
Year

## Criteria Pollutant Summary
## Mitigated

World Logistics Center
Prepared by FirstCarbon Solutions
3/6/2015

| | Emissions (pounds/day) | | | | |
|---|---|---|---|---|---|
| | VOC* | NOx | CO | PM10 | PM2.5 |
| **Operational Only** | | | | | |
| 2016 | 33 | 93 | 101 | 56 | 16 |
| 2017 | 66 | 187 | 203 | 113 | 31 |
| 2018 | 110 | 312 | 338 | 188 | 52 |
| 2019 | 154 | 436 | 473 | 264 | 72 |
| 2020 | 235 | 668 | 723 | 404 | 111 |
| 2021 | 317 | 899 | 974 | 543 | 149 |
| 2022 | 360 | 1021 | 1106 | 617 | 169 |
| 2023 | 382 | 1028 | 1133 | 664 | 182 |
| 2024 | 404 | 1035 | 1160 | 711 | 195 |
| 2025 | 435 | 1045 | 1199 | 779 | 213 |
| 2026 | 470 | 1057 | 1243 | 855 | 233 |
| 2027 | 505 | 1068 | 1287 | 931 | 253 |
| 2028 | 540 | 1080 | 1330 | 1007 | 274 |
| 2029 | 563 | 1087 | 1359 | 1057 | 287 |
| 2030 | 586 | 1094 | 1388 | 1107 | 300 |
| 2031 | 593 | 1097 | 1396 | 1121 | 304 |

*Emissions include: mobile, forklifts, emergency generator, yard trucks, and natural gas*
** VOC emissions also include architectural coatings and consumer products*

| | VOC | NOx | CO | PM10 | PM2.5 |
|---|---|---|---|---|---|
| **Operation Detail: 2022** | | | | | |
| Mobile | 93 | 968 | 1044 | 617 | 169 |
| Architectural Coatings | 146 | 0 | 0 | 0 | 0 |
| Consumer Products | 117 | 0 | 0 | 0 | 0 |
| Natural Gas | 0 | 2 | 2 | 0 | 0 |
| Yard Trucks | 4 | 47 | 2 | 0 | 0 |
| Generator | 0 | 0 | 16 | 0 | 0 |
| Forklifts | 0 | 4 | 42 | 0 | 0 |
| **Total** | **360** | **1021** | **1106** | **617** | **169** |
| | | | | | |
| **Operation Detail: Buildout** | | | | | |
| Mobile | 119 | 1001 | 1286 | 1120 | 303 |
| Architectural Coatings | 258 | 0 | 0 | 0 | 0 |
| Consumer Products | 207 | 0 | 0 | 0 | 0 |
| Natural Gas | 0 | 4 | 3 | 0 | 0 |
| Yard Trucks | 7 | 83 | 4 | 0 | 0 |
| Generator | 1 | 0 | 28 | 0 | 0 |
| Forklifts | 0 | 8 | 75 | 0 | 0 |
| **Total** | **593** | **1097** | **1396** | **1121** | **304** |

## Criteria Pollutant Summary
## Mitigated

World Logistics Center
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**Operational + Construction (Mitigated)**

| Year | VOC | NOx | CO | PM10 | PM2.5 |
|---|---|---|---|---|---|
| 2015 | 31 | 523 | 871 | 130 | 26 |
| 2016 | 167 | 465 | 631 | 143 | 29 |
| 2017 | 209 | 716 | 1052 | 243 | 57 |
| 2018 | 243 | 683 | 868 | 275 | 65 |
| 2019 | 311 | 1200 | 1699 | 444 | 117 |
| 2020 | 371 | 1069 | 1319 | 495 | 127 |
| 2021 | 459 | 1414 | 1748 | 671 | 174 |
| 2022 | 500 | 1482 | 1774 | 739 | 192 |
| 2023 | 530 | 1633 | 2018 | 812 | 214 |
| 2024 | 547 | 1558 | 1914 | 843 | 220 |
| 2025 | 583 | 1651 | 2053 | 926 | 245 |
| 2026 | 603 | 1428 | 1773 | 941 | 247 |
| 2027 | 650 | 1639 | 2036 | 1077 | 285 |
| 2028 | 682 | 1599 | 1997 | 1138 | 299 |
| 2029 | 695 | 1455 | 1815 | 1143 | 300 |
| 2030 | 725 | 1565 | 1958 | 1236 | 325 |
| Build-out | 593 | 1097 | 1396 | 1121 | 304 |

**Reductions from Operational Mitigation**

| Year | VOC | NOx | CO | PM10 | PM2.5 |
|---|---|---|---|---|---|
| 2016 | 1 | 65 | 1 | 0.4 | 0.4 |
| 2017 | 3 | 130 | 3 | 0.8 | 0.8 |
| 2018 | 4 | 217 | 4 | 1.4 | 1.3 |
| 2019 | 6 | 303 | 6 | 1.9 | 1.9 |
| 2020 | 9 | 465 | 9 | 3.0 | 2.9 |
| 2021 | 13 | 626 | 13 | 4.0 | 3.9 |
| 2022 | 14 | 711 | 14 | 4.5 | 4.4 |
| 2023 | 13 | 661 | 11 | 4.3 | 4.2 |
| 2024 | 12 | 612 | 9 | 4.1 | 3.9 |
| 2025 | 10 | 542 | 4 | 3.7 | 3.6 |
| 2026 | 8 | 462 | 0 | 3.3 | 3.2 |
| 2027 | 6 | 382 | -5 | 2.9 | 2.9 |
| 2028 | 4 | 302 | -10 | 2.5 | 2.5 |
| 2029 | 3 | 250 | -13 | 2.3 | 2.3 |
| 2030 | 2 | 198 | -16 | 2.0 | 2.0 |
| 2031 | 1 | 183 | -17 | 1.9 | 1.9 |

## Criteria Pollutant Summary
## Mitigated

World Logistics Center
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**Combined Construction + Operation Minus Existing (Net Increase)**

| | VOC | NOx | CO | PM10 | PM2.5 |
|---|---|---|---|---|---|
| *Existing* | *0* | *5* | *3* | *352* | *77* |
| 2015 | 31 | 523 | 871 | 130 | 26 |
| 2016 | 167 | 460 | 628 | -209 | -48 |
| 2017 | 209 | 711 | 1049 | -109 | -20 |
| 2018 | 243 | 678 | 865 | -77 | -12 |
| 2019 | 311 | 1195 | 1696 | 92 | 40 |
| 2020 | 371 | 1064 | 1316 | 143 | 50 |
| 2021 | 459 | 1409 | 1745 | 319 | 97 |
| 2022 | 500 | 1477 | 1771 | 387 | 115 |
| 2023 | 530 | 1628 | 2015 | 460 | 137 |
| 2024 | 547 | 1553 | 1911 | 491 | 143 |
| 2025 | 583 | 1646 | 2050 | 574 | 168 |
| 2026 | 603 | 1423 | 1770 | 589 | 170 |
| 2027 | 650 | 1634 | 2033 | 725 | 208 |
| 2028 | 682 | 1594 | 1994 | 786 | 222 |
| 2029 | 695 | 1450 | 1812 | 791 | 223 |
| 2030 | 725 | 1560 | 1955 | 884 | 248 |
| 2031 | 593 | 1092 | 1393 | 769 | 227 |

**Summary of Greenhouse Gas Emissions**
**Unmitigated**
World Logistics Center
Prepared by FirstCarbon Solutions
3/18/2015

**Emissions (MTCO2e/year)**

| | | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Buildout | percent buildout |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capped | Mobile | 0 | 15982 | 31964 | 53274 | 74584 | 114159 | 153734 | 174629 | 183616 | 192604 | 205429 | 219972 | 234515 | 249059 | 258591 | 268123 | 270846 | 65% |
| | Electricity | 0 | 5598 | 11197 | 18662 | 26126 | 39989 | 54119 | 61183 | 64116 | 69981 | 76246 | 83364 | 90455 | 97573 | 102239 | 106904 | 108237 | 26% |
| | Construction | 14306 | 14388 | 19040 | 14503 | 25584 | 16633 | 18307 | 15578 | 18019 | 16783 | 18030 | 14480 | 17086 | 15679 | 11782 | 14497 | 8823 | 2% |
| | Yard trucks | 0 | 264 | 528 | 881 | 1233 | 1887 | 2554 | 2888 | 3026 | 3303 | 3599 | 3935 | 4269 | 4605 | 4825 | 5046 | 5108 | 1% |
| | Water | 0 | 110 | 221 | 368 | 516 | 789 | 1068 | 1207 | 1265 | 1381 | 1505 | 1645 | 1785 | 1926 | 2018 | 2110 | 2136 | 1% |
| | Natural gas | 0 | 43 | 85 | 142 | 199 | 304 | 411 | 465 | 487 | 532 | 580 | 634 | 688 | 742 | 777 | 813 | 823 | 0% |
| | Generator | 0 | 30 | 60 | 101 | 141 | 216 | 292 | 330 | 346 | 377 | 411 | 449 | 488 | 526 | 551 | 576 | 583 | 0% |
| | Forklifts | 0 | 10 | 20 | 34 | 48 | 73 | 99 | 112 | 117 | 128 | 139 | 152 | 165 | 178 | 187 | 196 | 198 | 0% |
| Uncapped | Waste | 0 | 898 | 1796 | 2993 | 4191 | 6414 | 8681 | 9814 | 10284 | 11225 | 12230 | 13371 | 14509 | 15651 | 16399 | 17147 | 17361 | 4% |
| | Land use change | 0 | 60 | 119 | 199 | 279 | 426 | 577 | 652 | 684 | 746 | 813 | 889 | 964 | 1040 | 1090 | 1140 | 1154 | 0% |
| | Refrigerants | 0 | 43 | 86 | 143 | 200 | 306 | 414 | 467 | 490 | 535 | 583 | 637 | 691 | 746 | 781 | 817 | 827 | 0% |
| | Const. Waste, Refrig | 9 | 9 | 11 | 11 | 21 | 22 | 11 | 4 | 9 | 10 | 11 | 11 | 11 | 7 | 7 | 2 | 6 | 0% |
| | Sequestration | 0 | -6 | -11 | -19 | -27 | -41 | -56 | -63 | -66 | -72 | -78 | -85 | -93 | -100 | -105 | -110 | -111 | 0% |
| | **Total** | **14315** | **37429** | **65118** | **91292** | **133093** | **181177** | **240210** | **267267** | **282393** | **297532** | **319496** | **339454** | **365533** | **387631** | **399142** | **417260** | **415992** | |
| | **Subtotal capped** | **14306** | **36426** | **63117** | **87965** | **128430** | **174050** | **230584** | **256391** | **270992** | **285088** | **305938** | **324631** | **349451** | **370288** | **380970** | **398264** | **396755** | |
| | **Subtotal uncapped** | **9** | **1003** | **2001** | **3327** | **4663** | **7127** | **9626** | **10875** | **11401** | **12443** | **13558** | **14822** | **16082** | **17343** | **18172** | **18996** | **19237** | |
| | In operation (sf) | 0 | 2,100,000 | 4,200,000 | 7,000,000 | 9,800,000 | 15,000,000 | 20,300,000 | 22,950,000 | 24,050,000 | 26,250,000 | 28,600,000 | 31,270,000 | 33,930,000 | 36,600,000 | 38,350,000 | 40,100,000 | 40,600,000 | |
| | Percent of Total | 0.0% | 5.2% | 10.3% | 17.2% | 24.1% | 36.9% | 50.0% | 56.5% | 59.2% | 64.7% | 70.4% | 77.0% | 83.6% | 90.1% | 94.5% | 98.8% | 100.0% | |

Blue highlights: data entry
Source of buildout water, waste, electricity, and natural gas emissions: CalEEMod output
Source of buildout refrigerant emissions: Spreadsheet prepared by Michael Brandman Associates
Source of buildout sequestration: Michael Brandman Associates (refer to the Air Quality, Greenhouse Gas, and Health Risk Assessment Report, modeling assumptions section)
Source of emissions for 2016-2030 for electricity, waste, yard trucks, generator, water, refrigerants, natural gas, and forklifts: a percentage of the emissions at buildout based on the square feet in operation in each respective year.
Source of mobile emissions for 2022 and buildout: Spreadsheets prepared by Michael Brandman Associates
Source of mobile emissions for other years: Interpolated based on square feet in operation
Source of construction emissions: Estimating using CalEEMod and procedures outlined in the spreadsheets prepared by Michael Brandman Associates
Note: landscaping emissions are negligible at one ton/year

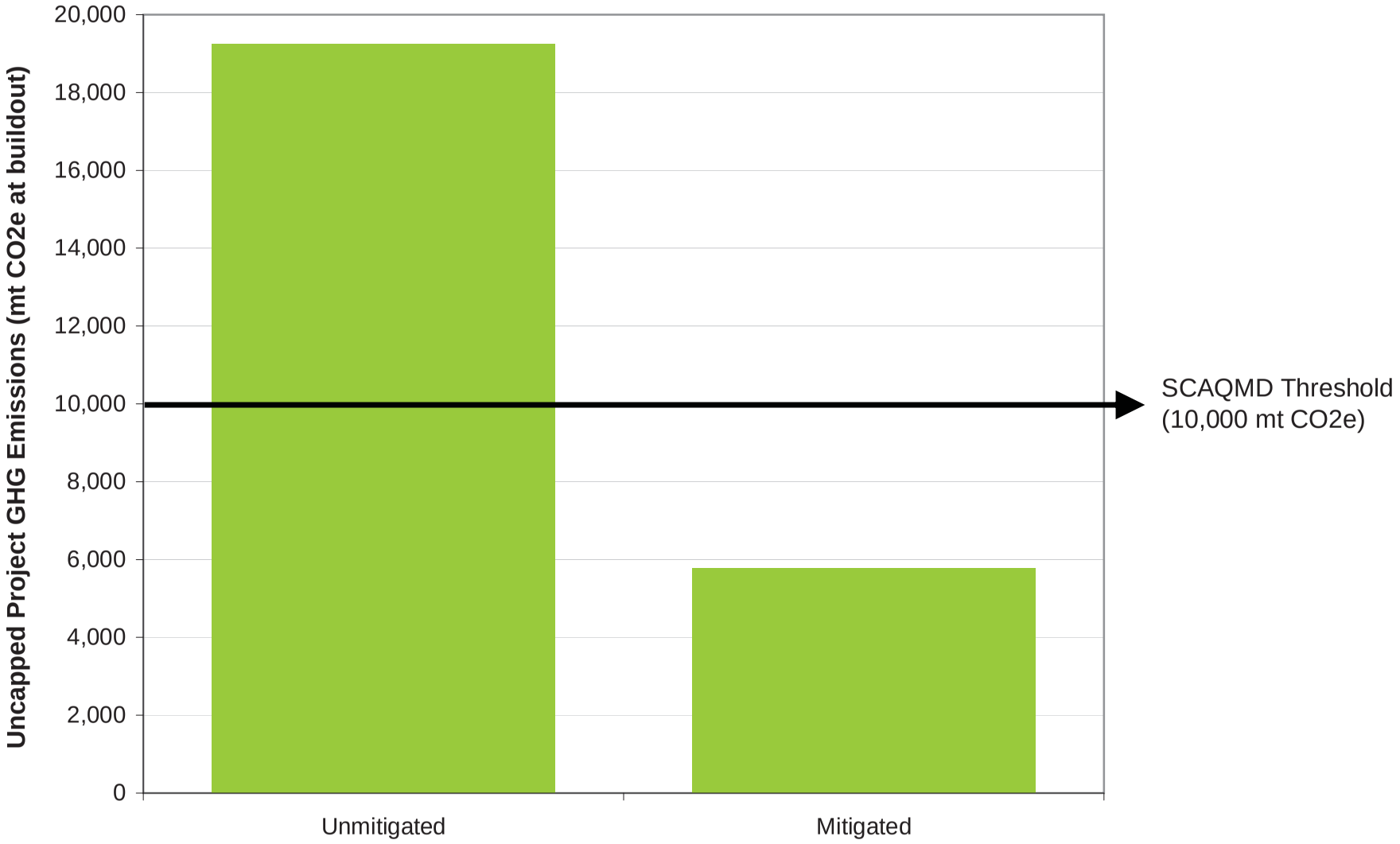
**Emissions (Phase 1)**

| | Emissions (tons/year) | | | | | MTCO2e |
|---|---|---|---|---|---|---|
| | CO2 | Methane | N2O | HFCs | BC | Total |
| Mobile | 191328 | 1.63 | 1.271 | 0.000 | 0.968 | 174629 |
| Electricity | 67179 | 3.09 | 0.638 | 0.000 | 0.000 | 61183 |
| Construction | 14210 | 3.60 | 0.002 | 0.010 | 3.771 | 15591 |
| Yard trucks | 3183 | 0.00 | 0.000 | 0.000 | 0.000 | 2888 |
| Water | 1326 | 0.06 | 0.013 | 0.000 | 0.000 | 1207 |
| Natural Gas | 500 | 0.01 | 0.008 | 0.000 | 0.012 | 465 |
| Emergency Generator | 151 | 0.01 | 0.000 | 0.000 | 0.280 | 330 |
| Forklifts | 120 | 0.00 | 0.000 | 0.000 | 0.004 | 112 |
| Waste | 4827 | 285.27 | 0.000 | 0.000 | 0.000 | 9814 |
| Land use change | 719 | 0.00 | 0.000 | 0.000 | 0.000 | 652 |
| Refrigerants | 0 | 0.00 | 0.000 | 0.344 | 0.000 | 467 |
| Const. Refrig., Waste | | -0.33 | 0.000 | 0.010 | 0.000 | 4 |
| Sequestration | -69 | 0.00 | 0.000 | 0.000 | 0.000 | -63 |
| **Total** | **283474** | **293.33** | **1.932** | **0.363** | **5.035** | **267280** |
| *Non-mobile emissions* | *92146* | *291.70* | *0.66* | *0.363* | *4.07* | *92651* |
| Subtotal capped | 277997 | 8.39 | 1.93 | 0.01 | 5.04 | 256405 |
| Subtotal uncapped | 5477 | 284.94 | 0.00 | 0.35 | 0.00 | 10875 |
| Total MTCO2e by pollutant | 257168 | 5588 | 543 | 494 | 3472 | 267266 |
| GWP | 1 | 21 | 310 | 1500 | 760 | |
| Percent contribution | 96.2% | 2.1% | 0.2% | 0.2% | 1.3% | |

**Emissions at Buildout**

| | Emissions (tons/year) | | | | | MTCO2e |
|---|---|---|---|---|---|---|
| | CO2 | Methane | N2O | HFCs | BC | Total |
| Mobile | 297,342 | 1.54 | 2.173 | 0.000 | 0.663 | 270,846 |
| Electricity | 118,844 | 5.46 | 1.129 | 0.000 | 0.00 | 108,237 |
| Construction (average) | 8,325 | 2.12 | 0.002 | 0.000 | 1.78 | 8,823 |
| Yard trucks | 5,631 | 0.00 | 0.000 | 0.000 | 0.00 | 5,108 |
| Water | 2,346 | 0.11 | 0.022 | 0.000 | 0.00 | 2,136 |
| Natural Gas | 885 | 0.02 | 0.015 | 0.000 | 0.02 | 823 |
| Emergency Generator | 266 | 0.01 | 0.000 | 0.000 | 0.50 | 583 |
| Forklifts | 213 | 0.00 | 0.000 | 0.000 | 0.01 | 198 |
| Waste | 8,539 | 504.66 | 0.000 | 0.000 | 0.00 | 17,361 |
| Land use change | 1,272 | 0.00 | 0.000 | 0.000 | 0.00 | 1,154 |
| Refrigerants | 0 | 0.00 | 0.000 | 0.608 | 0.00 | 827 |
| Construction Refrigerants, wa: | 0 | -0.58 | 0.000 | 0.011 | 0.00 | 6 |
| Sequestration | -122 | 0.00 | 0.000 | 0.000 | 0.00 | -111 |
| **Total** | **443,541** | **513.34** | **3.341** | **0.619** | **2.97** | **415,992** |
| *Non-mobile emissions* | *146,199* | *511.80* | *1.17* | *0.62* | *2.31* | *145,146* |
| Subtotal capped | 433,852 | 9.26 | 3.34 | 0.00 | 2.97 | 396,755 |
| Subtotal uncapped | 9,689 | 504.08 | 0.00 | 0.62 | 0.00 | 19,237 |

*Note: The CalEEMod output for electricity, waste, water, natural gas presents emissions in metric tons; the emissions in this table are in tons, which are converted from the output by dividing by 0.9072*


Uncapped Project GHG Emissions (mt CO2e at buildout)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Unmitigated
Mitigated
SCAQMD Threshold
(10,000 mt CO2e)

**Summary of Greenhouse Gas Emissions**
**Mitigated**
World Logistics Center
Prepared by FirstCarbon Solutions
3/18/2015

**Emissions (MTCO2e/year)**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Buildout |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capped Mobile | 0 | 15596 | 31193 | 51988 | 72783 | 111403 | 150023 | 170413 | 179751 | 189088 | 202413 | 217523 | 232633 | 247743 | 257647 | 267550 | 270380 |
| Electricity | 0 | 5126 | 10252 | 17087 | 23922 | 36616 | 49553 | 56022 | 58707 | 64077 | 69814 | 76331 | 82824 | 89342 | 93614 | 97885 | 99106 |
| Construction | 12267 | 12227 | 16203 | 12343 | 22003 | 14126 | 15647 | 13279 | 15497 | 14405 | 15580 | 12320 | 16251 | 14981 | 11396 | 14006 | 7751 |
| Yard trucks | 0 | 264 | 528 | 881 | 1233 | 1887 | 2554 | 2888 | 3026 | 3303 | 3599 | 3935 | 4269 | 4605 | 4825 | 5046 | 5108 |
| Water | 0 | 100 | 200 | 333 | 466 | 713 | 965 | 1090 | 1143 | 1247 | 1359 | 1486 | 1612 | 1739 | 1822 | 1905 | 1929 |
| Natural gas | 0 | 38 | 77 | 128 | 179 | 274 | 371 | 420 | 440 | 480 | 523 | 572 | 621 | 669 | 701 | 733 | 743 |
| Generator | 0 | 15 | 30 | 49 | 69 | 105 | 143 | 161 | 169 | 184 | 201 | 220 | 238 | 257 | 269 | 282 | 285 |
| Forklifts | 0 | 10 | 20 | 34 | 48 | 73 | 99 | 112 | 117 | 128 | 139 | 152 | 165 | 178 | 187 | 196 | 198 |
| Solar | 0 | -294 | -587 | -979 | -1370 | -2097 | -2838 | -3208 | -3362 | -3670 | -3998 | -4371 | -4743 | -5117 | -5361 | -5606 | -5676 |
| Uncapped Waste | 0 | 673 | 1347 | 2245 | 3143 | 1603 | 2170 | 2453 | 2571 | 2806 | 3057 | 3343 | 3627 | 3912 | 4099 | 4287 | 4340 |
| Land use change | 0 | 60 | 119 | 199 | 279 | 426 | 577 | 652 | 684 | 746 | 813 | 889 | 964 | 1040 | 1090 | 1140 | 1154 |
| Refrigerants | 0 | 43 | 86 | 143 | 200 | 306 | 414 | 467 | 490 | 535 | 583 | 637 | 691 | 746 | 781 | 817 | 827 |
| Construction Refrigerant | -675 | -675 | -900 | -900 | -1671 | -1704 | -852 | -354 | -707 | -755 | -858 | -855 | -858 | -562 | -562 | -161 | -435 |
| Sequestration | 0 | -6 | -11 | -19 | -27 | -41 | -56 | -63 | -66 | -72 | -78 | -85 | -93 | -100 | -105 | -110 | -111 |
| **Total** | **11592** | **33179** | **58557** | **83532** | **121256** | **163691** | **218770** | **244333** | **258458** | **272503** | **293146** | **312095** | **338203** | **359434** | **370404** | **387970** | **385599** |
| Subtotal capped | **12267** | **33084** | **57916** | **81864** | **119333** | **163100** | **216517** | **241176** | **255487** | **269243** | **289629** | **308167** | **333871** | **354398** | **365100** | **381997** | **379824** |
| Subtotal uncapped | **-675** | **95** | **640** | **1667** | **1923** | **591** | **2253** | **3157** | **2971** | **3260** | **3516** | **3928** | **4332** | **5036** | **5303** | **5973** | **5775** |
| Subtotal capped (without construction) | **0** | **20856** | **41713** | **69521** | **97330** | **148974** | **200869** | **227897** | **239990** | **254838** | **274049** | **295847** | **317620** | **339417** | **353704** | **367991** | **372073** |
| Subtotal uncapped (without const.) | **0** | **770** | **1540** | **2567** | **3594** | **2294** | **3105** | **3510** | **3679** | **4015** | **4375** | **4783** | **5190** | **5598** | **5866** | **6134** | **6210** |
| Square Feet - operation | 0 | 2,100,000 | 4,200,000 | 7,000,000 | 9,800,000 | 15,000,000 | 20,300,000 | 22,950,000 | 24,050,000 | 26,250,000 | 28,600,000 | 31,270,000 | 33,930,000 | 36,600,000 | 38,350,000 | 40,100,000 | 40,600,000 |
| Percent of Total | 0.0% | 5.2% | 10.3% | 17.2% | 24.1% | 36.9% | 50.0% | 56.5% | 59.2% | 64.7% | 70.4% | 77.0% | 83.6% | 90.1% | 94.5% | 98.8% | 100.0% |

**Reductions from Mitigation (MTCO2e/year**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Buildout |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capped Mobile | 0 | -386 | -772 | -1286 | -1801 | -2756 | -3711 | -4216 | -3866 | -3515 | -3016 | -2449 | -1882 | -1316 | -944 | -573 | -467 |
| Electricity | 0 | -472 | -945 | -1574 | -2204 | -3374 | -4566 | -5161 | -5409 | -5904 | -6432 | -7033 | -7631 | -8231 | -8625 | -9019 | -9131 |
| Construction | -2039 | -2160 | -2837 | -2160 | -3581 | -2507 | -2660 | -2299 | -2522 | -2378 | -2450 | -2160 | -834 | -699 | -386 | -492 | -1072 |
| Yard trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Water | 0 | -11 | -21 | -36 | -50 | -76 | -104 | -117 | -123 | -134 | -146 | -159 | -173 | -187 | -196 | -204 | -207 |
| Natural gas | 0 | -4 | -8 | -14 | -19 | -30 | -40 | -45 | -48 | -52 | -56 | -62 | -67 | -72 | -76 | -79 | -80 |
| Generator | 0 | -15 | -31 | -51 | -72 | -110 | -149 | -169 | -177 | -193 | -210 | -230 | -249 | -269 | -282 | -295 | -298 |
| Forklifts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Solar | 0 | -294 | -587 | -979 | -1370 | -2097 | -2838 | -3208 | -3362 | -3670 | -3998 | -4371 | -4743 | -5117 | -5361 | -5606 | -5676 |
| Uncapped Waste | 0 | -224 | -449 | -748 | -1048 | -4811 | -6511 | -7360 | -7713 | -8419 | -9172 | -10029 | -10882 | -11738 | -12299 | -12861 | -13021 |
| Land use change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Refrigerants | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Construction Refrigerant | | | | | | | | | | | | | | | | | |
| Sequestration | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **-2039** | **-3567** | **-5650** | **-6849** | **-10144** | **-15761** | **-20578** | **-22576** | **-23218** | **-24264** | **-25481** | **-26493** | **-26462** | **-27628** | **-28169** | **-29127** | **-29952** |
| **Percent Reduction** | **-14%** | **-10%** | **-9%** | **-8%** | **-8%** | **-9%** | **-9%** | **-8%** | **-8%** | **-8%** | **-8%** | **-8%** | **-7%** | **-7%** | **-7%** | **-7%** | **-7%** |

**Emissions at Buildout**

| | Emissions (tons/year) | | | | | MTCO2e |
|---|---|---|---|---|---|---|
| | CO2 | Methane | N2O | HFCs | BC | Total |
| Capped Mobile | 296,835 | 1.54 | 2.17 | 0.00 | 0.654 | 270,380 |
| Electricity | 108,818 | 5.00 | 1.04 | 0.00 | 0.00 | 99,106 |
| Construction (average) | 8,325 | 2.12 | 0.00 | 0.00 | 0.23 | 7,751 |
| Yard trucks | 5,631 | 0.00 | 0.00 | 0.00 | 0.00 | 5,108 |
| Water | 2,119 | 0.10 | 0.02 | 0.00 | 0.00 | 1,929 |
| Natural Gas | 796 | 0.01 | 0.01 | 0.00 | 0.02 | 743 |
| Emergency Generator | 314 | 0.00 | 0.00 | 0.00 | 0.00 | 285 |
| Forklifts | 213 | 0.00 | 0.00 | 0.00 | 0.01 | 198 |
| Solar | -6,232 | -0.29 | -0.06 | 0.00 | 0.00 | -5,676 |
| Uncapped Waste | 2,135 | 126.17 | 0.00 | 0.00 | 0.00 | 4,340 |
| Land use change | 1,272 | 0.00 | 0.00 | 0.00 | 0.00 | 1,154 |
| Refrigerants | 0 | 0.00 | 0.00 | 0.61 | 0.00 | 827 |
| Construction Refrigerant, waste | 0 | -23.70 | 0.00 | 0.01 | 0.00 | -435 |
| Sequestration | -122 | 0.00 | 0.00 | 0.00 | 0.00 | -111 |
| Total | **420,105** | **110.96** | **3.18** | **0.62** | **0.91** | **385,599** |
| *Without construction* | | | | | | *378,283* |
| *MTCO2e for each pollutant* | *381,119* | *2,114* | *895* | *841* | *628* | *385,596* |
| *Percent for each pollutant* | *98.8%* | *0.5%* | *0.2%* | *0.2%* | *0.2%* | |
| *Percent electricity* | 109.8000% | 0.0050% | 0.0010% | 0.000% | 0.000% | 100.0000% |

*Note: The CalEEMod output for electricity, waste, water, natural gas presents emissions in metric tons; the emissions in this table are in tons, which are converted from the output by dividing by 0.9072*

**Solar Calculations**

| | | |
|---|---|---|
| Electricity consumption by entire project | 376426 | MWh/year at buildout |
| Electricity produced by solar | 19739 | MWh/year |
| Percent solar | 5.2% | Percent |

The solar reduction is calculated by multiplying the percent solar by the unmitigated electricity GHG estimates

**Logistics part only of**

| **Alternatives** | % project | Capped | Uncapped | |
|---|---|---|---|---|
| Alt. 1 | 70% | 260,451 | 4,347 | |
| Alt. 2 | 54% | 200,920 | 3,353 | (plus other estimated) |
| Alt. 3 | 25% | 93,018 | 1,553 | (plus other estimated) |

## Interpolation of Onsite Equipment Emissions

World Logistics Center
Prepared by FirstCarbon Solutions
11/7/2013

| | | Emissions (pounds/day) | | | | | |
|---|---|---|---|---|---|---|---|
| | | VOC | NOx | CO | SO2 | PM10 | PM2.5 |
| **Unmitigated: 2022** | | | | | | | |
| | Yard Trucks | 4.0 | 98.9 | 2.0 | 0.0 | 0.2 | 0.2 |
| | Generator | 1.0 | 34.6 | 6.3 | 0.0 | 1.0 | 1.0 |
| | Forklifts | 0.1 | 4.5 | 42.2 | 0.0 | 0.1 | 0.1 |
| | Total | 5.1 | 138.0 | 50.5 | 0.0 | 1.3 | 1.3 |
| **Unmitigated Buildout** | | | | | | | |
| | Yard Trucks | 7.0 | 175.0 | 3.5 | 0.0 | 0.4 | 0.4 |
| | Generator | 1.9 | 61.9 | 11.3 | 0.0 | 1.9 | 1.9 |
| | Forklifts | 0.2 | 7.9 | 74.7 | 0.0 | 0.1 | 0.1 |
| | Total | 9.1 | 244.8 | 89.5 | 0.0 | 2.4 | 2.4 |

**Interpolation: Unmitigated Total Onsite based on buildout**

| Year | Occupied (msf) | %msf | VOC | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|---|---|
| 2016 | 2.10 | 5.2% | 0.5 | 12.7 | 4.6 | 0.0 | 0.1 | 0.1 |
| 2017 | 4.20 | 10.3% | 0.9 | 25.3 | 9.3 | 0.0 | 0.2 | 0.2 |
| 2018 | 7.00 | 17.2% | 1.6 | 42.2 | 15.4 | 0.0 | 0.4 | 0.4 |
| 2019 | 9.80 | 24.1% | 2.2 | 59.1 | 21.6 | 0.0 | 0.6 | 0.6 |
| 2020 | 15.00 | 36.9% | 3.3 | 90.4 | 33.1 | 0.0 | 0.9 | 0.9 |
| 2021 | 20.20 | 49.7% | 4.5 | 121.8 | 44.5 | 0.0 | 1.2 | 1.2 |
| 2022 | 22.95 | 56.5% | 5.1 | 138.3 | 50.6 | 0.0 | 1.3 | 1.3 |
| 2023 | 24.60 | 60.6% | 5.5 | 148.3 | 54.2 | 0.0 | 1.4 | 1.4 |
| 2024 | 26.25 | 64.6% | 5.9 | 158.2 | 57.8 | 0.0 | 1.5 | 1.5 |
| 2025 | 28.60 | 70.4% | 6.4 | 172.4 | 63.0 | 0.0 | 1.7 | 1.7 |
| 2026 | 31.27 | 77.0% | 7.0 | 188.5 | 68.9 | 0.0 | 1.8 | 1.8 |
| 2027 | 33.94 | 83.6% | 7.6 | 204.6 | 74.8 | 0.0 | 2.0 | 2.0 |
| 2028 | 36.61 | 90.2% | 8.2 | 220.7 | 80.7 | 0.0 | 2.1 | 2.1 |
| 2029 | 38.36 | 94.5% | 8.6 | 231.3 | 84.5 | 0.0 | 2.2 | 2.2 |
| 2030 | 40.11 | 98.8% | 8.9 | 241.8 | 88.4 | 0.0 | 2.3 | 2.3 |
| Buildout | 40.61 | 100.0% | 9.1 | 244.8 | 89.5 | 0.0 | 2.4 | 2.4 |

| **Mitigated: 2022** | | VOC | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|---|
| | Yard Trucks | 4.0 | 46.9 | 2.0 | 0.0 | 0.2 | 0.2 |
| | Generator | 0.3 | 0.2 | 16.1 | 0.0 | 0.0 | 0.0 |
| | Forklifts | 0.1 | 4.5 | 42.2 | 0.0 | 0.1 | 0.1 |
| | Total | 4.4 | 51.6 | 60.3 | 0.0 | 0.3 | 0.3 |
| **Mitigated Buildout** | | | | | | | |
| | Yard Trucks | 7.0 | 83.1 | 3.5 | 0.0 | 0.4 | 0.4 |
| | Generator | 0.6 | 0.4 | 28.4 | 0.0 | 0.0 | 0.0 |
| | Forklifts | 0.2 | 7.9 | 74.7 | 0.0 | 0.1 | 0.1 |
| | Total | 7.7 | 91.4 | 106.7 | 0.0 | 0.5 | 0.5 |

**Interpolation: Mitigated Total based on buildout**

| Year | Occupied (msf) | %msf | VOC | NOx | CO | SO2 | PM10 | PM2.5 |
|---|---|---|---|---|---|---|---|---|
| 2016 | 2.10 | 5% | 0.4 | 4.7 | 5.5 | 0.0 | 0.0 | 0.0 |
| 2017 | 4.20 | 10% | 0.8 | 9.5 | 11.0 | 0.0 | 0.1 | 0.1 |
| 2018 | 7.00 | 17% | 1.3 | 15.8 | 18.4 | 0.0 | 0.1 | 0.1 |
| 2019 | 9.80 | 24% | 1.9 | 22.1 | 25.7 | 0.0 | 0.1 | 0.1 |
| 2020 | 15.00 | 37% | 2.9 | 33.8 | 39.4 | 0.0 | 0.2 | 0.2 |
| 2021 | 20.20 | 50% | 3.9 | 45.5 | 53.1 | 0.0 | 0.2 | 0.2 |
| 2022 | 22.95 | 57% | 4.4 | 51.6 | 60.3 | 0.0 | 0.3 | 0.3 |
| 2023 | 24.60 | 61% | 4.7 | 55.4 | 64.6 | 0.0 | 0.3 | 0.3 |
| 2024 | 26.25 | 65% | 5.0 | 59.1 | 68.9 | 0.0 | 0.3 | 0.3 |
| 2025 | 28.60 | 70% | 5.5 | 64.4 | 75.1 | 0.0 | 0.3 | 0.3 |
| 2026 | 31.27 | 77% | 6.0 | 70.4 | 82.1 | 0.0 | 0.4 | 0.4 |
| 2027 | 33.94 | 84% | 6.5 | 76.4 | 89.1 | 0.0 | 0.4 | 0.4 |
| 2028 | 36.61 | 90% | 7.0 | 82.4 | 96.2 | 0.0 | 0.4 | 0.4 |
| 2029 | 38.36 | 94% | 7.3 | 86.3 | 100.8 | 0.0 | 0.5 | 0.5 |
| 2030 | 40.11 | 99% | 7.7 | 90.3 | 105.3 | 0.0 | 0.5 | 0.5 |
| Buildout | 40.61 | 100% | 7.7 | 91.4 | 106.7 | 0.0 | 0.5 | 0.5 |

## World Logistics Center
**Operational Emissions**
**Yard Trucks/Hostlers**
Prepared by FirstCarbon Solutions

5-Nov-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | Horsepower |
| 155 | whp |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Unmitigated Emission Factors and Emissions (propane)*

| | THC | NOx | CO | PM | CO2 | MTCO2e |
|---|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 | |
| Emissions (lbs/day) - per facility | 0.26 | 6.50 | 0.13 | 0.01 | 1608 | |
| Emissions (tons/year) - per facility | 0.03 | 0.84 | 0.02 | 0.00 | 209 | |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.35 | 43319 | |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 | 5109 |

*Mitigated Emission Factors and Emissions (Tier 4 Interim NOx standard or better)*

| | NOx |
|---|---|
| Emission factor (g/hp-hr) | 1.29 |
| Emissions (lbs/day) - per facility | 3.08 |
| Emissions (tons/year) - per facility | 0.40 |
| Emissions (lbs/day) - Project Build Out | 83.05 |
| Emissions (tons/year) - Project Build Out | 10.80 |

Sources:
- Yard trucks/facility: Highland Fairview, October 10, 2013
- Load factor and Horsepower: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf. The load factor is from Table 5.10. Horsepower is from Table 5.3 (the average horsepower for a propane yard tractor).
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors for unmitigated version: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.
- Emission factors for mitigated Tier 4: CalEEMod Manual, Appendix D, Table 3.5

Notes:
The most common propane fueled yard tractor at the port in 2006 was the Kalmar PT122, year 2004 (http://www.portoflosangeles.org/DOC/REPORT_Air_Emissions_Inventory_Volume2.pdf). According to www.kalmarind-northamerica.com/source.php/1390193/ Kalmar%20Logistics%20brochure.pdf, for the Ottawa tractor, there are 3 types of tractors listed: 4x2 off-road terminal tractor, whic has a Tier 3 off-road engine; 4x2 DOT/EPA Terminal Tractor, which is 2010 Clean Idle Certified; 6x4 DOT/EPA Terminal Tractor, which is 2010 Clean Idle certified. According to the Technical Data for Kalmar 4-wheel Drive TR618i RoRo Tractor, it has a Tier 3 off-road engine.

## World Logistics Center
**Operational Emissions**
**Forklifts**
Prepared by FirstCarbon Solutions
5-Nov-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Highland Fairview 10/11/13) |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 | 0.5101 | 510.8225 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 | 0.883797 | -0.30722 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 | 0.0593 | 667.7574 |

760 GWP

*Natural Gas Emissions (assuming all forklifts are natural gas)*

38% BC/PM2.5

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 | Black Carbon | Total |
|---|---|---|---|---|---|---|---|---|---|
| pounds/day | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 | 0.15 | 1639 | 0.06 | |
| tons/year | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 | 0.02 | 213 | 0.01 | |
| MTCO2e/year | | | | | | | 193 | 4.96 | 198 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). http://www.cat-lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com/_cat/PDFs/CLT-PDF030/CLT-PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 51-120
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6, Min Year 2015, Max Year 2019, HP 51-120 for forklift.

**World Logistics Center**
**Estimation of Operational Emissions - Emergency Generators**
**Diesel Fuel**
**Prepared by FirstCarbon Solutions**
15-Oct-13

| | | | |
|---|---|---|---|
| Generators: | 1 | per 1.5 million sf | Source: Highland Fairview 7/17/2013 |
| Total Project Size | 40.6 | million sf | Source: Project Description |
| Generators: | 27 | total | |
| Generator Size: | 314.9 | horsepower | Source: Highland Fairview 7/17/2013 (235 kw) |
| Testing Schedule | 50 | hours/year/generator | Source: SCAQMD Rule 1470 (c)(2)(C)(i) |
| | 1 | maximum hours/day/generator | |

Emission Rate for Tier III Diesel Engines

| Pollutant | Emission Rate (g/hp-hr) |
|---|---|
| CO2 | 568.3 |
| CH4 | 0.023 |
| HC | 0.1 |
| NOx | 3.3 |
| CO | 0.6 |
| PM | 0.1 |

Source for HC, NOx, CO, PM: Kohler Power Systems, 200REOZJF, 60 HZ Diesel Industrial Generator Set, Emission Data Sheet. Source for CO2 and CH4: CalEEMod Appendix D, Table 3.4, OFFROAD Equipment Emission Factors for Generator Sets, for year 2015, between 251 and 500 horsepower.

Annual Emissions per Generator

| Pollutant | Emissions (g/year) | Average Emissions (g/sec) |
|---|---|---|
| CO2 | 8947883.5 | 2.8374E-01 |
| CH4 | 362.1 | 1.1483E-05 |
| HC | 1574.5 | 4.9927E-05 |
| NOx | 51958.5 | 1.6476E-03 |
| CO | 9447.0 | 2.9956E-04 |
| PM10 | 1574.5 | 4.9927E-05 |
| PM2.5 (*) | 1417.1 | 4.4934E-05 |

(*) Assumes PM2.5 combusion emissions are 90% of PM10 combusion emissions

Emissions from Emergency Generators

| Project Phase | Building Area (sq ft) | Percentage of Total | Number of Generators | HC (g/sec) | NOx (g/sec) | CO (g/sec) | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|---|---|---|---|---|---|
| 1 | 22700000 | 55.91% | 15 | 7.56E-04 | 2.49E-02 | 4.53E-03 | 7.56E-04 | 6.80E-04 |
| 2 | 17900000 | 44.09% | 12 | 5.96E-04 | 1.97E-02 | 3.57E-03 | 5.96E-04 | 5.36E-04 |
| Total | 40600000 | | | | | | | |

| Phase | CO2 (tons/year) | CH4 (tons/year) | Total MTCO2e /year | HC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | PM10 (lbs/day) | PM2.5 (lbs/day) | Black Carbon (lbs/day) | Black Carbon (tons/year) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 149 | 0.0060 | 346 | 1.05 | 34.60 | 6.29 | 1.05 | 1.05 | 0.81 | 0.31 |
| 2 | 117 | 0.0048 | 238 | 0.83 | 27.28 | 4.96 | 0.83 | 0.83 | 0.64 | 0.19 |
| Total | 266 | 0.0108 | 583 | 1.88 | 61.88 | 11.25 | 1.88 | 1.88 | 1.44 | 0.50 |

Stack Dimensions (John Deere Model 6068HFG85)

| | | | | | |
|---|---|---|---|---|---|
| Stack Height | 3 meters | Stack Diameter | 0.5 meters | | |
| Stack Gas Volume | 42.8 m3/min | Stack Temperature | 527 C or | 800 k | |

Effective Plume Height with Building Downwash from the USEPA SCREEN3 Model: 20 meters with downwash

**World Logistics Center**
**Estimation of Operational Emissions - Emergency Generators**
**Natural Gas**
**Prepared by FirstCarbon Solutions**
15-Oct-13

| | | | |
|---|---|---|---|
| Generators: | 1 | per 1.5 million sf | Source: Highland Fairview 7/17/2013 |
| Total Project Size | 40.6 | million sf | Source: Project Description |
| Generators: | 27 | total | |
| Generator Size: | 235 | KW | Source: Highland Fairview 7/17/2013 (235 kw) |
| Testing Schedule | 50 | hours/year/generator | Source: SCAQMD Rule 1470 (c)(2)(C)(i) |
| | 1 | maximum hours/day/generator | |

Emission Rate

| Pollutant | Emission Rate (g/KW-hr) |
|---|---|
| CO2 | 898.68 |
| CH4 | NA |
| HC | 0.04 |
| NOx | 0.03 |
| CO | 2.03 |
| PM | 0 |

Source: Kohler Power Systems. Generator Model 200REZXB, NG Fuel

Annual Emissions per Generator

| Pollutant | Emissions (g/year) | Average Emissions (g/sec) |
|---|---|---|
| CO2 | 10559490.0 | 3.3484E-01 |
| CH4 | NA | NA |
| HC | 470.0 | 1.4904E-05 |
| NOx | 352.5 | 1.1178E-05 |
| CO | 23852.5 | 7.5636E-04 |
| PM10 | 0.0 | 0.0000E+00 |
| PM2.5 (*) | 0.0 | 0.0000E+00 |

(*) Assumes PM2.5 combusion emissions are 90% of PM10 combusion emissions

Emissions from Emergency Generators

| Project Phase | Building Area (sq ft) | Percentage of Total | Number of Generators | HC (g/sec) | NOx (g/sec) | CO (g/sec) | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|---|---|---|---|---|---|
| 1 | 22700000 | 55.91% | 15 | 2.26E-04 | 1.69E-04 | 1.14E-02 | 0.00E+00 | 0.00E+00 |
| 2 | 17900000 | 44.09% | 12 | 1.78E-04 | 1.33E-04 | 9.03E-03 | 0.00E+00 | 0.00E+00 |
| Total | 40600000 | | | | | | | |

| Phase | CO2 (tons/year) | CH4 (tons/year) | MTCO2e /year | HC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | PM10 (lbs/day) | PM2.5 (lbs/day) |
|---|---|---|---|---|---|---|---|---|
| 1 | 176 | | 159 | 0.31 | 0.23 | 15.88 | - | - |
| 2 | 139 | | 126 | 0.25 | 0.19 | 12.52 | - | - |
| Total | 314 | | 285 | 0.56 | 0.42 | 28.41 | - | - |

Stack Dimensions (John Deere Model 6068HFG85)

| | | | | | | |
|---|---|---|---|---|---|---|
| Stack Height | 3 | meters | Stack Diameter | 0.5 | meters | |
| Stack Gas Volume | 42.8 | m3/min | Stack Temperature | 527 | C or | 800 k |

Effective Plume Height with Building Downwash from the USEPA SCREEN3 Model: 20 meters with downwash

**World Logistics Center**
**Estimation of Operational Emissions - Emergency Generators**
**Propane Generators**
**Prepared by FirstCarbon Solutions**
15-Oct-13

| | | | |
|---|---|---|---|
| Generators: | 1 | per 1.5 million sf | Source: Highland Fairview 7/17/2013 |
| Total Project Size | 40.6 | million sf | Source: Project Description |
| Generators: | 27 | total | |
| Generator Size: | 235 | KW | Source: Highland Fairview 7/17/2013 (235 kw) |
| Testing Schedule | 50 | hours/year/generator | Source: SCAQMD Rule 1470 (c)(2)(C)(i) |
| | 1 | maximum hours/day/generator | |

Emission Rate

| Pollutant | Emission Rate (g/KW-hr) |
|---|---|
| CO2 | 591.9 |
| CH4 | NA |
| HC | 0 |
| NOx | 0.03 |
| CO | 0.24 |
| PM | 0 |

Source: Kohler Power Systems. Generator Model 300REZXB, LP Fuel

Annual Emissions per Generator

| Pollutant | Emissions (g/year) | Average Emissions (g/sec) |
|---|---|---|
| CO2 | 6954825.0 | 2.2054E-01 |
| CH4 | NA | NA |
| HC | 0.0 | 0.0000E+00 |
| NOx | 352.5 | 1.1178E-05 |
| CO | 2820.0 | 8.9422E-05 |
| PM10 | 0.0 | 0.0000E+00 |
| PM2.5 (*) | 0.0 | 0.0000E+00 |

(*) Assumes PM2.5 combusion emissions are 90% of PM10 combusion emissions (ARB CEIDERS Database)

Emissions from Emergency Generators

| Project Phase | Building Area (sq ft) | Percentage of Total | Number of Generators | HC (g/sec) | NOx (g/sec) | CO (g/sec) | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|---|---|---|---|---|---|
| 1 | 22700000 | 55.91% | 15 | 0.00E+00 | 1.69E-04 | 1.35E-03 | 0.00E+00 | 0.00E+00 |
| 2 | 17900000 | 44.09% | 12 | 0.00E+00 | 1.33E-04 | 1.07E-03 | 0.00E+00 | 0.00E+00 |
| Total | 40600000 | | | | | | | |

| Phase | CO2 (tons/year) | CH4 (tons/year) | MTCO2e /year | HC (lbs/day) | NOx (lbs/day) | CO (lbs/day) | PM10 (lbs/day) | PM2.5 (lbs/day) |
|---|---|---|---|---|---|---|---|---|
| 1 | 116 | | 105 | - | 0.001 | 0.01 | - | - |
| 2 | 91 | | 83 | - | 0.001 | 0.01 | - | - |
| Total | 207 | | 188 | - | 0.002 | 0.019 | - | - |

Stack Dimensions (John Deere Model 6068HFG85)

| | | | | | | |
|---|---|---|---|---|---|---|
| Stack Height | 3 | meters | Stack Diameter | 0.5 | meters | |
| Stack Gas Volume | 42.8 | m3/min | Stack Temperature | 527 | C or | 800 k |

Effective Plume Height with Building Downwash from the USEPA SCREEN3 Model: 20 meters with downwash

**Area Source Emissions**
World Logistics Center
Prepared by FirstCarbon Solutions
11/4/2013

**Consumer Products**

| Year | Emission Factor (pounds VOC/day/sf) | Square Feet | VOC emissions (pounds/day) |
|---|---|---|---|
| 2016 | 5.10E-06 | 2,100,000 | 11 |
| 2017 | 5.10E-06 | 4,200,000 | 21 |
| 2018 | 5.10E-06 | 7,000,000 | 36 |
| 2019 | 5.10E-06 | 9,800,000 | 50 |
| 2020 | 5.10E-06 | 15,000,000 | 77 |
| 2021 | 5.10E-06 | 20,200,000 | 103 |
| 2022 | 5.10E-06 | 22,945,500 | 117 |
| 2023 | 5.10E-06 | 24,595,500 | 125 |
| 2024 | 5.10E-06 | 26,245,500 | 134 |
| 2025 | 5.10E-06 | 28,600,000 | 146 |
| 2026 | 5.10E-06 | 31,270,000 | 159 |
| 2027 | 5.10E-06 | 33,940,000 | 173 |
| 2028 | 5.10E-06 | 36,610,000 | 187 |
| 2029 | 5.10E-06 | 38,360,000 | 196 |
| 2030 | 5.10E-06 | 40,110,000 | 205 |
| 2031 | 5.10E-06 | 40,610,000 | 207 |

Source of emission factor: CalEEMod and Michael Brandman Associates

**Architectural Coating**

| Year | Square Feet | Percent of Total | VOC emissions (pounds/day) |
|---|---|---|---|
| 2016 | 2,100,000 | 5% | 13.3 |
| 2017 | 4,200,000 | 10% | 26.7 |
| 2018 | 7,000,000 | 17% | 44.4 |
| 2019 | 9,800,000 | 24% | 62.2 |
| 2020 | 15,000,000 | 37% | 95.2 |
| 2021 | 20,200,000 | 50% | 128.2 |
| 2022 | 22,945,500 | 57% | 145.7 |
| 2023 | 24,595,500 | 61% | 156.1 |
| 2024 | 26,245,500 | 65% | 166.6 |
| 2025 | 28,600,000 | 70% | 181.6 |
| 2026 | 31,270,000 | 77% | 198.5 |
| 2027 | 33,940,000 | 84% | 215.5 |
| 2028 | 36,610,000 | 90% | 232.4 |
| 2029 | 38,360,000 | 94% | 243.5 |
| 2030 | 40,110,000 | 99% | 254.6 |
| 2031 | 40,610,000 | 100% | 257.8 |

Source of 2031 emissions: CalEEMod output
Source of other emissions: A percentage based on the square feet.

**Area Source Emissions**
World Logistics Center
Prepared by FirstCarbon Solutions
11/4/2013

**Natural Gas** **Emissions (pounds/day)** 38% PM2.5 Black Carbon

| Year | VOC | NOx | CO | SOx | PM10 | PM2.5 | Black Carbon (lbs/day) | Black Carbon (tons/year) | Black Carbon (MTCO2e/ year) |
|---|---|---|---|---|---|---|---|---|---|
| 2016 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.01 | 0.0011 | 1 |
| 2017 | 0.0 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.01 | 0.0022 | 2 |
| 2018 | 0.1 | 0.7 | 0.6 | 0.0 | 0.1 | 0.1 | 0.02 | 0.0036 | 3 |
| 2019 | 0.1 | 1.0 | 0.8 | 0.0 | 0.1 | 0.1 | 0.03 | 0.0050 | 4 |
| 2020 | 0.2 | 1.5 | 1.3 | 0.0 | 0.1 | 0.1 | 0.04 | 0.0077 | 6 |
| 2021 | 0.2 | 2.0 | 1.7 | 0.0 | 0.1 | 0.1 | 0.06 | 0.0103 | 8 |
| 2022 | 0.2 | 2.3 | 1.9 | 0.0 | 0.2 | 0.2 | 0.06 | 0.0118 | 9 |
| 2023 | 0.3 | 2.4 | 2.1 | 0.0 | 0.2 | 0.2 | 0.07 | 0.0126 | 10 |
| 2024 | 0.3 | 2.6 | 2.2 | 0.0 | 0.2 | 0.2 | 0.07 | 0.0134 | 10 |
| 2025 | 0.3 | 2.8 | 2.4 | 0.0 | 0.2 | 0.2 | 0.08 | 0.0147 | 11 |
| 2026 | 0.3 | 3.1 | 2.6 | 0.0 | 0.2 | 0.2 | 0.09 | 0.0160 | 12 |
| 2027 | 0.4 | 3.3 | 2.8 | 0.0 | 0.3 | 0.3 | 0.10 | 0.0174 | 13 |
| 2028 | 0.4 | 3.6 | 3.1 | 0.0 | 0.3 | 0.3 | 0.10 | 0.0188 | 14 |
| 2029 | 0.4 | 3.8 | 3.2 | 0.0 | 0.3 | 0.3 | 0.11 | 0.0197 | 15 |
| 2030 | 0.4 | 4.0 | 3.3 | 0.0 | 0.3 | 0.3 | 0.11 | 0.0205 | 16 |
| 2031 | 0.4 | 4.0 | 3.4 | 0.02 | 0.3 | 0.3 | 0.11 | 0.0208 | 16 |

GWP: 760

Source of 2031 emissions: CalEEMod output
Source of other emissions: A percentage based on the square feet.

# Air Conditioning and Refrigeration Fugitive Emissions - Operating Conditions

Project: World Logistics Center
Prepared by: FirstCarbon Solutions
Prepared on: 11/5/2013

| Land Use | Building Area (SF) |
|---|---|
| Unrefrigerated warehouse | 39,379,000 |
| Store | 3,000 |
| Office | 1,218,000 |
| Total | 40,600,000 |

| Type of Unit | Units | Average charge (lbs) | Average charge (kg) | Annual Leak Rate in percent of capacity | Emissions (kg/year) | Emissions (tons/year) | Average Global Warming Potential | MTCO2e per year |
|---|---|---|---|---|---|---|---|---|
| **With Regulations** | | | | | | | | |
| *Air conditioning Systems* | | | | | | | | |
| Unitary A/C - small | 243.6 | 100 | 45 | 5% | 552 | 0.61 | 1500 | 827 |

Sources:
- General methodology: U.S. Environmental Protection Agency, Climate Leaders. May 2008. Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment. EPA430-K-03-004. http://www.epa.gov/stateply/documents/resources/mfgrfg.pdf
- Number of units: It is assumed that there would be one unitary A/C for every 5,000 square feet of office space and one for the store
- With regulation/rule annual leak rate, average charge, and Global Warming Potential: South Coast Air Quality Management District. Draft Environmental Assessment for Proposed Amended Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems and Proposed Rule 1415.1 – Reduction of Refrigerant Emissions from Stationary Refrigeration Systems. November 2010. Website: http://www.aqmd.gov/ceqa/documents/2010/aqmd/finalEA/1415DEA.pdf (Table B-1)

**Road Segment Calculations for Carbon Sequestration Purposes**
World Logistics Center
Prepared by FirstCarbon Solutions
1/16/2013

| ID | Arterial | From | To | Segment Length (m) | Segment Length (feet) |
|---|---|---|---|---|---|
| 1 | Street A | State Route 60 | Eucalyptus Ave | 327 | 1073 |
| 2 | Street A | Eucalyptus Ave | Street F | 614 | 2014 |
| 3 | Street E | west of Street A | | 1181 | 3874 |
| 4 | Street E | north of Alessandro Blvd | | 934 | 3064 |
| 5 | Street E | Street D | Street A | 1060 | 3477 |
| 6 | Street A | Street F | Street C | 1163 | 3815 |
| 7 | Street A | south of Street C | | 535 | 1755 |
| 8 | Street D | Street E | Cactus Ave | 1143 | 3749 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 1201 | 3939 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 824 | 2703 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 897 | 2942 |
| 15 | Eucalyptus Ave | west of Street A | | 734 | 2408 |
| 18 | State Route 60 | Redlands Blvd | Theodore St | 780 | 2558 |
| 18a | State Route 60 | Theodore St | Gilman Springs Rd | 648 | 2125 |
| 19 | Street B | east of Street A | | 1347 | 4418 |
| 20 | Street F | east of Street A | | 1067 | 3500 |
| 21 | Street F | north of Street C | | 664 | 2178 |
| 22 | Street C | east of Street A | | 704 | 2309 |
| 23 | Street C | west of Street F | | 448 | 1469 |
| 24 | Street F | Street C | Street G | 1443 | 4733 |
| 25 | Street C | Street F | Street H | 265 | 869 |
| 26 | Street C | Street H | Gilman Springs Rd | 417 | 1368 |
| 27 | Street H | Street C | Street G | 347 | 1138 |
| 28 | Street G | east of Street H | | 1459 | 4786 |
| 29 | Street G | Street F | Street H | 564 | 1850 |
| 30 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 2174 | 7131 |
| 31 | Gilman Springs Rd | Eucalyptus Ave | Street C | 1563 | 5127 |
| | **Total** | | | **24503** | **80370** |

Source: Health Risk Assessment spreadsheets, measured using AERMOD

# WLC: Existing Sources

**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Industrial | 0.00 | User Defined Unit | 0.00 | 0.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2012 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Operational Off-Road Equipment - Tractor during operation

Construction Phase - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 0.00 | 1.00 |
| tblDemolition | PhaseName | Demolition | Operation only file |
| tblOnRoadDust | PhaseName | Demolition | Operation only file |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2012 |
| tblTripsAndVMT | PhaseName | Demolition | Operation only file |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Offroad | 0.0593 | 0.7027 | 0.4032 | 6.0000e-004 | | 0.0369 | 0.0369 | | 0.0339 | 0.0339 | 0.0000 | 58.4174 | 58.4174 | 0.0171 | 0.0000 | 58.7763 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0593** | **0.7027** | **0.4032** | **6.0000e-004** | **0.0000** | **0.0369** | **0.0369** | **0.0000** | **0.0339** | **0.0339** | **0.0000** | **58.4174** | **58.4174** | **0.0171** | **0.0000** | **58.7763** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Off-Highway Tractors | 1 | 8.00 | 260 | 122 | 0.44 | Diesel |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Highway Tractors | 0.0593 | 0.7027 | 0.4032 | 6.0000e-004 | | 0.0369 | 0.0369 | | 0.0339 | 0.0339 | 0.0000 | 58.4174 | 58.4174 | 0.0171 | 0.0000 | 58.7763 |
| **Total** | **0.0593** | **0.7027** | **0.4032** | **6.0000e-004** | | **0.0369** | **0.0369** | | **0.0339** | **0.0339** | **0.0000** | **58.4174** | **58.4174** | **0.0171** | **0.0000** | **58.7763** |

# WLC: Existing Sources

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Industrial | 0.00 | User Defined Unit | 0.00 | 0.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2012 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Operational Off-Road Equipment - Tractor during operation

Construction Phase - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 0.00 | 1.00 |
| tblDemolition | PhaseName | Demolition | Operation only file |
| tblOnRoadDust | PhaseName | Demolition | Operation only file |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2012 |
| tblTripsAndVMT | PhaseName | Demolition | Operation only file |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.4563 | 5.4051 | 3.1015 | 4.6200e-003 | | 0.2835 | 0.2835 | | 0.2608 | 0.2608 | | 495.3399 | 495.3399 | 0.1449 | | 498.3830 |
| **Total** | **0.4563** | **5.4051** | **3.1015** | **4.6200e-003** | **0.0000** | **0.2835** | **0.2835** | **0.0000** | **0.2608** | **0.2608** | | **495.3399** | **495.3399** | **0.1449** | **0.0000** | **498.3830** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Off-Highway Tractors | 1 | 8.00 | 260 | 122 | 0.44 | Diesel |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Highway Tractors | 0.4563 | 5.4051 | 3.1015 | 4.6200e-003 | | 0.2835 | 0.2835 | | 0.2608 | 0.2608 | | 495.3399 | 495.3399 | 0.1449 | | 498.3830 |
| **Total** | **0.4563** | **5.4051** | **3.1015** | **4.6200e-003** | | **0.2835** | **0.2835** | | **0.2608** | **0.2608** | | **495.3399** | **495.3399** | **0.1449** | | **498.3830** |

# World Logistics Center Operational Area Sources

**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 1,218.00 | 1000sqft | 27.96 | 1,218,000.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 39,379.00 | 1000sqft | 2,582.00 | 39,379,000.00 | 0 |
| Convenience Market With Gas Pumps | 3.00 | 1000sqft | 0.07 | 3,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Edited the acreage for the warehouse to the total area of specific plan (2610 acres) minus the office and market.

Land Use Change -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 6,000.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblConsumerProducts | ROG_EF | 1.98E-05 | 5.1E-06 |
| tblEnergyUse | LightingElect | 7.62 | 5.39 |
| tblEnergyUse | LightingElect | 4.80 | 3.98 |
| tblEnergyUse | LightingElect | 1.75 | 4.52 |
| tblEnergyUse | NT24E | 2.44 | 2.39 |
| tblEnergyUse | NT24E | 2.60 | 2.15 |
| tblEnergyUse | NT24E | 0.82 | 1.43 |
| tblEnergyUse | NT24NG | 0.30 | 0.00 |
| tblEnergyUse | NT24NG | 0.03 | 0.00 |
| tblEnergyUse | T24E | 5.60 | 1.49 |
| tblEnergyUse | T24E | 3.75 | 3.14 |
| tblEnergyUse | T24E | 0.45 | 3.33 |
| tblEnergyUse | T24NG | 2.02 | 0.00 |
| tblEnergyUse | T24NG | 3.07 | 12.35 |
| tblEnergyUse | T24NG | 2.11 | 0.00 |
| tblLandUse | LotAcreage | 904.02 | 2,582.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 9.02 | 15.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripNumber | 3.00 | 0.00 |
| tblVehicleTrips | ST_TR | 1,448.33 | 0.00 |
| tblVehicleTrips | ST_TR | 1.64 | 0.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 1,182.08 | 0.00 |
| tblVehicleTrips | SU_TR | 0.76 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 845.60 | 0.00 |
| tblVehicleTrips | WD_TR | 11.42 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AnaDigestCogenCombDigestGasPercent | 0.00 | 100.00 |
| tblWater | AnaDigestCogenCombDigestGasPercent | 0.00 | 100.00 |
| tblWater | AnaDigestCogenCombDigestGasPercent | 0.00 | 100.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | IndoorWaterUseRate | 222,217.56 | 0.00 |
| tblWater | IndoorWaterUseRate | 216,479,705.06 | 0.00 |
| tblWater | IndoorWaterUseRate | 9,106,393,750.00 | 148,190,000.00 |
| tblWater | OutdoorWaterUseRate | 136,197.86 | 0.00 |
| tblWater | OutdoorWaterUseRate | 132,681,109.55 | 0.00 |
| tblWater | OutdoorWaterUseRate | 0.00 | 495,670,000.00 |
| tblWater | SepticTankPercent | 10.33 | 0.00 |
| tblWater | SepticTankPercent | 10.33 | 0.00 |
| tblWater | SepticTankPercent | 10.33 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 84.8809 | 4.6400e-003 | 0.5156 | 4.0000e-005 | | 1.8300e-003 | 1.8300e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 1.0076 | 1.0076 | 2.6000e-003 | 0.0000 | 1.0622 |
| Energy | 0.0811 | 0.7374 | 0.6194 | 4.4200e-003 | | 0.0560 | 0.0560 | | 0.0560 | 0.0560 | 0.0000 | 108,617.7472 | 108,617.7472 | 4.9713 | 1.0401 | 109,044.5686 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 7,746.9471 | 0.0000 | 7,746.9471 | 457.8315 | 0.0000 | 17,361.4077 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2,128.0731 | 2,128.0731 | 0.0978 | 0.0202 | 2,136.4014 |
| **Total** | **84.9620** | **0.7420** | **1.1350** | **4.4600e-003** | **0.0000** | **0.0579** | **0.0579** | **0.0000** | **0.0579** | **0.0579** | **7,746.9471** | **110,746.8280** | **118,493.7751** | **462.9032** | **1.0603** | **128,543.4399** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 84.8809 | 4.6400e-003 | 0.5156 | 4.0000e-005 | | 1.8300e-003 | 1.8300e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 1.0076 | 1.0076 | 2.6000e-003 | 0.0000 | 1.0622 |
| Energy | 0.0730 | 0.6636 | 0.5575 | 3.9800e-003 | | 0.0504 | 0.0504 | | 0.0504 | 0.0504 | 0.0000 | 99,442.5784 | 99,442.5784 | 4.5517 | 0.9521 | 99,833.3182 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 1,936.7368 | 0.0000 | 1,936.7368 | 114.4579 | 0.0000 | 4,340.3519 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1,921.5073 | 1,921.5073 | 0.0883 | 0.0183 | 1,929.0272 |
| **Total** | **84.9539** | **0.6683** | **1.0730** | **4.0200e-003** | **0.0000** | **0.0523** | **0.0523** | **0.0000** | **0.0523** | **0.0523** | **1,936.7368** | **101,365.0933** | **103,301.8300** | **119.1005** | **0.9704** | **106,103.7594** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.01** | **9.94** | **5.46** | **9.87** | **0.00** | **9.68** | **9.68** | **0.00** | **9.68** | **9.68** | **75.00** | **8.47** | **12.82** | **74.27** | **8.48** | **17.46** |

## 2.3 Vegetation

**Vegetation**

| | CO2e |
|---|---|
| Category | MT |
| Vegetation Land Change | -1,154.2500 |
| **Total** | **-1,154.2500** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Convenience Market With Gas Pumps | 0.00 | 0.00 | 0.00 | | |
| Office Park | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Convenience Market With Gas | 16.60 | 8.40 | 6.90 | 0.80 | 80.20 | 19.00 | 14 | 21 | 65 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Unrefrigerated Warehouse-No | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 98,720.1354 | 98,720.1354 | 4.5379 | 0.9389 | 99,106.4785 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 107,815.0328 | 107,815.0328 | 4.9559 | 1.0254 | 108,236.9690 |
| NaturalGas Mitigated | 0.0730 | 0.6636 | 0.5575 | 3.9800e-003 | | 0.0504 | 0.0504 | | 0.0504 | 0.0504 | 0.0000 | 722.4430 | 722.4430 | 0.0139 | 0.0132 | 726.8396 |
| NaturalGas Unmitigated | 0.0811 | 0.7374 | 0.6194 | 4.4200e-003 | | 0.0560 | 0.0560 | | 0.0560 | 0.0560 | 0.0000 | 802.7144 | 802.7144 | 0.0154 | 0.0147 | 807.5996 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Convenience Market With Gas Pumps | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Office Park | 1.50423e+007 | 0.0811 | 0.7374 | 0.6194 | 4.4200e-003 | | 0.0560 | 0.0560 | | 0.0560 | 0.0560 | 0.0000 | 802.7144 | 802.7144 | 0.0154 | 0.0147 | 807.5996 |
| Unrefrigerated Warehouse-No Rail | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0811** | **0.7374** | **0.6194** | **4.4200e-003** | | **0.0560** | **0.0560** | | **0.0560** | **0.0560** | **0.0000** | **802.7144** | **802.7144** | **0.0154** | **0.0147** | **807.5996** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Office Park | 1.35381e+007 | 0.0730 | 0.6636 | 0.5575 | 3.9800e-003 | | 0.0504 | 0.0504 | | 0.0504 | 0.0504 | 0.0000 | 722.4430 | 722.4430 | 0.0139 | 0.0132 | 726.8396 |
| Unrefrigerated Warehouse-No Rail | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Convenience Market With Gas Pumps | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0730** | **0.6636** | **0.5575** | **3.9800e-003** | | **0.0504** | **0.0504** | | **0.0504** | **0.0504** | **0.0000** | **722.4430** | **722.4430** | **0.0139** | **0.0132** | **726.8396** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Convenience Market With Gas Pumps | 27810 | 7.9583 | 3.7000e-004 | 8.0000e-005 | 7.9895 |
| Office Park | 1.12909e+007 | 3,231.0703 | 0.1485 | 0.0307 | 3,243.7152 |
| Unrefrigerated Warehouse-No Rail | 3.65437e+008 | 104,576.0042 | 4.8070 | 0.9946 | 104,985.2644 |
| **Total** | | **107,815.0328** | **4.9559** | **1.0254** | **108,236.9690** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Convenience Market With Gas Pumps | 25746 | 7.3677 | 3.4000e-004 | 7.0000e-005 | 7.3965 |
| Office Park | 1.04236e+007 | 2,982.9018 | 0.1371 | 0.0284 | 2,994.5754 |
| Unrefrigerated Warehouse-No Rail | 3.34525e+008 | 95,729.8659 | 4.4004 | 0.9104 | 96,104.5066 |
| **Total** | | **98,720.1354** | **4.5379** | **0.9389** | **99,106.4785** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 84.8809 | 4.6400e-003 | 0.5156 | 4.0000e-005 | | 1.8300e-003 | 1.8300e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 1.0076 | 1.0076 | 2.6000e-003 | 0.0000 | 1.0622 |
| Mitigated | 84.8809 | 4.6400e-003 | 0.5156 | 4.0000e-005 | | 1.8300e-003 | 1.8300e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 1.0076 | 1.0076 | 2.6000e-003 | 0.0000 | 1.0622 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 47.0453 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 37.7885 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0472 | 4.6400e-003 | 0.5156 | 4.0000e-005 | | 1.8300e-003 | 1.8300e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 1.0076 | 1.0076 | 2.6000e-003 | 0.0000 | 1.0622 |
| **Total** | **84.8809** | **4.6400e-003** | **0.5156** | **4.0000e-005** | | **1.8300e-003** | **1.8300e-003** | | **1.8300e-003** | **1.8300e-003** | **0.0000** | **1.0076** | **1.0076** | **2.6000e-003** | **0.0000** | **1.0622** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 47.0453 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 37.7885 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0472 | 4.6400e-003 | 0.5156 | 4.0000e-005 | | 1.8300e-003 | 1.8300e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 1.0076 | 1.0076 | 2.6000e-003 | 0.0000 | 1.0622 |
| **Total** | **84.8809** | **4.6400e-003** | **0.5156** | **4.0000e-005** | | **1.8300e-003** | **1.8300e-003** | | **1.8300e-003** | **1.8300e-003** | **0.0000** | **1.0076** | **1.0076** | **2.6000e-003** | **0.0000** | **1.0622** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Unmitigated | 2,128.0731 | 0.0978 | 0.0202 | 2,136.4014 |
| Mitigated | 1,921.5073 | 0.0883 | 0.0183 | 1,929.0272 |

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Convenience Market With Gas Pumps | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Office Park | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 148.19 / 495.67 | 2,128.0731 | 0.0978 | 0.0202 | 2,136.4014 |
| **Total** | | **2,128.0731** | **0.0978** | **0.0202** | **2,136.4014** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Convenience Market With Gas Pumps | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Office Park | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unrefrigerated Warehouse-No Rail | 118.552 / 465.434 | 1,921.5073 | 0.0883 | 0.0183 | 1,929.0272 |
| **Total** | | **1,921.5073** | **0.0883** | **0.0183** | **1,929.0272** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 1,936.7368 | 114.4579 | 0.0000 | 4,340.3519 |
| Unmitigated | 7,746.9471 | 457.8315 | 0.0000 | 17,361.4077 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Convenience Market With Gas Pumps | 15 | 3.0449 | 0.1800 | 0.0000 | 6.8237 |
| Office Park | 1132.74 | 229.9360 | 13.5888 | 0.0000 | 515.3014 |
| Unrefrigerated Warehouse-No Rail | 37016.3 | 7,513.9663 | 444.0627 | 0.0000 | 16,839.2826 |
| **Total** | | **7,746.9471** | **457.8315** | **0.0000** | **17,361.4077** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Convenience Market With Gas Pumps | 3.75 | 0.7612 | 0.0450 | 0.0000 | 1.7059 |
| Office Park | 283.185 | 57.4840 | 3.3972 | 0.0000 | 128.8253 |
| Unrefrigerated Warehouse-No Rail | 9254.07 | 1,878.4916 | 111.0157 | 0.0000 | 4,209.8207 |
| **Total** | | **1,936.7368** | **114.4579** | **0.0000** | **4,340.3519** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Vegetation

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT | | | |
| Unmitigated | -1,154.2500 | 0.0000 | 0.0000 | -1,154.2500 |

### 10.1 Vegetation Land Change

**Vegetation Type**

| | Initial/Final | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| | Acres | MT | | | |
| Cropland | 2610 / 45 | -1,154.2500 | 0.0000 | 0.0000 | -1,154.2500 |
| **Total** | | **-1,154.2500** | **0.0000** | **0.0000** | **-1,154.2500** |

# World Logistics Center Operational Area Sources

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 1,218.00 | 1000sqft | 27.96 | 1,218,000.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 39,379.00 | 1000sqft | 2,582.00 | 39,379,000.00 | 0 |
| Convenience Market With Gas Pumps | 3.00 | 1000sqft | 0.07 | 3,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Edited the acreage for the warehouse to the total area of specific plan (2610 acres) minus the office and market.

Land Use Change -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 6,000.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblConsumerProducts | ROG_EF | 1.98E-05 | 5.1E-06 |
| tblEnergyUse | LightingElect | 7.62 | 5.39 |
| tblEnergyUse | LightingElect | 4.80 | 3.98 |
| tblEnergyUse | LightingElect | 1.75 | 4.52 |
| tblEnergyUse | NT24E | 2.44 | 2.39 |
| tblEnergyUse | NT24E | 2.60 | 2.15 |
| tblEnergyUse | NT24E | 0.82 | 1.43 |
| tblEnergyUse | NT24NG | 0.30 | 0.00 |
| tblEnergyUse | NT24NG | 0.03 | 0.00 |
| tblEnergyUse | T24E | 5.60 | 1.49 |
| tblEnergyUse | T24E | 3.75 | 3.14 |
| tblEnergyUse | T24E | 0.45 | 3.33 |
| tblEnergyUse | T24NG | 2.02 | 0.00 |
| tblEnergyUse | T24NG | 3.07 | 12.35 |
| tblEnergyUse | T24NG | 2.11 | 0.00 |
| tblLandUse | LotAcreage | 904.02 | 2,582.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 9.02 | 15.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | WorkerTripNumber | 3.00 | 0.00 |
| tblVehicleTrips | ST_TR | 1,448.33 | 0.00 |
| tblVehicleTrips | ST_TR | 1.64 | 0.00 |
| tblVehicleTrips | ST_TR | 2.59 | 0.00 |
| tblVehicleTrips | SU_TR | 1,182.08 | 0.00 |
| tblVehicleTrips | SU_TR | 0.76 | 0.00 |
| tblVehicleTrips | SU_TR | 2.59 | 0.00 |
| tblVehicleTrips | WD_TR | 845.60 | 0.00 |
| tblVehicleTrips | WD_TR | 11.42 | 0.00 |
| tblVehicleTrips | WD_TR | 2.59 | 0.00 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AnaDigestCogenCombDigestGasPercent | 0.00 | 100.00 |
| tblWater | AnaDigestCogenCombDigestGasPercent | 0.00 | 100.00 |
| tblWater | AnaDigestCogenCombDigestGasPercent | 0.00 | 100.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | IndoorWaterUseRate | 222,217.56 | 0.00 |
| tblWater | IndoorWaterUseRate | 216,479,705.06 | 0.00 |
| tblWater | IndoorWaterUseRate | 9,106,393,750.00 | 148,190,000.00 |
| tblWater | OutdoorWaterUseRate | 136,197.86 | 0.00 |
| tblWater | OutdoorWaterUseRate | 132,681,109.55 | 0.00 |
| tblWater | OutdoorWaterUseRate | 0.00 | 495,670,000.00 |
| tblWater | SepticTankPercent | 10.33 | 0.00 |
| tblWater | SepticTankPercent | 10.33 | 0.00 |
| tblWater | SepticTankPercent | 10.33 | 0.00 |

## 2.0 Emissions Summary

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 465.2196 | 0.0371 | 4.1245 | 3.1000e-004 | | 0.0146 | 0.0146 | | 0.0146 | 0.0146 | | 8.8854 | 8.8854 | 0.0229 | | 9.3666 |
| Energy | 0.4444 | 4.0404 | 3.3939 | 0.0242 | | 0.3071 | 0.3071 | | 0.3071 | 0.3071 | | 4,848.4448 | 4,848.4448 | 0.0929 | 0.0889 | 4,877.9516 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **465.6640** | **4.0775** | **7.5184** | **0.0246** | **0.0000** | **0.3217** | **0.3217** | **0.0000** | **0.3217** | **0.3217** | | **4,857.3302** | **4,857.3302** | **0.1158** | **0.0889** | **4,887.3182** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 465.2196 | 0.0371 | 4.1245 | 3.1000e-004 | | 0.0146 | 0.0146 | | 0.0146 | 0.0146 | | 8.8854 | 8.8854 | 0.0229 | | 9.3666 |
| Energy | 0.4000 | 3.6363 | 3.0545 | 0.0218 | | 0.2764 | 0.2764 | | 0.2764 | 0.2764 | | 4,363.6003 | 4,363.6003 | 0.0836 | 0.0800 | 4,390.1565 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **465.6196** | **3.6735** | **7.1790** | **0.0221** | **0.0000** | **0.2910** | **0.2910** | **0.0000** | **0.2910** | **0.2910** | | **4,372.4857** | **4,372.4857** | **0.1066** | **0.0800** | **4,399.5231** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.01** | **9.91** | **4.51** | **9.86** | **0.00** | **9.55** | **9.55** | **0.00** | **9.55** | **9.55** | **0.00** | **9.98** | **9.98** | **8.02** | **10.00** | **9.98** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Convenience Market With Gas Pumps | 0.00 | 0.00 | 0.00 | | |
| Office Park | 0.00 | 0.00 | 0.00 | | |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Convenience Market With Gas | 16.60 | 8.40 | 6.90 | 0.80 | 80.20 | 19.00 | 14 | 21 | 65 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Unrefrigerated Warehouse-No | 16.60 | 8.40 | 6.90 | 59.00 | 0.00 | 41.00 | 92 | 5 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.4000 | 3.6363 | 3.0545 | 0.0218 | | 0.2764 | 0.2764 | | 0.2764 | 0.2764 | | 4,363.6003 | 4,363.6003 | 0.0836 | 0.0800 | 4,390.1565 |
| NaturalGas Unmitigated | 0.4444 | 4.0404 | 3.3939 | 0.0242 | | 0.3071 | 0.3071 | | 0.3071 | 0.3071 | | 4,848.4448 | 4,848.4448 | 0.0929 | 0.0889 | 4,877.9516 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Convenience Market With Gas Pumps | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Office Park | 41211.8 | 0.4444 | 4.0404 | 3.3939 | 0.0242 | | 0.3071 | 0.3071 | | 0.3071 | 0.3071 | | 4,848.4448 | 4,848.4448 | 0.0929 | 0.0889 | 4,877.9516 |
| Unrefrigerated Warehouse-No Rail | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.4444** | **4.0404** | **3.3939** | **0.0242** | | **0.3071** | **0.3071** | | **0.3071** | **0.3071** | | **4,848.4448** | **4,848.4448** | **0.0929** | **0.0889** | **4,877.9516** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Office Park | 37.0906 | 0.4000 | 3.6363 | 3.0545 | 0.0218 | | 0.2764 | 0.2764 | | 0.2764 | 0.2764 | | 4,363.6003 | 4,363.6003 | 0.0836 | 0.0800 | 4,390.1565 |
| Unrefrigerated Warehouse-No Rail | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Convenience Market With Gas Pumps | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.4000** | **3.6363** | **3.0545** | **0.0218** | | **0.2764** | **0.2764** | | **0.2764** | **0.2764** | | **4,363.6003** | **4,363.6003** | **0.0836** | **0.0800** | **4,390.1565** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 465.2196 | 0.0371 | 4.1245 | 3.1000e-004 | | 0.0146 | 0.0146 | | 0.0146 | 0.0146 | | 8.8854 | 8.8854 | 0.0229 | | 9.3666 |
| Mitigated | 465.2196 | 0.0371 | 4.1245 | 3.1000e-004 | | 0.0146 | 0.0146 | | 0.0146 | 0.0146 | | 8.8854 | 8.8854 | 0.0229 | | 9.3666 |

### 6.2 Area by SubCategory

**Unmitigated**

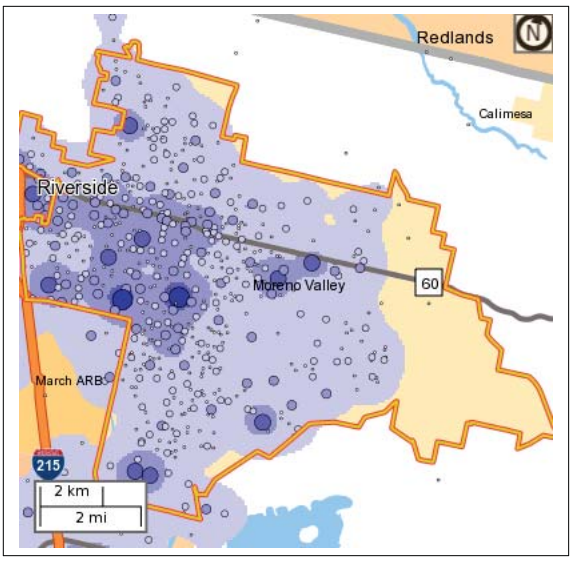
| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 257.7822 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 207.0600 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.3774 | 0.0371 | 4.1245 | 3.1000e-004 | | 0.0146 | 0.0146 | | 0.0146 | 0.0146 | | 8.8854 | 8.8854 | 0.0229 | | 9.3666 |
| **Total** | **465.2196** | **0.0371** | **4.1245** | **3.1000e-004** | | **0.0146** | **0.0146** | | **0.0146** | **0.0146** | | **8.8854** | **8.8854** | **0.0229** | | **9.3666** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 257.7822 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 207.0600 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.3774 | 0.0371 | 4.1245 | 3.1000e-004 | | 0.0146 | 0.0146 | | 0.0146 | 0.0146 | | 8.8854 | 8.8854 | 0.0229 | | 9.3666 |
| **Total** | **465.2196** | **0.0371** | **4.1245** | **3.1000e-004** | | **0.0146** | **0.0146** | | **0.0146** | **0.0146** | | **8.8854** | **8.8854** | **0.0229** | | **9.3666** |

# E.2 - CalEEMod Output for Alternatives

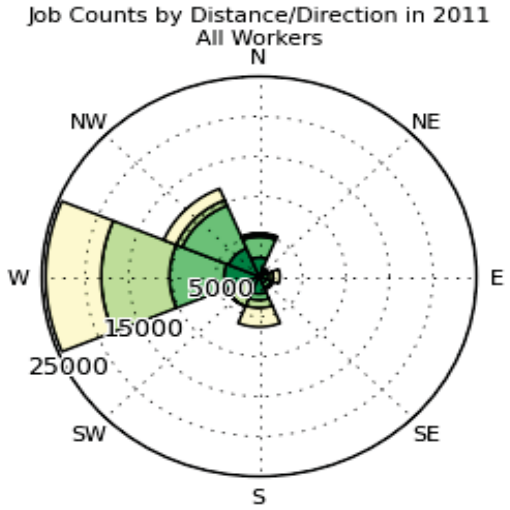
# Distance/Direction Report - Home Census Block to Work Census Block




5 - 192 Jobs/Sq.Mile
193 - 755 Jobs/Sq.Mile
756 - 1,694 Jobs/Sq.Mile
1,695 - 3,007 Jobs/Sq.Mile
3,008 - 4,697 Jobs/Sq.Mile

1 - 2 Jobs
3 - 19 Jobs
20 - 95 Jobs
96 - 300 Jobs
301 - 732 Jobs

Analysis Selection




## Jobs by Distance - Home Census Block to Work Census Block

| | 2011 | |
|---|---|---|
| | Count | Share |
| Total Primary Jobs | 57,550 | 100.0% |
| Less than 10 miles | 15,997 | 27.8% |
| 10 to 24 miles | 17,152 | 29.8% |
| 25 to 50 miles | 12,803 | 22.2% |
| Greater than 50 miles | 11,598 | 20.2% |

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2011).
Notes:

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results and are not available before 2011.

# Moreno Highlands Specific Plan

**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 11,000.00 | 1000sqft | 252.53 | 11,000,000.00 | 0 |
| Apartments Low Rise | 972.00 | Dwelling Unit | 60.75 | 972,000.00 | 2780 |
| Single Family Housing | 3,078.00 | Dwelling Unit | 999.35 | 5,540,400.00 | 8803 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 16500000 | 24000000 |
| tblAreaCoating | Area_Residential_Exterior | 4395870 | 6806025 |
| tblAreaCoating | Area_Residential_Interior | 13187610 | 20418075 |
| tblConstructionPhase | NumDays | 155,000.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblFireplaces | NumberGas | 826.20 | 972.00 |
| tblFireplaces | NumberGas | 2,616.30 | 3,078.00 |
| tblFireplaces | NumberNoFireplace | 97.20 | 0.00 |
| tblFireplaces | NumberNoFireplace | 307.80 | 0.00 |
| tblFireplaces | NumberWood | 48.60 | 0.00 |
| tblFireplaces | NumberWood | 153.90 | 0.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,609.23 | 6,918.34 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | ST_TR | 7.16 | 5.30 |
| tblVehicleTrips | ST_TR | 1.64 | 8.20 |
| tblVehicleTrips | ST_TR | 10.08 | 7.90 |
| tblVehicleTrips | SU_TR | 6.07 | 5.30 |
| tblVehicleTrips | SU_TR | 0.76 | 8.20 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 8.77 | 7.90 |
| tblVehicleTrips | WD_TR | 6.59 | 5.30 |
| tblVehicleTrips | WD_TR | 11.42 | 8.20 |
| tblVehicleTrips | WD_TR | 9.57 | 7.90 |
| tblWoodstoves | NumberCatalytic | 48.60 | 0.00 |
| tblWoodstoves | NumberCatalytic | 153.90 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 48.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 153.90 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 85.6729 | 0.4815 | 41.8009 | 2.2200e-003 | | 0.3000 | 0.3000 | | 0.2993 | 0.2993 | 0.0000 | 1,041.0529 | 1,041.0529 | 0.0844 | 0.0178 | 1,048.3515 |
| Energy | 0.8145 | 7.0591 | 3.6900 | 0.0444 | | 0.5627 | 0.5627 | | 0.5627 | 0.5627 | 0.0000 | 51,057.2315 | 51,057.2315 | 2.1309 | 0.5567 | 51,274.5543 |
| Mobile | 46.5833 | 129.4361 | 552.1392 | 2.4444 | 171.6356 | 3.6569 | 175.2925 | 45.8564 | 3.3723 | 49.2287 | 0.0000 | 160,140.5808 | 160,140.5808 | 3.7665 | 0.0000 | 160,219.6764 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3,571.7194 | 0.0000 | 3,571.7194 | 211.0826 | 0.0000 | 8,004.4533 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 703.9689 | 12,606.7571 | 13,310.7260 | 72.8839 | 1.8272 | 15,407.7057 |
| **Total** | **133.0707** | **136.9767** | **597.6301** | **2.4910** | **171.6356** | **4.5196** | **176.1552** | **45.8564** | **4.2343** | **50.0907** | **4,275.6883** | **224,845.6223** | **229,121.3106** | **289.9481** | **2.4017** | **235,954.7410** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 85.6729 | 0.4815 | 41.8009 | 2.2200e-003 | | 0.3000 | 0.3000 | | 0.2993 | 0.2993 | 0.0000 | 1,041.0529 | 1,041.0529 | 0.0844 | 0.0178 | 1,048.3515 |
| Energy | 0.8145 | 7.0591 | 3.6900 | 0.0444 | | 0.5627 | 0.5627 | | 0.5627 | 0.5627 | 0.0000 | 51,057.2315 | 51,057.2315 | 2.1309 | 0.5567 | 51,274.5543 |
| Mobile | 46.5833 | 129.4361 | 552.1392 | 2.4444 | 171.6356 | 3.6569 | 175.2925 | 45.8564 | 3.3723 | 49.2287 | 0.0000 | 160,140.5808 | 160,140.5808 | 3.7665 | 0.0000 | 160,219.6764 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3,571.7194 | 0.0000 | 3,571.7194 | 211.0826 | 0.0000 | 8,004.4533 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 703.9689 | 12,606.7571 | 13,310.7260 | 72.8707 | 1.8244 | 15,406.5826 |
| **Total** | **133.0707** | **136.9767** | **597.6301** | **2.4910** | **171.6356** | **4.5196** | **176.1552** | **45.8564** | **4.2343** | **50.0907** | **4,275.6883** | **224,845.6223** | **229,121.3106** | **289.9350** | **2.3990** | **235,953.6180** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.11** | **0.00** |

## 2.3 Vegetation

**Vegetation**

| | CO2e |
|---|---|
| Category | MT |
| Vegetation Land Change | -529.6500 |
| **Total** | **-529.6500** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 46.5833 | 129.4361 | 552.1392 | 2.4444 | 171.6356 | 3.6569 | 175.2925 | 45.8564 | 3.3723 | 49.2287 | 0.0000 | 160,140.5808 | 160,140.5808 | 3.7665 | 0.0000 | 160,219.6764 |
| Mitigated | 46.5833 | 129.4361 | 552.1392 | 2.4444 | 171.6356 | 3.6569 | 175.2925 | 45.8564 | 3.3723 | 49.2287 | 0.0000 | 160,140.5808 | 160,140.5808 | 3.7665 | 0.0000 | 160,219.6764 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Low Rise | 5,151.60 | 5,151.60 | 5151.60 | 25,832,724 | 25,832,724 |
| Office Park | 90,200.00 | 90,200.00 | 90200.00 | 304,754,296 | 304,754,296 |
| Single Family Housing | 24,316.20 | 24,316.20 | 24316.20 | 121,933,705 | 121,933,705 |
| Total | 119,667.80 | 119,667.80 | 119,667.80 | 452,520,725 | 452,520,725 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Low Rise | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Single Family Housing | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Low Rise | 1.3338e+007 | 0.0719 | 0.6146 | 0.2615 | 3.9200e-003 | | 0.0497 | 0.0497 | | 0.0497 | 0.0497 | 0.0000 | 711.7653 | 711.7653 | 0.0136 | 0.0131 | 716.0970 |
| Office Park | 3.377e+007 | 0.1821 | 1.6554 | 1.3905 | 9.9300e-003 | | 0.1258 | 0.1258 | | 0.1258 | 0.1258 | 0.0000 | 1,802.0958 | 1,802.0958 | 0.0345 | 0.0330 | 1,813.0631 |
| Single Family Housing | 1.03935e+008 | 0.5604 | 4.7891 | 2.0379 | 0.0306 | | 0.3872 | 0.3872 | | 0.3872 | 0.3872 | 0.0000 | 5,546.3450 | 5,546.3450 | 0.1063 | 0.1017 | 5,580.0991 |
| **Total** | | **0.8144** | **7.0591** | **3.6900** | **0.0444** | | **0.5627** | **0.5627** | | **0.5627** | **0.5627** | **0.0000** | **8,060.2061** | **8,060.2061** | **0.1545** | **0.1478** | **8,109.2592** |

### 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Low Rise | 3.96364e+006 | 1,134.2628 | 0.0521 | 0.0108 | 1,138.7018 |
| Office Park | 1.2265e+008 | 35,098.3691 | 1.6134 | 0.3338 | 35,235.7272 |
| Single Family Housing | 2.36379e+007 | 6,764.3935 | 0.3109 | 0.0643 | 6,790.8661 |
| **Total** | | **42,997.0254** | **1.9764** | **0.4089** | **43,165.2951** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 85.6729 | 0.4815 | 41.8009 | 2.2200e-003 | | 0.3000 | 0.3000 | | 0.2993 | 0.2993 | 0.0000 | 1,041.0529 | 1,041.0529 | 0.0844 | 0.0178 | 1,048.3515 |
| Mitigated | 85.6729 | 0.4815 | 41.8009 | 2.2200e-003 | | 0.3000 | 0.3000 | | 0.2993 | 0.2993 | 0.0000 | 1,041.0529 | 1,041.0529 | 0.0844 | 0.0178 | 1,048.3515 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 21.0348 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 63.2811 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0983 | 0.0000 | 5.3600e-003 | 0.0000 | | 0.0679 | 0.0679 | | 0.0672 | 0.0672 | 0.0000 | 972.5554 | 972.5554 | 0.0186 | 0.0178 | 978.4742 |
| Landscaping | 1.2587 | 0.4815 | 41.7956 | 2.2200e-003 | | 0.2321 | 0.2321 | | 0.2321 | 0.2321 | 0.0000 | 68.4975 | 68.4975 | 0.0657 | 0.0000 | 69.8773 |
| **Total** | **85.6729** | **0.4815** | **41.8009** | **2.2200e-003** | | **0.3000** | **0.3000** | | **0.2993** | **0.2993** | **0.0000** | **1,041.0529** | **1,041.0529** | **0.0843** | **0.0178** | **1,048.3515** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 21.0348 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 63.2811 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0983 | 0.0000 | 5.3600e-003 | 0.0000 | | 0.0679 | 0.0679 | | 0.0672 | 0.0672 | 0.0000 | 972.5554 | 972.5554 | 0.0186 | 0.0178 | 978.4742 |
| Landscaping | 1.2587 | 0.4815 | 41.7956 | 2.2200e-003 | | 0.2321 | 0.2321 | | 0.2321 | 0.2321 | 0.0000 | 68.4975 | 68.4975 | 0.0657 | 0.0000 | 69.8773 |
| **Total** | **85.6729** | **0.4815** | **41.8009** | **2.2200e-003** | | **0.3000** | **0.3000** | | **0.2993** | **0.2993** | **0.0000** | **1,041.0529** | **1,041.0529** | **0.0843** | **0.0178** | **1,048.3515** |

# 7.0 Water Detail

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Low Rise | 63.3297 / 39.9253 | 383.0044 | 2.0803 | 0.0522 | 442.8653 |
| Office Park | 1955.07 / 1198.27 | 11,714.8745 | 64.2160 | 1.6098 | 13,562.4335 |
| Single Family Housing | 200.544 / 126.43 | 1,212.8472 | 6.5876 | 0.1652 | 1,402.4068 |
| **Total** | | **13,310.7260** | **72.8839** | **1.8272** | **15,407.7057** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 3,571.7194 | 211.0826 | 0.0000 | 8,004.4533 |
| Unmitigated | 3,571.7194 | 211.0826 | 0.0000 | 8,004.4533 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Low Rise | 447.12 | 90.7613 | 5.3638 | 0.0000 | 203.4020 |
| Office Park | 10230 | 2,076.5976 | 122.7234 | 0.0000 | 4,653.7889 |
| Single Family Housing | 6918.34 | 1,404.3605 | 82.9953 | 0.0000 | 3,147.2624 |
| **Total** | | **3,571.7194** | **211.0826** | **0.0000** | **8,004.4533** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Vegetation

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT | | | |
| Unmitigated | -529.6500 | 0.0000 | 0.0000 | -529.6500 |

### 10.1 Vegetation Land Change

**Vegetation Type**

| | Initial/Final | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| | Acres | MT | | | |
| Cropland | 1177 / 0 | -529.6500 | 0.0000 | 0.0000 | -529.6500 |
| **Total** | | **-529.6500** | **0.0000** | **0.0000** | **-529.6500** |

# Moreno Highlands Specific Plan

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 11,000.00 | 1000sqft | 252.53 | 11,000,000.00 | 0 |
| Apartments Low Rise | 972.00 | Dwelling Unit | 60.75 | 972,000.00 | 2780 |
| Single Family Housing | 3,078.00 | Dwelling Unit | 999.35 | 5,540,400.00 | 8803 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 16500000 | 24000000 |
| tblAreaCoating | Area_Residential_Exterior | 4395870 | 6806025 |
| tblAreaCoating | Area_Residential_Interior | 13187610 | 20418075 |
| tblConstructionPhase | NumDays | 155,000.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblFireplaces | NumberGas | 826.20 | 972.00 |
| tblFireplaces | NumberGas | 2,616.30 | 3,078.00 |
| tblFireplaces | NumberNoFireplace | 97.20 | 0.00 |
| tblFireplaces | NumberNoFireplace | 307.80 | 0.00 |
| tblFireplaces | NumberWood | 48.60 | 0.00 |
| tblFireplaces | NumberWood | 153.90 | 0.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,609.23 | 6,918.34 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | ST_TR | 7.16 | 5.30 |
| tblVehicleTrips | ST_TR | 1.64 | 8.20 |
| tblVehicleTrips | ST_TR | 10.08 | 7.90 |
| tblVehicleTrips | SU_TR | 6.07 | 5.30 |
| tblVehicleTrips | SU_TR | 0.76 | 8.20 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 8.77 | 7.90 |
| tblVehicleTrips | WD_TR | 6.59 | 5.30 |
| tblVehicleTrips | WD_TR | 11.42 | 8.20 |
| tblVehicleTrips | WD_TR | 9.57 | 7.90 |
| tblWoodstoves | NumberCatalytic | 48.60 | 0.00 |
| tblWoodstoves | NumberCatalytic | 153.90 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 48.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 153.90 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 479.9364 | 3.8521 | 334.7934 | 0.0177 | | 7.2887 | 7.2887 | | 7.2315 | 7.2315 | 0.0000 | 86,368.7501 | 86,368.7501 | 2.2232 | 1.5724 | 86,902.8675 |
| Energy | 4.4627 | 38.6802 | 20.2191 | 0.2434 | | 3.0833 | 3.0833 | | 3.0833 | 3.0833 | | 48,684.1445 | 48,684.1445 | 0.9331 | 0.8925 | 48,980.4280 |
| Mobile | 274.5806 | 668.7956 | 3,139.2829 | 14.2591 | 958.8136 | 20.0946 | 978.9082 | 255.8269 | 18.5309 | 274.3578 | | 1,024,247.0196 | 1,024,247.0196 | 22.8171 | | 1,024,726.1779 |
| **Total** | **758.9797** | **711.3279** | **3,494.2954** | **14.5202** | **958.8136** | **30.4666** | **989.2803** | **255.8269** | **28.8457** | **284.6726** | **0.0000** | **1,159,299.9141** | **1,159,299.9141** | **25.9734** | **2.4649** | **1,160,609.4734** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 274.5806 | 668.7956 | 3,139.2829 | 14.2591 | 958.8136 | 20.0946 | 978.9082 | 255.8269 | 18.5309 | 274.3578 | | 1,024,247.0196 | 1,024,247.0196 | 22.8171 | | 1,024,726.1779 |
| Mitigated | 274.5806 | 668.7956 | 3,139.2829 | 14.2591 | 958.8136 | 20.0946 | 978.9082 | 255.8269 | 18.5309 | 274.3578 | | 1,024,247.0196 | 1,024,247.0196 | 22.8171 | | 1,024,726.1779 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Low Rise | 5,151.60 | 5,151.60 | 5151.60 | 25,832,724 | 25,832,724 |
| Office Park | 90,200.00 | 90,200.00 | 90200.00 | 304,754,296 | 304,754,296 |
| Single Family Housing | 24,316.20 | 24,316.20 | 24316.20 | 121,933,705 | 121,933,705 |
| Total | 119,667.80 | 119,667.80 | 119,667.80 | 452,520,725 | 452,520,725 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Low Rise | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Single Family Housing | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 4.4627 | 38.6802 | 20.2191 | 0.2434 | | 3.0833 | 3.0833 | | 3.0833 | 3.0833 | | 48,684.1445 | 48,684.1445 | 0.9331 | 0.8925 | 48,980.4280 |
| NaturalGas Unmitigated | 4.4627 | 38.6802 | 20.2191 | 0.2434 | | 3.0833 | 3.0833 | | 3.0833 | 3.0833 | | 48,684.1445 | 48,684.1445 | 0.9331 | 0.8925 | 48,980.4280 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Low Rise | 36542.4 | 0.3941 | 3.3676 | 1.4330 | 0.0215 | | 0.2723 | 0.2723 | | 0.2723 | 0.2723 | | 4,299.1067 | 4,299.1067 | 0.0824 | 0.0788 | 4,325.2703 |
| Office Park | 92520.5 | 0.9978 | 9.0706 | 7.6193 | 0.0544 | | 0.6894 | 0.6894 | | 0.6894 | 0.6894 | | 10,884.7704 | 10,884.7704 | 0.2086 | 0.1996 | 10,951.0132 |
| Single Family Housing | 284752 | 3.0709 | 26.2419 | 11.1668 | 0.1675 | | 2.1217 | 2.1217 | | 2.1217 | 2.1217 | | 33,500.2675 | 33,500.2675 | 0.6421 | 0.6142 | 33,704.1445 |
| **Total** | | **4.4627** | **38.6802** | **20.2191** | **0.2434** | | **3.0833** | **3.0833** | | **3.0833** | **3.0833** | | **48,684.1445** | **48,684.1445** | **0.9331** | **0.8925** | **48,980.4280** |

## 6.0 Area Detail

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 115.2592 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 346.7455 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.8618 | 3.6000e-004 | 0.4288 | 0.0000 | | 5.4318 | 5.4318 | | 5.3746 | 5.3746 | 0.0000 | 85,764.7059 | 85,764.7059 | 1.6438 | 1.5724 | 86,286.6556 |
| Landscaping | 10.0699 | 3.8518 | 334.3646 | 0.0177 | | 1.8569 | 1.8569 | | 1.8569 | 1.8569 | | 604.0442 | 604.0442 | 0.5794 | | 616.2119 |
| **Total** | **479.9364** | **3.8521** | **334.7934** | **0.0177** | | **7.2887** | **7.2887** | | **7.2315** | **7.2315** | **0.0000** | **86,368.7501** | **86,368.7501** | **2.2232** | **1.5724** | **86,902.8675** |

# Moreno Highlands Specific Plan

**Riverside-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 11,000.00 | 1000sqft | 252.53 | 11,000,000.00 | 0 |
| Apartments Low Rise | 972.00 | Dwelling Unit | 60.75 | 972,000.00 | 2780 |
| Single Family Housing | 3,078.00 | Dwelling Unit | 999.35 | 5,540,400.00 | 8803 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Energy Use -

Water And Wastewater -

Solid Waste -

Land Use Change - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblAreaCoating | Area_Nonresidential_Interior | 16500000 | 24000000 |
| tblAreaCoating | Area_Residential_Exterior | 4395870 | 6806025 |
| tblAreaCoating | Area_Residential_Interior | 13187610 | 20418075 |
| tblConstructionPhase | NumDays | 155,000.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblFireplaces | NumberGas | 826.20 | 972.00 |
| tblFireplaces | NumberGas | 2,616.30 | 3,078.00 |
| tblFireplaces | NumberNoFireplace | 97.20 | 0.00 |
| tblFireplaces | NumberNoFireplace | 307.80 | 0.00 |
| tblFireplaces | NumberWood | 48.60 | 0.00 |
| tblFireplaces | NumberWood | 153.90 | 0.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblSolidWaste | SolidWasteGenerationRate | 3,609.23 | 6,918.34 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | ST_TR | 7.16 | 5.30 |
| tblVehicleTrips | ST_TR | 1.64 | 8.20 |
| tblVehicleTrips | ST_TR | 10.08 | 7.90 |
| tblVehicleTrips | SU_TR | 6.07 | 5.30 |
| tblVehicleTrips | SU_TR | 0.76 | 8.20 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | SU_TR | 8.77 | 7.90 |
| tblVehicleTrips | WD_TR | 6.59 | 5.30 |
| tblVehicleTrips | WD_TR | 11.42 | 8.20 |
| tblVehicleTrips | WD_TR | 9.57 | 7.90 |
| tblWoodstoves | NumberCatalytic | 48.60 | 0.00 |
| tblWoodstoves | NumberCatalytic | 153.90 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 48.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 153.90 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 479.9364 | 3.8521 | 334.7934 | 0.0177 | | 7.2887 | 7.2887 | | 7.2315 | 7.2315 | 0.0000 | 86,368.7501 | 86,368.7501 | 2.2232 | 1.5724 | 86,902.8675 |
| Energy | 4.4627 | 38.6802 | 20.2191 | 0.2434 | | 3.0833 | 3.0833 | | 3.0833 | 3.0833 | | 48,684.1445 | 48,684.1445 | 0.9331 | 0.8925 | 48,980.4280 |
| Mobile | 267.6163 | 694.7458 | 2,947.5030 | 13.3001 | 958.8136 | 20.1468 | 978.9604 | 255.8269 | 18.5789 | 274.4058 | | 961,465.2620 | 961,465.2620 | 22.8700 | | 961,945.5313 |
| **Total** | **752.0154** | **737.2781** | **3,302.5155** | **13.5613** | **958.8136** | **30.5188** | **989.3325** | **255.8269** | **28.8938** | **284.7206** | **0.0000** | **1,096,518.1565** | **1,096,518.1565** | **26.0263** | **2.4649** | **1,097,828.8268** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 267.6163 | 694.7458 | 2,947.5030 | 13.3001 | 958.8136 | 20.1468 | 978.9604 | 255.8269 | 18.5789 | 274.4058 | | 961,465.2620 | 961,465.2620 | 22.8700 | | 961,945.5313 |
| Mitigated | 267.6163 | 694.7458 | 2,947.5030 | 13.3001 | 958.8136 | 20.1468 | 978.9604 | 255.8269 | 18.5789 | 274.4058 | | 961,465.2620 | 961,465.2620 | 22.8700 | | 961,945.5313 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Low Rise | 5,151.60 | 5,151.60 | 5151.60 | 25,832,724 | 25,832,724 |
| Office Park | 90,200.00 | 90,200.00 | 90200.00 | 304,754,296 | 304,754,296 |
| Single Family Housing | 24,316.20 | 24,316.20 | 24316.20 | 121,933,705 | 121,933,705 |
| Total | 119,667.80 | 119,667.80 | 119,667.80 | 452,520,725 | 452,520,725 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Low Rise | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Single Family Housing | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 4.4627 | 38.6802 | 20.2191 | 0.2434 | | 3.0833 | 3.0833 | | 3.0833 | 3.0833 | | 48,684.1445 | 48,684.1445 | 0.9331 | 0.8925 | 48,980.4280 |
| NaturalGas Unmitigated | 4.4627 | 38.6802 | 20.2191 | 0.2434 | | 3.0833 | 3.0833 | | 3.0833 | 3.0833 | | 48,684.1445 | 48,684.1445 | 0.9331 | 0.8925 | 48,980.4280 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Low Rise | 36542.4 | 0.3941 | 3.3676 | 1.4330 | 0.0215 | | 0.2723 | 0.2723 | | 0.2723 | 0.2723 | | 4,299.1067 | 4,299.1067 | 0.0824 | 0.0788 | 4,325.2703 |
| Office Park | 92520.5 | 0.9978 | 9.0706 | 7.6193 | 0.0544 | | 0.6894 | 0.6894 | | 0.6894 | 0.6894 | | 10,884.7704 | 10,884.7704 | 0.2086 | 0.1996 | 10,951.0132 |
| Single Family Housing | 284752 | 3.0709 | 26.2419 | 11.1668 | 0.1675 | | 2.1217 | 2.1217 | | 2.1217 | 2.1217 | | 33,500.2675 | 33,500.2675 | 0.6421 | 0.6142 | 33,704.1445 |
| **Total** | | **4.4627** | **38.6802** | **20.2191** | **0.2434** | | **3.0833** | **3.0833** | | **3.0833** | **3.0833** | | **48,684.1445** | **48,684.1445** | **0.9331** | **0.8925** | **48,980.4280** |

## 6.0 Area Detail

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 115.2592 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 346.7455 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.8618 | 3.6000e-004 | 0.4288 | 0.0000 | | 5.4318 | 5.4318 | | 5.3746 | 5.3746 | 0.0000 | 85,764.7059 | 85,764.7059 | 1.6438 | 1.5724 | 86,286.6556 |
| Landscaping | 10.0699 | 3.8518 | 334.3646 | 0.0177 | | 1.8569 | 1.8569 | | 1.8569 | 1.8569 | | 604.0442 | 604.0442 | 0.5794 | | 616.2119 |
| **Total** | **479.9364** | **3.8521** | **334.7934** | **0.0177** | | **7.2887** | **7.2887** | | **7.2315** | **7.2315** | **0.0000** | **86,368.7501** | **86,368.7501** | **2.2232** | **1.5724** | **86,902.8675** |

# WLC: Alternative 2

**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 1,000.00 | 1000sqft | 22.96 | 1,000,000.00 | 0 |
| General Light Industry | 20,000.00 | 1000sqft | 459.14 | 20,000,000.00 | 0 |
| Regional Shopping Center | 500.00 | 1000sqft | 11.48 | 500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 7,750.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblVehicleTrips | ST_TR | 1.32 | 6.97 |
| tblVehicleTrips | ST_TR | 49.97 | 42.70 |
| tblVehicleTrips | SU_TR | 0.68 | 6.97 |
| tblVehicleTrips | SU_TR | 25.24 | 42.70 |
| tblVehicleTrips | WD_TR | 11.42 | 11.03 |
| tblVehicleTrips | WD_TR | 42.94 | 42.70 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 102.6284 | 2.4600e-003 | 0.2730 | 2.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 0.5336 | 0.5336 | 1.3800e-003 | 0.0000 | 0.5625 |
| Energy | 3.6129 | 32.8446 | 27.5895 | 0.1971 | | 2.4962 | 2.4962 | | 2.4962 | 2.4962 | 0.0000 | 104,544.1495 | 104,544.1495 | 3.8473 | 1.3097 | 105,030.9569 |
| Mobile | 67.6509 | 195.1726 | 823.4705 | 3.7270 | 262.1850 | 5.5587 | 267.7436 | 70.0488 | 5.1260 | 75.1747 | 0.0000 | 244,167.8605 | 244,167.8605 | 5.7246 | 0.0000 | 244,288.0775 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 5,329.5277 | 0.0000 | 5,329.5277 | 314.9661 | 0.0000 | 11,943.8151 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 1,535.4357 | 18,452.3532 | 19,987.7889 | 158.5522 | 3.8992 | 24,526.1431 |
| **Total** | **173.8921** | **228.0196** | **851.3330** | **3.9240** | **262.1850** | **8.0558** | **270.2408** | **70.0488** | **7.6231** | **77.6719** | **6,864.9635** | **367,164.8968** | **374,029.8602** | **483.0916** | **5.2089** | **385,789.5551** |

## 2.3 Vegetation

**Vegetation**

| | CO2e |
|---|---|
| Category | MT |
| Vegetation Land Change | -517.5000 |
| **Total** | **-517.5000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 67.6509 | 195.1726 | 823.4705 | 3.7270 | 262.1850 | 5.5587 | 267.7436 | 70.0488 | 5.1260 | 75.1747 | 0.0000 | 244,167.8605 | 244,167.8605 | 5.7246 | 0.0000 | 244,288.0775 |
| Mitigated | 67.6509 | 195.1726 | 823.4705 | 3.7270 | 262.1850 | 5.5587 | 267.7436 | 70.0488 | 5.1260 | 75.1747 | 0.0000 | 244,167.8605 | 244,167.8605 | 5.7246 | 0.0000 | 244,288.0775 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 139,400.00 | 139,400.00 | 139400.00 | 617,301,882 | 617,301,882 |
| Office Park | 11,030.00 | 1,640.00 | 760.00 | 27,777,336 | 27,777,336 |
| Regional Shopping Center | 21,350.00 | 21,350.00 | 21350.00 | 46,176,718 | 46,176,718 |
| Total | 171,780.00 | 162,390.00 | 161,510.00 | 691,255,936 | 691,255,936 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 16.60 | 8.40 | 6.90 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Regional Shopping Center | 16.60 | 8.40 | 6.90 | 16.30 | 64.70 | 19.00 | 54 | 35 | 11 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 68,788.7971 | 68,788.7971 | 3.1620 | 0.6542 | 69,058.0034 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 68,788.7971 | 68,788.7971 | 3.1620 | 0.6542 | 69,058.0034 |
| NaturalGas Mitigated | 3.6129 | 32.8446 | 27.5895 | 0.1971 | | 2.4962 | 2.4962 | | 2.4962 | 2.4962 | 0.0000 | 35,755.3524 | 35,755.3524 | 0.6853 | 0.6555 | 35,972.9536 |
| NaturalGas Unmitigated | 3.6129 | 32.8446 | 27.5895 | 0.1971 | | 2.4962 | 2.4962 | | 2.4962 | 2.4962 | 0.0000 | 35,755.3524 | 35,755.3524 | 0.6853 | 0.6555 | 35,972.9536 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| General Light Industry | 6.658e+008 | 3.5901 | 32.6373 | 27.4153 | 0.1958 | | 2.4804 | 2.4804 | | 2.4804 | 2.4804 | 0.0000 | 35,529.6235 | 35,529.6235 | 0.6810 | 0.6514 | 35,745.859 |
| Office Park | 3.07e+006 | 0.0166 | 0.1505 | 0.1264 | 9.0000e-004 | | 0.0114 | 0.0114 | | 0.0114 | 0.0114 | 0.0000 | 163.8269 | 163.8269 | 3.1400e-003 | 3.0000e-003 | 164.8239 |
| Regional Shopping Center | 1.16e+006 | 6.2500e-003 | 0.0569 | 0.0478 | 3.4000e-004 | | 4.3200e-003 | 4.3200e-003 | | 4.3200e-003 | 4.3200e-003 | 0.0000 | 61.9020 | 61.9020 | 1.1900e-003 | 1.1300e-003 | 62.2787 |
| **Total** | | **3.6129** | **32.8446** | **27.5895** | **0.1971** | | **2.4962** | **2.4962** | | **2.4962** | **2.4962** | **0.0000** | **35,755.3524** | **35,755.3524** | **0.6853** | **0.6555** | **35,972.9535** |

### 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| General Light Industry | 2.214e+008 | 63,357.3495 | 2.9123 | 0.6026 | 63,605.2997 |
| Office Park | 1.115e+007 | 3,190.7608 | 0.1467 | 0.0304 | 3,203.2479 |
| Regional Shopping Center | 7.83e+006 | 2,240.6868 | 0.1030 | 0.0213 | 2,249.4557 |
| **Total** | | **68,788.7971** | **3.1620** | **0.6542** | **69,058.0034** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 102.6284 | 2.4600e-003 | 0.2730 | 2.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 0.5336 | 0.5336 | 1.3800e-003 | 0.0000 | 0.5625 |
| Mitigated | 102.6284 | 2.4600e-003 | 0.2730 | 2.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 0.5336 | 0.5336 | 1.3800e-003 | 0.0000 | 0.5625 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 24.9131 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 77.6903 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0250 | 2.4600e-003 | 0.2730 | 2.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 0.5336 | 0.5336 | 1.3800e-003 | 0.0000 | 0.5625 |
| **Total** | **102.6284** | **2.4600e-003** | **0.2730** | **2.0000e-005** | | **9.7000e-004** | **9.7000e-004** | | **9.7000e-004** | **9.7000e-004** | **0.0000** | **0.5336** | **0.5336** | **1.3800e-003** | **0.0000** | **0.5625** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Unmitigated | 19,987.7889 | 158.5522 | 3.8992 | 24,526.1431 |
| Mitigated | 19,987.7889 | 158.5234 | 3.8933 | 24,523.6935 |

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 4625 / 0 | 18,700.8774 | 151.4979 | 3.7224 | 23,036.2721 |
| Office Park | 177.734 / 108.934 | 1,064.9886 | 5.8378 | 0.1463 | 1,232.9485 |
| Regional Shopping Center | 37.0363 / 22.6996 | 221.9229 | 1.2165 | 0.0305 | 256.9225 |
| **Total** | | **19,987.7889** | **158.5522** | **3.8992** | **24,526.1431** |

## 8.0 Waste Detail

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 24800 | 5,034.1759 | 297.5113 | 0.0000 | 11,281.9126 |
| Office Park | 930 | 188.7816 | 11.1567 | 0.0000 | 423.0717 |
| Regional Shopping Center | 525 | 106.5703 | 6.2981 | 0.0000 | 238.8308 |
| **Total** | | **5,329.5277** | **314.9661** | **0.0000** | **11,943.8151** |

## 10.0 Vegetation

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT | | | |
| Unmitigated | -517.5000 | 0.0000 | 0.0000 | -517.5000 |

### 10.1 Vegetation Land Change

**Vegetation Type**

| | Initial/Final | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| | Acres | MT | | | |
| Cropland | 1150 / 0 | -517.5000 | 0.0000 | 0.0000 | -517.5000 |
| **Total** | | **-517.5000** | **0.0000** | **0.0000** | **-517.5000** |

# WLC: Alternative 2

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 1,000.00 | 1000sqft | 22.96 | 1,000,000.00 | 0 |
| General Light Industry | 20,000.00 | 1000sqft | 459.14 | 20,000,000.00 | 0 |
| Regional Shopping Center | 500.00 | 1000sqft | 11.48 | 500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 7,750.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblVehicleTrips | ST_TR | 1.32 | 6.97 |
| tblVehicleTrips | ST_TR | 49.97 | 42.70 |
| tblVehicleTrips | SU_TR | 0.68 | 6.97 |
| tblVehicleTrips | SU_TR | 25.24 | 42.70 |
| tblVehicleTrips | WD_TR | 11.42 | 11.03 |
| tblVehicleTrips | WD_TR | 42.94 | 42.70 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 562.4101 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |
| Energy | 19.7968 | 179.9705 | 151.1752 | 1.0798 | | 13.6778 | 13.6778 | | 13.6778 | 13.6778 | | 215,964.5447 | 215,964.5447 | 4.1393 | 3.9594 | 217,278.8690 |
| Mobile | 404.5097 | 1,022.1229 | 4,776.1364 | 22.0427 | 1,484.7585 | 30.9722 | 1,515.7306 | 396.1574 | 28.5613 | 424.7187 | | 1,583,311.6830 | 1,583,311.6830 | 35.1642 | | 1,584,050.1302 |
| **Total** | **986.7166** | **1,202.1130** | **4,929.4957** | **23.1227** | **1,484.7585** | **44.6576** | **1,529.4161** | **396.1574** | **42.2468** | **438.4042** | | **1,799,280.9330** | **1,799,280.9330** | **39.3156** | **3.9594** | **1,801,333.9593** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 404.5097 | 1,022.1229 | 4,776.1364 | 22.0427 | 1,484.7585 | 30.9722 | 1,515.7306 | 396.1574 | 28.5613 | 424.7187 | | 1,583,311.6830 | 1,583,311.6830 | 35.1642 | | 1,584,050.1302 |
| Mitigated | 404.5097 | 1,022.1229 | 4,776.1364 | 22.0427 | 1,484.7585 | 30.9722 | 1,515.7306 | 396.1574 | 28.5613 | 424.7187 | | 1,583,311.6830 | 1,583,311.6830 | 35.1642 | | 1,584,050.1302 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 139,400.00 | 139,400.00 | 139400.00 | 617,301,882 | 617,301,882 |
| Office Park | 11,030.00 | 1,640.00 | 760.00 | 27,777,336 | 27,777,336 |
| Regional Shopping Center | 21,350.00 | 21,350.00 | 21350.00 | 46,176,718 | 46,176,718 |
| Total | 171,780.00 | 162,390.00 | 161,510.00 | 691,255,936 | 691,255,936 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 16.60 | 8.40 | 6.90 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Regional Shopping Center | 16.60 | 8.40 | 6.90 | 16.30 | 64.70 | 19.00 | 54 | 35 | 11 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Light Industry | 1.82411e+006 | 19.6718 | 178.8343 | 150.2208 | 1.0730 | | 13.5914 | 13.5914 | | 13.5914 | 13.5914 | | 214,601.1281 | 214,601.1281 | 4.1132 | 3.9344 | 215,907.1548 |
| Office Park | 8410.96 | 0.0907 | 0.8246 | 0.6927 | 4.9500e-003 | | 0.0627 | 0.0627 | | 0.0627 | 0.0627 | | 989.5246 | 989.5246 | 0.0190 | 0.0181 | 995.5467 |
| Regional Shopping Center | 3178.08 | 0.0343 | 0.3116 | 0.2617 | 1.8700e-003 | | 0.0237 | 0.0237 | | 0.0237 | 0.0237 | | 373.8920 | 373.8920 | 7.1700e-003 | 6.8500e-003 | 376.1675 |
| **Total** | | **19.7968** | **179.9705** | **151.1752** | **1.0798** | | **13.6778** | **13.6778** | | **13.6778** | **13.6778** | | **215,964.5447** | **215,964.5447** | **4.1393** | **3.9593** | **217,278.8690** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 562.4101 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |
| Mitigated | 562.4101 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 136.5103 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 425.7000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.1998 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |
| **Total** | **562.4101** | **0.0197** | **2.1841** | **1.6000e-004** | | **7.7400e-003** | **7.7400e-003** | | **7.7400e-003** | **7.7400e-003** | | **4.7053** | **4.7053** | **0.0121** | | **4.9601** |

# WLC: Alternative 2

**Riverside-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Office Park | 1,000.00 | 1000sqft | 22.96 | 1,000,000.00 | 0 |
| General Light Industry | 20,000.00 | 1000sqft | 459.14 | 20,000,000.00 | 0 |
| Regional Shopping Center | 500.00 | 1000sqft | 11.48 | 500,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 7,750.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblVehicleTrips | ST_TR | 1.32 | 6.97 |
| tblVehicleTrips | ST_TR | 49.97 | 42.70 |
| tblVehicleTrips | SU_TR | 0.68 | 6.97 |
| tblVehicleTrips | SU_TR | 25.24 | 42.70 |
| tblVehicleTrips | WD_TR | 11.42 | 11.03 |
| tblVehicleTrips | WD_TR | 42.94 | 42.70 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 562.4101 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |
| Energy | 19.7968 | 179.9705 | 151.1752 | 1.0798 | | 13.6778 | 13.6778 | | 13.6778 | 13.6778 | | 215,964.5447 | 215,964.5447 | 4.1393 | 3.9594 | 217,278.8690 |
| Mobile | 394.1365 | 1,062.4526 | 4,459.4439 | 20.5589 | 1,484.7585 | 31.0471 | 1,515.8055 | 396.1574 | 28.6302 | 424.7876 | | 1,486,228.7671 | 1,486,228.7671 | 35.2401 | | 1,486,968.8092 |
| **Total** | **976.3434** | **1,242.4429** | **4,612.8033** | **21.6389** | **1,484.7585** | **44.7326** | **1,529.4910** | **396.1574** | **42.3157** | **438.4731** | | **1,702,198.0172** | **1,702,198.0172** | **39.3916** | **3.9594** | **1,704,252.6383** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 394.1365 | 1,062.4528 | 4,459.4439 | 20.5589 | 1,484.7585 | 31.0471 | 1,515.8055 | 396.1574 | 28.6302 | 424.7876 | | 1,486,228.7671 | 1,486,228.7671 | 35.2401 | | 1,486,968.8092 |
| Mitigated | 394.1365 | 1,062.4528 | 4,459.4439 | 20.5589 | 1,484.7585 | 31.0471 | 1,515.8055 | 396.1574 | 28.6302 | 424.7876 | | 1,486,228.7671 | 1,486,228.7671 | 35.2401 | | 1,486,968.8092 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 139,400.00 | 139,400.00 | 139400.00 | 617,301,882 | 617,301,882 |
| Office Park | 11,030.00 | 1,640.00 | 760.00 | 27,777,336 | 27,777,336 |
| Regional Shopping Center | 21,350.00 | 21,350.00 | 21350.00 | 46,176,718 | 46,176,718 |
| Total | 171,780.00 | 162,390.00 | 161,510.00 | 691,255,936 | 691,255,936 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 16.60 | 8.40 | 6.90 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Office Park | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 82 | 15 | 3 |
| Regional Shopping Center | 16.60 | 8.40 | 6.90 | 16.30 | 64.70 | 19.00 | 54 | 35 | 11 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 19.7968 | 179.9705 | 151.1752 | 1.0798 | | 13.6778 | 13.6778 | | 13.6778 | 13.6778 | | 215,964.5447 | 215,964.5447 | 4.1393 | 3.9594 | 217,278.8690 |
| NaturalGas Unmitigated | 19.7968 | 179.9705 | 151.1752 | 1.0798 | | 13.6778 | 13.6778 | | 13.6778 | 13.6778 | | 215,964.5447 | 215,964.5447 | 4.1393 | 3.9594 | 217,278.8690 |

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| General Light Industry | 1.82411e+006 | 19.6718 | 178.8343 | 150.2208 | 1.0730 | | 13.5914 | 13.5914 | | 13.5914 | 13.5914 | | 214,601.1281 | 214,601.1281 | 4.1132 | 3.9344 | 215,907.1548 |
| Office Park | 8410.96 | 0.0907 | 0.8246 | 0.6927 | 4.9500e-003 | | 0.0627 | 0.0627 | | 0.0627 | 0.0627 | | 989.5246 | 989.5246 | 0.0190 | 0.0181 | 995.5467 |
| Regional Shopping Center | 3178.08 | 0.0343 | 0.3116 | 0.2617 | 1.8700e-003 | | 0.0237 | 0.0237 | | 0.0237 | 0.0237 | | 373.8920 | 373.8920 | 7.1700e-003 | 6.8500e-003 | 376.1675 |
| **Total** | | **19.7968** | **179.9705** | **151.1752** | **1.0798** | | **13.6778** | **13.6778** | | **13.6778** | **13.6778** | | **215,964.5447** | **215,964.5447** | **4.1393** | **3.9593** | **217,278.8690** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 562.4101 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |
| Mitigated | 562.4101 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 136.5103 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 425.7000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 0.1998 | 0.0197 | 2.1841 | 1.6000e-004 | | 7.7400e-003 | 7.7400e-003 | | 7.7400e-003 | 7.7400e-003 | | 4.7053 | 4.7053 | 0.0121 | | 4.9601 |
| **Total** | **562.4101** | **0.0197** | **2.1841** | **1.6000e-004** | | **7.7400e-003** | **7.7400e-003** | | **7.7400e-003** | **7.7400e-003** | | **4.7053** | **4.7053** | **0.0121** | | **4.9601** |

# WLC: Alternative 3

**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Apartments Low Rise | 1,568.00 | Dwelling Unit | 98.00 | 1,568,000.00 | 4484 |
| Single Family Housing | 4,964.00 | Dwelling Unit | 1,611.69 | 8,935,200.00 | 14197 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Land Use Change - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 15,500.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblFireplaces | NumberGas | 1,332.80 | 1,568.00 |
| tblFireplaces | NumberGas | 4,219.40 | 4,964.00 |
| tblFireplaces | NumberNoFireplace | 156.80 | 0.00 |
| tblFireplaces | NumberNoFireplace | 496.40 | 0.00 |
| tblFireplaces | NumberWood | 78.40 | 0.00 |
| tblFireplaces | NumberWood | 248.20 | 0.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblTripsAndVMT | WorkerTripNumber | 3.00 | 0.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblWoodstoves | NumberCatalytic | 78.40 | 0.00 |
| tblWoodstoves | NumberCatalytic | 248.20 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 78.40 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 248.20 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 44.2289 | 0.7745 | 67.1929 | 3.5600e-003 | | 0.4831 | 0.4831 | | 0.4819 | 0.4819 | 0.0000 | 1,678.6109 | 1,678.6109 | 0.1349 | 0.0288 | 1,690.3585 |
| Energy | 1.0199 | 8.7151 | 3.7085 | 0.0556 | | 0.7046 | 0.7046 | | 0.7046 | 0.7046 | 0.0000 | 22,831.9203 | 22,831.9203 | 0.7790 | 0.3062 | 22,943.1986 |
| Mobile | 24.9877 | 79.2144 | 325.5622 | 1.5519 | 109.6358 | 2.2986 | 111.9344 | 29.2917 | 2.1196 | 31.4113 | 0.0000 | 101,671.0104 | 101,671.0104 | 2.3666 | 0.0000 | 101,720.7095 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 1,327.9770 | 0.0000 | 1,327.9770 | 78.4812 | 0.0000 | 2,976.0821 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 135.0188 | 2,438.8336 | 2,573.8524 | 13.9798 | 0.3506 | 2,976.1278 |
| **Total** | **70.2364** | **88.7040** | **396.4636** | **1.6111** | **109.6358** | **3.4863** | **113.1221** | **29.2917** | **3.3061** | **32.5978** | **1,462.9959** | **128,620.3752** | **130,083.3711** | **95.7416** | **0.6856** | **132,306.4766** |

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 44.2289 | 0.7745 | 67.1929 | 3.5600e-003 | | 0.4831 | 0.4831 | | 0.4819 | 0.4819 | 0.0000 | 1,678.6109 | 1,678.6109 | 0.1349 | 0.0288 | 1,690.3585 |
| Energy | 1.0199 | 8.7151 | 3.7085 | 0.0556 | | 0.7046 | 0.7046 | | 0.7046 | 0.7046 | 0.0000 | 22,831.9203 | 22,831.9203 | 0.7790 | 0.3062 | 22,943.1986 |
| Mobile | 24.9877 | 79.2144 | 325.5622 | 1.5519 | 109.6358 | 2.2986 | 111.9344 | 29.2917 | 2.1196 | 31.4113 | 0.0000 | 101,671.0104 | 101,671.0104 | 2.3666 | 0.0000 | 101,720.7095 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 1,327.9770 | 0.0000 | 1,327.9770 | 78.4812 | 0.0000 | 2,976.0821 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 135.0188 | 2,438.8336 | 2,573.8524 | 13.9773 | 0.3501 | 2,975.9124 |
| **Total** | **70.2364** | **88.7040** | **396.4636** | **1.6111** | **109.6358** | **3.4863** | **113.1221** | **29.2917** | **3.3061** | **32.5978** | **1,462.9959** | **128,620.3752** | **130,083.3711** | **95.7390** | **0.6851** | **132,306.2612** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.08** | **0.00** |

### 2.3 Vegetation

**Vegetation**

| | CO2e |
|---|---|
| Category | MT |
| Vegetation Land Change | -515.7000 |
| **Total** | **-515.7000** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 24.9877 | 79.2144 | 325.5622 | 1.5519 | 109.6358 | 2.2986 | 111.9344 | 29.2917 | 2.1196 | 31.4113 | 0.0000 | 101,671.0104 | 101,671.0104 | 2.3666 | 0.0000 | 101,720.7095 |
| Mitigated | 24.9877 | 79.2144 | 325.5622 | 1.5519 | 109.6358 | 2.2986 | 111.9344 | 29.2917 | 2.1196 | 31.4113 | 0.0000 | 101,671.0104 | 101,671.0104 | 2.3666 | 0.0000 | 101,720.7095 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Low Rise | 10,333.12 | 11,226.88 | 9517.76 | 51,871,644 | 51,871,644 |
| Single Family Housing | 47,505.48 | 50,037.12 | 43534.28 | 237,185,225 | 237,185,225 |
| Total | 57,838.60 | 61,264.00 | 53,052.04 | 289,056,868 | 289,056,868 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Low Rise | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Single Family Housing | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 12,738.9351 | 12,738.9351 | 0.5856 | 0.1212 | 12,788.7892 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 12,738.9351 | 12,738.9351 | 0.5856 | 0.1212 | 12,788.7892 |
| NaturalGas Mitigated | 1.0199 | 8.7151 | 3.7085 | 0.0556 | | 0.7046 | 0.7046 | | 0.7046 | 0.7046 | 0.0000 | 10,092.9852 | 10,092.9852 | 0.1935 | 0.1850 | 10,154.4095 |
| NaturalGas Unmitigated | 1.0199 | 8.7151 | 3.7085 | 0.0556 | | 0.7046 | 0.7046 | | 0.7046 | 0.7046 | 0.0000 | 10,092.9852 | 10,092.9852 | 0.1935 | 0.1850 | 10,154.4095 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Apartments Low Rise | 2.15164e+007 | 0.1160 | 0.9914 | 0.4219 | 6.3300e-003 | | 0.0802 | 0.0802 | | 0.0802 | 0.0802 | 0.0000 | 1,148.1976 | 1,148.1976 | 0.0220 | 0.0211 | 1,155.1853 |
| Single Family Housing | 1.67619e+008 | 0.9038 | 7.7236 | 3.2867 | 0.0493 | | 0.6245 | 0.6245 | | 0.6245 | 0.6245 | 0.0000 | 8,944.7877 | 8,944.7877 | 0.1714 | 0.1640 | 8,999.2242 |
| **Total** | | **1.0199** | **8.7151** | **3.7085** | **0.0556** | | **0.7046** | **0.7046** | | **0.7046** | **0.7046** | **0.0000** | **10,092.9853** | **10,092.9853** | **0.1935** | **0.1850** | **10,154.4095** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Single Family Housing | 1.67619e+008 | 0.9038 | 7.7236 | 3.2867 | 0.0493 | | 0.6245 | 0.6245 | | 0.6245 | 0.6245 | 0.0000 | 8,944.7877 | 8,944.7877 | 0.1714 | 0.1640 | 8,999.2242 |
| Apartments Low Rise | 2.15164e+007 | 0.1160 | 0.9914 | 0.4219 | 6.3300e-003 | | 0.0802 | 0.0802 | | 0.0802 | 0.0802 | 0.0000 | 1,148.1976 | 1,148.1976 | 0.0220 | 0.0211 | 1,155.1853 |
| **Total** | | **1.0199** | **8.7151** | **3.7085** | **0.0556** | | **0.7046** | **0.7046** | | **0.7046** | **0.7046** | **0.0000** | **10,092.9853** | **10,092.9853** | **0.1935** | **0.1850** | **10,154.4095** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Low Rise | 6.39402e+006 | 1,829.7573 | 0.0841 | 0.0174 | 1,836.9181 |
| Single Family Housing | 3.81217e+007 | 10,909.1778 | 0.5015 | 0.1038 | 10,951.8711 |
| **Total** | | **12,738.9351** | **0.5856** | **0.1212** | **12,788.7892** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Low Rise | 6.39402e+006 | 1,829.7573 | 0.0841 | 0.0174 | 1,836.9181 |
| Single Family Housing | 3.81217e+007 | 10,909.1778 | 0.5015 | 0.1038 | 10,951.8711 |
| **Total** | | **12,738.9351** | **0.5856** | **0.1212** | **12,788.7892** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Unmitigated | 44.2289 | 0.7745 | 67.1929 | 3.5600e-003 | | 0.4831 | 0.4831 | | 0.4819 | 0.4819 | 0.0000 | 1,678.6109 | 1,678.6109 | 0.1349 | 0.0288 | 1,690.3585 |
| Mitigated | 44.2289 | 0.7745 | 67.1929 | 3.5600e-003 | | 0.4831 | 0.4831 | | 0.4819 | 0.4819 | 0.0000 | 1,678.6109 | 1,678.6109 | 0.1349 | 0.0288 | 1,690.3585 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 4.1076 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 37.9533 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.1585 | 1.0000e-005 | 8.6500e-003 | 0.0000 | | 0.1095 | 0.1095 | | 0.1084 | 0.1084 | 0.0000 | 1,568.5758 | 1,568.5758 | 0.0301 | 0.0288 | 1,578.1219 |
| Landscaping | 2.0095 | 0.7745 | 67.1843 | 3.5600e-003 | | 0.3736 | 0.3736 | | 0.3736 | 0.3736 | 0.0000 | 110.0351 | 110.0351 | 0.1048 | 0.0000 | 112.2367 |
| **Total** | **44.2289** | **0.7745** | **67.1929** | **3.5600e-003** | | **0.4831** | **0.4831** | | **0.4819** | **0.4819** | **0.0000** | **1,678.6109** | **1,678.6109** | **0.1349** | **0.0288** | **1,690.3585** |

## 7.0 Water Detail

### 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Low Rise | 102.162 / 64.4062 | 617.8507 | 3.3559 | 0.0842 | 714.4165 |
| Single Family Housing | 323.425 / 203.898 | 1,956.0018 | 10.6240 | 0.2665 | 2,261.7113 |
| **Total** | | **2,573.8524** | **13.9798** | **0.3506** | **2,976.1278** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 1,327.9770 | 78.4812 | 0.0000 | 2,976.0821 |
| Unmitigated | 1,327.9770 | 78.4812 | 0.0000 | 2,976.0821 |

### 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Low Rise | 721.28 | 146.4133 | 8.6528 | 0.0000 | 328.1217 |
| Single Family Housing | 5820.77 | 1,181.5637 | 69.8284 | 0.0000 | 2,647.9604 |
| **Total** | | **1,327.9770** | **78.4812** | **0.0000** | **2,976.0821** |

## 10.0 Vegetation

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT | | | |
| Unmitigated | -515.7000 | 0.0000 | 0.0000 | -515.7000 |

### 10.1 Vegetation Land Change

**Vegetation Type**

| | Initial/Final | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| | Acres | MT | | | |
| Cropland | 1146 / 0 | -515.7000 | 0.0000 | 0.0000 | -515.7000 |
| **Total** | | **-515.7000** | **0.0000** | **0.0000** | **-515.7000** |

# WLC: Alternative 3

**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Apartments Low Rise | 1,568.00 | Dwelling Unit | 98.00 | 1,568,000.00 | 4484 |
| Single Family Housing | 4,964.00 | Dwelling Unit | 1,611.69 | 8,935,200.00 | 14197 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Land Use Change - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 15,500.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblFireplaces | NumberGas | 1,332.80 | 1,568.00 |
| tblFireplaces | NumberGas | 4,219.40 | 4,964.00 |
| tblFireplaces | NumberNoFireplace | 156.80 | 0.00 |
| tblFireplaces | NumberNoFireplace | 496.40 | 0.00 |
| tblFireplaces | NumberWood | 78.40 | 0.00 |
| tblFireplaces | NumberWood | 248.20 | 0.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblTripsAndVMT | WorkerTripNumber | 3.00 | 0.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblWoodstoves | NumberCatalytic | 78.40 | 0.00 |
| tblWoodstoves | NumberCatalytic | 248.20 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 78.40 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 248.20 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 259.2266 | 6.1967 | 538.1658 | 0.0285 | | 11.7491 | 11.7491 | | 11.6569 | 11.6569 | 0.0000 | 139,295.0495 | 139,295.0495 | 3.5757 | 2.5360 | 140,156.2850 |
| Energy | 5.5882 | 47.7538 | 20.3208 | 0.3048 | | 3.8609 | 3.8609 | | 3.8609 | 3.8609 | | 60,962.2564 | 60,962.2564 | 1.1684 | 1.1176 | 61,333.2625 |
| Mobile | 155.8626 | 434.0547 | 2,005.4719 | 9.6241 | 650.9223 | 13.4277 | 664.3500 | 173.6765 | 12.3817 | 186.0583 | | 691,249.9953 | 691,249.9953 | 15.2407 | | 691,570.0505 |
| **Total** | **420.6774** | **488.0052** | **2,563.9584** | **9.9574** | **650.9223** | **29.0377** | **679.9600** | **173.6765** | **27.8996** | **201.5761** | **0.0000** | **891,507.3012** | **891,507.3012** | **19.9849** | **3.6536** | **893,059.5980** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 155.8626 | 434.0547 | 2,005.4719 | 9.6241 | 650.9223 | 13.4277 | 664.3500 | 173.6765 | 12.3817 | 186.0583 | | 691,249.9953 | 691,249.9953 | 15.2407 | | 691,570.0505 |
| Mitigated | 155.8626 | 434.0547 | 2,005.4719 | 9.6241 | 650.9223 | 13.4277 | 664.3500 | 173.6765 | 12.3817 | 186.0583 | | 691,249.9953 | 691,249.9953 | 15.2407 | | 691,570.0505 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Low Rise | 10,333.12 | 11,226.88 | 9517.76 | 51,871,644 | 51,871,644 |
| Single Family Housing | 47,505.48 | 50,037.12 | 43534.28 | 237,185,225 | 237,185,225 |
| Total | 57,838.60 | 61,264.00 | 53,052.04 | 289,056,868 | 289,056,868 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Low Rise | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Single Family Housing | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Low Rise | 58949.1 | 0.6357 | 5.4326 | 2.3117 | 0.0347 | | 0.4392 | 0.4392 | | 0.4392 | 0.4392 | | 6,935.1844 | 6,935.1844 | 0.1329 | 0.1272 | 6,977.3908 |
| Single Family Housing | 459230 | 4.9525 | 42.3212 | 18.0090 | 0.2701 | | 3.4217 | 3.4217 | | 3.4217 | 3.4217 | | 54,027.0720 | 54,027.0720 | 1.0355 | 0.9905 | 54,355.8718 |
| **Total** | | **5.5882** | **47.7538** | **20.3208** | **0.3048** | | **3.8609** | **3.8609** | | **3.8609** | **3.8609** | | **60,962.2564** | **60,962.2564** | **1.1684** | **1.1177** | **61,333.2625** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 259.2266 | 6.1967 | 538.1658 | 0.0285 | | 11.7491 | 11.7491 | | 11.6569 | 11.6569 | 0.0000 | 139,295.0495 | 139,295.0495 | 3.5757 | 2.5360 | 140,156.2850 |
| Mitigated | 259.2266 | 6.1967 | 538.1658 | 0.0285 | | 11.7491 | 11.7491 | | 11.6569 | 11.6569 | 0.0000 | 139,295.0495 | 139,295.0495 | 3.5757 | 2.5360 | 140,156.2850 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 22.5072 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 207.9634 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 12.6798 | 5.8000e-004 | 0.6916 | 0.0000 | | 8.7606 | 8.7606 | | 8.6684 | 8.6684 | 0.0000 | 138,324.7059 | 138,324.7059 | 2.6512 | 2.5360 | 139,166.5270 |
| Landscaping | 16.0763 | 6.1961 | 537.4742 | 0.0285 | | 2.9885 | 2.9885 | | 2.9885 | 2.9885 | | 970.3436 | 970.3436 | 0.9245 | | 989.7580 |
| **Total** | **259.2266** | **6.1967** | **538.1658** | **0.0285** | | **11.7491** | **11.7491** | | **11.6569** | **11.6569** | **0.0000** | **139,295.0495** | **139,295.0495** | **3.5757** | **2.5360** | **140,156.2850** |

# WLC: Alternative 3

**Riverside-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Apartments Low Rise | 1,568.00 | Dwelling Unit | 98.00 | 1,568,000.00 | 4484 |
| Single Family Housing | 4,964.00 | Dwelling Unit | 1,611.69 | 8,935,200.00 | 14197 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.4 | **Precipitation Freq (Days)** | 28 |
| **Climate Zone** | 10 | | | **Operational Year** | 2030 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 630.89 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Land Use Change - -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 15,500.00 | 1.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 7.00 |
| tblFireplaces | NumberGas | 1,332.80 | 1,568.00 |
| tblFireplaces | NumberGas | 4,219.40 | 4,964.00 |
| tblFireplaces | NumberNoFireplace | 156.80 | 0.00 |
| tblFireplaces | NumberNoFireplace | 496.40 | 0.00 |
| tblFireplaces | NumberWood | 78.40 | 0.00 |
| tblFireplaces | NumberWood | 248.20 | 0.00 |
| tblLandUseChange | CO2peracre | 6.20 | 0.45 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2030 |
| tblTripsAndVMT | WorkerTripNumber | 3.00 | 0.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblVehicleTrips | HW_TL | 14.70 | 27.00 |
| tblWoodstoves | NumberCatalytic | 78.40 | 0.00 |
| tblWoodstoves | NumberCatalytic | 248.20 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 78.40 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 248.20 | 0.00 |

## 2.0 Emissions Summary

### 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 259.2266 | 6.1967 | 538.1658 | 0.0285 | | 11.7491 | 11.7491 | | 11.6569 | 11.6569 | 0.0000 | 139,295.0495 | 139,295.0495 | 3.5757 | 2.5360 | 140,156.2850 |
| Energy | 5.5882 | 47.7538 | 20.3208 | 0.3048 | | 3.8609 | 3.8609 | | 3.8609 | 3.8609 | | 60,962.2564 | 60,962.2564 | 1.1684 | 1.1176 | 61,333.2625 |
| Mobile | 151.7418 | 451.8861 | 1,846.1687 | 8.9749 | 650.9223 | 13.4544 | 664.3767 | 173.6765 | 12.4063 | 186.0828 | | 648,830.7464 | 648,830.7464 | 15.2678 | | 649,151.3704 |
| **Total** | **416.5566** | **505.8365** | **2,404.6552** | **9.3081** | **650.9223** | **29.0645** | **679.9867** | **173.6765** | **27.9242** | **201.6007** | **0.0000** | **849,088.0523** | **849,088.0523** | **20.0120** | **3.6536** | **850,640.9179** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 151.7418 | 451.8861 | 1,846.1687 | 8.9749 | 650.9223 | 13.4544 | 664.3767 | 173.6765 | 12.4063 | 186.0828 | | 648,830.7464 | 648,830.7464 | 15.2678 | | 649,151.3704 |
| Mitigated | 151.7418 | 451.8861 | 1,846.1687 | 8.9749 | 650.9223 | 13.4544 | 664.3767 | 173.6765 | 12.4063 | 186.0828 | | 648,830.7464 | 648,830.7464 | 15.2678 | | 649,151.3704 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Low Rise | 10,333.12 | 11,226.88 | 9517.76 | 51,871,644 | 51,871,644 |
| Single Family Housing | 47,505.48 | 50,037.12 | 43534.28 | 237,185,225 | 237,185,225 |
| Total | 57,838.60 | 61,264.00 | 53,052.04 | 289,056,868 | 289,056,868 |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Low Rise | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Single Family Housing | 27.00 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.448719 | 0.070012 | 0.183617 | 0.175225 | 0.044572 | 0.007195 | 0.011818 | 0.047080 | 0.000820 | 0.001060 | 0.005212 | 0.000723 | 0.003946 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Apartments Low Rise | 58949.1 | 0.6357 | 5.4326 | 2.3117 | 0.0347 | | 0.4392 | 0.4392 | | 0.4392 | 0.4392 | | 6,935.1844 | 6,935.1844 | 0.1329 | 0.1272 | 6,977.3908 |
| Single Family Housing | 459230 | 4.9525 | 42.3212 | 18.0090 | 0.2701 | | 3.4217 | 3.4217 | | 3.4217 | 3.4217 | | 54,027.0720 | 54,027.0720 | 1.0355 | 0.9905 | 54,355.8718 |
| **Total** | | **5.5882** | **47.7538** | **20.3208** | **0.3048** | | **3.8609** | **3.8609** | | **3.8609** | **3.8609** | | **60,962.2564** | **60,962.2564** | **1.1684** | **1.1177** | **61,333.2625** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Unmitigated | 259.2266 | 6.1967 | 538.1658 | 0.0285 | | 11.7491 | 11.7491 | | 11.6569 | 11.6569 | 0.0000 | 139,295.0495 | 139,295.0495 | 3.5757 | 2.5360 | 140,156.2850 |
| Mitigated | 259.2266 | 6.1967 | 538.1658 | 0.0285 | | 11.7491 | 11.7491 | | 11.6569 | 11.6569 | 0.0000 | 139,295.0495 | 139,295.0495 | 3.5757 | 2.5360 | 140,156.2850 |

### 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 22.5072 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 207.9634 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 12.6798 | 5.8000e-004 | 0.6916 | 0.0000 | | 8.7606 | 8.7606 | | 8.6684 | 8.6684 | 0.0000 | 138,324.7059 | 138,324.7059 | 2.6512 | 2.5360 | 139,166.5270 |
| Landscaping | 16.0763 | 6.1961 | 537.4742 | 0.0285 | | 2.9885 | 2.9885 | | 2.9885 | 2.9885 | | 970.3436 | 970.3436 | 0.9245 | | 989.7580 |
| **Total** | **259.2266** | **6.1967** | **538.1658** | **0.0285** | | **11.7491** | **11.7491** | | **11.6569** | **11.6569** | **0.0000** | **139,295.0495** | **139,295.0495** | **3.5757** | **2.5360** | **140,156.2850** |

# E.3 - Mobile Spreadsheets: Phase 1 2012

# World Logistics Center

## Project Phase 1 (2012)

## Trip and Vehicle Miles Traveled Calculation

**2012**

**World Logistics Center**
**Vehicle Fleet Mix**
Project Phase 1 (2012)

**Vehicle VMT for South Coast Air Basin per EMFAC2011 @ All Speeds**

| GAS Vehicle Class | VMT (miles/day) |
|---|---|
| LDA-GAS | 192,038,766 |
| LDT1-GAS | 22,519,393 |
| LDT2-GAS | 66,885,372 |
| MDT-GAS | 53,041,833 |
| LHDT1-GAS | 11,744,390 |
| LHDT2-GAS | 1,237,829 |
| MHDT-GAS | 1,034,400 |
| HHDT-GAS | 204,980 |
| Subtotal | 348,706,963 |
| **DSL Vehicle Class** | |
| LDA-DSL | 581,758 |
| LDT1-DSL | 27,976 |
| LDT2-DSL | 27,520 |
| MDT-DSL | 53,264 |
| LHDT1-DSL | 3,629,896 |
| LHDT2-DSL | 1,234,271 |
| MHDT-DSL | 4,281,961 |
| HHDT-DSL | 9,080,350 |
| Subtotal | 18,916,995 |
| Grand Total | 367,623,958 |

| Vehicle Class | | VMT-GAS | VMT-DSL | VMT-Total | % VMT-Total | %GAS | %DSL |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 192,038,766 | 581,758 | 192,620,524 | 57.47% | 99.7% | 0.30% |
| LDT1 | Pass Car | 22,519,393 | 27,976 | 22,547,369 | 6.73% | 99.9% | 0.12% |
| LDT2 | Pass Car | 66,885,372 | 27,520 | 66,912,892 | 19.96% | 100.0% | 0.04% |
| MDT | Pass Car | 53,041,833 | 53,264 | 53,095,097 | 15.84% | 99.9% | 0.10% |
| Subtotal | | 334,485,364 | 690,518 | 335,175,882 | 100.00% | 99.8% | 0.21% |
| LHDT1 | Light Heavy Truck | 11,744,390 | 3,629,896 | 15,374,286 | 86.15% | 76.4% | 23.61% |
| LHDT2 | Light Heavy Truck | 1,237,829 | 1,234,271 | 2,472,100 | 13.85% | 50.1% | 49.93% |
| Subtotal | | 12,982,219 | 4,864,167 | 17,846,386 | | | |
| MHDT | Medium Heavy Truck | 1,034,400 | 4,281,961 | 5,316,361 | 100% | 19.5% | 80.54% |
| HHDT | Heavy Heavy Truck | 204,980 | 9,080,350 | 9,285,330 | 100% | 2.2% | 97.79% |

**Area Source Assumptions**

| | |
|---|---|
| Onsite truck idle time: | 5 minutes (truck idling only applies to HDT vehicles) |
| Onsite Travel: | 15 mph |
| Facility Operations for Warehouses: | 24 hrs |
| Facility operations for All Others: | 24 hrs |

| Onsite Diesel Truck Travel Links | Location | Diesel Truck Travel Distance (m) |
|---|---|---|
| | High Cube | 330 |
| | Light Logistics | 175 |
| | Utility Service | 100 |
| | Gas Station w/Convenience | 50 |
| | Convenience Store | 50 |
| | Fire Station | 50 |

**World Logistics Center**
**Project Phase 1 (2012)**
Area Source Trip Distribution

| | Building Size (sq-ft) | |
|---|---|---|
| High Cube Warehouse | 22,900,000 | Sq-feet |
| Light Logistics | 45,500 | Sq-feet |
| Utilities Service Station | 30,800 | Sq-feet |
| Gas Station w/Convenience Store | 12 | Pumps |
| Convenience Store | 3,000 | Sq-feet |
| Fire Station | 1 | Sq-feet |

**Trip Generation**

| | trips/day (Non-PCE) | Source |
|---|---|---|
| High Cube Warehouse | 38472 | Traffic Impact Analysis Report |
| Light Logistics | 162 | prepared by Parsons Brinckerhoff, Inc. |
| Utilities Service Station | 248 | September 2014 |
| Gas Station w/Convenience Store | 219 | |
| Convenience Store | 354 | |
| Fire Station | 137 | |
| Total | 39592 | |

**Vehicle Fleet for High Cube Warehouse**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 79.6% | 57.47% | 0.30% | 53 | 17546 | 17599 |
| LDT1 | | 6.73% | 0.12% | 3 | 2058 | 2060 |
| LDT2 | | 19.96% | 0.04% | 3 | 6111 | 6114 |
| MDT | | 15.84% | 0.10% | 5 | 4846 | 4851 |
| SubTotal | | 100.00% | 0.21% | 63 | 30561 | 30624 |
| LHDT1 (2 axle truck) | 3.5% | 86.15% | 23.61% | 274 | 886 | 1160 |
| LHDT2 | | 13.85% | 49.93% | 93 | 93 | 187 |
| Subtotal | | 100.0% | | 367 | 980 | 1347 |
| MHDT (3 axle truck) | 4.6% | 100.00% | 80.54% | 1425 | 344 | 1770 |
| HHDT (4+ axle truck) | 12.3% | 100.00% | 97.79% | 4628 | 104 | 4732 |
| Total | 100.0% | | | 6483 | 31989 | 38472 |

**Vehicle Fleet for Light Logistics**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 80.3% | 57.47% | 0.30% | 0 | 75 | 75 |
| LDT1 | | 6.73% | 0.12% | 0 | 9 | 9 |
| LDT2 | | 19.96% | 0.04% | 0 | 26 | 26 |
| MDT | | 15.84% | 0.10% | 0 | 21 | 21 |
| SubTotal | | 100.00% | 0.21% | 0 | 130 | 130 |
| LHDT1 (2 axle truck) | 5.2% | 86.15% | 23.61% | 2 | 6 | 7 |
| LHDT2 | | 13.85% | 49.93% | 1 | 1 | 1 |
| Subtotal | | 100.0% | | 2 | 6 | 8 |
| MHDT (3 axle truck) | 4.5% | 100.0% | 80.54% | 6 | 1 | 7 |
| HHDT (4+ axle truck) | 10.0% | 100.0% | 97.79% | 16 | 0 | 16 |
| Total | 100.0% | | | 24 | 138 | 162 |

**Vehicle Fleet for Utilities Service Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 77.3% | 57.47% | 0.30% | 0.3 | 110 | 110 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 13 | 13 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 38 | 38 |
| MDT | | 15.84% | 0.10% | 0.0 | 30 | 30 |
| SubTotal | | 100.00% | 0.21% | 0.4 | 191 | 192 |
| LHDT1 (2 axle truck) | 11.3% | 86.15% | 23.61% | 6 | 19 | 24 |
| LHDT2 | | 13.85% | 49.93% | 2 | 2 | 4 |
| Subtotal | | 100.00% | | 8 | 20 | 28 |
| MHDT (3 axle truck) | 2.4% | 100.00% | 80.54% | 5 | 1 | 6 |
| HHDT (4+ axle truck) | 8.9% | 100.00% | 97.79% | 22 | 0 | 22 |
| Total | 100.0% | | | 35 | 214 | 248 |

**Vehicle Fleet for Gas Station with Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 50.7% | 57.47% | 0.30% | 0.2 | 64 | 64 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 7 | 7 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 22 | 22 |
| MDT | | 15.84% | 0.10% | 0.0 | 18 | 18 |
| SubTotal | | 100.00% | 0.21% | 0.2 | 111 | 111 |
| LHDT1 (2 axle truck) | 1.8% | 86.15% | 23.61% | 0.8 | 3 | 3 |
| LHDT2 | | 13.85% | 49.93% | 0.3 | 0 | 1 |
| Subtotal | | 100.00% | | 1.1 | 3 | 4 |
| MHDT (3 axle truck) | 7.8% | 100.00% | 80.54% | 13.8 | 3 | 17 |
| HHDT (4+ axle truck) | 39.7% | 100.00% | 97.79% | 85.0 | 2 | 87 |
| Total | 100.0% | | | 100.1 | 119 | 219 |

**Vehicle Fleet for Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 52.0% | 57.47% | 0.30% | 0.5 | 105 | 106 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 12 | 12 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 37 | 37 |
| MDT | | 15.84% | 0.10% | 0.0 | 29 | 29 |
| SubTotal | | 100.00% | 0.21% | 0.6 | 183 | 184 |
| LHDT1 (2 axle truck) | 1.7% | 86.15% | 23.61% | 1.2 | 4 | 5 |
| LHDT2 | | 13.85% | 49.93% | 0.4 | 0 | 1 |
| Subtotal | | 100.00% | | 1.6 | 4 | 6 |
| MHDT (3 axle truck) | 7.9% | 100.00% | 80.54% | 22.5 | 5 | 28 |
| HHDT (4+ axle truck) | 38.4% | 100.00% | 97.79% | 132.9 | 3 | 136 |
| Total | 100.0% | | | 157.7 | 196 | 354 |

**Vehicle Fleet for Fire Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 100.0% | 57.47% | 0.30% | 0.2 | 79 | 79 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 9 | 9 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 27 | 27 |
| MDT | | 15.84% | 0.10% | 0.0 | 22 | 22 |
| SubTotal | | 100.00% | 0.21% | 0.2 | 137 | 137 |
| LHDT1 (2 axle truck) | 0.0% | 86.15% | 23.61% | 0.0 | 0 | 0 |
| LHDT2 | | 13.85% | 49.93% | 0.0 | 0 | 0 |
| Subtotal | | 100.00% | | 0.0 | 0 | 0 |
| MHDT (3 axle truck) | 0.0% | 100.00% | 80.54% | 0.0 | 0 | 0 |
| HHDT (4+ axle truck) | 0.0% | 100.00% | 97.79% | 0.0 | 0 | 0 |
| Total | 100.0% | | | 0.2 | 137 | 137 |

**Vehicle Summary (Phase Summary)**

| Vehicle Class | Daily Diesel Trips | Daily Non Diesel Trips | Total Daily Trips |
|---|---|---|---|
| LDA | 55 | 17978 | 18032 |
| LDT1 | 3 | 2108 | 2111 |
| LDT2 | 3 | 6262 | 6264 |
| MDT | 5 | 4966 | 4971 |
| LHDT1 | 283 | 917 | 1200 |
| LHDT2 | 96 | 97 | 193 |
| MHDT | 1472 | 356 | 1828 |
| HHDT | 4883 | 110 | 4993 |
| Total | 6800 | 32792 | 39592 |

Trip Generation from PB 2013 Traffic Study
Vehicle Fleet Mix taken from EMFAC2011 for the SoCAB in **2012** and the PB 2013 Traffic Study
% Diesel taken from EMAC2011 for the SoCAB in **2012**

# World Logistics Center

Project Phase 1 (2012)
Area Source: Diesel Trip Distribution by Land Use and Building

**Land Use**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 22,900,000 |
| Light Logistics | 45,500 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 53 | 3 | 3 | 5 | 274 | 93 | 1425 | 4628 | 6483 |
| Light Logistics | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 16 | 24 |
| Utilities Service Station | 0 | 0 | 0 | 0 | 6 | 2 | 5 | 22 | 35 |
| Gas Station w/Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 85 | 100 |
| Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 133 | 158 |
| Fire Station | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | |
| Total | 55 | 3 | 3 | 5 | 283 | 96 | 1472 | 4883 | 6800 |

# World Logistics Center

Project Phase 1 (2012)

Area Source: Non-Diesel Trip Distribution by Land Use and Building

**Land Use:**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 22,900,000 |
| Light Logistics | 45,500 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Non-Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 17546 | 2058 | 6111 | 4846 | 886 | 93 | 344 | 104 | 31989 |
| Light Logistics | 75 | 9 | 26 | 21 | 6 | 1 | 1 | 0 | 138 |
| Utilities Service Station | 110 | 13 | 38 | 30 | 19 | 2 | 1 | 0 | 214 |
| Gas Station w/Convenience Store | 64 | 7 | 22 | 18 | 3 | 0 | 3 | 2 | 119 |
| Convenience Store | 105 | 12 | 37 | 29 | 4 | 0 | 5 | 3 | 196 |
| Fire Station | 79 | 9 | 27 | 22 | 0 | 0 | 0 | 0 | 137 |
| | | | | | | | | | |
| Total | 17978 | 2108 | 6262 | 4966 | 917 | 97 | 356 | 110 | 32792 |

# World Logistics Center
## Project Phase 1 (2012)
Area Source Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 53 | 330 | 0.21 | 10.9 |
| | **LDT1** | 15 | 3 | 330 | 0.21 | 0.5 |
| | **LDT2** | 15 | 3 | 330 | 0.21 | 0.5 |
| | **MDT** | 15 | 5 | 330 | 0.21 | 1.0 |
| | **LHDT1** | 15 | 274 | 330 | 0.21 | 56.1 |
| | **LHDT2** | 15 | 93 | 330 | 0.21 | 19.1 |
| | **MHDT** | 15 | 1425 | 330 | 0.21 | 292.2 |
| | **HHDT** | 15 | 4628 | 330 | 0.21 | 948.7 |
| **Travel at Light Logistics** | **LDA** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT1** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT2** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **MDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LHDT1** | 15 | 2 | 175 | 0.11 | 0.2 |
| | **LHDT2** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **MHDT** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **HHDT** | 15 | 16 | 175 | 0.11 | 1.7 |
| **Travel at Utility** | **LDA** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT1** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT2** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **MDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LHDT1** | 15 | 6 | 100 | 0.06 | 0.4 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 5 | 100 | 0.06 | 0.3 |
| | **HHDT** | 15 | 22 | 100 | 0.06 | 1.3 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 14 | 50 | 0.03 | 0.4 |
| | **HHDT** | 15 | 85 | 50 | 0.03 | 2.6 |
| **Travel at Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **HHDT** | 15 | 133 | 50 | 0.03 | 4.1 |
| **Travel at Fire Station** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 11 | 1 | 1 | 1 | 57 | 19 | 294 | 958 | **1342** |

## Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| Idle at High Cube Warehouses | LHDT1 | 5 | 137 | 685 |
| | LHDT2 | 5 | 47 | 233 |
| | MHDT | 5 | 713 | 3563 |
| | HHDT | 5 | 2314 | 11569 |
| Idle at Light Logistics | LHDT1 | 5 | 1 | 4 |
| | LHDT2 | 5 | 0 | 1 |
| | MHDT | 5 | 3 | 15 |
| | HHDT | 5 | 8 | 40 |
| Idle at Utility | LHDT1 | 5 | 3 | 14 |
| | LHDT2 | 5 | 1 | 5 |
| | MHDT | 5 | 2 | 12 |
| | HHDT | 5 | 11 | 54 |
| Idle at Gas Station/Convenience Store | LHDT1 | 5 | 0 | 2 |
| | LHDT2 | 5 | 0 | 1 |
| | MHDT | 5 | 7 | 34 |
| | HHDT | 5 | 43 | 213 |
| Idle at Convenience Store | LHDT1 | 5 | 1 | 3 |
| | LHDT2 | 5 | 0 | 1 |
| | MHDT | 5 | 11 | 56 |
| | HHDT | 5 | 66 | 332 |
| Idle at Firestation | LHDT1 | 5 | 0 | 0 |
| | LHDT2 | 5 | 0 | 0 |
| | MHDT | 5 | 0 | 0 |
| | HHDT | 5 | 0 | 0 |

| Total DSL (hrs) | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|
| | 11.8 | 4.0 | 61.3 | 203.5 | 280.6 |

# World Logistics Center
## Project Phase 1 (2012)
Area Source Non-Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 17546 | 330 | 0.21 | 3596.9 |
| | **LDT1** | 15 | 2058 | 330 | 0.21 | 421.8 |
| | **LDT2** | 15 | 6111 | 330 | 0.21 | 1252.8 |
| | **MDT** | 15 | 4846 | 330 | 0.21 | 993.5 |
| | **LHDT1** | 15 | 886 | 330 | 0.21 | 181.7 |
| | **LHDT2** | 15 | 93 | 330 | 0.21 | 19.1 |
| | **MHDT** | 15 | 344 | 330 | 0.21 | 70.6 |
| | **HHDT** | 15 | 104 | 330 | 0.21 | 21.4 |
| **Travel at Light Logistics** | **LDA** | 15 | 75 | 175 | 0.11 | 8.1 |
| | **LDT1** | 15 | 9 | 175 | 0.11 | 1.0 |
| | **LDT2** | 15 | 26 | 175 | 0.11 | 2.8 |
| | **MDT** | 15 | 21 | 175 | 0.11 | 2.2 |
| | **LHDT1** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **LHDT2** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **MHDT** | 15 | 1 | 175 | 0.11 | 0.2 |
| | **HHDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| **Travel at Utility** | **LDA** | 15 | 110 | 100 | 0.06 | 6.8 |
| | **LDT1** | 15 | 13 | 100 | 0.06 | 0.8 |
| | **LDT2** | 15 | 38 | 100 | 0.06 | 2.4 |
| | **MDT** | 15 | 30 | 100 | 0.06 | 1.9 |
| | **LHDT1** | 15 | 19 | 100 | 0.06 | 1.1 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 1 | 100 | 0.06 | 0.1 |
| | **HHDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 64 | 50 | 0.03 | 2.0 |
| | **LDT1** | 15 | 7 | 50 | 0.03 | 0.2 |
| | **LDT2** | 15 | 22 | 50 | 0.03 | 0.7 |
| | **MDT** | 15 | 18 | 50 | 0.03 | 0.5 |
| | **LHDT1** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **HHDT** | 15 | 2 | 50 | 0.03 | 0.1 |
| **Travel at Convenience Store** | **LDA** | 15 | 105 | 50 | 0.03 | 3.3 |
| | **LDT1** | 15 | 12 | 50 | 0.03 | 0.4 |
| | **LDT2** | 15 | 37 | 50 | 0.03 | 1.1 |
| | **MDT** | 15 | 29 | 50 | 0.03 | 0.9 |
| | **LHDT1** | 15 | 4 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 5 | 50 | 0.03 | 0.2 |
| | **HHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| **Travel at Fire Station** | **LDA** | 15 | 79 | 50 | 0.03 | 2.4 |
| | **LDT1** | 15 | 9 | 50 | 0.03 | 0.3 |
| | **LDT2** | 15 | 27 | 50 | 0.03 | 0.8 |
| | **MDT** | 15 | 22 | 50 | 0.03 | 0.7 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 3620 | 424 | 1261 | 1000 | 184 | 19 | 71 | 22 | **6600** |

## Non-Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 443 | 2215 |
| | **LHDT2** | 5 | 47 | 233 |
| | **MHDT** | 5 | 172 | 861 |
| | **HHDT** | 5 | 52 | 261 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 3 | 14 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 1 | 4 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Utility** | **LHDT1** | 5 | 9 | 46 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 1 | 6 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 2 | 8 |
| | **HHDT** | 5 | 1 | 5 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 2 | 10 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 14 |
| | **HHDT** | 5 | 2 | 8 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |

| **Total GAS Idle Time (hours)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** |
|---|---|---|---|---|
| | 38.2 | 4.0 | 14.8 | 4.6 |

| ID | Arterial | From | To | Internal Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 16,625 | 727 | 2,291 | 6,889 |
| 2 | Street A | Eucalyptus Ave | Street F | 16,852 | 1,291 | 2,411 | 7,329 |
| 3 | Street E | west of Street A | | 8,580 | 607 | 1,255 | 3,797 |
| 5 | Street E | Street D | Street A | 3,952 | 134 | 237 | 93 |
| 6 | Street A | Street F | Street C | 7,443 | 427 | 796 | 1,777 |
| 8 | Street D | Street E | Cactus Ave | 7,702 | 281 | 459 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 30 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 318 | 25 | 25 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 906 | 34 | 63 | 194 |
| 18 | Street B | east of Street A | Gilman Springs Rd | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 52 | 0 | 0 | 0 |
| 21 | Street C | east of Street A | Street F | 2,376 | 71 | 188 | 193 |
| 24 | Street C | Street F | Street H | 2,355 | 61 | 182 | 173 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 152 | 5 | 17 | 28 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 152 | 5 | 17 | 28 |
| 31 | Gilman Springs Rd | south of Street C | | 2,504 | 65 | 169 | 228 |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Internal Roadway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 29 | 1 | 1 | 3 | 148 | 50 | 1845 | 6737 | 8815 | 1791 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 29 | 1 | 1 | 3 | 263 | 89 | 1942 | 7167 | 9496 | 4312 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 123 | 42 | 1011 | 3713 | 4907 | 7170 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 7 | 0 | 0 | 1 | 27 | 9 | 191 | 91 | 326 | 193 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 13 | 1 | 1 | 1 | 87 | 30 | 641 | 1738 | 2511 | 1714 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 | 313 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 5 | 2 | 20 | 0 | 28 | 14 |
| 14 | 1197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 7 | 2 | 51 | 190 | 252 | 253 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 52 | 52 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 14 | 5 | 151 | 189 | 364 | 285 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 12 | 4 | 147 | 169 | 337 | 408 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 | 18 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 | 75 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 4 | 0 | 0 | 0 | 13 | 4 | 136 | 223 | 382 | 195 |
| | | | | | | | | | | | | | | | | Total | 16742 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 0 | 0 | 1 | 30 | 10 | 375 | 1369 |
| 2 | 1 | 13 | 1 | 1 | 1 | 119 | 41 | 882 | 3255 |
| 3 | 1 | 22 | 1 | 1 | 2 | 180 | 61 | 1477 | 5425 |
| 5 | 1 | 4 | 0 | 0 | 0 | 16 | 5 | 113 | 54 |
| 6 | 1 | 9 | 0 | 0 | 1 | 59 | 20 | 438 | 1186 |
| 8 | 1 | 9 | 0 | 0 | 1 | 39 | 13 | 251 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 12 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 0 |
| 14 | 1 | 2 | 0 | 0 | 0 | 7 | 2 | 51 | 191 |
| 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1 | 3 | 0 | 0 | 0 | 11 | 4 | 118 | 147 |
| 24 | 1 | 5 | 0 | 0 | 0 | 15 | 5 | 177 | 205 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 11 |
| 30 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 48 |
| 31 | 1 | 2 | 0 | 0 | 0 | 7 | 2 | 69 | 114 |
| Total | | **76** | **4** | **4** | **7** | **489** | **166** | **3992** | **12005** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 76 | 4 | 4 | 7 | 489 | 166 | 3992 | 12005 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | **76** | **4** | **4** | **7** | **489** | **166** | **3992** | **12005** | **16742** |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Internal Roadway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 9525 | 1117 | 3318 | 2631 | 478 | 50 | 446 | 152 | 17717 | 3599 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 9655 | 1132 | 3363 | 2667 | 850 | 90 | 469 | 162 | 18387 | 8350 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 4916 | 576 | 1712 | 1358 | 399 | 42 | 244 | 84 | 9332 | 13635 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 2264 | 266 | 789 | 625 | 88 | 9 | 46 | 2 | 4090 | 2421 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 4264 | 500 | 1485 | 1178 | 281 | 30 | 155 | 39 | 7932 | 5416 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 | 5408 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 | 23 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 182 | 21 | 63 | 50 | 16 | 2 | 5 | 0 | 340 | 174 |
| 14 | 1197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 519 | 61 | 181 | 143 | 22 | 2 | 12 | 4 | 945 | 950 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 52 | 52 | 0 | 0 | 0 | 2386 | 1.482 | 30 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | 52 | 77 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 1361 | 160 | 474 | 376 | 47 | 5 | 37 | 4 | 2464 | 1925 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 1349 | 158 | 470 | 373 | 40 | 4 | 35 | 4 | 2434 | 2942 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 | 67 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 | 280 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 1435 | 168 | 500 | 396 | 43 | 5 | 33 | 5 | 2584 | 1316 |
| | | | | | | | | | | | | | | | | Total | 46583 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1935 | 227 | 674 | 534 | 97 | 10 | 91 | 31 |
| 2 | 1 | 4385 | 514 | 1527 | 1211 | 386 | 41 | 213 | 73 |
| 3 | 1 | 7183 | 842 | 2502 | 1984 | 584 | 62 | 357 | 122 |
| 5 | 1 | 1340 | 157 | 467 | 370 | 52 | 6 | 27 | 1 |
| 6 | 1 | 2911 | 341 | 1014 | 804 | 192 | 20 | 106 | 27 |
| 8 | 1 | 2991 | 351 | 1042 | 826 | 125 | 13 | 61 | 0 |
| 11 | 1 | 13 | 2 | 4 | 4 | 0 | 0 | 0 | 0 |
| 12 | 1 | 93 | 11 | 32 | 26 | 8 | 1 | 2 | 0 |
| 14 | 1 | 522 | 61 | 182 | 144 | 22 | 2 | 12 | 4 |
| 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 44 | 5 | 15 | 12 | 0 | 0 | 0 | 0 |
| 21 | 1 | 1064 | 125 | 371 | 294 | 37 | 4 | 29 | 3 |
| 24 | 1 | 1631 | 191 | 568 | 451 | 49 | 5 | 43 | 5 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 37 | 4 | 13 | 10 | 1 | 0 | 1 | 0 |
| 30 | 1 | 153 | 18 | 53 | 42 | 6 | 1 | 6 | 1 |
| 31 | 1 | 731 | 86 | 255 | 202 | 22 | 2 | 17 | 3 |
| Total | | **25032** | **2935** | **8718** | **6914** | **1581** | **167** | **964** | **271** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 25032 | 2935 | 8718 | 6914 | 1581 | 167 | 964 | 271 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **25032** | **2935** | **8718** | **6914** | **1581** | **167** | **964** | **271** | **46583** |

**World Logistics Center**
**Project Phase 1 (2012)**
**Entrained Road Dust**
Internal Roadways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 16,625 | 3377 | 727 | 148 | 2,291 | 465 | 6,889 | 1399 | 5390 | 8.54 | 0.035 | 0.0002 | 1.2 | 0.0009 | 5.0 |
| 2 | A | 731 | 0.45 | 16,852 | 7653 | 1,291 | 586 | 2,411 | 1095 | 7,329 | 3328 | 12662 | 8.68 | 0.035 | 0.0002 | 2.9 | 0.0009 | 11.9 |
| 3 | A | 2352 | 1.46 | 8,580 | 12536 | 607 | 887 | 1,255 | 1834 | 3,797 | 5548 | 20804 | 8.76 | 0.035 | 0.0002 | 4.9 | 0.0010 | 19.8 |
| 5 | A | 953 | 0.59 | 3,952 | 2340 | 134 | 79 | 237 | 140 | 93 | 55 | 2614 | 3.20 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.9 |
| 6 | A | 1099 | 0.68 | 7,443 | 5081 | 427 | 292 | 796 | 543 | 1,777 | 1213 | 7130 | 6.60 | 0.035 | 0.0002 | 1.2 | 0.0007 | 5.1 |
| 8 | A | 1091 | 0.68 | 7,702 | 5220 | 281 | 190 | 459 | 311 | 0 | 0 | 5722 | 2.77 | 0.035 | 0.0001 | 0.4 | 0.0003 | 1.7 |
| 11 | A | 1201 | 0.75 | 30 | 22 | 1 | 1 | 2 | 1 | 0 | 0 | 25 | 2.82 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 12 | A | 824 | 0.51 | 318 | 163 | 25 | 13 | 25 | 13 | 0 | 0 | 188 | 3.02 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 14 | A | 1618 | 1.01 | 906 | 911 | 34 | 34 | 63 | 63 | 194 | 195 | 1203 | 6.16 | 0.035 | 0.0002 | 0.2 | 0.0007 | 0.8 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 19 | A | 2386 | 1.48 | 52 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 21 | A | 1258 | 0.78 | 2,376 | 1857 | 71 | 55 | 188 | 147 | 193 | 151 | 2210 | 4.30 | 0.035 | 0.0001 | 0.2 | 0.0005 | 1.0 |
| 24 | A | 1946 | 1.21 | 2,355 | 2847 | 61 | 74 | 182 | 220 | 173 | 209 | 3350 | 4.16 | 0.035 | 0.0001 | 0.4 | 0.0004 | 1.5 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 29 | A | 675 | 0.42 | 152 | 64 | 5 | 2 | 17 | 7 | 28 | 12 | 85 | 5.95 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 30 | A | 2827 | 1.76 | 152 | 267 | 5 | 9 | 17 | 30 | 28 | 49 | 355 | 5.95 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.2 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 65 | 33 | 169 | 86 | 228 | 116 | 1511 | 4.38 | 0.035 | 0.0001 | 0.2 | 0.0005 | 0.7 |
| | | | | | | | | | | | | | | | **Totals:** | **12.0** | | **48.8** |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 5,607 | 172 | 375 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 499 | 22 | 24 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 627 | 10 | 35 | 194 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1,275 | 59 | 52 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 381 | 13 | 20 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 178 | 13 | 33 | 426 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 994 | 67 | 176 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 446 | 39 | 142 | 360 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 1,945 | 137 | 366 | 2 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,457 | 102 | 273 | 424 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 120 | 6 | 5 | 25 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 84 | 4 | 1 | 11 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 54 | 2 | 1 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 212 | 5 | 8 | 17 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 7,702 | 281 | 459 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 0 | 0 | 0 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 5,239 | 145 | 358 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 301 | 16 | 6 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 44 | 3 | 1 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,018 | 67 | 170 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 148 | 9 | 8 | 22 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 12 | 0 | 2 | 6 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 723 | 22 | 67 | 286 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 64 | 3 | 2 | 188 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | |
| 65 | Alessandro Blvd | Nason St | Oliver St | 268 | 6 | 9 | 18 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 328 | 10 | 13 | 18 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 15 | 0 | 0 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 662 | 24 | 30 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 993 | 36 | 45 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 5,137 | 141 | 356 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 480 | 9 | 6 | 2 |
| 75 | Ironwood Ave | Graham St | Heacock St | 157 | 5 | 10 | 4 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 29 | 1 | 4 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 639 | 13 | 15 | 7 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 810 | 18 | 22 | 5 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,168 | 29 | 39 | 52 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 564 | 15 | 22 | 26 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,472 | 54 | 84 | 148 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 24 | 0 | 0 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 44 | 2 | 1 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 499 | 15 | 20 | 29 |
| 96 | N California Ave | W 6th St | E 8th St | 389 | 10 | 0 | 0 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 51 | 2 | 9 | 6 |
| 98 | N California Ave | W 6th St | I-10 | 51 | 2 | 0 | 9 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 36 | 0 | 1 | 1 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 259 | 6 | 14 | 20 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 637 | 15 | 35 | 53 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 635 | 15 | 36 | 62 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 72 | 1 | 4 | 25 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 4 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 78 | 1 | 4 | 25 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 4 | 0 | 0 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 20 | 1 | 3 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 66 | 1 | 4 | 18 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 87 | 4 | 14 | 46 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 14 | 2 | 6 | 14 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 26 | 3 | 9 | 28 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 75 | 1 | 4 | 21 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 2 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 9 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 88 | 2 | 5 | 23 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 33 | 3 | 5 | 24 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 112 | 3 | 6 | 24 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 10 | 2 | 2 | 15 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 14 | 0 | 1 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 149 | 4 | 8 | 24 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 151 | 3 | 7 | 18 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 62 | 3 | 7 | 100 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 164 | 3 | 1 | 16 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 55 | 2 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 16 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 65 | 3 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 32 | 1 | 0 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 244 | 6 | 9 | 18 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 58 | 1 | 0 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 4 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 22 | 1 | 3 | 3 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 60 | 2 | 4 | 3 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 126 | 2 | 3 | 3 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 127 | 2 | 4 | 3 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 13 | 1 | 2 | 2 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 143 | 3 | 8 | 3 |
| 144 | Cactus Ave | Frederick St | Graham St | 144 | 3 | 8 | 1 |
| 145 | Cactus Ave | Graham St | Heacock St | 149 | 3 | 9 | 1 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 0 | 0 | 0 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 183 | 5 | 9 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 5 | 0 | 1 | 8 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 241 | 7 | 12 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 270 | 9 | 15 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 44 | 2 | 5 | 98 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 380 | 12 | 19 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 869 | 31 | 41 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 379 | 15 | 11 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 991 | 36 | 41 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 138 | 5 | 19 | 15 |
| 159 | Beaumont Ave | E 6th St | I-10 | 137 | 3 | 0 | 12 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,051 | 40 | 127 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 1,966 | 70 | 224 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 842 | 27 | 95 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 22 | 1 | 2 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 4,973 | 133 | 337 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 633 | 19 | 72 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,836 | 57 | 109 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,688 | 53 | 104 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,464 | 106 | 313 | 360 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 300 | 20 | 39 | 63 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,772 | 126 | 353 | 418 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 78 | 0 | 0 | 0 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2,454 | 57 | 157 | 94 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 2,098 | 48 | 143 | 79 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 356 | 9 | 16 | 18 |
| 194 | Crescent Ave | West of Alessandro Rd | | 274 | 22 | 63 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 557 | 30 | 95 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 832 | 57 | 157 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 49 | 2 | 6 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 137 | 2 | 8 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,018 | 67 | 170 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 91 | 9 | 28 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 91 | 9 | 28 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 5 | 0 | 0 | 0 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 200 | 4 | 10 | 13 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 381 | 9 | 15 | 21 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 37 | 0 | 2 | 4 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 14 | 0 | 0 | 0 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 4 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 12 | 0 | 0 | 0 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 15 | 0 | 2 | 4 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 1 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 40 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 49 | 1 | 3 | 4 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 519 | 13 | 33 | 66 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 39 | 1 | 2 | 4 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 13 | 0 | 2 | 1 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 382 | 11 | 43 | 64 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 159 | 4 | 15 | 15 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 199 | 7 | 16 | 45 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 208 | 7 | 4 | 44 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 13 | 1 | 2 | 4 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 15 | 3 | 2 | 37 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 48 | 2 | 0 | 17 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 8 | 0 | 2 | 5 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 212 | 7 | 15 | 48 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 546 | 14 | 40 | 67 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 226 | 4 | 5 | 7 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 769 | 18 | 46 | 73 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 69 | 3 | 2 | 0 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 106 | 3 | 3 | 2 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 795 | 20 | 36 | 88 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 14 | 1 | 5 | 16 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 449 | 12 | 34 | 65 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,002 | 25 | 40 | 56 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 149 | 4 | 12 | 11 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 867 | 0 | 63 | 113 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 371 | 18 | 71 | 176 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 2 | 0 | 0 | 1 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 374 | 18 | 69 | 177 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 2 | 0 | 0 | 0 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 384 | 18 | 72 | 178 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 14 | 1 | 0 | 1 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 395 | 19 | 62 | 184 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 4 | 0 | 0 | 0 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 176 | 8 | 30 | 80 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 418 | 21 | 82 | 202 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 2 | 1 | 0 | 10 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 350 | 15 | 58 | 149 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 26 | 1 | 2 | 33 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,170 | 32 | 44 | 88 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 346 | 12 | 21 | 46 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 756 | 25 | 54 | 7 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 736 | 26 | 51 | 85 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 195 | 7 | 17 | 6 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 808 | 27 | 54 | 57 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 554 | 21 | 37 | 129 |
| 294 | Via Del Lago | South of Iris Ave | | 56 | 2 | 0 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 102 | 5 | 4 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 117 | 5 | 2 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 33 | 1 | 4 | 96 |
| 304 | Iris Ave | Indian St | Perris Blvd | 157 | 5 | 14 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 827 | 32 | 111 | 94 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,357 | 48 | 176 | 94 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 8 | 0 | 1 | 0 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 963 | 22 | 35 | 88 |
| 326 | Ramona Expy | Sanderson Ave | State St | 313 | 5 | 17 | 16 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 655 | 16 | 24 | 72 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 9 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 2,096 | 48 | 131 | 79 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 10 | 0 | 0 | 0 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 1,564 | 37 | 86 | 42 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,071 | 23 | 80 | 70 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 27 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,134 | 26 | 42 | 12 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 881 | 21 | 54 | 66 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 636 | 15 | 33 | 44 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 1 | 0 | 0 | 9 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ran | Mid County Pkwy | 3rd St | | | | |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | | | | |
| 377 | Mid County Pkwy WB Off-Ran | Mid County Pkwy | 3rd St | | | | |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | | | | |
| 379 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | 3rd St | | | | |
| 380 | Mid County Pkwy EB On-Ram | 3rd St | Mid County Pkwy | | | | |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | | | | |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,270 | 45 | 161 | 78 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 14 | 0 | 0 | 0 |
| 390 | Ramona Expy | Webster Ave | Indian St | 205 | 10 | 31 | 11 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 171 | 16 | 71 | 26 |
| 393 | Indian St | Ramona Expy | Morgan St | 41 | 9 | 61 | 42 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 1,250 | 44 | 160 | 75 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 1,274 | 33 | 107 | 42 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 852 | 16 | 54 | 5 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,384 | 46 | 110 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 20 | 0 | 0 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 763 | 16 | 19 | 3 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 2 | 1 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 405 | Morgan St | Evans Rd | Bradley Rd | 196 | 8 | 0 | 4 |
| 406 | Ironwood Ave | East of Thedore St | | 51 | 6 | 3 | 0 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 8 | 0 | 0 | 1 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 76 | 2 | 2 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 225 | 6 | 0 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 11 | 1 | 0 | 2 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 1 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1,254 | 31 | 64 | 29 |
| 416 | Mid County Pkwy WB On-Ran | Mid County Pkwy | Perris Blvd | | | | |
| 417 | Mid County Pkwy WB Off-Ran | Perris Blvd | Mid County Pkwy | | | | |
| 419 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | Perris Blvd | | | | |
| 420 | Mid County Pkwy EB On-Ram | Perris Blvd | Mid County Pkwy | | | | |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 174 | 7 | 14 | 119 |
| 425 | Mid County Pkwy WB On-Ran | West of Evan | | | | | |
| 426 | Mid County Pkwy WB Off-Ran | East of Evan | | | | | |
| 427 | Day St | south of Alessandro Blvd | | 6 | 1 | 2 | 7 |
| 428 | Mid County Pkwy EB Off-Ram | West of Evan | | | | | |
| 429 | Mid County Pkwy EB On-Ram | East of Evan | | | | | |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 378 | 8 | 21 | 34 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | |
| 433 | Evans Rd | Rider St | Orange Ave | 295 | 4 | 5 | 0 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 8 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 112 | 1 | 1 | 0 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 81 | 1 | 2 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | |
| 453 | Evans Rd | North of San Jancito Ave | | | | | |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | |
| 455 | Evans Rd | South of San Jancito Ave | | | | | |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | |
| 477 | Ellis Ave | West of Evan Rd | | | | | |
| 478 | Evans Rd | North of Ellis Ave | | | | | |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | |
| 482 | Ellis Ave | East of SR-215 | | | | | |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | |
| 488 | Nason St | North of Iris Ave | | | | | |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 423 | 16 | 17 | 104 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 488 | 18 | 18 | 116 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | |
| 504 | Krameria Ave | west of Perris Blvd | | 102 | 3 | 7 | 0 |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Surface Street Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Daily VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6154 | 5,607 | 172 | 375 | 0 | 1820 | 1.131 | 10 | 0 | 0 | 1 | 35 | 12 | 302 | 0 | 360 | 408 |
| 10 | 545 | 499 | 22 | 24 | 0 | 826 | 0.513 | 1 | 0 | 0 | 0 | 4 | 2 | 19 | 0 | 26 | 14 |
| 13 | 866 | 627 | 10 | 35 | 194 | 345 | 0.214 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 190 | 222 | 48 |
| 32 | 1386 | 1,275 | 59 | 52 | 0 | 1551 | 0.964 | 2 | 0 | 0 | 0 | 12 | 4 | 42 | 0 | 61 | 58 |
| 33 | 414 | 381 | 13 | 20 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 3 | 1 | 16 | 0 | 20 | 25 |
| 35 | 650 | 178 | 13 | 33 | 426 | 801 | 0.498 | 0 | 0 | 0 | 0 | 3 | 1 | 27 | 417 | 447 | 222 |
| 36 | 1237 | 994 | 67 | 176 | 0 | 1627 | 1.011 | 2 | 0 | 0 | 0 | 14 | 5 | 142 | 0 | 162 | 164 |
| 37 | 987 | 446 | 39 | 142 | 360 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 114 | 352 | 478 | 65 |
| 38 | 2450 | 1,945 | 137 | 366 | 2 | 659 | 0.409 | 3 | 0 | 0 | 0 | 28 | 9 | 295 | 2 | 338 | 138 |
| 42 | 2256 | 1,457 | 102 | 273 | 424 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 21 | 7 | 220 | 415 | 665 | 2206 |
| 43 | 156 | 120 | 6 | 5 | 25 | 2598 | 1.614 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 24 | 30 | 49 |
| 46 | 100 | 84 | 4 | 1 | 11 | 806 | 0.501 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 11 | 13 | 6 |
| 47 | 57 | 54 | 2 | 1 | 0 | 1995 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 48 | 242 | 212 | 5 | 8 | 17 | 795 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 17 | 25 | 12 |
| 50 | 8442 | 7,702 | 281 | 459 | 0 | 479 | 0.298 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 | 138 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5742 | 5,239 | 145 | 358 | 0 | 1269 | 0.788 | 9 | 0 | 0 | 1 | 29 | 10 | 288 | 0 | 339 | 267 |
| 53 | 323 | 301 | 16 | 6 | 0 | 795 | 0.494 | 1 | 0 | 0 | 0 | 3 | 1 | 5 | 0 | 10 | 5 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 48 | 44 | 3 | 1 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1255 | 1,018 | 67 | 170 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 14 | 5 | 137 | 0 | 157 | 24 |
| 58 | 187 | 148 | 9 | 8 | 22 | 172 | 0.107 | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 22 | 31 | 3 |
| 59 | 20 | 12 | 0 | 2 | 6 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | 4 |
| 60 | 1098 | 723 | 22 | 67 | 286 | 159 | 0.099 | 1 | 0 | 0 | 0 | 4 | 2 | 54 | 280 | 341 | 34 |
| 61 | 257 | 64 | 3 | 2 | 188 | 97 | 0.060 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 184 | 186 | 11 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 301 | 268 | 6 | 9 | 18 | 795 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 18 | 27 | 13 |
| 66 | 369 | 328 | 10 | 13 | 18 | 812 | 0.504 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 18 | 31 | 16 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 15 | 15 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 716 | 662 | 24 | 30 | 0 | 819 | 0.509 | 1 | 0 | 0 | 0 | 5 | 2 | 24 | 0 | 32 | 16 |
| 70 | 1074 | 993 | 36 | 45 | 0 | 795 | 0.494 | 2 | 0 | 0 | 0 | 7 | 2 | 36 | 0 | 48 | 24 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5634 | 5,137 | 141 | 356 | 0 | 742 | 0.461 | 9 | 0 | 0 | 1 | 29 | 10 | 287 | 0 | 336 | 155 |
| 74 | 497 | 480 | 9 | 6 | 2 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 2 | 1 | 5 | 2 | 10 | 10 |
| 75 | 176 | 157 | 5 | 10 | 4 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 4 | 14 | 7 |
| 76 | 34 | 29 | 1 | 4 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 4 |
| 77 | 674 | 639 | 13 | 15 | 7 | 438 | 0.272 | 1 | 0 | 0 | 0 | 3 | 1 | 12 | 7 | 24 | 6 |
| 80 | 855 | 810 | 18 | 22 | 5 | 138 | 0.086 | 1 | 0 | 0 | 0 | 4 | 1 | 18 | 5 | 29 | 3 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1288 | 1,168 | 29 | 39 | 52 | 322 | 0.200 | 2 | 0 | 0 | 0 | 6 | 2 | 31 | 51 | 93 | 19 |
| 83 | 627 | 564 | 15 | 22 | 26 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 18 | 25 | 48 | 3 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1758 | 1,472 | 54 | 84 | 148 | 284 | 0.176 | 3 | 0 | 0 | 0 | 11 | 4 | 68 | 145 | 230 | 41 |
| 87 | 24 | 24 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88 | 47 | 44 | 2 | 1 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 95 | 563 | 499 | 15 | 20 | 29 | 439 | 0.273 | 1 | 0 | 0 | 0 | 3 | 1 | 16 | 28 | 50 | 14 |
| 96 | 399 | 389 | 10 | 0 | 0 | 399 | 0.248 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 4 | 1 |
| 97 | 68 | 51 | 2 | 9 | 6 | 389 | 0.242 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 6 | 14 | 3 |
| 98 | 62 | 51 | 2 | 0 | 9 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 1 |
| 99 | 38 | 36 | 0 | 1 | 1 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 100 | 299 | 259 | 6 | 14 | 20 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 20 | 33 | 5 |
| 101 | 740 | 637 | 15 | 35 | 53 | 313 | 0.194 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 52 | 85 | 17 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 748 | 635 | 15 | 36 | 62 | 291 | 0.181 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 61 | 95 | 17 |
| 104 | 102 | 72 | 1 | 4 | 25 | 404 | 0.251 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 24 | 28 | 7 |
| 105 | 4 | 4 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 0 | 0 | 0 | 0 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107 | 108 | 78 | 1 | 4 | 25 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 24 | 28 | 7 |
| 108 | 4 | 4 | 0 | 0 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 109 | 24 | 20 | 1 | 3 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 110 | 89 | 66 | 1 | 4 | 18 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 18 | 21 | 10 |
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 151 | 87 | 4 | 14 | 46 | 817 | 0.508 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 45 | 58 | 29 |
| 113 | 36 | 14 | 2 | 6 | 14 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 14 | 19 | 9 |
| 114 | 66 | 26 | 3 | 9 | 28 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 | 36 | 17 |
| 115 | 101 | 75 | 1 | 4 | 21 | 851 | 0.529 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 24 | 13 |
| 116 | 2 | 0 | 0 | 0 | 2 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 117 | 9 | 9 | 0 | 0 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 118 | 88 | 2 | 5 | 23 | 765 | 0.475 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 22 | 27 | 13 |
| 119 | 1 | 1 | 0 | 0 | 0 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120 | 65 | 33 | 3 | 5 | 24 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 23 | 28 | 14 |
| 121 | 145 | 112 | 3 | 6 | 24 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 23 | 29 | 15 |
| 122 | 29 | 10 | 2 | 2 | 15 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 15 | 17 | 8 |
| 123 | 15 | 14 | 0 | 1 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 124 | 185 | 149 | 4 | 8 | 24 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 23 | 31 | 16 |
| 125 | 0 | 0 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 179 | 151 | 3 | 7 | 18 | 774 | 0.481 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 18 | 24 | 12 |
| 127 | 172 | 62 | 3 | 7 | 100 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 98 | 104 | 53 |
| 128 | 0 | 0 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 184 | 164 | 3 | 1 | 16 | 823 | 0.511 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 16 | 18 | 9 |
| 130 | 58 | 55 | 2 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 131 | 16 | 16 | 0 | 0 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 68 | 65 | 3 | 0 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 134 | 33 | 32 | 1 | 0 | 0 | 760 | 0.472 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135 | 277 | 244 | 6 | 9 | 18 | 816 | 0.507 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 18 | 27 | 14 |
| 136 | 59 | 58 | 1 | 0 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137 | 4 | 4 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 29 | 22 | 1 | 3 | 3 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 6 | 1 |
| 139 | 69 | 60 | 2 | 4 | 3 | 504 | 0.313 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 140 | 134 | 126 | 2 | 3 | 3 | 527 | 0.327 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 6 | 2 |
| 141 | 136 | 127 | 2 | 4 | 3 | 1001 | 0.622 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 4 |
| 142 | 18 | 13 | 1 | 2 | 2 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 143 | 157 | 143 | 3 | 8 | 3 | 845 | 0.525 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 3 | 10 | 6 |
| 144 | 156 | 144 | 3 | 8 | 1 | 783 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 9 | 4 |
| 145 | 162 | 149 | 3 | 9 | 1 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 9 | 5 |
| 146 | 0 | 0 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 197 | 183 | 5 | 9 | 0 | 798 | 0.496 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 | 4 |
| 148 | 14 | 5 | 0 | 1 | 8 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 9 | 4 |
| 149 | 260 | 241 | 7 | 12 | 0 | 808 | 0.502 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 12 | 6 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 294 | 270 | 9 | 15 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 2 | 1 | 12 | 0 | 15 | 7 |
| 152 | 149 | 44 | 2 | 5 | 98 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 96 | 100 | 49 |
| 153 | 411 | 380 | 12 | 19 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 19 | 10 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 941 | 869 | 31 | 41 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 6 | 2 | 33 | 0 | 43 | 21 |
| 156 | 405 | 379 | 15 | 11 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 9 | 0 | 14 | 7 |
| 157 | 1068 | 991 | 36 | 41 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 7 | 2 | 33 | 0 | 45 | 22 |
| 158 | 177 | 138 | 5 | 19 | 15 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 15 | 32 | 20 |
| 159 | 152 | 137 | 3 | 0 | 12 | 170 | 0.106 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 12 | 13 | 1 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1218 | 1,051 | 40 | 127 | 0 | 784 | 0.487 | 2 | 0 | 0 | 0 | 8 | 3 | 102 | 0 | 115 | 56 |
| 162 | 2260 | 1,966 | 70 | 224 | 0 | 1052 | 0.654 | 3 | 0 | 0 | 0 | 14 | 5 | 180 | 0 | 204 | 133 |
| 163 | 964 | 842 | 27 | 95 | 0 | 350 | 0.217 | 1 | 0 | 0 | 0 | 5 | 2 | 77 | 0 | 86 | 19 |
| 164 | 25 | 22 | 1 | 2 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 165 | 5443 | 4,973 | 133 | 337 | 0 | 1541 | 0.957 | 9 | 0 | 0 | 1 | 27 | 9 | 271 | 0 | 318 | 304 |
| 168 | 724 | 633 | 19 | 72 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 4 | 1 | 58 | 0 | 64 | 30 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3002 | 2,836 | 57 | 109 | 0 | 522 | 0.324 | 5 | 0 | 0 | 0 | 12 | 4 | 88 | 0 | 109 | 35 |
| 172 | 2845 | 2,688 | 53 | 104 | 0 | 993 | 0.617 | 5 | 0 | 0 | 0 | 11 | 4 | 84 | 0 | 104 | 64 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2243 | 1,464 | 106 | 313 | 360 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 22 | 7 | 252 | 352 | 636 | 439 |
| 178 | 422 | 300 | 20 | 39 | 63 | 7132 | 4.430 | 1 | 0 | 0 | 0 | 4 | 1 | 31 | 62 | 99 | 439 |
| 179 | 2669 | 1,772 | 126 | 353 | 418 | 2189 | 1.360 | 3 | 0 | 0 | 0 | 26 | 9 | 284 | 409 | 731 | 994 |
| 180 | 78 | 78 | 0 | 0 | 0 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 2762 | 2,454 | 57 | 157 | 94 | 6368 | 3.956 | 4 | 0 | 0 | 0 | 12 | 4 | 126 | 92 | 239 | 945 |
| 191 | 2368 | 2,098 | 48 | 143 | 79 | 4906 | 3.048 | 4 | 0 | 0 | 0 | 10 | 3 | 115 | 77 | 210 | 640 |
| 192 | 399 | 356 | 9 | 16 | 18 | 4358 | 2.707 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 18 | 34 | 91 |
| 194 | 359 | 274 | 22 | 63 | 0 | 355 | 0.221 | 0 | 0 | 0 | 0 | 4 | 2 | 51 | 0 | 57 | 13 |
| 195 | 682 | 557 | 30 | 95 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 6 | 2 | 77 | 0 | 86 | 21 |
| 196 | 1046 | 832 | 57 | 157 | 0 | 716 | 0.445 | 1 | 0 | 0 | 0 | 12 | 4 | 126 | 0 | 144 | 64 |
| 198 | 57 | 49 | 2 | 6 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 3 |
| 199 | 147 | 137 | 2 | 8 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 7 | 2 |
| 200 | 1255 | 1,018 | 67 | 170 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 14 | 5 | 137 | 0 | 157 | 137 |
| 205 | 128 | 91 | 9 | 28 | 0 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 2 | 1 | 23 | 0 | 25 | 23 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 128 | 91 | 9 | 28 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 2 | 1 | 23 | 0 | 25 | 41 |
| 215 | 5 | 5 | 0 | 0 | 0 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 227 | 200 | 4 | 10 | 13 | 2000 | 1.242 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 13 | 22 | 28 |
| 217 | 426 | 381 | 9 | 15 | 21 | 663 | 0.412 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 21 | 36 | 15 |
| 218 | 43 | 37 | 0 | 2 | 4 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 4 |
| 219 | 14 | 14 | 0 | 0 | 0 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 221 | 4 | 4 | 0 | 0 | 0 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 12 | 12 | 0 | 0 | 0 | 359 | 0.223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 21 | 15 | 0 | 2 | 4 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 6 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 1 | 1 | 0 | 0 | 0 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 40 | 40 | 0 | 0 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 57 | 49 | 1 | 3 | 4 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 8 |
| 232 | 631 | 519 | 13 | 33 | 66 | 1719 | 1.068 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 65 | 96 | 102 |
| 233 | 46 | 39 | 1 | 2 | 4 | 976 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 4 |
| 236 | 16 | 13 | 0 | 2 | 1 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 1 |
| 237 | 500 | 382 | 11 | 43 | 64 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 2 | 1 | 35 | 63 | 101 | 98 |
| 238 | 193 | 159 | 4 | 15 | 15 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 15 | 28 | 20 |
| 239 | 267 | 199 | 7 | 16 | 45 | 1385 | 0.860 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 44 | 59 | 51 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 263 | 208 | 7 | 4 | 44 | 989 | 0.614 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 43 | 49 | 30 |
| 243 | 20 | 13 | 1 | 2 | 4 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 0 |
| 244 | 57 | 15 | 3 | 2 | 37 | 173 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 36 | 39 | 4 |
| 245 | 67 | 48 | 2 | 0 | 17 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 | 2 |
| 246 | 15 | 8 | 0 | 2 | 5 | 273 | 0.170 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 7 | 1 |
| 247 | 282 | 212 | 7 | 15 | 48 | 87 | 0.054 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 47 | 61 | 3 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 667 | 546 | 14 | 40 | 67 | 1588 | 0.986 | 1 | 0 | 0 | 0 | 3 | 1 | 32 | 66 | 103 | 101 |
| 254 | 0 | 0 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 242 | 226 | 4 | 5 | 7 | 943 | 0.586 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 7 | 12 | 7 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 906 | 769 | 18 | 46 | 73 | 1783 | 1.108 | 1 | 0 | 0 | 0 | 4 | 1 | 37 | 71 | 115 | 127 |
| 261 | 74 | 69 | 3 | 2 | 0 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 2 |
| 262 | 114 | 106 | 3 | 3 | 2 | 860 | 0.534 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 5 | 3 |
| 263 | 939 | 795 | 20 | 36 | 88 | 141 | 0.088 | 1 | 0 | 0 | 0 | 4 | 1 | 29 | 86 | 122 | 11 |
| 264 | 36 | 14 | 1 | 5 | 16 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 16 | 20 | 3 |
| 265 | 560 | 449 | 12 | 34 | 65 | 98 | 0.061 | 1 | 0 | 0 | 0 | 2 | 1 | 27 | 64 | 95 | 6 |
| 266 | 1123 | 1,002 | 25 | 40 | 56 | 171 | 0.106 | 2 | 0 | 0 | 0 | 5 | 2 | 32 | 55 | 96 | 10 |
| 267 | 176 | 149 | 4 | 12 | 11 | 156 | 0.097 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 11 | 22 | 2 |
| 268 | 1043 | 867 | 0 | 63 | 113 | 159 | 0.099 | 2 | 0 | 0 | 0 | 0 | 0 | 51 | 111 | 163 | 16 |
| 269 | 636 | 371 | 18 | 71 | 176 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 172 | 235 | 358 |
| 270 | 3 | 2 | 0 | 0 | 1 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 271 | 638 | 374 | 18 | 69 | 177 | 370 | 0.230 | 1 | 0 | 0 | 0 | 4 | 1 | 56 | 173 | 234 | 54 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 2 | 2 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 652 | 384 | 18 | 72 | 178 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 4 | 1 | 58 | 174 | 238 | 182 |
| 275 | 16 | 14 | 1 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 276 | 660 | 395 | 19 | 62 | 184 | 159 | 0.099 | 1 | 0 | 0 | 0 | 4 | 1 | 50 | 180 | 236 | 23 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 277 | 4 | 4 | 0 | 0 | 0 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 294 | 176 | 8 | 30 | 80 | 157 | 0.098 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 78 | 105 | 10 |
| 280 | 723 | 418 | 21 | 82 | 202 | 163 | 0.101 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 198 | 270 | 27 |
| 281 | 13 | 2 | 1 | 0 | 10 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 2 |
| 282 | 572 | 350 | 15 | 58 | 149 | 167 | 0.104 | 1 | 0 | 0 | 0 | 3 | 1 | 47 | 146 | 197 | 20 |
| 283 | 62 | 26 | 1 | 2 | 33 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 32 | 34 | 9 |
| 284 | 1334 | 1,170 | 32 | 44 | 88 | 365 | 0.227 | 2 | 0 | 0 | 0 | 7 | 2 | 35 | 86 | 133 | 30 |
| 285 | 425 | 346 | 12 | 21 | 46 | 230 | 0.143 | 1 | 0 | 0 | 0 | 2 | 1 | 17 | 45 | 66 | 9 |
| 286 | 842 | 756 | 25 | 54 | 7 | 209 | 0.130 | 1 | 0 | 0 | 0 | 5 | 2 | 43 | 7 | 59 | 8 |
| 287 | 898 | 736 | 26 | 51 | 85 | 292 | 0.181 | 1 | 0 | 0 | 0 | 5 | 2 | 41 | 83 | 133 | 24 |
| 288 | 225 | 195 | 7 | 17 | 6 | 152 | 0.094 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 6 | 22 | 2 |
| 289 | 946 | 808 | 27 | 54 | 57 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 43 | 56 | 108 | 19 |
| 290 | 741 | 554 | 21 | 37 | 129 | 328 | 0.204 | 1 | 0 | 0 | 0 | 4 | 1 | 30 | 126 | 163 | 33 |
| 294 | 58 | 56 | 2 | 0 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 301 | 111 | 102 | 5 | 4 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 5 | 2 |
| 302 | 124 | 117 | 5 | 2 | 0 | 796 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 2 |
| 303 | 134 | 33 | 1 | 4 | 96 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 94 | 97 | 92 |
| 304 | 176 | 157 | 5 | 14 | 0 | 729 | 0.453 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 13 | 6 |
| 306 | 1064 | 827 | 32 | 111 | 94 | 818 | 0.508 | 1 | 0 | 0 | 0 | 7 | 2 | 89 | 92 | 192 | 97 |
| 307 | 1675 | 1,357 | 48 | 176 | 94 | 0 | 0.000 | 2 | 0 | 0 | 0 | 10 | 3 | 142 | 92 | 250 | 0 |
| 324 | 9 | 8 | 0 | 1 | 0 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 325 | 1108 | 963 | 22 | 35 | 88 | 2224 | 1.382 | 2 | 0 | 0 | 0 | 4 | 2 | 28 | 86 | 122 | 169 |
| 326 | 351 | 313 | 5 | 17 | 16 | 3506 | 2.178 | 1 | 0 | 0 | 0 | 1 | 0 | 14 | 16 | 31 | 68 |
| 327 | 767 | 655 | 16 | 24 | 72 | 227 | 0.141 | 1 | 0 | 0 | 0 | 3 | 1 | 19 | 70 | 95 | 13 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 9 | 9 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 2354 | 2,096 | 48 | 131 | 79 | 0 | 0.000 | 4 | 0 | 0 | 0 | 10 | 3 | 106 | 77 | 200 | 0 |
| 359 | 10 | 10 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 360 | 1729 | 1,564 | 37 | 86 | 42 | 247 | 0.153 | 3 | 0 | 0 | 0 | 8 | 3 | 69 | 41 | 124 | 19 |
| 361 | 1244 | 1,071 | 23 | 80 | 70 | 337 | 0.209 | 2 | 0 | 0 | 0 | 5 | 2 | 64 | 68 | 141 | 30 |
| 362 | 29 | 27 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 1214 | 1,134 | 26 | 42 | 12 | 4495 | 2.792 | 2 | 0 | 0 | 0 | 5 | 2 | 34 | 12 | 55 | 154 |
| 364 | 1022 | 881 | 21 | 54 | 66 | 286 | 0.178 | 2 | 0 | 0 | 0 | 4 | 1 | 43 | 65 | 116 | 21 |
| 365 | 728 | 636 | 15 | 33 | 44 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 43 | 75 | 75 |
| 366 | 10 | 1 | 0 | 0 | 9 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 10 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 0 | 0 | 0 | 0 | 0 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 387 | 1554 | 1,270 | 45 | 161 | 78 | 2761 | 1.715 | 2 | 0 | 0 | 0 | 9 | 3 | 130 | 76 | 221 | 379 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 14 | 14 | 0 | 0 | 0 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 257 | 205 | 10 | 31 | 11 | 1189 | 0.739 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 11 | 39 | 29 |
| 392 | 284 | 171 | 16 | 71 | 26 | 436 | 0.271 | 0 | 0 | 0 | 0 | 3 | 1 | 57 | 25 | 87 | 24 |
| 393 | 153 | 41 | 9 | 61 | 42 | 934 | 0.580 | 0 | 0 | 0 | 0 | 2 | 1 | 49 | 41 | 93 | 54 |
| 394 | 1529 | 1,250 | 44 | 160 | 75 | 1292 | 0.803 | 2 | 0 | 0 | 0 | 9 | 3 | 129 | 73 | 217 | 174 |
| 396 | 1456 | 1,274 | 33 | 107 | 42 | 2366 | 1.470 | 2 | 0 | 0 | 0 | 7 | 2 | 86 | 41 | 139 | 204 |
| 397 | 927 | 852 | 16 | 54 | 5 | 1588 | 0.986 | 1 | 0 | 0 | 0 | 3 | 1 | 43 | 5 | 54 | 54 |
| 398 | 2540 | 2,384 | 46 | 110 | 0 | 560 | 0.348 | 4 | 0 | 0 | 0 | 9 | 3 | 89 | 0 | 106 | 37 |
| 399 | 20 | 20 | 0 | 0 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 400 | 801 | 763 | 16 | 19 | 3 | 1704 | 1.059 | 1 | 0 | 0 | 0 | 3 | 1 | 15 | 3 | 24 | 26 |
| 401 | 4 | 1 | 0 | 2 | 1 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 208 | 196 | 8 | 0 | 4 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 4 | 6 | 4 |
| 406 | 60 | 51 | 6 | 3 | 0 | 395 | 0.245 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 1 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 9 | 8 | 0 | 0 | 1 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 409 | 80 | 76 | 2 | 2 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 410 | 231 | 225 | 6 | 0 | 0 | 884 | 0.549 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 14 | 11 | 1 | 0 | 2 | 678 | 0.421 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 414 | 1 | 1 | 0 | 0 | 0 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 1378 | 1,254 | 31 | 64 | 29 | 855 | 0.531 | 2 | 0 | 0 | 0 | 6 | 2 | 52 | 28 | 91 | 48 |
| 416 | 0 | 0 | 0 | 0 | 0 | 284 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 0 | 0 | 0 | 0 | 0 | 343 | 0.213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 0 | 0 | 0 | 0 | 0 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 314 | 174 | 7 | 14 | 119 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 116 | 130 | 67 |
| 425 | 0 | 0 | 0 | 0 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 0 | 0 | 0 | 0 | 0 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 16 | 6 | 1 | 2 | 7 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 4 |
| 428 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 0 | 0 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 441 | 378 | 8 | 21 | 34 | 114 | 0.071 | 1 | 0 | 0 | 0 | 2 | 1 | 17 | 33 | 53 | 4 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 304 | 295 | 4 | 5 | 0 | 1802 | 1.119 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 | 6 |
| 434 | 8 | 8 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 114 | 112 | 1 | 1 | 0 | 2365 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 443 | 84 | 81 | 1 | 2 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 560 | 423 | 16 | 17 | 104 | 660 | 0.410 | 1 | 0 | 0 | 0 | 3 | 1 | 14 | 102 | 121 | 49 |
| 500 | 640 | 488 | 18 | 18 | 116 | 395 | 0.245 | 1 | 0 | 0 | 0 | 4 | 1 | 14 | 113 | 134 | 33 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 112 | 102 | 3 | 7 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 1 |
| | | | | | | | | | | | | | | | | | 12643 |

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 11 | 1 | 1 | 1 | 40 | 13 | 341 | 0 |
| 10 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 10 | 0 |
| 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 41 |
| 32 | 3 | 2 | 0 | 0 | 0 | 12 | 4 | 40 | 0 |
| 33 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 0 |
| 35 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 207 |
| 36 | 7 | 2 | 0 | 0 | 0 | 14 | 5 | 143 | 0 |
| 37 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 48 |
| 38 | 7 | 1 | 0 | 0 | 0 | 11 | 4 | 121 | 1 |
| 42 | 7 | 8 | 0 | 0 | 1 | 69 | 23 | 729 | 1375 |
| 43 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 39 |
| 46 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 47 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 48 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 8 |
| 50 | 3 | 4 | 0 | 0 | 0 | 17 | 6 | 110 | 0 |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 3 | 7 | 0 | 0 | 1 | 23 | 8 | 227 | 0 |
| 53 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 0 |
| 58 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 60 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 28 |
| 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 9 |
| 66 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 9 |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 0 |
| 70 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 18 | 0 |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 3 | 4 | 0 | 0 | 0 | 13 | 4 | 132 | 0 |
| 74 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 5 | 2 |
| 75 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 2 |
| 76 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 77 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 2 |
| 80 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 10 |
| 83 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 12 | 26 |
| 87 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 8 |
| 96 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 97 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 98 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 101 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 10 |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 11 |
| 104 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| 108 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 109 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 110 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 23 |
| 113 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 |
| 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 |
| 115 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 117 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 |
| 121 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 |
| 122 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| 123 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 12 |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 |
| 127 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 50 |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 130 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 131 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 134 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 9 |
| 136 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 139 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 140 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 141 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 142 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 143 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 144 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 145 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 149 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 152 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 47 |
| 153 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 16 | 0 |
| 156 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 157 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 16 | 0 |
| 158 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 9 |
| 159 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 50 | 0 |
| 162 | 3 | 2 | 0 | 0 | 0 | 9 | 3 | 118 | 0 |
| 163 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 0 |
| 164 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165 | 1 | 8 | 0 | 0 | 1 | 26 | 9 | 260 | 0 |
| 168 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 27 | 0 |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3 | 2 | 0 | 0 | 0 | 4 | 1 | 28 | 0 |
| 172 | 6 | 3 | 0 | 0 | 0 | 7 | 2 | 52 | 0 |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 7 | 2 | 0 | 0 | 0 | 15 | 5 | 174 | 243 |
| 178 | 7 | 2 | 0 | 0 | 0 | 18 | 6 | 139 | 273 |
| 179 | 7 | 4 | 0 | 0 | 0 | 35 | 12 | 387 | 556 |
| 180 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 7 | 17 | 1 | 1 | 2 | 46 | 16 | 500 | 364 |
| 191 | 7 | 11 | 1 | 1 | 1 | 30 | 10 | 351 | 235 |
| 192 | 7 | 2 | 0 | 0 | 0 | 5 | 2 | 35 | 48 |
| 194 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 |
| 195 | 5 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 0 |
| 196 | 5 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 0 |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 199 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 200 | 6 | 2 | 0 | 0 | 0 | 12 | 4 | 119 | 0 |
| 205 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 0 |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 37 | 0 |
| 215 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 16 |
| 217 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 8 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 219 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 221 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 232 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 69 |
| 233 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 236 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 237 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 60 |
| 238 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 239 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 38 |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 26 |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 245 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 246 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 247 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 32 | 65 |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 41 | 79 |
| 261 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 262 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 263 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 265 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 266 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 6 |
| 267 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 268 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 |
| 269 | 6 | 1 | 0 | 0 | 0 | 6 | 2 | 87 | 262 |
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 271 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 40 |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 44 | 133 |
| 275 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 276 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 18 |
| 277 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 280 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 20 |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 282 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 15 |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 284 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 8 | 20 |
| 285 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 |
| 286 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 |
| 287 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 15 |
| 288 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 289 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 290 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 26 |
| 294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 302 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 303 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 88 |
| 304 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| 306 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 45 | 47 |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 325 | 7 | 2 | 0 | 0 | 0 | 6 | 2 | 39 | 119 |
| 326 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 34 |
| 327 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 359 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 360 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 361 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 14 |
| 362 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 1 | 5 | 0 | 0 | 1 | 15 | 5 | 94 | 33 |
| 364 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 11 |
| 365 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 26 | 43 |
| 366 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 387 | 3 | 4 | 0 | 0 | 0 | 16 | 5 | 222 | 131 |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 18 | 8 |
| 392 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 7 |
| 393 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 29 | 24 |
| 394 | 3 | 2 | 0 | 0 | 0 | 7 | 2 | 103 | 59 |
| 396 | 3 | 3 | 0 | 0 | 0 | 10 | 3 | 127 | 60 |
| 397 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 43 | 5 |
| 398 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 31 | 0 |
| 399 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 400 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 16 | 3 |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 406 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 409 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 410 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 15 |
| 416 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 60 |
| 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 443 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 42 |
| 500 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 28 |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Total | | **151** | **7** | **7** | **14** | **604** | **205** | **5918** | **5736** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 22 | 1 | 1 | 2 | 72 | 24 | 599 | 644 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 39 | 2 | 2 | 4 | 144 | 49 | 1350 | 392 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 2 | 0 | 0 | 0 | 10 | 3 | 104 | 16 | |
| 6 | 29 | 1 | 1 | 3 | 106 | 36 | 983 | 945 | |
| 7 | 58 | 3 | 3 | 5 | 271 | 92 | 2882 | 3739 | |
| 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **151** | **7** | **7** | **14** | **604** | **205** | **5918** | **5736** | **12643** |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Surface Street Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6154 | 5,607 | 172 | 375 | 0 | 1820 | 1.131 | 3213 | 377 | 1119 | 887 | 113 | 12 | 73 | 0 | 5794 | 6550 |
| 10 | 545 | 499 | 22 | 24 | 0 | 826 | 0.513 | 286 | 34 | 100 | 79 | 14 | 2 | 5 | 0 | 519 | 266 |
| 13 | 866 | 627 | 10 | 35 | 194 | 345 | 0.214 | 359 | 42 | 125 | 99 | 7 | 1 | 7 | 4 | 644 | 138 |
| 32 | 1386 | 1,275 | 59 | 52 | 0 | 1551 | 0.964 | 731 | 86 | 254 | 202 | 39 | 4 | 10 | 0 | 1325 | 1277 |
| 33 | 414 | 381 | 13 | 20 | 0 | 2006 | 1.246 | 218 | 26 | 76 | 60 | 9 | 1 | 4 | 0 | 394 | 490 |
| 35 | 650 | 178 | 13 | 33 | 426 | 801 | 0.498 | 102 | 12 | 36 | 28 | 9 | 1 | 6 | 9 | 203 | 101 |
| 36 | 1237 | 994 | 67 | 176 | 0 | 1627 | 1.011 | 570 | 67 | 198 | 157 | 44 | 5 | 34 | 0 | 1075 | 1086 |
| 37 | 987 | 446 | 39 | 142 | 360 | 219 | 0.136 | 256 | 30 | 89 | 71 | 26 | 3 | 28 | 8 | 509 | 69 |
| 38 | 2450 | 1,945 | 137 | 366 | 2 | 659 | 0.409 | 1114 | 131 | 388 | 308 | 90 | 10 | 71 | 0 | 2112 | 865 |
| 42 | 2256 | 1,457 | 102 | 273 | 424 | 5338 | 3.316 | 835 | 98 | 291 | 231 | 67 | 7 | 53 | 9 | 1591 | 5275 |
| 43 | 156 | 120 | 6 | 5 | 25 | 2598 | 1.614 | 69 | 8 | 24 | 19 | 4 | 0 | 1 | 1 | 126 | 203 |
| 46 | 100 | 84 | 4 | 1 | 11 | 806 | 0.501 | 48 | 6 | 17 | 13 | 3 | 0 | 0 | 0 | 87 | 44 |
| 47 | 57 | 54 | 2 | 1 | 0 | 1995 | 1.239 | 31 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 56 | 69 |
| 48 | 242 | 212 | 5 | 8 | 17 | 795 | 0.494 | 121 | 14 | 42 | 34 | 3 | 0 | 2 | 0 | 217 | 107 |
| 50 | 8442 | 7,702 | 281 | 459 | 0 | 479 | 0.298 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 | 2374 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5742 | 5,239 | 145 | 358 | 0 | 1269 | 0.788 | 3002 | 352 | 1045 | 829 | 95 | 10 | 70 | 0 | 5403 | 4260 |
| 53 | 323 | 301 | 16 | 6 | 0 | 795 | 0.494 | 172 | 20 | 60 | 48 | 11 | 1 | 1 | 0 | 313 | 155 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 48 | 44 | 3 | 1 | 0 | 2042 | 1.269 | 25 | 3 | 9 | 7 | 2 | 0 | 0 | 0 | 46 | 59 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1255 | 1,018 | 67 | 170 | 0 | 246 | 0.153 | 583 | 68 | 203 | 161 | 44 | 5 | 33 | 0 | 1098 | 168 |
| 58 | 187 | 148 | 9 | 8 | 22 | 172 | 0.107 | 85 | 10 | 30 | 23 | 6 | 1 | 2 | 0 | 156 | 17 |
| 59 | 20 | 12 | 0 | 2 | 6 | 786 | 0.488 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 6 |
| 60 | 1098 | 723 | 22 | 67 | 286 | 159 | 0.099 | 414 | 49 | 144 | 114 | 14 | 2 | 13 | 6 | 757 | 75 |
| 61 | 257 | 64 | 3 | 2 | 188 | 97 | 0.060 | 37 | 4 | 13 | 10 | 2 | 0 | 0 | 4 | 71 | 4 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 301 | 268 | 6 | 9 | 18 | 795 | 0.494 | 154 | 18 | 53 | 42 | 4 | 0 | 2 | 0 | 274 | 135 |
| 66 | 369 | 328 | 10 | 13 | 18 | 812 | 0.504 | 188 | 22 | 65 | 52 | 7 | 1 | 3 | 0 | 338 | 170 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 15 | 15 | 0 | 0 | 0 | 814 | 0.506 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 15 | 8 |
| 69 | 716 | 662 | 24 | 30 | 0 | 819 | 0.509 | 379 | 44 | 132 | 105 | 16 | 2 | 6 | 0 | 684 | 348 |
| 70 | 1074 | 993 | 36 | 45 | 0 | 795 | 0.494 | 569 | 67 | 198 | 157 | 24 | 2 | 9 | 0 | 1026 | 507 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5634 | 5,137 | 141 | 356 | 0 | 742 | 0.461 | 2943 | 345 | 1025 | 813 | 93 | 10 | 69 | 0 | 5298 | 2442 |
| 74 | 497 | 480 | 9 | 6 | 2 | 1573 | 0.977 | 275 | 32 | 96 | 76 | 6 | 1 | 1 | 0 | 487 | 476 |
| 75 | 176 | 157 | 5 | 10 | 4 | 805 | 0.500 | 90 | 11 | 31 | 25 | 3 | 0 | 2 | 0 | 162 | 81 |
| 76 | 34 | 29 | 1 | 4 | 0 | 1597 | 0.992 | 17 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | 30 | 30 |
| 77 | 674 | 639 | 13 | 15 | 7 | 438 | 0.272 | 366 | 43 | 128 | 101 | 9 | 1 | 3 | 0 | 650 | 177 |
| 80 | 855 | 810 | 18 | 22 | 5 | 138 | 0.086 | 464 | 54 | 162 | 128 | 12 | 1 | 4 | 0 | 826 | 71 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1288 | 1,168 | 29 | 39 | 52 | 322 | 0.200 | 669 | 78 | 233 | 185 | 19 | 2 | 8 | 1 | 1195 | 239 |
| 83 | 627 | 564 | 15 | 22 | 26 | 95 | 0.059 | 323 | 38 | 113 | 89 | 10 | 1 | 4 | 1 | 579 | 34 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1758 | 1,472 | 54 | 84 | 148 | 284 | 0.176 | 843 | 99 | 294 | 233 | 36 | 4 | 16 | 3 | 1528 | 270 |
| 87 | 24 | 24 | 0 | 0 | 0 | 800 | 0.497 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 12 |
| 88 | 47 | 44 | 2 | 1 | 0 | 809 | 0.503 | 25 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | 46 | 23 |
| 95 | 563 | 499 | 15 | 20 | 29 | 439 | 0.273 | 286 | 34 | 100 | 79 | 10 | 1 | 4 | 1 | 513 | 140 |
| 96 | 399 | 389 | 10 | 0 | 0 | 399 | 0.248 | 223 | 26 | 78 | 62 | 7 | 1 | 0 | 0 | 395 | 98 |
| 97 | 68 | 51 | 2 | 9 | 6 | 389 | 0.242 | 29 | 3 | 10 | 8 | 1 | 0 | 2 | 0 | 54 | 13 |
| 98 | 62 | 51 | 2 | 0 | 9 | 160 | 0.099 | 29 | 3 | 10 | 8 | 1 | 0 | 0 | 0 | 53 | 5 |
| 99 | 38 | 36 | 0 | 1 | 1 | 405 | 0.252 | 21 | 2 | 7 | 6 | 0 | 0 | 0 | 0 | 36 | 9 |
| 100 | 299 | 259 | 6 | 14 | 20 | 227 | 0.141 | 148 | 17 | 52 | 41 | 4 | 0 | 3 | 0 | 266 | 38 |
| 101 | 740 | 637 | 15 | 35 | 53 | 313 | 0.194 | 365 | 43 | 127 | 101 | 10 | 1 | 7 | 1 | 655 | 127 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 748 | 635 | 15 | 36 | 62 | 291 | 0.181 | 364 | 43 | 127 | 100 | 10 | 1 | 7 | 1 | 653 | 118 |
| 104 | 102 | 72 | 1 | 4 | 25 | 404 | 0.251 | 41 | 5 | 14 | 11 | 1 | 0 | 1 | 1 | 74 | 19 |
| 105 | 4 | 4 | 0 | 0 | 0 | 195 | 0.121 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 0 |
| 106 | 0 | 0 | 0 | 0 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107 | 108 | 78 | 1 | 4 | 25 | 388 | 0.241 | 45 | 5 | 16 | 12 | 1 | 0 | 1 | 1 | 80 | 19 |
| 108 | 4 | 4 | 0 | 0 | 0 | 997 | 0.619 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 109 | 24 | 20 | 1 | 3 | 0 | 787 | 0.489 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | 21 | 10 |
| 110 | 89 | 66 | 1 | 4 | 18 | 756 | 0.470 | 38 | 4 | 13 | 10 | 1 | 0 | 1 | 0 | 68 | 32 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 151 | 87 | 4 | 14 | 46 | 817 | 0.508 | 50 | 6 | 17 | 14 | 3 | 0 | 3 | 1 | 93 | 47 |
| 113 | 36 | 14 | 2 | 6 | 14 | 791 | 0.491 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 17 | 8 |
| 114 | 66 | 26 | 3 | 9 | 28 | 791 | 0.491 | 15 | 2 | 5 | 4 | 2 | 0 | 2 | 1 | 30 | 15 |
| 115 | 101 | 75 | 1 | 4 | 21 | 851 | 0.529 | 43 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | 77 | 41 |
| 116 | 2 | 0 | 0 | 0 | 2 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117 | 9 | 9 | 0 | 0 | 0 | 757 | 0.470 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 4 |
| 118 | 118 | 88 | 2 | 5 | 23 | 765 | 0.475 | 50 | 6 | 18 | 14 | 1 | 0 | 1 | 1 | 91 | 43 |
| 119 | 1 | 1 | 0 | 0 | 0 | 782 | 0.486 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 120 | 65 | 33 | 3 | 5 | 24 | 814 | 0.506 | 19 | 2 | 7 | 5 | 2 | 0 | 1 | 1 | 37 | 19 |
| 121 | 145 | 112 | 3 | 6 | 24 | 825 | 0.513 | 64 | 8 | 22 | 18 | 2 | 0 | 1 | 1 | 116 | 59 |
| 122 | 29 | 10 | 2 | 2 | 15 | 782 | 0.486 | 6 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 12 | 6 |
| 123 | 15 | 14 | 0 | 1 | 0 | 791 | 0.491 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 7 |
| 124 | 185 | 149 | 4 | 8 | 24 | 800 | 0.497 | 85 | 10 | 30 | 24 | 3 | 0 | 2 | 1 | 154 | 76 |
| 125 | 0 | 0 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 179 | 151 | 3 | 7 | 18 | 774 | 0.481 | 87 | 10 | 30 | 24 | 2 | 0 | 1 | 0 | 155 | 74 |
| 127 | 172 | 62 | 3 | 7 | 100 | 825 | 0.513 | 36 | 4 | 12 | 10 | 2 | 0 | 1 | 2 | 68 | 35 |
| 128 | 0 | 0 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 184 | 164 | 3 | 1 | 16 | 823 | 0.511 | 94 | 11 | 33 | 26 | 2 | 0 | 0 | 0 | 166 | 85 |
| 130 | 58 | 55 | 2 | 1 | 0 | 800 | 0.497 | 32 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 57 | 28 |
| 131 | 16 | 16 | 0 | 0 | 0 | 775 | 0.481 | 9 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 16 | 8 |
| 133 | 68 | 65 | 3 | 0 | 0 | 804 | 0.499 | 37 | 4 | 13 | 10 | 2 | 0 | 0 | 0 | 67 | 33 |
| 134 | 33 | 32 | 1 | 0 | 0 | 760 | 0.472 | 18 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 33 | 15 |
| 135 | 277 | 244 | 6 | 9 | 18 | 816 | 0.507 | 140 | 16 | 49 | 39 | 4 | 0 | 2 | 0 | 250 | 127 |
| 136 | 59 | 58 | 1 | 0 | 0 | 786 | 0.488 | 33 | 4 | 12 | 9 | 1 | 0 | 0 | 0 | 59 | 29 |
| 137 | 4 | 4 | 0 | 0 | 0 | 790 | 0.491 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 138 | 29 | 22 | 1 | 3 | 3 | 267 | 0.166 | 13 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | 23 | 4 |
| 139 | 69 | 60 | 2 | 4 | 3 | 504 | 0.313 | 34 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 62 | 19 |
| 140 | 134 | 126 | 2 | 3 | 3 | 527 | 0.327 | 72 | 8 | 25 | 20 | 1 | 0 | 1 | 0 | 128 | 42 |
| 141 | 136 | 127 | 2 | 4 | 3 | 1001 | 0.622 | 73 | 9 | 25 | 20 | 1 | 0 | 1 | 0 | 129 | 80 |
| 142 | 18 | 13 | 1 | 2 | 2 | 291 | 0.181 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 14 | 3 |
| 143 | 157 | 143 | 3 | 8 | 3 | 845 | 0.525 | 82 | 10 | 29 | 23 | 2 | 0 | 2 | 0 | 147 | 77 |
| 144 | 156 | 144 | 3 | 8 | 1 | 783 | 0.486 | 83 | 10 | 29 | 23 | 2 | 0 | 2 | 0 | 147 | 72 |
| 145 | 162 | 149 | 3 | 9 | 1 | 787 | 0.489 | 85 | 10 | 30 | 24 | 2 | 0 | 2 | 0 | 153 | 75 |
| 146 | 0 | 0 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 197 | 183 | 5 | 9 | 0 | 798 | 0.496 | 105 | 12 | 37 | 29 | 3 | 0 | 2 | 0 | 188 | 93 |
| 148 | 14 | 5 | 0 | 1 | 8 | 731 | 0.454 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 2 |
| 149 | 260 | 241 | 7 | 12 | 0 | 808 | 0.502 | 138 | 16 | 48 | 38 | 5 | 0 | 2 | 0 | 248 | 124 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 294 | 270 | 9 | 15 | 0 | 787 | 0.489 | 155 | 18 | 54 | 43 | 6 | 1 | 3 | 0 | 279 | 136 |
| 152 | 149 | 44 | 2 | 5 | 98 | 782 | 0.486 | 25 | 3 | 9 | 7 | 1 | 0 | 1 | 2 | 49 | 24 |
| 153 | 411 | 380 | 12 | 19 | 0 | 798 | 0.496 | 218 | 26 | 76 | 60 | 8 | 1 | 4 | 0 | 392 | 194 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 941 | 869 | 31 | 41 | 0 | 775 | 0.481 | 498 | 58 | 173 | 138 | 20 | 2 | 8 | 0 | 898 | 432 |
| 156 | 405 | 379 | 15 | 11 | 0 | 771 | 0.479 | 217 | 25 | 76 | 60 | 10 | 1 | 2 | 0 | 391 | 187 |
| 157 | 1068 | 991 | 36 | 41 | 0 | 804 | 0.499 | 568 | 67 | 198 | 157 | 24 | 2 | 8 | 0 | 1023 | 511 |
| 158 | 177 | 138 | 5 | 19 | 15 | 1039 | 0.645 | 79 | 9 | 28 | 22 | 3 | 0 | 4 | 0 | 145 | 94 |
| 159 | 152 | 137 | 3 | 0 | 12 | 170 | 0.106 | 78 | 9 | 27 | 22 | 2 | 0 | 0 | 0 | 139 | 15 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1218 | 1,051 | 40 | 127 | 0 | 784 | 0.487 | 602 | 71 | 210 | 166 | 26 | 3 | 25 | 0 | 1103 | 537 |
| 162 | 2260 | 1,966 | 70 | 224 | 0 | 1052 | 0.654 | 1126 | 132 | 392 | 311 | 46 | 5 | 44 | 0 | 2056 | 1344 |
| 163 | 964 | 842 | 27 | 95 | 0 | 350 | 0.217 | 482 | 57 | 168 | 133 | 18 | 2 | 18 | 0 | 878 | 191 |
| 164 | 25 | 22 | 1 | 2 | 0 | 473 | 0.294 | 13 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 23 | 7 |
| 165 | 5443 | 4,973 | 133 | 337 | 0 | 1541 | 0.957 | 2849 | 334 | 992 | 787 | 88 | 9 | 66 | 0 | 5125 | 4906 |
| 168 | 724 | 633 | 19 | 72 | 0 | 758 | 0.471 | 363 | 43 | 126 | 100 | 13 | 1 | 14 | 0 | 660 | 311 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3002 | 2,836 | 57 | 109 | 0 | 522 | 0.324 | 1625 | 191 | 566 | 449 | 38 | 4 | 21 | 0 | 2893 | 938 |
| 172 | 2845 | 2,688 | 53 | 104 | 0 | 993 | 0.617 | 1540 | 181 | 536 | 425 | 35 | 4 | 20 | 0 | 2741 | 1691 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2243 | 1,464 | 106 | 313 | 360 | 1110 | 0.690 | 839 | 98 | 292 | 232 | 70 | 7 | 61 | 8 | 1607 | 1108 |
| 178 | 422 | 300 | 20 | 39 | 63 | 7132 | 4.430 | 172 | 20 | 60 | 47 | 13 | 1 | 8 | 1 | 323 | 1431 |
| 179 | 2669 | 1,772 | 126 | 353 | 418 | 2189 | 1.360 | 1015 | 119 | 354 | 280 | 83 | 9 | 69 | 9 | 1938 | 2635 |
| 180 | 78 | 78 | 0 | 0 | 0 | 6725 | 4.178 | 45 | 5 | 16 | 12 | 0 | 0 | 0 | 0 | 78 | 325 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 2762 | 2,454 | 57 | 157 | 94 | 6368 | 3.956 | 1406 | 165 | 490 | 388 | 38 | 4 | 31 | 2 | 2523 | 9981 |
| 191 | 2368 | 2,098 | 48 | 143 | 79 | 4906 | 3.048 | 1202 | 141 | 419 | 332 | 32 | 3 | 28 | 2 | 2158 | 6577 |
| 192 | 399 | 356 | 9 | 16 | 18 | 4358 | 2.707 | 204 | 24 | 71 | 56 | 6 | 1 | 3 | 0 | 365 | 989 |
| 194 | 359 | 274 | 22 | 63 | 0 | 355 | 0.221 | 157 | 18 | 55 | 43 | 14 | 2 | 12 | 0 | 302 | 67 |
| 195 | 682 | 557 | 30 | 95 | 0 | 397 | 0.247 | 319 | 37 | 111 | 88 | 20 | 2 | 18 | 0 | 596 | 147 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196 | 1046 | 832 | 57 | 157 | 0 | 716 | 0.445 | 477 | 56 | 166 | 132 | 38 | 4 | 31 | 0 | 902 | 401 |
| 198 | 57 | 49 | 2 | 6 | 0 | 1009 | 0.627 | 28 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | 52 | 32 |
| 199 | 147 | 137 | 2 | 8 | 0 | 378 | 0.235 | 78 | 9 | 27 | 22 | 1 | 0 | 2 | 0 | 140 | 33 |
| 200 | 1255 | 1,018 | 67 | 170 | 0 | 1403 | 0.872 | 583 | 68 | 203 | 161 | 44 | 5 | 33 | 0 | 1098 | 957 |
| 205 | 128 | 91 | 9 | 28 | 0 | 1501 | 0.932 | 52 | 6 | 18 | 14 | 6 | 1 | 5 | 0 | 103 | 96 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 128 | 91 | 9 | 28 | 0 | 2611 | 1.622 | 52 | 6 | 18 | 14 | 6 | 1 | 5 | 0 | 103 | 167 |
| 215 | 5 | 5 | 0 | 0 | 0 | 2937 | 1.825 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 9 |
| 216 | 227 | 200 | 4 | 10 | 13 | 2000 | 1.242 | 115 | 13 | 40 | 32 | 3 | 0 | 2 | 0 | 205 | 254 |
| 217 | 426 | 381 | 9 | 15 | 21 | 663 | 0.412 | 218 | 26 | 76 | 60 | 6 | 1 | 3 | 0 | 390 | 161 |
| 218 | 43 | 37 | 0 | 2 | 4 | 1167 | 0.725 | 21 | 2 | 7 | 6 | 0 | 0 | 0 | 0 | 37 | 27 |
| 219 | 14 | 14 | 0 | 0 | 0 | 2672 | 1.660 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 23 |
| 221 | 4 | 4 | 0 | 0 | 0 | 2622 | 1.629 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 7 |
| 223 | 12 | 12 | 0 | 0 | 0 | 359 | 0.223 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 3 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 21 | 15 | 0 | 2 | 4 | 1643 | 1.021 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 15 | 16 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 1 | 1 | 0 | 0 | 0 | 1122 | 0.697 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 230 | 40 | 40 | 0 | 0 | 0 | 1007 | 0.626 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 | 25 |
| 231 | 57 | 49 | 1 | 3 | 4 | 1968 | 1.223 | 28 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | 50 | 61 |
| 232 | 631 | 519 | 13 | 33 | 66 | 1719 | 1.068 | 297 | 35 | 104 | 82 | 9 | 1 | 6 | 1 | 535 | 572 |
| 233 | 46 | 39 | 1 | 2 | 4 | 976 | 0.606 | 22 | 3 | 8 | 6 | 1 | 0 | 0 | 0 | 40 | 24 |
| 236 | 16 | 13 | 0 | 2 | 1 | 794 | 0.493 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 7 |
| 237 | 500 | 382 | 11 | 43 | 64 | 1556 | 0.967 | 219 | 26 | 76 | 60 | 7 | 1 | 8 | 1 | 399 | 386 |
| 238 | 193 | 159 | 4 | 15 | 15 | 1120 | 0.696 | 91 | 11 | 32 | 25 | 3 | 0 | 3 | 0 | 165 | 115 |
| 239 | 267 | 199 | 7 | 16 | 45 | 1385 | 0.860 | 114 | 13 | 40 | 31 | 5 | 0 | 3 | 1 | 208 | 179 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 263 | 208 | 7 | 4 | 44 | 989 | 0.614 | 119 | 14 | 42 | 33 | 5 | 0 | 1 | 1 | 214 | 132 |
| 243 | 20 | 13 | 1 | 2 | 4 | 64 | 0.040 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 14 | 1 |
| 244 | 57 | 15 | 3 | 2 | 37 | 173 | 0.107 | 9 | 1 | 3 | 2 | 2 | 0 | 0 | 1 | 18 | 2 |
| 245 | 67 | 48 | 2 | 0 | 17 | 181 | 0.112 | 28 | 3 | 10 | 8 | 1 | 0 | 0 | 0 | 50 | 6 |
| 246 | 15 | 8 | 0 | 2 | 5 | 273 | 0.170 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 1 |
| 247 | 282 | 212 | 7 | 15 | 48 | 87 | 0.054 | 121 | 14 | 42 | 34 | 5 | 0 | 3 | 1 | 221 | 12 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 667 | 546 | 14 | 40 | 67 | 1588 | 0.986 | 313 | 37 | 109 | 86 | 9 | 1 | 8 | 1 | 564 | 557 |
| 254 | 0 | 0 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 242 | 226 | 4 | 5 | 7 | 943 | 0.586 | 129 | 15 | 45 | 36 | 3 | 0 | 1 | 0 | 230 | 134 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 906 | 769 | 18 | 46 | 73 | 1783 | 1.108 | 441 | 52 | 153 | 122 | 12 | 1 | 9 | 2 | 791 | 876 |
| 261 | 74 | 69 | 3 | 2 | 0 | 1181 | 0.734 | 40 | 5 | 14 | 11 | 2 | 0 | 0 | 0 | 71 | 52 |
| 262 | 114 | 106 | 3 | 3 | 2 | 860 | 0.534 | 61 | 7 | 21 | 17 | 2 | 0 | 1 | 0 | 109 | 58 |
| 263 | 939 | 795 | 20 | 36 | 88 | 141 | 0.088 | 455 | 53 | 159 | 126 | 13 | 1 | 7 | 2 | 817 | 72 |
| 264 | 36 | 14 | 1 | 5 | 16 | 224 | 0.139 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 16 | 2 |
| 265 | 560 | 449 | 12 | 34 | 65 | 98 | 0.061 | 257 | 30 | 90 | 71 | 8 | 1 | 7 | 1 | 465 | 28 |
| 266 | 1123 | 1,002 | 25 | 40 | 56 | 171 | 0.106 | 574 | 67 | 200 | 159 | 16 | 2 | 8 | 1 | 1027 | 109 |
| 267 | 176 | 149 | 4 | 12 | 11 | 156 | 0.097 | 85 | 10 | 30 | 24 | 3 | 0 | 2 | 0 | 154 | 15 |
| 268 | 1043 | 867 | 0 | 63 | 113 | 159 | 0.099 | 497 | 58 | 173 | 137 | 0 | 0 | 12 | 2 | 880 | 87 |
| 269 | 636 | 371 | 18 | 71 | 176 | 2450 | 1.522 | 213 | 25 | 74 | 59 | 12 | 1 | 14 | 4 | 401 | 610 |
| 270 | 3 | 2 | 0 | 0 | 1 | 620 | 0.385 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 271 | 638 | 374 | 18 | 69 | 177 | 370 | 0.230 | 214 | 25 | 75 | 59 | 12 | 1 | 13 | 4 | 404 | 93 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 2 | 2 | 0 | 0 | 0 | 625 | 0.388 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 274 | 652 | 384 | 18 | 72 | 178 | 1231 | 0.765 | 220 | 26 | 77 | 61 | 12 | 1 | 14 | 4 | 414 | 317 |
| 275 | 16 | 14 | 1 | 0 | 1 | 377 | 0.234 | 8 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 15 | 3 |
| 276 | 660 | 395 | 19 | 62 | 184 | 159 | 0.099 | 226 | 27 | 79 | 63 | 13 | 1 | 12 | 4 | 424 | 42 |
| 277 | 4 | 4 | 0 | 0 | 0 | 1074 | 0.667 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 3 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 294 | 176 | 8 | 30 | 80 | 157 | 0.098 | 101 | 12 | 35 | 28 | 5 | 1 | 6 | 2 | 189 | 18 |
| 280 | 723 | 418 | 21 | 82 | 202 | 163 | 0.101 | 239 | 28 | 83 | 66 | 14 | 1 | 16 | 4 | 453 | 46 |
| 281 | 13 | 2 | 1 | 0 | 10 | 280 | 0.174 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 1 |
| 282 | 572 | 350 | 15 | 58 | 149 | 167 | 0.104 | 201 | 24 | 70 | 55 | 10 | 1 | 11 | 3 | 375 | 39 |
| 283 | 62 | 26 | 1 | 2 | 33 | 405 | 0.252 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 1 | 28 | 7 |
| 284 | 1334 | 1,170 | 32 | 44 | 88 | 365 | 0.227 | 670 | 79 | 233 | 185 | 21 | 2 | 9 | 2 | 1201 | 272 |
| 285 | 425 | 346 | 12 | 21 | 46 | 230 | 0.143 | 198 | 23 | 69 | 55 | 8 | 1 | 4 | 1 | 359 | 51 |
| 286 | 842 | 756 | 25 | 54 | 7 | 209 | 0.130 | 433 | 51 | 151 | 120 | 16 | 2 | 11 | 0 | 783 | 102 |
| 287 | 898 | 736 | 26 | 51 | 85 | 292 | 0.181 | 422 | 49 | 147 | 116 | 17 | 2 | 10 | 2 | 765 | 139 |
| 288 | 225 | 195 | 7 | 17 | 6 | 152 | 0.094 | 112 | 13 | 39 | 31 | 5 | 0 | 3 | 0 | 203 | 19 |
| 289 | 946 | 808 | 27 | 54 | 57 | 285 | 0.177 | 463 | 54 | 161 | 128 | 18 | 2 | 11 | 1 | 838 | 148 |
| 290 | 741 | 554 | 21 | 37 | 129 | 328 | 0.204 | 317 | 37 | 111 | 88 | 14 | 1 | 7 | 3 | 578 | 118 |
| 294 | 58 | 56 | 2 | 0 | 0 | 824 | 0.512 | 32 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 57 | 29 |
| 301 | 111 | 102 | 5 | 4 | 0 | 774 | 0.481 | 58 | 7 | 20 | 16 | 3 | 0 | 1 | 0 | 106 | 51 |
| 302 | 124 | 117 | 5 | 2 | 0 | 796 | 0.494 | 67 | 8 | 23 | 19 | 3 | 0 | 0 | 0 | 121 | 60 |
| 303 | 134 | 33 | 1 | 4 | 96 | 1514 | 0.941 | 19 | 2 | 7 | 5 | 1 | 0 | 1 | 2 | 37 | 34 |
| 304 | 176 | 157 | 5 | 14 | 0 | 729 | 0.453 | 90 | 11 | 31 | 25 | 3 | 0 | 3 | 0 | 163 | 74 |
| 306 | 1064 | 827 | 32 | 111 | 94 | 818 | 0.508 | 474 | 56 | 165 | 131 | 21 | 2 | 22 | 2 | 872 | 443 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 307 | 1675 | 1,357 | 48 | 176 | 94 | 0 | 0.000 | 777 | 91 | 271 | 215 | 32 | 3 | 34 | 2 | 1425 | 0 |
| 324 | 9 | 8 | 0 | 1 | 0 | 2925 | 1.817 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 15 |
| 325 | 1108 | 963 | 22 | 35 | 88 | 2224 | 1.382 | 552 | 65 | 192 | 152 | 14 | 2 | 7 | 2 | 986 | 1362 |
| 326 | 351 | 313 | 5 | 17 | 16 | 3506 | 2.178 | 179 | 21 | 62 | 50 | 3 | 0 | 3 | 0 | 320 | 696 |
| 327 | 767 | 655 | 16 | 24 | 72 | 227 | 0.141 | 375 | 44 | 131 | 104 | 11 | 1 | 5 | 2 | 672 | 95 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 9 | 9 | 0 | 0 | 0 | 0 | 0.000 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 0 |
| 358 | 2354 | 2,096 | 48 | 131 | 79 | 0 | 0.000 | 1201 | 141 | 418 | 332 | 32 | 3 | 25 | 2 | 2154 | 0 |
| 359 | 10 | 10 | 0 | 0 | 0 | 339 | 0.211 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 2 |
| 360 | 1729 | 1,564 | 37 | 86 | 42 | 247 | 0.153 | 896 | 105 | 312 | 248 | 24 | 3 | 17 | 1 | 1605 | 246 |
| 361 | 1244 | 1,071 | 23 | 80 | 70 | 337 | 0.209 | 614 | 72 | 214 | 169 | 15 | 2 | 16 | 2 | 1103 | 231 |
| 362 | 29 | 27 | 0 | 1 | 1 | 338 | 0.210 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 27 | 6 |
| 363 | 1214 | 1,134 | 26 | 42 | 12 | 4495 | 2.792 | 650 | 76 | 226 | 179 | 17 | 2 | 8 | 0 | 1159 | 3236 |
| 364 | 1022 | 881 | 21 | 54 | 66 | 286 | 0.178 | 505 | 59 | 176 | 139 | 14 | 1 | 11 | 1 | 906 | 161 |
| 365 | 728 | 636 | 15 | 33 | 44 | 1602 | 0.995 | 364 | 43 | 127 | 101 | 10 | 1 | 6 | 1 | 653 | 650 |
| 366 | 10 | 1 | 0 | 0 | 9 | 1742 | 1.082 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 0 | 0 | 0 | 0 | 0 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 387 | 1554 | 1,270 | 45 | 161 | 78 | 2761 | 1.715 | 728 | 85 | 253 | 201 | 30 | 3 | 31 | 2 | 1333 | 2287 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 14 | 14 | 0 | 0 | 0 | 189 | 0.117 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 2 |
| 390 | 257 | 205 | 10 | 31 | 11 | 1189 | 0.739 | 117 | 14 | 41 | 32 | 7 | 1 | 6 | 0 | 218 | 161 |
| 392 | 284 | 171 | 16 | 71 | 26 | 436 | 0.271 | 98 | 11 | 34 | 27 | 11 | 1 | 14 | 1 | 197 | 53 |
| 393 | 153 | 41 | 9 | 61 | 42 | 934 | 0.580 | 23 | 3 | 8 | 6 | 6 | 1 | 12 | 1 | 60 | 35 |
| 394 | 1529 | 1,250 | 44 | 160 | 75 | 1292 | 0.803 | 716 | 84 | 249 | 198 | 29 | 3 | 31 | 2 | 1312 | 1053 |
| 396 | 1456 | 1,274 | 33 | 107 | 42 | 2366 | 1.470 | 730 | 86 | 254 | 202 | 22 | 2 | 21 | 1 | 1317 | 1936 |
| 397 | 927 | 852 | 16 | 54 | 5 | 1588 | 0.986 | 488 | 57 | 170 | 135 | 11 | 1 | 11 | 0 | 873 | 861 |
| 398 | 2540 | 2,384 | 46 | 110 | 0 | 560 | 0.348 | 1366 | 160 | 476 | 377 | 30 | 3 | 21 | 0 | 2434 | 847 |
| 399 | 20 | 20 | 0 | 0 | 0 | 3389 | 2.105 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 20 | 42 |
| 400 | 801 | 763 | 16 | 19 | 3 | 1704 | 1.059 | 437 | 51 | 152 | 121 | 11 | 1 | 4 | 0 | 777 | 822 |
| 401 | 4 | 1 | 0 | 2 | 1 | 790 | 0.491 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 208 | 196 | 8 | 0 | 4 | 1010 | 0.627 | 112 | 13 | 39 | 31 | 5 | 1 | 0 | 0 | 202 | 126 |
| 406 | 60 | 51 | 6 | 3 | 0 | 395 | 0.245 | 29 | 3 | 10 | 8 | 4 | 0 | 1 | 0 | 56 | 14 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 9 | 8 | 0 | 0 | 1 | 1072 | 0.666 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 5 |
| 409 | 80 | 76 | 2 | 2 | 0 | 1137 | 0.706 | 44 | 5 | 15 | 12 | 1 | 0 | 0 | 0 | 78 | 55 |
| 410 | 231 | 225 | 6 | 0 | 0 | 884 | 0.549 | 129 | 15 | 45 | 36 | 4 | 0 | 0 | 0 | 229 | 126 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 14 | 11 | 1 | 0 | 2 | 678 | 0.421 | 6 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 12 | 5 |
| 414 | 1 | 1 | 0 | 0 | 0 | 895 | 0.556 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 415 | 1378 | 1,254 | 31 | 64 | 29 | 855 | 0.531 | 718 | 84 | 250 | 198 | 20 | 2 | 12 | 1 | 1287 | 684 |
| 416 | 0 | 0 | 0 | 0 | 0 | 284 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 0 | 0 | 0 | 0 | 0 | 343 | 0.213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 0 | 0 | 0 | 0 | 0 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 314 | 174 | 7 | 14 | 119 | 828 | 0.514 | 100 | 12 | 35 | 28 | 5 | 0 | 3 | 3 | 184 | 95 |
| 425 | 0 | 0 | 0 | 0 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 0 | 0 | 0 | 0 | 0 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 16 | 6 | 1 | 2 | 7 | 654 | 0.406 | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 7 | 3 |
| 428 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 0 | 0 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 441 | 378 | 8 | 21 | 34 | 114 | 0.071 | 217 | 25 | 75 | 60 | 5 | 1 | 4 | 1 | 388 | 27 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 304 | 295 | 4 | 5 | 0 | 1802 | 1.119 | 169 | 20 | 59 | 47 | 3 | 0 | 1 | 0 | 298 | 334 |
| 434 | 8 | 8 | 0 | 0 | 0 | 1269 | 0.788 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 6 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 114 | 112 | 1 | 1 | 0 | 2365 | 1.469 | 64 | 8 | 22 | 18 | 1 | 0 | 0 | 0 | 113 | 166 |
| 443 | 84 | 81 | 1 | 2 | 0 | 1588 | 0.986 | 46 | 5 | 16 | 13 | 1 | 0 | 0 | 0 | 82 | 81 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 560 | 423 | 16 | 17 | 104 | 660 | 0.410 | 242 | 28 | 84 | 67 | 11 | 1 | 3 | 2 | 439 | 180 |
| 500 | 640 | 488 | 18 | 18 | 116 | 395 | 0.245 | 280 | 33 | 97 | 77 | 12 | 1 | 4 | 3 | 506 | 124 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 112 | 102 | 3 | 7 | 0 | 360 | 0.224 | 58 | 7 | 20 | 16 | 2 | 0 | 1 | 0 | 105 | 24 |

Total 90716

**VMT per Vehicle Class**

| Street Segment | | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2-GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) | Road Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 | 6 | 3632 | 426 | 1265 | 1003 | 128 | 13 | 82 | 0 | A |
| | 10 | 3 | 147 | 17 | 51 | 41 | 7 | 1 | 2 | 0 | A |
| | 13 | 6 | 77 | 9 | 27 | 21 | 1 | 0 | 1 | 1 | A |
| | 32 | 3 | 704 | 83 | 245 | 194 | 37 | 4 | 10 | 0 | A |
| | 33 | 1 | 272 | 32 | 95 | 75 | 11 | 1 | 5 | 0 | M |
| | 35 | 7 | 51 | 6 | 18 | 14 | 4 | 0 | 3 | 5 | A |
| | 36 | 7 | 576 | 67 | 200 | 159 | 45 | 5 | 35 | 0 | A |
| | 37 | 7 | 35 | 4 | 12 | 10 | 3 | 0 | 4 | 1 | A |
| | 38 | 7 | 456 | 53 | 159 | 126 | 37 | 4 | 29 | 0 | A |
| | 42 | 7 | 2768 | 325 | 964 | 765 | 223 | 23 | 176 | 31 | A |
| | 43 | 7 | 111 | 13 | 39 | 31 | 6 | 1 | 2 | 1 | A |
| | 46 | 7 | 24 | 3 | 8 | 7 | 1 | 0 | 0 | 0 | A |
| | 47 | 7 | 38 | 4 | 13 | 11 | 2 | 0 | 0 | 0 | A |
| | 48 | 6 | 60 | 7 | 21 | 17 | 2 | 0 | 1 | 0 | A |
| | 50 | 3 | 1313 | 154 | 457 | 363 | 55 | 6 | 27 | 0 | A |
| | 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 52 | 3 | 2366 | 277 | 824 | 654 | 75 | 8 | 55 | 0 | A |
| | 53 | 6 | 85 | 10 | 30 | 24 | 5 | 1 | 1 | 0 | A |
| | 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 55 | 6 | 32 | 4 | 11 | 9 | 3 | 0 | 0 | 0 | A |
| | 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 57 | 7 | 89 | 10 | 31 | 25 | 7 | 1 | 5 | 0 | A |
| | 58 | 1 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| | 59 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| | 60 | 1 | 41 | 5 | 14 | 11 | 1 | 0 | 1 | 1 | M |
| | 61 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| | 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 65 | 3 | 76 | 9 | 26 | 21 | 2 | 0 | 1 | 0 | A |
| | 66 | 3 | 95 | 11 | 33 | 26 | 3 | 0 | 1 | 0 | A |
| | 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 68 | 7 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| | 69 | 3 | 193 | 23 | 67 | 53 | 8 | 1 | 3 | 0 | A |
| | 70 | 3 | 281 | 33 | 98 | 78 | 12 | 1 | 4 | 0 | A |
| | 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 73 | 3 | 1357 | 159 | 473 | 375 | 43 | 5 | 32 | 0 | A |
| | 74 | 6 | 269 | 32 | 94 | 74 | 6 | 1 | 1 | 0 | A |
| | 75 | 1 | 45 | 5 | 16 | 12 | 2 | 0 | 1 | 0 | M |
| | 76 | 1 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | M |
| | 77 | 5 | 100 | 12 | 35 | 28 | 2 | 0 | 1 | 0 | A |
| | 80 | 5 | 40 | 5 | 14 | 11 | 1 | 0 | 0 | 0 | A |
| | 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 82 | 1 | 134 | 16 | 47 | 37 | 4 | 0 | 2 | 0 | M |
| | 83 | 5 | 19 | 2 | 7 | 5 | 1 | 0 | 0 | 0 | A |
| | 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 86 | 1 | 149 | 17 | 52 | 41 | 6 | 1 | 3 | 1 | M |
| | 87 | 1 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| | 88 | 1 | 13 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | M |
| | 95 | 6 | 78 | 9 | 27 | 22 | 3 | 0 | 1 | 0 | A |
| | 96 | 8 | 55 | 6 | 19 | 15 | 2 | 0 | 0 | 0 | A |
| | 97 | 5 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| | 98 | 5 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 99 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| | 100 | 1 | 21 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | M |
| | 101 | 1 | 71 | 8 | 25 | 20 | 2 | 0 | 1 | 0 | M |
| | 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 103 | 1 | 66 | 8 | 23 | 18 | 2 | 0 | 1 | 0 | M |
| | 104 | 1 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |
| | 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 107 | 1 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 109 | 5 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 110 | 6 | 18 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | A |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 112 | 6 | 25 | 3 | 9 | 7 | 1 | 0 | 1 | 1 | A |
| 113 | 5 | 4 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | A |
| 114 | 1 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | M |
| 115 | 6 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | A |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 117 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 118 | 6 | 24 | 3 | 8 | 7 | 1 | 0 | 0 | 0 | A |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 120 | 1 | 10 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 121 | 6 | 33 | 4 | 11 | 9 | 1 | 0 | 1 | 0 | A |
| 122 | 3 | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | A |
| 123 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 124 | 6 | 42 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | A |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 126 | 6 | 42 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 127 | 1 | 18 | 2 | 6 | 5 | 1 | 0 | 1 | 1 | M |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 129 | 6 | 48 | 6 | 17 | 13 | 1 | 0 | 0 | 0 | A |
| 130 | 6 | 16 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 131 | 6 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 133 | 3 | 19 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | A |
| 134 | 1 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 135 | 3 | 71 | 8 | 25 | 20 | 2 | 0 | 1 | 0 | A |
| 136 | 6 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | A |
| 137 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 138 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 139 | 1 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |
| 140 | 1 | 24 | 3 | 8 | 7 | 0 | 0 | 0 | 0 | M |
| 141 | 1 | 45 | 5 | 16 | 12 | 1 | 0 | 0 | 0 | M |
| 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 143 | 3 | 43 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | A |
| 144 | 3 | 40 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 145 | 3 | 42 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | A |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 147 | 6 | 52 | 6 | 18 | 14 | 2 | 0 | 1 | 0 | A |
| 148 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 149 | 6 | 69 | 8 | 24 | 19 | 2 | 0 | 1 | 0 | A |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 151 | 1 | 76 | 9 | 26 | 21 | 3 | 0 | 1 | 0 | M |
| 152 | 1 | 12 | 1 | 4 | 3 | 1 | 0 | 0 | 1 | M |
| 153 | 1 | 108 | 13 | 38 | 30 | 4 | 0 | 2 | 0 | M |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 155 | 3 | 240 | 28 | 83 | 66 | 10 | 1 | 4 | 0 | A |
| 156 | 3 | 104 | 12 | 36 | 29 | 5 | 0 | 1 | 0 | A |
| 157 | 3 | 284 | 33 | 99 | 78 | 12 | 1 | 4 | 0 | A |
| 158 | 6 | 51 | 6 | 18 | 14 | 2 | 0 | 2 | 0 | A |
| 159 | 6 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 161 | 3 | 293 | 34 | 102 | 81 | 13 | 1 | 12 | 0 | A |
| 162 | 3 | 736 | 86 | 256 | 203 | 30 | 3 | 28 | 0 | A |
| 163 | 3 | 105 | 12 | 37 | 29 | 4 | 0 | 4 | 0 | A |
| 164 | 3 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 165 | 1 | 2728 | 320 | 950 | 753 | 84 | 9 | 63 | 0 | M |
| 168 | 1 | 171 | 20 | 59 | 47 | 6 | 1 | 7 | 0 | M |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 171 | 3 | 527 | 62 | 184 | 146 | 12 | 1 | 7 | 0 | A |
| 172 | 6 | 950 | 111 | 331 | 262 | 22 | 2 | 12 | 0 | A |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 177 | 7 | 578 | 68 | 201 | 160 | 48 | 5 | 42 | 5 | A |
| 178 | 7 | 762 | 89 | 265 | 210 | 58 | 6 | 34 | 6 | A |
| 179 | 7 | 1381 | 162 | 481 | 381 | 113 | 12 | 93 | 13 | A |
| 180 | 7 | 187 | 22 | 65 | 52 | 0 | 0 | 0 | 0 | A |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 190 | 7 | 5562 | 652 | 1937 | 1536 | 148 | 16 | 121 | 8 | A |
| 191 | 7 | 3663 | 430 | 1276 | 1012 | 96 | 10 | 85 | 5 | A |
| 192 | 7 | 552 | 65 | 192 | 153 | 16 | 2 | 8 | 1 | A |
| 194 | 5 | 35 | 4 | 12 | 10 | 3 | 0 | 3 | 0 | A |
| 195 | 5 | 79 | 9 | 27 | 22 | 5 | 1 | 5 | 0 | A |
| 196 | 5 | 212 | 25 | 74 | 59 | 17 | 2 | 14 | 0 | A |
| 198 | 5 | 18 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | A |
| 199 | 5 | 18 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | A |
| 200 | 6 | 508 | 60 | 177 | 140 | 38 | 4 | 29 | 0 | A |
| 205 | 6 | 49 | 6 | 17 | 13 | 6 | 1 | 5 | 0 | A |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 207 | 6 | 85 | 10 | 29 | 23 | 10 | 1 | 9 | 0 | A |
| 215 | 3 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 216 | 6 | 142 | 17 | 50 | 39 | 3 | 0 | 2 | 0 | A |
| 217 | 3 | 90 | 11 | 31 | 25 | 2 | 0 | 1 | 0 | A |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 7 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 219 | 6 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 221 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 223 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 226 | 7 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 230 | 6 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 231 | 6 | 34 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | A |
| 232 | 7 | 318 | 37 | 111 | 88 | 9 | 1 | 7 | 2 | A |
| 233 | 7 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 236 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 237 | 7 | 212 | 25 | 74 | 58 | 7 | 1 | 8 | 1 | A |
| 238 | 6 | 63 | 7 | 22 | 18 | 2 | 0 | 2 | 0 | A |
| 239 | 6 | 98 | 12 | 34 | 27 | 4 | 0 | 3 | 1 | A |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 242 | 1 | 73 | 9 | 26 | 20 | 3 | 0 | 0 | 1 | M |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 244 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 245 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 246 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 247 | 1 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 252 | 6 | 309 | 36 | 107 | 85 | 9 | 1 | 8 | 1 | A |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 256 | 6 | 76 | 9 | 26 | 21 | 2 | 0 | 1 | 0 | A |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 260 | 3 | 488 | 57 | 170 | 135 | 13 | 1 | 10 | 2 | A |
| 261 | 5 | 29 | 3 | 10 | 8 | 1 | 0 | 0 | 0 | A |
| 262 | 1 | 32 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | M |
| 263 | 1 | 40 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | M |
| 264 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 265 | 1 | 16 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| 266 | 1 | 61 | 7 | 21 | 17 | 2 | 0 | 1 | 0 | M |
| 267 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 268 | 1 | 49 | 6 | 17 | 14 | 0 | 0 | 1 | 0 | M |
| 269 | 6 | 324 | 38 | 113 | 89 | 18 | 2 | 21 | 6 | A |
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 271 | 6 | 49 | 6 | 17 | 14 | 3 | 0 | 3 | 1 | A |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 274 | 6 | 168 | 20 | 59 | 46 | 9 | 1 | 11 | 3 | A |
| 275 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 276 | 6 | 22 | 3 | 8 | 6 | 1 | 0 | 1 | 0 | A |
| 277 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 279 | 1 | 10 | 1 | 3 | 3 | 1 | 0 | 1 | 0 | M |
| 280 | 1 | 24 | 3 | 8 | 7 | 1 | 0 | 2 | 0 | M |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 282 | 1 | 21 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | M |
| 283 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 284 | 1 | 152 | 18 | 53 | 42 | 5 | 1 | 2 | 0 | M |
| 285 | 1 | 28 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | M |
| 286 | 1 | 56 | 7 | 20 | 16 | 2 | 0 | 1 | 0 | M |
| 287 | 1 | 76 | 9 | 27 | 21 | 3 | 0 | 2 | 0 | M |
| 288 | 1 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |
| 289 | 1 | 82 | 10 | 29 | 23 | 3 | 0 | 2 | 0 | M |
| 290 | 1 | 65 | 8 | 23 | 18 | 3 | 0 | 1 | 1 | M |
| 294 | 7 | 16 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | A |
| 301 | 6 | 28 | 3 | 10 | 8 | 2 | 0 | 0 | 0 | A |
| 302 | 6 | 33 | 4 | 12 | 9 | 2 | 0 | 0 | 0 | A |
| 303 | 6 | 18 | 2 | 6 | 5 | 1 | 0 | 1 | 2 | A |
| 304 | 6 | 41 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 306 | 6 | 241 | 28 | 84 | 67 | 11 | 1 | 11 | 1 | A |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 324 | 7 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 325 | 7 | 762 | 89 | 265 | 211 | 20 | 2 | 9 | 3 | A |
| 326 | 7 | 391 | 46 | 136 | 108 | 7 | 1 | 7 | 1 | A |
| 327 | 7 | 53 | 6 | 18 | 15 | 1 | 0 | 1 | 0 | A |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 359 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 360 | 1 | 137 | 16 | 48 | 38 | 4 | 0 | 3 | 0 | M |
| 361 | 1 | 128 | 15 | 45 | 35 | 3 | 0 | 3 | 0 | M |
| 362 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 363 | 1 | 1814 | 213 | 632 | 501 | 48 | 5 | 23 | 1 | M |
| 364 | 1 | 90 | 11 | 31 | 25 | 2 | 0 | 2 | 0 | M |
| 365 | 6 | 363 | 43 | 126 | 100 | 10 | 1 | 6 | 1 | A |
| 366 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 386 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 387 | 3 | 1248 | 146 | 435 | 345 | 51 | 5 | 54 | 3 | A |
| | 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 389 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 390 | 7 | 87 | 10 | 30 | 24 | 5 | 1 | 4 | 0 | A |
| | 392 | 7 | 27 | 3 | 9 | 7 | 3 | 0 | 4 | 0 | A |
| | 393 | 7 | 14 | 2 | 5 | 4 | 3 | 0 | 7 | 1 | A |
| | 394 | 3 | 575 | 67 | 200 | 159 | 23 | 2 | 25 | 1 | A |
| | 396 | 3 | 1073 | 126 | 374 | 296 | 32 | 3 | 31 | 1 | A |
| | 397 | 7 | 482 | 56 | 168 | 133 | 10 | 1 | 10 | 0 | A |
| | 398 | 6 | 475 | 56 | 165 | 131 | 11 | 1 | 7 | 0 | A |
| | 399 | 7 | 24 | 3 | 8 | 7 | 0 | 0 | 0 | 0 | A |
| | 400 | 6 | 463 | 54 | 161 | 128 | 11 | 1 | 4 | 0 | A |
| | 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 405 | 1 | 70 | 8 | 25 | 19 | 3 | 0 | 0 | 0 | M |
| | 406 | 7 | 7 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | A |
| | 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 408 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 409 | 7 | 31 | 4 | 11 | 8 | 1 | 0 | 0 | 0 | A |
| | 410 | 6 | 71 | 8 | 25 | 20 | 2 | 0 | 0 | 0 | A |
| | 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 413 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 415 | 3 | 382 | 45 | 133 | 105 | 11 | 1 | 7 | 0 | A |
| | 416 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 419 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 424 | 1 | 51 | 6 | 18 | 14 | 2 | 0 | 1 | 1 | M |
| | 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 427 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 430 | 1 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| | 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 433 | 6 | 189 | 22 | 66 | 52 | 3 | 0 | 1 | 0 | A |
| | 434 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 442 | 6 | 94 | 11 | 33 | 26 | 1 | 0 | 0 | 0 | A |
| | 443 | 6 | 46 | 5 | 16 | 13 | 1 | 0 | 0 | 0 | A |
| | 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 499 | 1 | 99 | 12 | 35 | 27 | 4 | 0 | 1 | 1 | M |
| | 500 | 1 | 69 | 8 | 24 | 19 | 3 | 0 | 1 | 1 | M |
| | 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 504 | 1 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| Total | | **1177** | **49948** | **5857** | **17396** | **13796** | **1954** | **206** | **1430** | **129** | |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7415 | 869 | 2582 | 2048 | 233 | 25 | 145 | 15 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 12902 | 1513 | 4494 | 3564 | 467 | 49 | 326 | 9 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 575 | 67 | 200 | 159 | 33 | 3 | 25 | 0 | |
| 6 | 9695 | 1137 | 3377 | 2678 | 342 | 36 | 238 | 21 | |
| 7 | 19306 | 2264 | 6724 | 5332 | 877 | 92 | 696 | 84 | |
| 8 | 55 | 6 | 19 | 15 | 2 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **49948** | **5857** | **17396** | **13796** | **1954** | **206** | **1430** | **129** | **90716** |

**World Logistics Center**
**Project Phase 1 (2012)**
**Entrained Road Dust**
Surface Streets

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1820 | 1.13 | 5,607 | 6339 | 172 | 194 | 375 | 424 | 0 | 0 | 6958 | 2.81 | 0.035 | 0.0001 | 0.5 | 0.0003 | 2.1 |
| 10 | A | 826 | 0.51 | 499 | 256 | 22 | 11 | 24 | 12 | 0 | 0 | 280 | 2.69 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 13 | A | 345 | 0.21 | 627 | 134 | 10 | 2 | 35 | 8 | 194 | 42 | 186 | 7.29 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 32 | A | 1551 | 0.96 | 1,275 | 1228 | 59 | 57 | 52 | 50 | 0 | 0 | 1335 | 2.64 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 33 | M | 2006 | 1.25 | 381 | 475 | 13 | 16 | 20 | 25 | 0 | 0 | 516 | 2.70 | 0.32 | 0.0005 | 0.3 | 0.0022 | 1.1 |
| 35 | A | 801 | 0.50 | 178 | 89 | 13 | 6 | 33 | 16 | 426 | 212 | 323 | 16.53 | 0.035 | 0.0004 | 0.1 | 0.0018 | 0.6 |
| 36 | A | 1627 | 1.01 | 994 | 1005 | 67 | 68 | 176 | 178 | 0 | 0 | 1250 | 3.69 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 37 | A | 219 | 0.14 | 446 | 61 | 39 | 5 | 142 | 19 | 360 | 49 | 134 | 11.36 | 0.035 | 0.0003 | 0.0 | 0.0012 | 0.2 |
| 38 | A | 659 | 0.41 | 1,945 | 796 | 137 | 56 | 366 | 150 | 2 | 1 | 1003 | 3.78 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 42 | A | 5338 | 3.32 | 1,457 | 4831 | 102 | 338 | 273 | 905 | 424 | 1406 | 7481 | 7.42 | 0.035 | 0.0002 | 1.5 | 0.0008 | 6.0 |
| 43 | A | 2598 | 1.61 | 120 | 194 | 6 | 10 | 5 | 8 | 25 | 40 | 252 | 5.96 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.2 |
| 46 | A | 806 | 0.50 | 84 | 42 | 4 | 2 | 1 | 1 | 11 | 6 | 50 | 4.69 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 47 | A | 1995 | 1.24 | 54 | 67 | 2 | 2 | 1 | 1 | 0 | 0 | 71 | 2.42 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 48 | A | 795 | 0.49 | 212 | 105 | 5 | 2 | 8 | 4 | 17 | 8 | 120 | 4.00 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 50 | A | 479 | 0.30 | 7,702 | 2292 | 281 | 84 | 459 | 137 | 0 | 0 | 2512 | 2.77 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.7 |
| 51 | A | 975 | 0.61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 52 | A | 1269 | 0.79 | 5,239 | 4130 | 145 | 114 | 358 | 282 | 0 | 0 | 4527 | 2.82 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.4 |
| 53 | A | 795 | 0.49 | 301 | 149 | 16 | 8 | 6 | 3 | 0 | 0 | 160 | 2.48 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 54 | A | 325 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 55 | A | 2042 | 1.27 | 44 | 56 | 3 | 4 | 1 | 1 | 0 | 0 | 61 | 2.55 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 56 | A | 1152 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 57 | A | 246 | 0.15 | 1,018 | 156 | 67 | 10 | 170 | 26 | 0 | 0 | 192 | 3.62 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 58 | M | 172 | 0.11 | 148 | 16 | 9 | 1 | 8 | 1 | 22 | 2 | 20 | 5.19 | 0.32 | 0.0010 | 0.0 | 0.0042 | 0.1 |
| 59 | M | 786 | 0.49 | 12 | 6 | 0 | 0 | 2 | 1 | 6 | 3 | 10 | 9.43 | 0.32 | 0.0019 | 0.0 | 0.0077 | 0.1 |
| 60 | M | 159 | 0.10 | 723 | 71 | 22 | 2 | 67 | 7 | 286 | 28 | 108 | 8.29 | 0.32 | 0.0017 | 0.2 | 0.0067 | 0.7 |
| 61 | M | 97 | 0.06 | 64 | 4 | 3 | 0 | 2 | 0 | 188 | 11 | 15 | 17.70 | 0.32 | 0.0036 | 0.1 | 0.0146 | 0.2 |
| 62 | M | 781 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 65 | A | 795 | 0.49 | 268 | 132 | 6 | 3 | 9 | 4 | 18 | 9 | 149 | 3.75 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 66 | A | 812 | 0.50 | 328 | 165 | 10 | 5 | 13 | 7 | 18 | 9 | 186 | 3.59 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 67 | M | 778 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 68 | A | 814 | 0.51 | 15 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 69 | A | 819 | 0.51 | 662 | 337 | 24 | 12 | 30 | 15 | 0 | 0 | 364 | 2.65 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 70 | A | 795 | 0.49 | 993 | 490 | 36 | 18 | 45 | 22 | 0 | 0 | 530 | 2.65 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 71 | M | 803 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 72 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 73 | A | 742 | 0.46 | 5,137 | 2368 | 141 | 65 | 356 | 164 | 0 | 0 | 2597 | 2.83 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.8 |
| 74 | A | 1573 | 0.98 | 480 | 469 | 9 | 9 | 6 | 6 | 2 | 2 | 486 | 2.39 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 75 | M | 805 | 0.50 | 157 | 79 | 5 | 3 | 10 | 5 | 4 | 2 | 88 | 3.26 | 0.32 | 0.0006 | 0.1 | 0.0026 | 0.2 |
| 76 | M | 1597 | 0.99 | 29 | 29 | 1 | 1 | 4 | 4 | 0 | 0 | 34 | 3.36 | 0.32 | 0.0007 | 0.0 | 0.0027 | 0.1 |
| 77 | A | 438 | 0.27 | 639 | 174 | 13 | 4 | 15 | 4 | 7 | 2 | 183 | 2.63 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 80 | A | 138 | 0.09 | 810 | 69 | 18 | 2 | 22 | 2 | 5 | 0 | 73 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 81 | M | 407 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 82 | M | 322 | 0.20 | 1,168 | 234 | 29 | 6 | 39 | 8 | 52 | 10 | 258 | 3.35 | 0.32 | 0.0007 | 0.2 | 0.0027 | 0.7 |
| 83 | A | 95 | 0.06 | 564 | 33 | 15 | 1 | 22 | 1 | 26 | 2 | 37 | 3.43 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 85 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 86 | M | 284 | 0.18 | 1,472 | 260 | 54 | 10 | 84 | 15 | 148 | 26 | 310 | 4.48 | 0.32 | 0.0009 | 0.3 | 0.0036 | 1.1 |
| 87 | M | 800 | 0.50 | 24 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 88 | M | 809 | 0.50 | 44 | 22 | 2 | 1 | 1 | 1 | 0 | 0 | 24 | 2.48 | 0.32 | 0.0005 | 0.0 | 0.0020 | 0.0 |
| 95 | A | 439 | 0.27 | 499 | 136 | 15 | 4 | 20 | 5 | 29 | 8 | 154 | 3.65 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 96 | A | 399 | 0.25 | 389 | 96 | 10 | 2 | 0 | 0 | 0 | 0 | 99 | 2.22 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 97 | A | 389 | 0.24 | 51 | 12 | 2 | 0 | 9 | 2 | 6 | 1 | 16 | 5.37 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 98 | A | 160 | 0.10 | 51 | 5 | 2 | 0 | 0 | 0 | 9 | 1 | 6 | 5.31 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 99 | A | 405 | 0.25 | 36 | 9 | 0 | 0 | 1 | 0 | 1 | 0 | 10 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 100 | M | 227 | 0.14 | 259 | 37 | 6 | 1 | 14 | 2 | 20 | 3 | 42 | 4.06 | 0.32 | 0.0008 | 0.0 | 0.0033 | 0.1 |
| 101 | M | 313 | 0.19 | 637 | 124 | 15 | 3 | 35 | 7 | 53 | 10 | 144 | 4.17 | 0.32 | 0.0008 | 0.1 | 0.0033 | 0.5 |
| 102 | M | 246 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 103 | M | 291 | 0.18 | 635 | 115 | 15 | 3 | 36 | 7 | 62 | 11 | 135 | 4.41 | 0.32 | 0.0009 | 0.1 | 0.0035 | 0.5 |
| 104 | M | 404 | 0.25 | 72 | 18 | 1 | 0 | 4 | 1 | 25 | 6 | 26 | 7.72 | 0.32 | 0.0015 | 0.0 | 0.0063 | 0.2 |
| 105 | M | 195 | 0.12 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 106 | M | 1803 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 107 | M | 388 | 0.24 | 78 | 19 | 1 | 0 | 4 | 1 | 25 | 6 | 26 | 7.41 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.2 |
| 108 | M | 997 | 0.62 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 109 | A | 787 | 0.49 | 20 | 10 | 1 | 0 | 3 | 1 | 0 | 0 | 12 | 3.48 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 110 | A | 756 | 0.47 | 66 | 31 | 1 | 0 | 4 | 2 | 18 | 8 | 42 | 6.87 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 111 | A | 800 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 112 | A | 817 | 0.51 | 87 | 44 | 4 | 2 | 14 | 7 | 46 | 23 | 77 | 9.55 | 0.035 | 0.0003 | 0.0 | 0.0010 | 0.1 |
| 113 | A | 791 | 0.49 | 14 | 7 | 2 | 1 | 6 | 3 | 14 | 7 | 18 | 12.14 | 0.035 | 0.0003 | 0.0 | 0.0013 | 0.0 |
| 114 | M | 791 | 0.49 | 26 | 13 | 3 | 1 | 9 | 4 | 28 | 14 | 32 | 12.56 | 0.32 | 0.0025 | 0.1 | 0.0103 | 0.3 |
| 115 | A | 851 | 0.53 | 75 | 40 | 1 | 1 | 4 | 2 | 21 | 11 | 53 | 6.94 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 116 | M | 819 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 117 | A | 757 | 0.47 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 118 | A | 765 | 0.48 | 88 | 42 | 2 | 1 | 5 | 2 | 23 | 11 | 56 | 6.71 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 119 | A | 782 | 0.49 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 120 | M | 814 | 0.51 | 33 | 17 | 3 | 2 | 5 | 3 | 24 | 12 | 33 | 10.83 | 0.32 | 0.0022 | 0.1 | 0.0089 | 0.3 |
| 121 | A | 825 | 0.51 | 112 | 57 | 3 | 2 | 6 | 3 | 24 | 12 | 74 | 6.10 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 122 | A | 782 | 0.49 | 10 | 5 | 2 | 1 | 2 | 1 | 15 | 7 | 14 | 13.96 | 0.035 | 0.0004 | 0.0 | 0.0015 | 0.0 |
| 123 | M | 791 | 0.49 | 14 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 2.77 | 0.32 | 0.0005 | 0.0 | 0.0022 | 0.0 |
| 124 | A | 800 | 0.50 | 149 | 74 | 4 | 2 | 8 | 4 | 24 | 12 | 92 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 125 | A | 817 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 126 | A | 774 | 0.48 | 151 | 73 | 3 | 1 | 7 | 3 | 18 | 9 | 86 | 4.69 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 127 | M | 825 | 0.51 | 62 | 32 | 3 | 2 | 7 | 4 | 100 | 51 | 88 | 14.86 | 0.32 | 0.0030 | 0.3 | 0.0122 | 1.1 |
| 128 | A | 774 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 129 | A | 823 | 0.51 | 164 | 84 | 3 | 2 | 1 | 1 | 16 | 8 | 94 | 4.08 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 130 | A | 800 | 0.50 | 55 | 27 | 2 | 1 | 1 | 0 | 0 | 0 | 29 | 2.42 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 131 | A | 775 | 0.48 | 16 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 133 | A | 804 | 0.50 | 65 | 32 | 3 | 1 | 0 | 0 | 0 | 0 | 34 | 2.28 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 134 | M | 760 | 0.47 | 32 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 16 | 2.24 | 0.32 | 0.0004 | 0.0 | 0.0018 | 0.0 |
| 135 | A | 816 | 0.51 | 244 | 124 | 6 | 3 | 9 | 5 | 18 | 9 | 140 | 3.89 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 136 | A | 786 | 0.49 | 58 | 28 | 1 | 0 | 0 | 0 | 0 | 0 | 29 | 2.19 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 137 | A | 790 | 0.49 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 138 | M | 267 | 0.17 | 22 | 4 | 1 | 0 | 3 | 0 | 3 | 0 | 5 | 5.43 | 0.32 | 0.0011 | 0.0 | 0.0044 | 0.0 |
| 139 | M | 504 | 0.31 | 60 | 19 | 2 | 1 | 4 | 1 | 3 | 1 | 22 | 3.71 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.1 |
| 140 | M | 527 | 0.33 | 126 | 41 | 2 | 1 | 3 | 1 | 3 | 1 | 44 | 2.87 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.1 |
| 141 | M | 1001 | 0.62 | 127 | 79 | 2 | 1 | 4 | 2 | 3 | 2 | 85 | 2.93 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.2 |
| 142 | M | 291 | 0.18 | 13 | 2 | 1 | 0 | 2 | 0 | 2 | 0 | 3 | 5.74 | 0.32 | 0.0011 | 0.0 | 0.0046 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 143 | A | 845 | 0.52 | 143 | 75 | 3 | 2 | 8 | 4 | 3 | 2 | 82 | 3.09 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 144 | A | 783 | 0.49 | 144 | 70 | 3 | 1 | 8 | 4 | 1 | 0 | 76 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 145 | A | 787 | 0.49 | 149 | 73 | 3 | 1 | 9 | 4 | 1 | 0 | 79 | 2.86 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 146 | A | 814 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 147 | A | 798 | 0.50 | 183 | 91 | 5 | 2 | 9 | 4 | 0 | 0 | 98 | 2.66 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 148 | A | 731 | 0.45 | 5 | 2 | 0 | 0 | 1 | 0 | 8 | 4 | 6 | 14.89 | 0.035 | 0.0004 | 0.0 | 0.0016 | 0.0 |
| 149 | A | 808 | 0.50 | 241 | 121 | 7 | 4 | 12 | 6 | 0 | 0 | 131 | 2.67 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 150 | A | 793 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 151 | M | 787 | 0.49 | 270 | 132 | 9 | 4 | 15 | 7 | 0 | 0 | 144 | 2.73 | 0.32 | 0.0005 | 0.1 | 0.0022 | 0.3 |
| 152 | M | 782 | 0.49 | 44 | 21 | 2 | 1 | 5 | 2 | 98 | 48 | 72 | 16.39 | 0.32 | 0.0033 | 0.2 | 0.0135 | 1.0 |
| 153 | M | 798 | 0.50 | 380 | 188 | 12 | 6 | 19 | 9 | 0 | 0 | 204 | 2.68 | 0.32 | 0.0005 | 0.1 | 0.0021 | 0.4 |
| 154 | A | 901 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 155 | A | 775 | 0.48 | 869 | 418 | 31 | 15 | 41 | 20 | 0 | 0 | 453 | 2.66 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 156 | A | 771 | 0.48 | 379 | 182 | 15 | 7 | 11 | 5 | 0 | 0 | 194 | 2.52 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 157 | A | 804 | 0.50 | 991 | 495 | 36 | 18 | 41 | 20 | 0 | 0 | 533 | 2.62 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 158 | A | 1039 | 0.65 | 138 | 89 | 5 | 3 | 19 | 12 | 15 | 10 | 114 | 5.05 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 159 | A | 170 | 0.11 | 137 | 14 | 3 | 0 | 0 | 0 | 12 | 1 | 16 | 3.87 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 160 | A | 717 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 161 | A | 784 | 0.49 | 1,051 | 512 | 40 | 19 | 127 | 62 | 0 | 0 | 593 | 3.25 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 162 | A | 1052 | 0.65 | 1,966 | 1285 | 70 | 46 | 224 | 146 | 0 | 0 | 1477 | 3.19 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 163 | A | 350 | 0.22 | 842 | 183 | 27 | 6 | 95 | 21 | 0 | 0 | 210 | 3.18 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 164 | A | 473 | 0.29 | 22 | 6 | 1 | 0 | 2 | 1 | 0 | 0 | 7 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 165 | M | 1541 | 0.96 | 4,973 | 4761 | 133 | 127 | 337 | 323 | 0 | 0 | 5211 | 2.81 | 0.32 | 0.0005 | 2.9 | 0.0022 | 11.7 |
| 168 | M | 758 | 0.47 | 633 | 298 | 19 | 9 | 72 | 34 | 0 | 0 | 341 | 3.18 | 0.32 | 0.0006 | 0.2 | 0.0025 | 0.9 |
| 169 | A | 931 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 170 | A | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 171 | A | 522 | 0.32 | 2,836 | 920 | 57 | 18 | 109 | 35 | 0 | 0 | 973 | 2.55 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 172 | A | 993 | 0.62 | 2,688 | 1658 | 53 | 33 | 104 | 64 | 0 | 0 | 1755 | 2.55 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 173 | A | 1615 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 174 | A | 330 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 177 | A | 1110 | 0.69 | 1,464 | 1009 | 106 | 73 | 313 | 216 | 360 | 248 | 1547 | 7.03 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.2 |
| 178 | A | 7132 | 4.43 | 300 | 1329 | 20 | 89 | 39 | 173 | 63 | 279 | 1870 | 6.34 | 0.035 | 0.0002 | 0.3 | 0.0007 | 1.3 |
| 179 | A | 2189 | 1.36 | 1,772 | 2410 | 126 | 171 | 353 | 480 | 418 | 568 | 3629 | 6.88 | 0.035 | 0.0002 | 0.7 | 0.0007 | 2.7 |
| 180 | A | 6725 | 4.18 | 78 | 326 | 0 | 0 | 0 | 0 | 0 | 0 | 326 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.1 |
| 181 | M | 625 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 182 | M | 349 | 0.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 183 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 184 | M | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 185 | M | 287 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 186 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 190 | A | 6368 | 3.96 | 2,454 | 9708 | 57 | 225 | 157 | 621 | 94 | 372 | 10926 | 3.47 | 0.035 | 0.0001 | 1.0 | 0.0004 | 4.0 |
| 191 | A | 4906 | 3.05 | 2,098 | 6394 | 48 | 146 | 143 | 436 | 79 | 241 | 7217 | 3.49 | 0.035 | 0.0001 | 0.7 | 0.0004 | 2.7 |
| 192 | A | 4358 | 2.71 | 356 | 964 | 9 | 24 | 16 | 43 | 18 | 49 | 1080 | 3.55 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 194 | A | 355 | 0.22 | 274 | 60 | 22 | 5 | 63 | 14 | 0 | 0 | 79 | 4.03 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 195 | A | 397 | 0.25 | 557 | 137 | 30 | 7 | 95 | 23 | 0 | 0 | 168 | 3.62 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 196 | A | 716 | 0.44 | 832 | 370 | 57 | 25 | 157 | 70 | 0 | 0 | 465 | 3.76 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 198 | A | 1009 | 0.63 | 49 | 31 | 2 | 1 | 6 | 4 | 0 | 0 | 36 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 199 | A | 378 | 0.23 | 137 | 32 | 2 | 0 | 8 | 2 | 0 | 0 | 35 | 2.70 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 200 | A | 1403 | 0.87 | 1,018 | 887 | 67 | 58 | 170 | 148 | 0 | 0 | 1094 | 3.62 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 205 | A | 1501 | 0.93 | 91 | 85 | 9 | 8 | 28 | 26 | 0 | 0 | 119 | 4.48 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 206 | A | 2658 | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 207 | A | 2611 | 1.62 | 91 | 148 | 9 | 15 | 28 | 45 | 0 | 0 | 208 | 4.48 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 215 | A | 2937 | 1.82 | 5 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 216 | A | 2000 | 1.24 | 200 | 248 | 4 | 5 | 10 | 12 | 13 | 16 | 282 | 3.82 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 217 | A | 663 | 0.41 | 381 | 157 | 9 | 4 | 15 | 6 | 21 | 9 | 175 | 3.58 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 218 | A | 1167 | 0.72 | 37 | 27 | 0 | 0 | 2 | 1 | 4 | 3 | 31 | 4.54 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 219 | A | 2672 | 1.66 | 14 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 221 | A | 2622 | 1.63 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 223 | A | 359 | 0.22 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 225 | M | 1243 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 226 | A | 1643 | 1.02 | 15 | 15 | 0 | 0 | 2 | 2 | 4 | 4 | 21 | 7.07 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 227 | M | 1154 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 229 | A | 1122 | 0.70 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 230 | A | 1007 | 0.63 | 40 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 231 | A | 1968 | 1.22 | 49 | 60 | 1 | 1 | 3 | 4 | 4 | 5 | 70 | 4.18 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 232 | A | 1719 | 1.07 | 519 | 554 | 13 | 14 | 33 | 35 | 66 | 70 | 674 | 4.91 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.4 |
| 233 | A | 976 | 0.61 | 39 | 24 | 1 | 1 | 2 | 1 | 4 | 2 | 28 | 4.46 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 236 | A | 794 | 0.49 | 13 | 6 | 0 | 0 | 2 | 1 | 1 | 0 | 8 | 4.65 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 237 | A | 1556 | 0.97 | 382 | 369 | 11 | 11 | 43 | 42 | 64 | 62 | 483 | 5.74 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.3 |
| 238 | A | 1120 | 0.70 | 159 | 111 | 4 | 3 | 15 | 10 | 15 | 10 | 134 | 4.59 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 239 | A | 1385 | 0.86 | 199 | 171 | 7 | 6 | 16 | 14 | 45 | 39 | 230 | 6.36 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.2 |
| 240 | A | 240 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 241 | A | 843 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 242 | M | 989 | 0.61 | 208 | 128 | 7 | 4 | 4 | 2 | 44 | 27 | 162 | 5.90 | 0.32 | 0.0012 | 0.2 | 0.0048 | 0.8 |
| 243 | M | 64 | 0.04 | 13 | 1 | 1 | 0 | 2 | 0 | 4 | 0 | 1 | 7.49 | 0.32 | 0.0015 | 0.0 | 0.0061 | 0.0 |
| 244 | M | 173 | 0.11 | 15 | 2 | 3 | 0 | 2 | 0 | 37 | 4 | 6 | 16.36 | 0.32 | 0.0033 | 0.0 | 0.0135 | 0.1 |
| 245 | M | 181 | 0.11 | 48 | 5 | 2 | 0 | 0 | 0 | 17 | 2 | 8 | 7.59 | 0.32 | 0.0015 | 0.0 | 0.0062 | 0.0 |
| 246 | M | 273 | 0.17 | 8 | 1 | 0 | 0 | 2 | 0 | 5 | 1 | 3 | 10.45 | 0.32 | 0.0021 | 0.0 | 0.0085 | 0.0 |
| 247 | M | 87 | 0.05 | 212 | 11 | 7 | 0 | 15 | 1 | 48 | 3 | 15 | 6.32 | 0.32 | 0.0013 | 0.0 | 0.0051 | 0.1 |
| 250 | A | 1366 | 0.85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 252 | A | 1588 | 0.99 | 546 | 539 | 14 | 14 | 40 | 39 | 67 | 66 | 658 | 4.90 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 254 | A | 424 | 0.26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 256 | A | 943 | 0.59 | 226 | 132 | 4 | 2 | 5 | 3 | 7 | 4 | 142 | 3.00 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 258 | A | 472 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 260 | A | 1783 | 1.11 | 769 | 852 | 18 | 20 | 46 | 51 | 73 | 81 | 1004 | 4.39 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 261 | A | 1181 | 0.73 | 69 | 51 | 3 | 2 | 2 | 1 | 0 | 0 | 54 | 2.53 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 262 | M | 860 | 0.53 | 106 | 57 | 3 | 2 | 3 | 2 | 2 | 1 | 61 | 2.85 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.1 |
| 263 | M | 141 | 0.09 | 795 | 70 | 20 | 2 | 36 | 3 | 88 | 8 | 82 | 4.55 | 0.32 | 0.0009 | 0.1 | 0.0037 | 0.3 |
| 264 | M | 224 | 0.14 | 14 | 2 | 1 | 0 | 5 | 1 | 16 | 2 | 5 | 12.95 | 0.32 | 0.0026 | 0.0 | 0.0106 | 0.1 |
| 265 | M | 98 | 0.06 | 449 | 27 | 12 | 1 | 34 | 2 | 65 | 4 | 34 | 5.24 | 0.32 | 0.0010 | 0.0 | 0.0042 | 0.1 |
| 266 | M | 171 | 0.11 | 1,002 | 106 | 25 | 3 | 40 | 4 | 56 | 6 | 119 | 3.60 | 0.32 | 0.0007 | 0.1 | 0.0029 | 0.3 |
| 267 | M | 156 | 0.10 | 149 | 14 | 4 | 0 | 12 | 1 | 11 | 1 | 17 | 4.19 | 0.32 | 0.0008 | 0.0 | 0.0034 | 0.1 |
| 268 | M | 159 | 0.10 | 867 | 86 | 0 | 0 | 63 | 6 | 113 | 11 | 103 | 5.00 | 0.32 | 0.0010 | 0.1 | 0.0040 | 0.4 |
| 269 | A | 2450 | 1.52 | 371 | 565 | 18 | 27 | 71 | 108 | 176 | 268 | 968 | 9.15 | 0.035 | 0.0002 | 0.2 | 0.0010 | 1.0 |
| 270 | A | 620 | 0.39 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 9.17 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.0 |
| 271 | A | 370 | 0.23 | 374 | 86 | 18 | 4 | 69 | 16 | 177 | 41 | 147 | 9.13 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.1 |
| 272 | A | 1246 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 273 | M | 625 | 0.39 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 274 | A | 1231 | 0.76 | 384 | 294 | 18 | 14 | 72 | 55 | 178 | 136 | 499 | 9.05 | 0.035 | 0.0002 | 0.1 | 0.0010 | 0.5 |
| 275 | M | 377 | 0.23 | 14 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 3.67 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.0 |
| 276 | A | 159 | 0.10 | 395 | 39 | 19 | 2 | 62 | 6 | 184 | 18 | 65 | 9.02 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.1 |
| 277 | M | 1074 | 0.67 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 278 | M | 239 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 279 | M | 157 | 0.10 | 176 | 17 | 8 | 1 | 30 | 3 | 80 | 8 | 29 | 8.95 | 0.32 | 0.0018 | 0.1 | 0.0073 | 0.2 |
| 280 | M | 163 | 0.10 | 418 | 42 | 21 | 2 | 82 | 8 | 202 | 20 | 73 | 9.22 | 0.32 | 0.0018 | 0.1 | 0.0075 | 0.6 |
| 281 | M | 280 | 0.17 | 2 | 0 | 1 | 0 | 0 | 0 | 10 | 2 | 2 | 18.65 | 0.32 | 0.0038 | 0.0 | 0.0154 | 0.0 |
| 282 | M | 167 | 0.10 | 350 | 36 | 15 | 2 | 58 | 6 | 149 | 15 | 59 | 8.70 | 0.32 | 0.0017 | 0.1 | 0.0071 | 0.4 |
| 283 | M | 405 | 0.25 | 26 | 7 | 1 | 0 | 2 | 1 | 33 | 8 | 16 | 13.74 | 0.32 | 0.0028 | 0.0 | 0.0113 | 0.2 |
| 284 | M | 365 | 0.23 | 1,170 | 265 | 32 | 7 | 44 | 10 | 88 | 20 | 302 | 3.92 | 0.32 | 0.0008 | 0.2 | 0.0031 | 1.0 |
| 285 | M | 230 | 0.14 | 346 | 49 | 12 | 2 | 21 | 3 | 46 | 7 | 61 | 4.99 | 0.32 | 0.0010 | 0.1 | 0.0040 | 0.2 |
| 286 | M | 209 | 0.13 | 756 | 98 | 25 | 3 | 54 | 7 | 7 | 1 | 109 | 3.03 | 0.32 | 0.0006 | 0.1 | 0.0024 | 0.3 |
| 287 | M | 292 | 0.18 | 736 | 134 | 26 | 5 | 51 | 9 | 85 | 15 | 163 | 4.78 | 0.32 | 0.0009 | 0.2 | 0.0038 | 0.6 |
| 288 | M | 152 | 0.09 | 195 | 18 | 7 | 1 | 17 | 2 | 6 | 1 | 21 | 3.53 | 0.32 | 0.0007 | 0.0 | 0.0028 | 0.1 |
| 289 | M | 285 | 0.18 | 808 | 143 | 27 | 5 | 54 | 10 | 57 | 10 | 167 | 4.05 | 0.32 | 0.0008 | 0.1 | 0.0033 | 0.5 |
| 290 | M | 328 | 0.20 | 554 | 113 | 21 | 4 | 37 | 8 | 129 | 26 | 151 | 6.39 | 0.32 | 0.0013 | 0.2 | 0.0052 | 0.8 |
| 294 | A | 824 | 0.51 | 56 | 29 | 2 | 1 | 0 | 0 | 0 | 0 | 30 | 2.25 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 301 | A | 774 | 0.48 | 102 | 49 | 5 | 2 | 4 | 2 | 0 | 0 | 53 | 2.63 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 302 | A | 796 | 0.49 | 117 | 58 | 5 | 2 | 2 | 1 | 0 | 0 | 61 | 2.43 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 303 | A | 1514 | 0.94 | 33 | 31 | 1 | 1 | 4 | 4 | 96 | 90 | 126 | 17.57 | 0.035 | 0.0005 | 0.1 | 0.0019 | 0.2 |
| 304 | A | 729 | 0.45 | 157 | 71 | 5 | 2 | 14 | 6 | 0 | 0 | 80 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 306 | A | 818 | 0.51 | 827 | 420 | 32 | 16 | 111 | 56 | 94 | 48 | 541 | 5.10 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 307 | M | 0 | 0.00 | 1,357 | 0 | 48 | 0 | 176 | 0 | 94 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 324 | A | 2925 | 1.82 | 8 | 15 | 0 | 0 | 1 | 2 | 0 | 0 | 16 | 3.20 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 325 | A | 2224 | 1.38 | 963 | 1330 | 22 | 30 | 35 | 48 | 88 | 122 | 1531 | 4.18 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.7 |
| 326 | A | 3506 | 2.18 | 313 | 682 | 5 | 11 | 17 | 37 | 16 | 35 | 764 | 3.61 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 327 | A | 227 | 0.14 | 655 | 92 | 16 | 2 | 24 | 3 | 72 | 10 | 108 | 4.49 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 340 | A | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 351 | A | 0 | 0.00 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 358 | A | 0 | 0.00 | 2,096 | 0 | 48 | 0 | 131 | 0 | 79 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 359 | M | 339 | 0.21 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 360 | M | 247 | 0.15 | 1,564 | 240 | 37 | 6 | 86 | 13 | 42 | 6 | 265 | 3.20 | 0.32 | 0.0006 | 0.2 | 0.0026 | 0.7 |
| 361 | M | 337 | 0.21 | 1,071 | 224 | 23 | 5 | 80 | 17 | 70 | 15 | 260 | 4.00 | 0.32 | 0.0008 | 0.2 | 0.0032 | 0.8 |
| 362 | M | 338 | 0.21 | 27 | 6 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 3.19 | 0.32 | 0.0006 | 0.0 | 0.0025 | 0.0 |
| 363 | M | 4495 | 2.79 | 1,134 | 3167 | 26 | 73 | 42 | 117 | 12 | 34 | 3390 | 2.75 | 0.32 | 0.0005 | 1.8 | 0.0022 | 7.4 |
| 364 | M | 286 | 0.18 | 881 | 157 | 21 | 4 | 54 | 10 | 66 | 12 | 182 | 4.07 | 0.32 | 0.0008 | 0.1 | 0.0033 | 0.6 |
| 365 | A | 1602 | 1.00 | 636 | 633 | 15 | 15 | 33 | 33 | 44 | 44 | 724 | 3.91 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 366 | A | 1742 | 1.08 | 1 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 11 | 21.14 | 0.035 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 367 | A | 1054 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 375 | M | 388 | 0.24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 376 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 377 | M | 339 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 378 | M | 212 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 379 | M | 331 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 380 | M | 283 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 381 | M | 469 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 386 | A | 810 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 387 | A | 2761 | 1.72 | 1,270 | 2178 | 45 | 77 | 161 | 276 | 78 | 134 | 2665 | 4.29 | 0.035 | 0.0001 | 0.3 | 0.0005 | 1.2 |
| 388 | A | 175 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 389 | A | 189 | 0.12 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 390 | A | 1189 | 0.74 | 205 | 151 | 10 | 7 | 31 | 23 | 11 | 8 | 190 | 4.33 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 392 | A | 436 | 0.27 | 171 | 46 | 16 | 4 | 71 | 19 | 26 | 7 | 77 | 6.67 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 393 | A | 934 | 0.58 | 41 | 24 | 9 | 5 | 61 | 35 | 42 | 24 | 89 | 11.97 | 0.035 | 0.0003 | 0.0 | 0.0013 | 0.1 |
| 394 | A | 1292 | 0.80 | 1,250 | 1003 | 44 | 35 | 160 | 128 | 75 | 60 | 1227 | 4.27 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.6 |
| 396 | A | 2366 | 1.47 | 1,274 | 1873 | 33 | 49 | 107 | 157 | 42 | 62 | 2140 | 3.53 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.8 |
| 397 | A | 1588 | 0.99 | 852 | 840 | 16 | 16 | 54 | 53 | 5 | 5 | 914 | 2.86 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 398 | A | 560 | 0.35 | 2,384 | 829 | 46 | 16 | 110 | 38 | 0 | 0 | 884 | 2.61 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 399 | A | 3389 | 2.11 | 20 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 400 | A | 1704 | 1.06 | 763 | 808 | 16 | 17 | 19 | 20 | 3 | 3 | 848 | 2.51 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 401 | M | 790 | 0.49 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 2 | 12.22 | 0.32 | 0.0025 | 0.0 | 0.0100 | 0.0 |
| 402 | M | 1199 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 404 | M | 768 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 405 | M | 1010 | 0.63 | 196 | 123 | 8 | 5 | 0 | 0 | 4 | 3 | 131 | 2.67 | 0.32 | 0.0005 | 0.1 | 0.0021 | 0.3 |
| 406 | A | 395 | 0.25 | 51 | 13 | 6 | 1 | 3 | 1 | 0 | 0 | 15 | 2.96 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 407 | A | 756 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 408 | A | 1072 | 0.67 | 8 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 4.48 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 409 | A | 1137 | 0.71 | 76 | 54 | 2 | 1 | 2 | 1 | 0 | 0 | 57 | 2.46 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 410 | A | 884 | 0.55 | 225 | 124 | 6 | 3 | 0 | 0 | 0 | 0 | 127 | 2.22 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 411 | A | 2332 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 412 | A | 141 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 413 | A | 678 | 0.42 | 11 | 5 | 1 | 0 | 0 | 0 | 2 | 1 | 6 | 5.40 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 414 | A | 895 | 0.56 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 415 | A | 855 | 0.53 | 1,254 | 666 | 31 | 16 | 64 | 34 | 29 | 15 | 732 | 3.10 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 416 | M | 284 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 417 | M | 303 | 0.19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 419 | M | 343 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 420 | M | 300 | 0.19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 421 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 424 | M | 828 | 0.51 | 174 | 89 | 7 | 4 | 14 | 7 | 119 | 61 | 162 | 10.64 | 0.32 | 0.0021 | 0.3 | 0.0087 | 1.4 |
| 425 | M | 203 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 426 | M | 276 | 0.17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 427 | A | 654 | 0.41 | 6 | 2 | 1 | 0 | 2 | 1 | 7 | 3 | 7 | 12.79 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 428 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 429 | M | 219 | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 430 | M | 114 | 0.07 | 378 | 27 | 8 | 1 | 21 | 1 | 34 | 2 | 31 | 4.28 | 0.32 | 0.0008 | 0.0 | 0.0034 | 0.1 |
| 431 | M | 524 | 0.33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 432 | M | 629 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 433 | A | 1802 | 1.12 | 295 | 330 | 4 | 4 | 5 | 6 | 0 | 0 | 340 | 2.33 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.1 |
| 434 | A | 1269 | 0.79 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 435 | A | 1537 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 436 | M | 178 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 441 | A | 1192 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 442 | A | 2365 | 1.47 | 112 | 165 | 1 | 1 | 1 | 1 | 0 | 0 | 167 | 2.25 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 443 | A | 1588 | 0.99 | 81 | 80 | 1 | 1 | 2 | 2 | 0 | 0 | 83 | 2.40 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 444 | A | 905 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 452 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 453 | A | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 454 | M | 661 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 455 | A | 366 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 458 | M | 237 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 464 | A | 702 | 0.44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 477 | M | 750 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 478 | M | 253 | 0.16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 479 | M | 461 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 480 | A | 500 | 0.31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 481 | M | 377 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 482 | A | 1353 | 0.84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 483 | M | 589 | 0.37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 484 | M | 684 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 485 | M | 319 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 488 | A | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 494 | A | 1039 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 498 | M | 792 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 499 | M | 660 | 0.41 | 423 | 173 | 16 | 7 | 17 | 7 | 104 | 43 | 230 | 6.44 | 0.32 | 0.0013 | 0.3 | 0.0052 | 1.2 |
| 500 | M | 395 | 0.25 | 488 | 120 | 18 | 4 | 18 | 4 | 116 | 28 | 157 | 6.33 | 0.32 | 0.0013 | 0.2 | 0.0051 | 0.8 |
| 502 | A | 855 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 503 | A | 820 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 504 | M | 360 | 0.22 | 102 | 23 | 3 | 1 | 7 | 2 | 0 | 0 | 25 | 2.83 | 0.32 | 0.0006 | 0.0 | 0.0022 | 0.1 |
| | | | | **115992** | **87177** | **3884** | **2970** | **9240** | **7348** | **8031** | **5865** | **103359** | | **Totals:** | | **20.3** | | **82.9** |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 450 | 60 | 170 | 1,720 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 370 | 60 | 180 | 1,750 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 390 | 70 | 180 | 1,760 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 420 | 70 | 190 | 1,790 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 450 | 70 | 200 | 1,820 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 470 | 70 | 210 | 1,840 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 480 | 70 | 210 | 1,840 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 500 | 70 | 220 | 1,870 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 540 | 80 | 240 | 1,980 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 560 | 80 | 240 | 1,990 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 580 | 80 | 250 | 2,010 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 860 | 100 | 320 | 2,260 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 920 | 110 | 350 | 2,350 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 940 | 110 | 360 | 2,410 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 940 | 110 | 360 | 2,410 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,010 | 110 | 370 | 2,420 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 1,200 | 120 | 390 | 2,480 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 1,380 | 130 | 410 | 2,500 |
| FRWY19 | SR60 | Market St to Main St | 1,490 | 140 | 440 | 2,550 |
| FRWY20 | SR60 | Main St to SR-91 | 1,810 | 170 | 510 | 2,760 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 3,620 | 280 | 920 | 4,520 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 3,740 | 290 | 960 | 4,610 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 3,700 | 300 | 980 | 4,640 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 4,080 | 320 | 1,050 | 4,800 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 4,730 | 340 | 1,100 | 4,890 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 4,990 | 330 | 1,070 | 4,760 |
| FRWY27 | SR60 | I-215 to Day St | 6,450 | 390 | 1,230 | 5,330 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 6,290 | 400 | 1,260 | 5,330 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 6,460 | 420 | 1,300 | 5,370 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 7,400 | 450 | 1,340 | 5,410 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 8,550 | 500 | 1,430 | 5,530 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 9,180 | 530 | 1,460 | 5,530 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 11,470 | 540 | 1,680 | 6,190 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,400 | 550 | 1,680 | 6,430 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 2,400 | 90 | 300 | 700 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 2,140 | 100 | 260 | 610 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 2,140 | 100 | 260 | 610 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 68 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 68 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 68 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 68 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 68 |
| FRWY75 | SR91 | I-15 to McKinley St | 760 | 60 | 230 | 1,250 |
| FRWY76 | SR91 | McKinley St to Pierce St | 890 | 70 | 250 | 1,280 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 890 | 70 | 250 | 1,280 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 950 | 70 | 260 | 1,300 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,050 | 70 | 270 | 1,310 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,160 | 80 | 280 | 1,330 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,240 | 80 | 290 | 1,350 |
| FRWY82 | SR91 | Adam St to Madison St | 1,300 | 80 | 300 | 1,370 |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,320 | 80 | 310 | 1,380 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,480 | 80 | 320 | 1,390 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,490 | 80 | 320 | 1,390 |
| FRWY86 | SR91 | 14th St to University Ave | 1,360 | 70 | 280 | 1,260 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,370 | 70 | 280 | 1,280 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 1,080 | 60 | 170 | 530 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 860 | 50 | 160 | 510 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 860 | 50 | 160 | 510 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 630 | 40 | 140 | 500 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 510 | 40 | 130 | 490 |
| FRWY106 | I-10 | 22nd St to S 8th St | 460 | 40 | 120 | 490 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 370 | 30 | 110 | 470 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 310 | 30 | 100 | 460 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 300 | 30 | 90 | 450 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 260 | 30 | 90 | 450 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 260 | 30 | 90 | 450 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 250 | 30 | 90 | 450 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 210 | 20 | 70 | 400 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 210 | 20 | 70 | 400 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 1,440 | 20 | 90 | 180 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,740 | 30 | 100 | 190 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,910 | 30 | 110 | 210 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,970 | 30 | 120 | 210 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 2,010 | 30 | 120 | 220 |
| FRWY167 | I-215 | Redlands Ave to D St | 1,170 | 20 | 80 | 250 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 1,310 | 30 | 110 | 330 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 810 | 20 | 70 | 340 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 750 | 20 | 70 | 360 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 770 | 20 | 70 | 370 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 1,060 | 30 | 80 | 380 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 970 | 30 | 80 | 380 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 1,440 | 40 | 110 | 420 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 1,440 | 40 | 110 | 420 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 590 | 40 | 130 | 490 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 580 | 40 | 120 | 480 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 570 | 40 | 120 | 480 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 500 | 30 | 100 | 440 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 460 | 30 | 90 | 430 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 450 | 30 | 90 | 410 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 490 | 30 | 100 | 410 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 480 | 30 | 80 | 380 |
| FRWY142 | SR-215 | Mill St to 2rd St | 470 | 30 | 80 | 370 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 450 | 30 | 80 | 330 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 390 | 20 | 60 | 290 |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Freeway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2400 | 450 | 60 | 170 | 1,720 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 12 | 4 | 137 | 1682 | 1836 | 1795 |
| FRWY2 | 2360 | 370 | 60 | 180 | 1,750 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 12 | 4 | 145 | 1711 | 1873 | 2506 |
| FRWY3 | 2400 | 390 | 70 | 180 | 1,760 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 14 | 5 | 145 | 1721 | 1886 | 2035 |
| FRWY4 | 2470 | 420 | 70 | 190 | 1,790 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 14 | 5 | 153 | 1750 | 1923 | 2207 |
| FRWY5 | 2540 | 450 | 70 | 200 | 1,820 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 14 | 5 | 161 | 1780 | 1961 | 1732 |
| FRWY6 | 2590 | 470 | 70 | 210 | 1,840 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 14 | 5 | 169 | 1799 | 1989 | 2578 |
| FRWY7 | 2600 | 480 | 70 | 210 | 1,840 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 14 | 5 | 169 | 1799 | 1989 | 2038 |
| FRWY8 | 2660 | 500 | 70 | 220 | 1,870 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 14 | 5 | 177 | 1829 | 2026 | 1934 |
| FRWY9 | 2840 | 540 | 80 | 240 | 1,980 | 1792 | 1.113 | 1 | 0 | 0 | 0 | 16 | 6 | 193 | 1936 | 2153 | 2396 |
| FRWY10 | 2870 | 560 | 80 | 240 | 1,990 | 1665 | 1.034 | 1 | 0 | 0 | 0 | 16 | 6 | 193 | 1946 | 2162 | 2237 |
| FRWY11 | 2920 | 580 | 80 | 250 | 2,010 | 849 | 0.527 | 1 | 0 | 0 | 0 | 16 | 6 | 201 | 1966 | 2190 | 1155 |
| FRWY12 | 3540 | 860 | 100 | 320 | 2,260 | 2299 | 1.428 | 1 | 0 | 0 | 0 | 20 | 7 | 258 | 2210 | 2497 | 3566 |
| FRWY13 | 3730 | 920 | 110 | 350 | 2,350 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 22 | 8 | 282 | 2298 | 2612 | 2740 |
| FRWY14 | 3820 | 940 | 110 | 360 | 2,410 | 2444 | 1.518 | 2 | 0 | 0 | 0 | 22 | 8 | 290 | 2357 | 2679 | 4067 |
| FRWY15 | 3820 | 940 | 110 | 360 | 2,410 | 1608 | 0.999 | 2 | 0 | 0 | 0 | 22 | 8 | 290 | 2357 | 2679 | 2676 |
| FRWY16 | 3910 | 1,010 | 110 | 370 | 2,420 | 2722 | 1.691 | 2 | 0 | 0 | 0 | 22 | 8 | 298 | 2367 | 2697 | 4560 |
| FRWY17 | 4190 | 1,200 | 120 | 390 | 2,480 | 3198 | 1.987 | 2 | 0 | 0 | 0 | 24 | 8 | 314 | 2425 | 2775 | 5512 |
| FRWY18 | 4420 | 1,380 | 130 | 410 | 2,500 | 2509 | 1.559 | 2 | 0 | 0 | 0 | 26 | 9 | 330 | 2445 | 2813 | 4385 |
| FRWY19 | 4620 | 1,490 | 140 | 440 | 2,550 | 910 | 0.565 | 3 | 0 | 0 | 0 | 28 | 10 | 354 | 2494 | 2889 | 1633 |
| FRWY20 | 5250 | 1,810 | 170 | 510 | 2,760 | 774 | 0.481 | 3 | 0 | 0 | 0 | 35 | 12 | 411 | 2699 | 3160 | 1519 |
| FRWY21 | 9340 | 3,620 | 280 | 920 | 4,520 | 1798 | 1.117 | 6 | 0 | 0 | 1 | 57 | 19 | 741 | 4420 | 5245 | 5858 |
| FRWY22 | 9600 | 3,740 | 290 | 960 | 4,610 | 1035 | 0.643 | 6 | 0 | 0 | 1 | 59 | 20 | 773 | 4508 | 5368 | 3452 |
| FRWY23 | 9620 | 3,700 | 300 | 980 | 4,640 | 1042 | 0.647 | 6 | 0 | 0 | 1 | 61 | 21 | 789 | 4538 | 5416 | 3506 |
| FRWY24 | 10250 | 4,080 | 320 | 1,050 | 4,800 | 2260 | 1.404 | 7 | 0 | 0 | 1 | 65 | 22 | 846 | 4694 | 5635 | 7912 |
| FRWY25 | 11060 | 4,730 | 340 | 1,100 | 4,890 | 1305 | 0.811 | 8 | 0 | 0 | 1 | 69 | 24 | 886 | 4782 | 5770 | 4678 |
| FRWY26 | 11150 | 4,990 | 330 | 1,070 | 4,760 | 977 | 0.607 | 9 | 0 | 0 | 1 | 67 | 23 | 862 | 4655 | 5617 | 3409 |
| FRWY27 | 13400 | 6,450 | 390 | 1,230 | 5,330 | 1186 | 0.737 | 11 | 1 | 1 | 1 | 79 | 27 | 991 | 5212 | 6323 | 4658 |
| FRWY28 | 13280 | 6,290 | 400 | 1,260 | 5,330 | 1642 | 1.020 | 11 | 1 | 1 | 1 | 81 | 28 | 1015 | 5212 | 6349 | 6476 |
| FRWY29 | 13550 | 6,460 | 420 | 1,300 | 5,370 | 1636 | 1.016 | 11 | 1 | 1 | 1 | 85 | 29 | 1047 | 5251 | 6426 | 6531 |
| FRWY30 | 14600 | 7,400 | 450 | 1,340 | 5,410 | 1555 | 0.966 | 13 | 1 | 1 | 1 | 92 | 31 | 1079 | 5291 | 6508 | 6286 |
| FRWY31 | 16010 | 8,550 | 500 | 1,430 | 5,530 | 3384 | 2.102 | 15 | 1 | 1 | 1 | 102 | 35 | 1152 | 5408 | 6714 | 14113 |
| FRWY32 | 16700 | 9,180 | 530 | 1,460 | 5,530 | 1112 | 0.691 | 16 | 1 | 1 | 1 | 108 | 37 | 1176 | 5408 | 6747 | 4661 |
| FRWY33 | 19880 | 11,470 | 540 | 1,680 | 6,190 | 1935 | 1.202 | 20 | 1 | 1 | 2 | 110 | 37 | 1353 | 6053 | 7577 | 9108 |
| FRWY34 | 21060 | 12,400 | 550 | 1,680 | 6,430 | 1675 | 1.041 | 22 | 1 | 1 | 2 | 112 | 38 | 1353 | 6288 | 7817 | 8133 |
| FRWY35 | 3490 | 2,400 | 90 | 300 | 700 | 1143 | 0.710 | 4 | 0 | 0 | 0 | 18 | 6 | 242 | 685 | 956 | 679 |
| FRWY36 | 3110 | 2,140 | 100 | 260 | 610 | 9120 | 5.665 | 4 | 0 | 0 | 0 | 20 | 7 | 209 | 597 | 838 | 4745 |
| FRWY37 | 3110 | 2,140 | 100 | 260 | 610 | 3802 | 2.362 | 4 | 0 | 0 | 0 | 20 | 7 | 209 | 597 | 838 | 1978 |
| FRWY294 | 68 | 0 | 0 | 0 | 68 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 121 |
| FRWY295 | 68 | 0 | 0 | 0 | 68 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 43 |
| FRWY296 | 68 | 0 | 0 | 0 | 68 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 75 |
| FRWY297 | 68 | 0 | 0 | 0 | 68 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 62 |
| FRWY299 | 68 | 0 | 0 | 0 | 68 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 68 |
| FRWY75 | 2300 | 760 | 60 | 230 | 1,250 | 2861 | 1.777 | 1 | 0 | 0 | 0 | 12 | 4 | 185 | 1222 | 1426 | 2534 |
| FRWY76 | 2490 | 890 | 70 | 250 | 1,280 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 14 | 5 | 201 | 1252 | 1474 | 2289 |
| FRWY77 | 2490 | 890 | 70 | 250 | 1,280 | 450 | 0.280 | 2 | 0 | 0 | 0 | 14 | 5 | 201 | 1252 | 1474 | 412 |
| FRWY78 | 2580 | 950 | 70 | 260 | 1,300 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 14 | 5 | 209 | 1271 | 1502 | 1291 |
| FRWY79 | 2700 | 1,050 | 70 | 270 | 1,310 | 1713 | 1.064 | 2 | 0 | 0 | 0 | 14 | 5 | 217 | 1281 | 1520 | 1617 |
| FRWY80 | 2850 | 1,160 | 80 | 280 | 1,330 | 1703 | 1.058 | 2 | 0 | 0 | 0 | 16 | 6 | 226 | 1301 | 1550 | 1640 |
| FRWY81 | 2960 | 1,240 | 80 | 290 | 1,350 | 2512 | 1.560 | 2 | 0 | 0 | 0 | 16 | 6 | 234 | 1320 | 1578 | 2463 |
| FRWY82 | 3050 | 1,300 | 80 | 300 | 1,370 | 1674 | 1.040 | 2 | 0 | 0 | 0 | 16 | 6 | 242 | 1340 | 1606 | 1670 |
| FRWY83 | 3090 | 1,320 | 80 | 310 | 1,380 | 1819 | 1.130 | 2 | 0 | 0 | 0 | 16 | 6 | 250 | 1350 | 1624 | 1835 |
| FRWY84 | 3270 | 1,480 | 80 | 320 | 1,390 | 1182 | 0.734 | 3 | 0 | 0 | 0 | 16 | 6 | 258 | 1359 | 1642 | 1206 |
| FRWY85 | 3280 | 1,490 | 80 | 320 | 1,390 | 2360 | 1.466 | 3 | 0 | 0 | 0 | 16 | 6 | 258 | 1359 | 1642 | 2407 |
| FRWY86 | 2970 | 1,360 | 70 | 280 | 1,260 | 783 | 0.486 | 2 | 0 | 0 | 0 | 14 | 5 | 226 | 1232 | 1480 | 720 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY87 | 3000 | 1,370 | 70 | 280 | 1,280 | 1370 | 0.851 | 2 | 0 | 0 | 0 | 14 | 5 | 226 | 1252 | 1499 | 1276 |
| FRWY101 | 1840 | 1,080 | 60 | 170 | 530 | 1703 | 1.058 | 2 | 0 | 0 | 0 | 12 | 4 | 137 | 518 | 674 | 713 |
| FRWY102 | 1580 | 860 | 50 | 160 | 510 | 925 | 0.575 | 1 | 0 | 0 | 0 | 10 | 3 | 129 | 499 | 643 | 369 |
| FRWY103 | 1580 | 860 | 50 | 160 | 510 | 1770 | 1.100 | 1 | 0 | 0 | 0 | 10 | 3 | 129 | 499 | 643 | 707 |
| FRWY104 | 1310 | 630 | 40 | 140 | 500 | 3182 | 1.977 | 1 | 0 | 0 | 0 | 8 | 3 | 113 | 489 | 614 | 1214 |
| FRWY105 | 1170 | 510 | 40 | 130 | 490 | 1010 | 0.627 | 1 | 0 | 0 | 0 | 8 | 3 | 105 | 479 | 596 | 374 |
| FRWY106 | 1110 | 460 | 40 | 120 | 490 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 8 | 3 | 97 | 479 | 588 | 476 |
| FRWY107 | 980 | 370 | 30 | 110 | 470 | 1655 | 1.028 | 1 | 0 | 0 | 0 | 6 | 2 | 89 | 460 | 557 | 573 |
| FRWY108 | 900 | 310 | 30 | 100 | 460 | 4341 | 2.697 | 1 | 0 | 0 | 0 | 6 | 2 | 81 | 450 | 539 | 1454 |
| FRWY109 | 870 | 300 | 30 | 90 | 450 | 1728 | 1.073 | 1 | 0 | 0 | 0 | 6 | 2 | 72 | 440 | 521 | 560 |
| FRWY110 | 830 | 260 | 30 | 90 | 450 | 2788 | 1.732 | 0 | 0 | 0 | 0 | 6 | 2 | 72 | 440 | 521 | 903 |
| FRWY111 | 830 | 260 | 30 | 90 | 450 | 7717 | 4.794 | 0 | 0 | 0 | 0 | 6 | 2 | 72 | 440 | 521 | 2499 |
| FRWY112 | 820 | 250 | 30 | 90 | 450 | 1384 | 0.860 | 0 | 0 | 0 | 0 | 6 | 2 | 72 | 440 | 521 | 448 |
| FRWY113 | 700 | 210 | 20 | 70 | 400 | 3380 | 2.100 | 0 | 0 | 0 | 0 | 4 | 1 | 56 | 391 | 453 | 952 |
| FRWY114 | 700 | 210 | 20 | 70 | 400 | 3719 | 2.310 | 0 | 0 | 0 | 0 | 4 | 1 | 56 | 391 | 453 | 1048 |
| FRWY129 | 1730 | 1,440 | 20 | 90 | 180 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 72 | 176 | 257 | 714 |
| FRWY130 | 2060 | 1,740 | 30 | 100 | 190 | 3830 | 2.379 | 3 | 0 | 0 | 0 | 6 | 2 | 81 | 186 | 278 | 662 |
| FRWY131 | 2260 | 1,910 | 30 | 110 | 210 | 2967 | 1.843 | 3 | 0 | 0 | 0 | 6 | 2 | 89 | 205 | 306 | 564 |
| FRWY132 | 2330 | 1,970 | 30 | 120 | 210 | 1163 | 0.722 | 3 | 0 | 0 | 0 | 6 | 2 | 97 | 205 | 314 | 227 |
| FRWY133 | 2380 | 2,010 | 30 | 120 | 220 | 4541 | 2.821 | 3 | 0 | 0 | 0 | 6 | 2 | 97 | 215 | 324 | 914 |
| FRWY167 | 1520 | 1,170 | 20 | 80 | 250 | 1471 | 0.914 | 2 | 0 | 0 | 0 | 4 | 1 | 64 | 244 | 317 | 289 |
| FRWY168 | 1780 | 1,310 | 30 | 110 | 330 | 916 | 0.569 | 2 | 0 | 0 | 0 | 6 | 2 | 89 | 323 | 422 | 240 |
| FRWY169 | 1240 | 810 | 20 | 70 | 340 | 4924 | 3.059 | 1 | 0 | 0 | 0 | 4 | 1 | 56 | 332 | 396 | 1211 |
| FRWY171 | 1200 | 750 | 20 | 70 | 360 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 4 | 1 | 56 | 352 | 415 | 554 |
| FRWY172 | 1230 | 770 | 20 | 70 | 370 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 4 | 1 | 56 | 362 | 425 | 793 |
| FRWY173 | 1550 | 1,060 | 30 | 80 | 380 | 2501 | 1.554 | 2 | 0 | 0 | 0 | 6 | 2 | 64 | 372 | 446 | 694 |
| FRWY174 | 1460 | 970 | 30 | 80 | 380 | 1135 | 0.705 | 2 | 0 | 0 | 0 | 6 | 2 | 64 | 372 | 446 | 315 |
| FRWY175 | 2010 | 1,440 | 40 | 110 | 420 | 1547 | 0.961 | 2 | 0 | 0 | 0 | 8 | 3 | 89 | 411 | 513 | 493 |
| FRWY176 | 2010 | 1,440 | 40 | 110 | 420 | 1359 | 0.844 | 2 | 0 | 0 | 0 | 8 | 3 | 89 | 411 | 513 | 433 |
| FRWY134 | 1250 | 590 | 40 | 130 | 490 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 8 | 3 | 105 | 479 | 596 | 513 |
| FRWY135 | 1220 | 580 | 40 | 120 | 480 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 8 | 3 | 97 | 469 | 578 | 615 |
| FRWY136 | 1210 | 570 | 40 | 120 | 480 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 8 | 3 | 97 | 469 | 578 | 373 |
| FRWY137 | 1070 | 500 | 30 | 100 | 440 | 1516 | 0.942 | 1 | 0 | 0 | 0 | 6 | 2 | 81 | 430 | 520 | 490 |
| FRWY138 | 1010 | 460 | 30 | 90 | 430 | 2485 | 1.544 | 1 | 0 | 0 | 0 | 6 | 2 | 72 | 421 | 502 | 775 |
| FRWY139 | 980 | 450 | 30 | 90 | 410 | 1950 | 1.211 | 1 | 0 | 0 | 0 | 6 | 2 | 72 | 401 | 483 | 585 |
| FRWY140 | 1030 | 490 | 30 | 100 | 410 | 1581 | 0.982 | 1 | 0 | 0 | 0 | 6 | 2 | 81 | 401 | 491 | 482 |
| FRWY141 | 970 | 480 | 30 | 80 | 380 | 1447 | 0.899 | 1 | 0 | 0 | 0 | 6 | 2 | 64 | 372 | 445 | 400 |
| FRWY142 | 950 | 470 | 30 | 80 | 370 | 938 | 0.583 | 1 | 0 | 0 | 0 | 6 | 2 | 64 | 362 | 435 | 254 |
| FRWY143 | 890 | 450 | 30 | 80 | 330 | 2032 | 1.262 | 1 | 0 | 0 | 0 | 6 | 2 | 64 | 323 | 396 | 500 |
| FRWY144 | 760 | 390 | 20 | 60 | 290 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 4 | 1 | 48 | 284 | 338 | 655 |
| | | | | | | | | | | | | | | | | | **197219** |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2 | 1 | 0 | 0 | 0 | 12 | 4 | 134 | 1645 |
| FRWY2 | 2 | 1 | 0 | 0 | 0 | 16 | 6 | 194 | 2289 |
| FRWY3 | 2 | 1 | 0 | 0 | 0 | 15 | 5 | 156 | 1857 |
| FRWY4 | 2 | 1 | 0 | 0 | 0 | 16 | 6 | 176 | 2008 |
| FRWY5 | 2 | 1 | 0 | 0 | 0 | 13 | 4 | 142 | 1572 |
| FRWY6 | 2 | 1 | 0 | 0 | 0 | 18 | 6 | 219 | 2333 |
| FRWY7 | 2 | 1 | 0 | 0 | 0 | 15 | 5 | 173 | 1844 |
| FRWY8 | 2 | 1 | 0 | 0 | 0 | 14 | 5 | 169 | 1746 |
| FRWY9 | 2 | 1 | 0 | 0 | 0 | 18 | 6 | 215 | 2156 |
| FRWY10 | 2 | 1 | 0 | 0 | 0 | 17 | 6 | 200 | 2013 |
| FRWY11 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 106 | 1037 |
| FRWY12 | 4 | 2 | 0 | 0 | 0 | 29 | 10 | 368 | 3156 |
| FRWY13 | 4 | 2 | 0 | 0 | 0 | 23 | 8 | 296 | 2411 |
| FRWY14 | 4 | 2 | 0 | 0 | 0 | 34 | 12 | 440 | 3578 |
| FRWY15 | 4 | 2 | 0 | 0 | 0 | 22 | 8 | 290 | 2354 |
| FRWY16 | 4 | 3 | 0 | 0 | 0 | 38 | 13 | 504 | 4002 |
| FRWY17 | 4 | 4 | 0 | 0 | 0 | 48 | 16 | 624 | 4818 |
| FRWY18 | 4 | 4 | 0 | 0 | 0 | 41 | 14 | 515 | 3811 |
| FRWY19 | 4 | 1 | 0 | 0 | 0 | 16 | 5 | 200 | 1410 |
| FRWY20 | 4 | 2 | 0 | 0 | 0 | 17 | 6 | 198 | 1298 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY21 | 2 | 7 | 0 | 0 | 1 | 64 | 22 | 828 | 4937 |
| FRWY22 | 2 | 4 | 0 | 0 | 0 | 38 | 13 | 497 | 2899 |
| FRWY23 | 2 | 4 | 0 | 0 | 0 | 39 | 13 | 511 | 2937 |
| FRWY24 | 2 | 10 | 0 | 0 | 1 | 91 | 31 | 1187 | 6590 |
| FRWY25 | 2 | 7 | 0 | 0 | 1 | 56 | 19 | 718 | 3877 |
| FRWY26 | 2 | 5 | 0 | 0 | 0 | 41 | 14 | 523 | 2825 |
| FRWY27 | 4 | 8 | 0 | 0 | 1 | 58 | 20 | 730 | 3840 |
| FRWY28 | 4 | 11 | 1 | 1 | 1 | 83 | 28 | 1035 | 5317 |
| FRWY29 | 4 | 11 | 1 | 1 | 1 | 87 | 30 | 1064 | 5337 |
| FRWY30 | 4 | 12 | 1 | 1 | 1 | 88 | 30 | 1043 | 5111 |
| FRWY31 | 4 | 31 | 2 | 1 | 3 | 214 | 73 | 2421 | 11368 |
| FRWY32 | 4 | 11 | 1 | 1 | 1 | 74 | 25 | 812 | 3736 |
| FRWY33 | 4 | 24 | 1 | 1 | 2 | 132 | 45 | 1627 | 7276 |
| FRWY34 | 4 | 22 | 1 | 1 | 2 | 116 | 40 | 1408 | 6543 |
| FRWY35 | 4 | 3 | 0 | 0 | 0 | 13 | 4 | 172 | 486 |
| FRWY36 | 4 | 21 | 1 | 1 | 2 | 115 | 39 | 1186 | 3380 |
| FRWY37 | 4 | 9 | 0 | 0 | 1 | 48 | 16 | 495 | 1409 |
| FRWY294 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 |
| FRWY295 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| FRWY296 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| FRWY297 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| FRWY299 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
| FRWY75 | 9 | 2 | 0 | 0 | 0 | 22 | 7 | 329 | 2173 |
| FRWY76 | 9 | 2 | 0 | 0 | 0 | 22 | 8 | 313 | 1944 |
| FRWY77 | 9 | 0 | 0 | 0 | 0 | 4 | 1 | 56 | 350 |
| FRWY78 | 9 | 1 | 0 | 0 | 0 | 12 | 4 | 180 | 1093 |
| FRWY79 | 9 | 2 | 0 | 0 | 0 | 15 | 5 | 231 | 1363 |
| FRWY80 | 9 | 2 | 0 | 0 | 0 | 17 | 6 | 239 | 1376 |
| FRWY81 | 9 | 3 | 0 | 0 | 0 | 25 | 9 | 364 | 2060 |
| FRWY82 | 9 | 2 | 0 | 0 | 0 | 17 | 6 | 251 | 1393 |
| FRWY83 | 9 | 3 | 0 | 0 | 0 | 18 | 6 | 282 | 1525 |
| FRWY84 | 9 | 2 | 0 | 0 | 0 | 12 | 4 | 189 | 998 |
| FRWY85 | 9 | 4 | 0 | 0 | 0 | 24 | 8 | 378 | 1993 |
| FRWY86 | 9 | 1 | 0 | 0 | 0 | 7 | 2 | 110 | 599 |
| FRWY87 | 9 | 2 | 0 | 0 | 0 | 12 | 4 | 192 | 1065 |
| FRWY101 | 4 | 2 | 0 | 0 | 0 | 13 | 4 | 145 | 548 |
| FRWY102 | 4 | 1 | 0 | 0 | 0 | 6 | 2 | 74 | 287 |
| FRWY103 | 4 | 2 | 0 | 0 | 0 | 11 | 4 | 142 | 548 |
| FRWY104 | 4 | 2 | 0 | 0 | 0 | 16 | 5 | 223 | 967 |
| FRWY105 | 4 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 301 |
| FRWY106 | 4 | 1 | 0 | 0 | 0 | 7 | 2 | 78 | 388 |
| FRWY107 | 4 | 1 | 0 | 0 | 0 | 6 | 2 | 91 | 473 |
| FRWY108 | 4 | 1 | 0 | 0 | 0 | 16 | 6 | 217 | 1213 |
| FRWY109 | 4 | 1 | 0 | 0 | 0 | 7 | 2 | 78 | 472 |
| FRWY110 | 4 | 1 | 0 | 0 | 0 | 11 | 4 | 126 | 762 |
| FRWY111 | 4 | 2 | 0 | 0 | 0 | 29 | 10 | 348 | 2110 |
| FRWY112 | 4 | 0 | 0 | 0 | 0 | 5 | 2 | 62 | 378 |
| FRWY113 | 4 | 1 | 0 | 0 | 0 | 9 | 3 | 118 | 821 |
| FRWY114 | 4 | 1 | 0 | 0 | 0 | 9 | 3 | 130 | 904 |
| FRWY129 | 4 | 7 | 0 | 0 | 1 | 11 | 4 | 202 | 489 |
| FRWY130 | 4 | 7 | 0 | 0 | 1 | 15 | 5 | 192 | 442 |
| FRWY131 | 4 | 6 | 0 | 0 | 1 | 11 | 4 | 163 | 379 |
| FRWY132 | 4 | 2 | 0 | 0 | 0 | 4 | 1 | 70 | 148 |
| FRWY133 | 4 | 10 | 0 | 0 | 1 | 17 | 6 | 273 | 607 |
| FRWY167 | 4 | 2 | 0 | 0 | 0 | 4 | 1 | 59 | 223 |
| FRWY168 | 4 | 1 | 0 | 0 | 0 | 3 | 1 | 50 | 184 |
| FRWY169 | 4 | 4 | 0 | 0 | 0 | 12 | 4 | 172 | 1017 |
| FRWY171 | 4 | 2 | 0 | 0 | 0 | 5 | 2 | 75 | 469 |
| FRWY172 | 4 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 674 |
| FRWY173 | 4 | 3 | 0 | 0 | 0 | 9 | 3 | 100 | 577 |
| FRWY174 | 4 | 1 | 0 | 0 | 0 | 4 | 1 | 45 | 262 |
| FRWY175 | 4 | 2 | 0 | 0 | 0 | 8 | 3 | 85 | 395 |
| FRWY176 | 4 | 2 | 0 | 0 | 0 | 7 | 2 | 75 | 347 |
| FRWY134 | 2 | 1 | 0 | 0 | 0 | 7 | 2 | 90 | 412 |
| FRWY135 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 103 | 499 |
| FRWY136 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 62 | 303 |
| FRWY137 | 2 | 1 | 0 | 0 | 0 | 6 | 2 | 76 | 405 |
| FRWY138 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 112 | 649 |
| FRWY139 | 2 | 1 | 0 | 0 | 0 | 7 | 3 | 88 | 486 |
| FRWY140 | 9 | 1 | 0 | 0 | 0 | 6 | 2 | 79 | 394 |
| FRWY141 | 9 | 1 | 0 | 0 | 0 | 5 | 2 | 58 | 334 |
| FRWY142 | 9 | 0 | 0 | 0 | 0 | 4 | 1 | 38 | 211 |
| FRWY143 | 9 | 1 | 0 | 0 | 0 | 8 | 3 | 81 | 407 |
| FRWY144 | 9 | 1 | 0 | 0 | 0 | 8 | 3 | 94 | 549 |
| **Total** | | **339** | **16** | **16** | **31** | **2342** | **796** | **29135** | **164543** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2_DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 52 | 3 | 2 | 5 | 535 | 182 | 6680 | 47319 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 254 | 12 | 12 | 23 | 1569 | 533 | 18991 | 97026 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 32 | 2 | 2 | 3 | 239 | 81 | 3464 | 20198 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **339** | **16** | **16** | **31** | **2342** | **796** | **29135** | **164543** | **197219** |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Freeway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2400 | 450 | 60 | 170 | 1,720 | 1574 | 0.978 | 258 | 30 | 90 | 71 | 39 | 4 | 33 | 38 | 564 | 551 |
| FRWY2 | 2360 | 370 | 60 | 180 | 1,750 | 2153 | 1.337 | 212 | 25 | 74 | 59 | 39 | 4 | 35 | 39 | 487 | 651 |
| FRWY3 | 2400 | 390 | 70 | 180 | 1,760 | 1737 | 1.079 | 223 | 26 | 78 | 62 | 46 | 5 | 35 | 39 | 514 | 555 |
| FRWY4 | 2470 | 420 | 70 | 190 | 1,790 | 1847 | 1.147 | 241 | 28 | 84 | 66 | 46 | 5 | 37 | 40 | 547 | 627 |
| FRWY5 | 2540 | 450 | 70 | 200 | 1,820 | 1422 | 0.883 | 258 | 30 | 90 | 71 | 46 | 5 | 39 | 40 | 579 | 512 |
| FRWY6 | 2590 | 470 | 70 | 210 | 1,840 | 2087 | 1.296 | 269 | 32 | 94 | 74 | 46 | 5 | 41 | 41 | 601 | 780 |
| FRWY7 | 2600 | 480 | 70 | 210 | 1,840 | 1650 | 1.025 | 275 | 32 | 96 | 76 | 46 | 5 | 41 | 41 | 611 | 627 |
| FRWY8 | 2660 | 500 | 70 | 220 | 1,870 | 1537 | 0.955 | 286 | 34 | 100 | 79 | 46 | 5 | 43 | 41 | 634 | 605 |
| FRWY9 | 2840 | 540 | 80 | 240 | 1,980 | 1792 | 1.113 | 309 | 36 | 108 | 85 | 53 | 6 | 47 | 44 | 687 | 765 |
| FRWY10 | 2870 | 560 | 80 | 240 | 1,990 | 1665 | 1.034 | 321 | 38 | 112 | 89 | 53 | 6 | 47 | 44 | 708 | 732 |
| FRWY11 | 2920 | 580 | 80 | 250 | 2,010 | 849 | 0.527 | 332 | 39 | 116 | 92 | 53 | 6 | 49 | 44 | 730 | 385 |
| FRWY12 | 3540 | 860 | 100 | 320 | 2,260 | 2299 | 1.428 | 493 | 58 | 172 | 136 | 66 | 7 | 62 | 50 | 1043 | 1490 |
| FRWY13 | 3730 | 920 | 110 | 350 | 2,350 | 1689 | 1.049 | 527 | 62 | 184 | 146 | 72 | 8 | 68 | 52 | 1118 | 1173 |
| FRWY14 | 3820 | 940 | 110 | 360 | 2,410 | 2444 | 1.518 | 539 | 63 | 188 | 149 | 72 | 8 | 70 | 53 | 1141 | 1733 |
| FRWY15 | 3820 | 940 | 110 | 360 | 2,410 | 1608 | 0.999 | 539 | 63 | 188 | 149 | 72 | 8 | 70 | 53 | 1141 | 1140 |
| FRWY16 | 3910 | 1,010 | 110 | 370 | 2,420 | 2722 | 1.691 | 579 | 68 | 202 | 160 | 72 | 8 | 72 | 53 | 1213 | 2052 |
| FRWY17 | 4190 | 1,200 | 120 | 390 | 2,480 | 3198 | 1.987 | 688 | 81 | 239 | 190 | 79 | 8 | 76 | 55 | 1415 | 2812 |
| FRWY18 | 4420 | 1,380 | 130 | 410 | 2,500 | 2509 | 1.559 | 791 | 93 | 275 | 218 | 86 | 9 | 80 | 55 | 1607 | 2504 |
| FRWY19 | 4620 | 1,490 | 140 | 440 | 2,550 | 910 | 0.565 | 854 | 100 | 297 | 236 | 92 | 10 | 86 | 56 | 1731 | 978 |
| FRWY20 | 5250 | 1,810 | 170 | 510 | 2,760 | 774 | 0.481 | 1037 | 122 | 361 | 286 | 112 | 12 | 99 | 61 | 2090 | 1005 |
| FRWY21 | 9340 | 3,620 | 280 | 920 | 4,520 | 1798 | 1.117 | 2074 | 243 | 722 | 573 | 184 | 19 | 179 | 100 | 4095 | 4574 |
| FRWY22 | 9600 | 3,740 | 290 | 960 | 4,610 | 1035 | 0.643 | 2143 | 251 | 746 | 592 | 191 | 20 | 187 | 102 | 4232 | 2721 |
| FRWY23 | 9620 | 3,700 | 300 | 980 | 4,640 | 1042 | 0.647 | 2120 | 249 | 738 | 586 | 197 | 21 | 191 | 102 | 4204 | 2721 |
| FRWY24 | 10250 | 4,080 | 320 | 1,050 | 4,800 | 2260 | 1.404 | 2338 | 274 | 814 | 646 | 211 | 22 | 204 | 106 | 4615 | 6479 |
| FRWY25 | 11060 | 4,730 | 340 | 1,100 | 4,890 | 1305 | 0.811 | 2710 | 318 | 944 | 749 | 224 | 24 | 214 | 108 | 5290 | 4288 |
| FRWY26 | 11150 | 4,990 | 330 | 1,070 | 4,760 | 977 | 0.607 | 2859 | 335 | 996 | 790 | 217 | 23 | 208 | 105 | 5533 | 3358 |
| FRWY27 | 13400 | 6,450 | 390 | 1,230 | 5,330 | 1186 | 0.737 | 3696 | 433 | 1287 | 1021 | 257 | 27 | 239 | 118 | 7077 | 5214 |
| FRWY28 | 13280 | 6,290 | 400 | 1,260 | 5,330 | 1642 | 1.020 | 3604 | 423 | 1255 | 995 | 263 | 28 | 245 | 118 | 6931 | 7070 |
| FRWY29 | 13550 | 6,460 | 420 | 1,300 | 5,370 | 1636 | 1.016 | 3701 | 434 | 1289 | 1022 | 276 | 29 | 253 | 119 | 7124 | 7240 |
| FRWY30 | 14600 | 7,400 | 450 | 1,340 | 5,410 | 1555 | 0.966 | 4240 | 497 | 1477 | 1171 | 296 | 31 | 261 | 119 | 8092 | 7817 |
| FRWY31 | 16010 | 8,550 | 500 | 1,430 | 5,530 | 3384 | 2.102 | 4899 | 574 | 1706 | 1353 | 329 | 35 | 278 | 122 | 9296 | 19543 |
| FRWY32 | 16700 | 9,180 | 530 | 1,460 | 5,530 | 1112 | 0.691 | 5260 | 617 | 1832 | 1453 | 349 | 37 | 284 | 122 | 9953 | 6875 |
| FRWY33 | 19880 | 11,470 | 540 | 1,680 | 6,190 | 1935 | 1.202 | 6572 | 771 | 2289 | 1815 | 355 | 37 | 327 | 137 | 12303 | 14788 |
| FRWY34 | 21060 | 12,400 | 550 | 1,680 | 6,430 | 1675 | 1.041 | 7105 | 833 | 2474 | 1962 | 362 | 38 | 327 | 142 | 13243 | 13780 |
| FRWY35 | 3490 | 2,400 | 90 | 300 | 700 | 1143 | 0.710 | 1375 | 161 | 479 | 380 | 59 | 6 | 58 | 15 | 2534 | 1800 |
| FRWY36 | 3110 | 2,140 | 100 | 260 | 610 | 9120 | 5.665 | 1226 | 144 | 427 | 339 | 66 | 7 | 51 | 13 | 2272 | 12874 |
| FRWY37 | 3110 | 2,140 | 100 | 260 | 610 | 3802 | 2.362 | 1226 | 144 | 427 | 339 | 66 | 7 | 51 | 13 | 2272 | 5367 |
| FRWY294 | 68 | 0 | 0 | 0 | 68 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| FRWY295 | 68 | 0 | 0 | 0 | 68 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| FRWY296 | 68 | 0 | 0 | 0 | 68 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY297 | 68 | 0 | 0 | 0 | 68 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| FRWY299 | 68 | 0 | 0 | 0 | 68 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY75 | 2300 | 760 | 60 | 230 | 1,250 | 2861 | 1.777 | 435 | 51 | 152 | 120 | 39 | 4 | 45 | 28 | 874 | 1554 |
| FRWY76 | 2490 | 890 | 70 | 250 | 1,280 | 2500 | 1.553 | 510 | 60 | 178 | 141 | 46 | 5 | 49 | 28 | 1016 | 1578 |
| FRWY77 | 2490 | 890 | 70 | 250 | 1,280 | 450 | 0.280 | 510 | 60 | 178 | 141 | 46 | 5 | 49 | 28 | 1016 | 284 |
| FRWY78 | 2580 | 950 | 70 | 260 | 1,300 | 1384 | 0.860 | 544 | 64 | 190 | 150 | 46 | 5 | 51 | 29 | 1078 | 927 |
| FRWY79 | 2700 | 1,050 | 70 | 270 | 1,310 | 1713 | 1.064 | 602 | 71 | 210 | 166 | 46 | 5 | 53 | 29 | 1180 | 1256 |
| FRWY80 | 2850 | 1,160 | 80 | 280 | 1,330 | 1703 | 1.058 | 665 | 78 | 231 | 184 | 53 | 6 | 54 | 29 | 1300 | 1375 |
| FRWY81 | 2960 | 1,240 | 80 | 290 | 1,350 | 2512 | 1.560 | 710 | 83 | 247 | 196 | 53 | 6 | 56 | 30 | 1382 | 2156 |
| FRWY82 | 3050 | 1,300 | 80 | 300 | 1,370 | 1674 | 1.040 | 745 | 87 | 259 | 206 | 53 | 6 | 58 | 30 | 1444 | 1502 |
| FRWY83 | 3090 | 1,320 | 80 | 310 | 1,380 | 1819 | 1.130 | 756 | 89 | 263 | 209 | 53 | 6 | 60 | 30 | 1466 | 1657 |
| FRWY84 | 3270 | 1,480 | 80 | 320 | 1,390 | 1182 | 0.734 | 848 | 99 | 295 | 234 | 53 | 6 | 62 | 31 | 1628 | 1195 |
| FRWY85 | 3280 | 1,490 | 80 | 320 | 1,390 | 2360 | 1.466 | 854 | 100 | 297 | 236 | 53 | 6 | 62 | 31 | 1638 | 2402 |
| FRWY86 | 2970 | 1,360 | 70 | 280 | 1,260 | 783 | 0.486 | 779 | 91 | 271 | 215 | 46 | 5 | 54 | 28 | 1490 | 725 |
| FRWY87 | 3000 | 1,370 | 70 | 280 | 1,280 | 1370 | 0.851 | 785 | 92 | 273 | 217 | 46 | 5 | 54 | 28 | 1501 | 1277 |
| FRWY101 | 1840 | 1,080 | 60 | 170 | 530 | 1703 | 1.058 | 619 | 73 | 216 | 171 | 39 | 4 | 33 | 12 | 1166 | 1234 |
| FRWY102 | 1580 | 860 | 50 | 160 | 510 | 925 | 0.575 | 493 | 58 | 172 | 136 | 33 | 3 | 31 | 11 | 937 | 538 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 1580 | 860 | 50 | 160 | 510 | 1770 | 1.100 | 493 | 58 | 172 | 136 | 33 | 3 | 31 | 11 | 937 | 1030 |
| FRWY104 | 1310 | 630 | 40 | 140 | 500 | 3182 | 1.977 | 361 | 42 | 126 | 100 | 26 | 3 | 27 | 11 | 696 | 1376 |
| FRWY105 | 1170 | 510 | 40 | 130 | 490 | 1010 | 0.627 | 292 | 34 | 102 | 81 | 26 | 3 | 25 | 11 | 574 | 360 |
| FRWY106 | 1110 | 460 | 40 | 120 | 490 | 1305 | 0.811 | 264 | 31 | 92 | 73 | 26 | 3 | 23 | 11 | 522 | 423 |
| FRWY107 | 980 | 370 | 30 | 110 | 470 | 1655 | 1.028 | 212 | 25 | 74 | 59 | 20 | 2 | 21 | 10 | 423 | 435 |
| FRWY108 | 900 | 310 | 30 | 100 | 460 | 4341 | 2.697 | 178 | 21 | 62 | 49 | 20 | 2 | 19 | 10 | 361 | 973 |
| FRWY109 | 870 | 300 | 30 | 90 | 450 | 1728 | 1.073 | 172 | 20 | 60 | 47 | 20 | 2 | 18 | 10 | 349 | 374 |
| FRWY110 | 830 | 260 | 30 | 90 | 450 | 2788 | 1.732 | 149 | 17 | 52 | 41 | 20 | 2 | 18 | 10 | 309 | 535 |
| FRWY111 | 830 | 260 | 30 | 90 | 450 | 7717 | 4.794 | 149 | 17 | 52 | 41 | 20 | 2 | 18 | 10 | 309 | 1480 |
| FRWY112 | 820 | 250 | 30 | 90 | 450 | 1384 | 0.860 | 143 | 17 | 50 | 40 | 20 | 2 | 18 | 10 | 299 | 257 |
| FRWY113 | 700 | 210 | 20 | 70 | 400 | 3380 | 2.100 | 120 | 14 | 42 | 33 | 13 | 1 | 14 | 9 | 247 | 518 |
| FRWY114 | 700 | 210 | 20 | 70 | 400 | 3719 | 2.310 | 120 | 14 | 42 | 33 | 13 | 1 | 14 | 9 | 247 | 570 |
| FRWY129 | 1730 | 1,440 | 20 | 90 | 180 | 4476 | 2.781 | 825 | 97 | 287 | 228 | 13 | 1 | 18 | 4 | 1473 | 4096 |
| FRWY130 | 2060 | 1,740 | 30 | 100 | 190 | 3830 | 2.379 | 997 | 117 | 347 | 275 | 20 | 2 | 19 | 4 | 1782 | 4240 |
| FRWY131 | 2260 | 1,910 | 30 | 110 | 210 | 2967 | 1.843 | 1094 | 128 | 381 | 302 | 20 | 2 | 21 | 5 | 1954 | 3601 |
| FRWY132 | 2330 | 1,970 | 30 | 120 | 210 | 1163 | 0.722 | 1129 | 132 | 393 | 312 | 20 | 2 | 23 | 5 | 2016 | 1456 |
| FRWY133 | 2380 | 2,010 | 30 | 120 | 220 | 4541 | 2.821 | 1152 | 135 | 401 | 318 | 20 | 2 | 23 | 5 | 2056 | 5800 |
| FRWY167 | 1520 | 1,170 | 20 | 80 | 250 | 1471 | 0.914 | 670 | 79 | 233 | 185 | 13 | 1 | 16 | 6 | 1203 | 1100 |
| FRWY168 | 1780 | 1,310 | 30 | 110 | 330 | 916 | 0.569 | 751 | 88 | 261 | 207 | 20 | 2 | 21 | 7 | 1358 | 773 |
| FRWY169 | 1240 | 810 | 20 | 70 | 340 | 4924 | 3.059 | 464 | 54 | 162 | 128 | 13 | 1 | 14 | 8 | 844 | 2582 |
| FRWY171 | 1200 | 750 | 20 | 70 | 360 | 2145 | 1.333 | 430 | 50 | 150 | 119 | 13 | 1 | 14 | 8 | 785 | 1045 |
| FRWY172 | 1230 | 770 | 20 | 70 | 370 | 3000 | 1.864 | 441 | 52 | 154 | 122 | 13 | 1 | 14 | 8 | 805 | 1500 |
| FRWY173 | 1550 | 1,060 | 30 | 80 | 380 | 2501 | 1.554 | 607 | 71 | 212 | 168 | 20 | 2 | 16 | 8 | 1104 | 1715 |
| FRWY174 | 1460 | 970 | 30 | 80 | 380 | 1135 | 0.705 | 556 | 65 | 194 | 154 | 20 | 2 | 16 | 8 | 1014 | 715 |
| FRWY175 | 2010 | 1,440 | 40 | 110 | 420 | 1547 | 0.961 | 825 | 97 | 287 | 228 | 26 | 3 | 21 | 9 | 1497 | 1438 |
| FRWY176 | 2010 | 1,440 | 40 | 110 | 420 | 1359 | 0.844 | 825 | 97 | 287 | 228 | 26 | 3 | 21 | 9 | 1497 | 1264 |
| FRWY134 | 1250 | 590 | 40 | 130 | 490 | 1385 | 0.860 | 338 | 40 | 118 | 93 | 26 | 3 | 25 | 11 | 654 | 563 |
| FRWY135 | 1220 | 580 | 40 | 120 | 480 | 1711 | 1.063 | 332 | 39 | 116 | 92 | 26 | 3 | 23 | 11 | 642 | 682 |
| FRWY136 | 1210 | 570 | 40 | 120 | 480 | 1038 | 0.645 | 327 | 38 | 114 | 90 | 26 | 3 | 23 | 11 | 632 | 407 |
| FRWY137 | 1070 | 500 | 30 | 100 | 440 | 1516 | 0.942 | 286 | 34 | 100 | 79 | 20 | 2 | 19 | 10 | 550 | 518 |
| FRWY138 | 1010 | 460 | 30 | 90 | 430 | 2485 | 1.544 | 264 | 31 | 92 | 73 | 20 | 2 | 18 | 9 | 508 | 784 |
| FRWY139 | 980 | 450 | 30 | 90 | 410 | 1950 | 1.211 | 258 | 30 | 90 | 71 | 20 | 2 | 18 | 9 | 497 | 603 |
| FRWY140 | 1030 | 490 | 30 | 100 | 410 | 1581 | 0.982 | 281 | 33 | 98 | 78 | 20 | 2 | 19 | 9 | 539 | 530 |
| FRWY141 | 970 | 480 | 30 | 80 | 380 | 1447 | 0.899 | 275 | 32 | 96 | 76 | 20 | 2 | 16 | 8 | 525 | 472 |
| FRWY142 | 950 | 470 | 30 | 80 | 370 | 938 | 0.583 | 269 | 32 | 94 | 74 | 20 | 2 | 16 | 8 | 515 | 300 |
| FRWY143 | 890 | 450 | 30 | 80 | 330 | 2032 | 1.262 | 258 | 30 | 90 | 71 | 20 | 2 | 16 | 7 | 494 | 623 |
| FRWY144 | 760 | 390 | 20 | 60 | 290 | 3119 | 1.938 | 223 | 26 | 78 | 62 | 13 | 1 | 12 | 6 | 422 | 817 |
| | | | | | | | | | | | | | | | | | 213806 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2 | 252 | 30 | 88 | 70 | 39 | 4 | 32 | 37 |
| FRWY2 | 2 | 284 | 33 | 99 | 78 | 53 | 6 | 47 | 52 |
| FRWY3 | 2 | 241 | 28 | 84 | 67 | 50 | 5 | 38 | 42 |
| FRWY4 | 2 | 276 | 32 | 96 | 76 | 53 | 6 | 42 | 45 |
| FRWY5 | 2 | 228 | 27 | 79 | 63 | 41 | 4 | 34 | 35 |
| FRWY6 | 2 | 349 | 41 | 122 | 96 | 60 | 6 | 53 | 53 |
| FRWY7 | 2 | 282 | 33 | 98 | 78 | 47 | 5 | 42 | 42 |
| FRWY8 | 2 | 274 | 32 | 95 | 76 | 44 | 5 | 41 | 39 |
| FRWY9 | 2 | 344 | 40 | 120 | 95 | 59 | 6 | 52 | 49 |
| FRWY10 | 2 | 332 | 39 | 116 | 92 | 54 | 6 | 48 | 45 |
| FRWY11 | 2 | 175 | 21 | 61 | 48 | 28 | 3 | 26 | 23 |
| FRWY12 | 4 | 704 | 83 | 245 | 194 | 94 | 10 | 89 | 71 |
| FRWY13 | 4 | 553 | 65 | 193 | 153 | 76 | 8 | 71 | 54 |
| FRWY14 | 4 | 818 | 96 | 285 | 226 | 110 | 12 | 106 | 81 |
| FRWY15 | 4 | 538 | 63 | 187 | 149 | 72 | 8 | 70 | 53 |
| FRWY16 | 4 | 979 | 115 | 341 | 270 | 122 | 13 | 122 | 90 |
| FRWY17 | 4 | 1366 | 160 | 476 | 377 | 157 | 17 | 151 | 109 |
| FRWY18 | 4 | 1232 | 145 | 429 | 340 | 133 | 14 | 124 | 86 |
| FRWY19 | 4 | 483 | 57 | 168 | 133 | 52 | 5 | 48 | 32 |
| FRWY20 | 4 | 499 | 58 | 174 | 138 | 54 | 6 | 48 | 29 |
| FRWY21 | 2 | 2317 | 272 | 807 | 640 | 206 | 22 | 200 | 111 |
| FRWY22 | 2 | 1378 | 162 | 480 | 381 | 123 | 13 | 120 | 65 |
| FRWY23 | 2 | 1372 | 161 | 478 | 379 | 128 | 13 | 123 | 66 |
| FRWY24 | 2 | 3282 | 385 | 1143 | 906 | 296 | 31 | 287 | 149 |
| FRWY25 | 2 | 2197 | 258 | 765 | 607 | 181 | 19 | 174 | 88 |
| FRWY26 | 2 | 1735 | 203 | 604 | 479 | 132 | 14 | 126 | 64 |
| FRWY27 | 4 | 2723 | 319 | 948 | 752 | 189 | 20 | 176 | 87 |
| FRWY28 | 4 | 3676 | 431 | 1280 | 1015 | 269 | 28 | 250 | 120 |
| FRWY29 | 4 | 3762 | 441 | 1310 | 1039 | 281 | 30 | 257 | 120 |
| FRWY30 | 4 | 4096 | 480 | 1426 | 1131 | 286 | 30 | 252 | 115 |
| FRWY31 | 4 | 10298 | 1208 | 3587 | 2844 | 692 | 73 | 585 | 257 |
| FRWY32 | 4 | 3633 | 426 | 1265 | 1004 | 241 | 25 | 196 | 84 |
| FRWY33 | 4 | 7900 | 926 | 2751 | 2182 | 427 | 45 | 393 | 164 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY34 | 4 | 7393 | 867 | 2575 | 2042 | 377 | 40 | 340 | 148 |
| FRWY35 | 4 | 976 | 114 | 340 | 270 | 42 | 4 | 41 | 11 |
| FRWY36 | 4 | 6946 | 815 | 2419 | 1919 | 373 | 39 | 287 | 76 |
| FRWY37 | 4 | 2896 | 340 | 1009 | 800 | 155 | 16 | 119 | 32 |
| FRWY294 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| FRWY295 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FRWY296 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY297 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FRWY299 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY75 | 9 | 774 | 91 | 270 | 214 | 70 | 7 | 80 | 49 |
| FRWY76 | 9 | 792 | 93 | 276 | 219 | 72 | 8 | 76 | 44 |
| FRWY77 | 9 | 143 | 17 | 50 | 39 | 13 | 1 | 14 | 8 |
| FRWY78 | 9 | 468 | 55 | 163 | 129 | 40 | 4 | 43 | 25 |
| FRWY79 | 9 | 640 | 75 | 223 | 177 | 49 | 5 | 56 | 31 |
| FRWY80 | 9 | 703 | 82 | 245 | 194 | 56 | 6 | 58 | 31 |
| FRWY81 | 9 | 1109 | 130 | 386 | 306 | 82 | 9 | 88 | 47 |
| FRWY82 | 9 | 775 | 91 | 270 | 214 | 55 | 6 | 61 | 31 |
| FRWY83 | 9 | 855 | 100 | 298 | 236 | 59 | 6 | 68 | 34 |
| FRWY84 | 9 | 623 | 73 | 217 | 172 | 39 | 4 | 46 | 23 |
| FRWY85 | 9 | 1252 | 147 | 436 | 346 | 77 | 8 | 91 | 45 |
| FRWY86 | 9 | 379 | 44 | 132 | 105 | 22 | 2 | 26 | 14 |
| FRWY87 | 9 | 668 | 78 | 233 | 185 | 39 | 4 | 46 | 24 |
| FRWY101 | 4 | 655 | 77 | 228 | 181 | 42 | 4 | 35 | 12 |
| FRWY102 | 4 | 283 | 33 | 99 | 78 | 19 | 2 | 18 | 6 |
| FRWY103 | 4 | 542 | 64 | 189 | 150 | 36 | 4 | 34 | 12 |
| FRWY104 | 4 | 714 | 84 | 249 | 197 | 52 | 5 | 54 | 22 |
| FRWY105 | 4 | 183 | 21 | 64 | 51 | 17 | 2 | 16 | 7 |
| FRWY106 | 4 | 214 | 25 | 74 | 59 | 21 | 2 | 19 | 9 |
| FRWY107 | 4 | 218 | 26 | 76 | 60 | 20 | 2 | 22 | 11 |
| FRWY108 | 4 | 479 | 56 | 167 | 132 | 53 | 6 | 52 | 27 |
| FRWY109 | 4 | 185 | 22 | 64 | 51 | 21 | 2 | 19 | 11 |
| FRWY110 | 4 | 258 | 30 | 90 | 71 | 34 | 4 | 30 | 17 |
| FRWY111 | 4 | 714 | 84 | 249 | 197 | 95 | 10 | 84 | 48 |
| FRWY112 | 4 | 123 | 14 | 43 | 34 | 17 | 2 | 15 | 9 |
| FRWY113 | 4 | 253 | 30 | 88 | 70 | 28 | 3 | 29 | 19 |
| FRWY114 | 4 | 278 | 33 | 97 | 77 | 30 | 3 | 31 | 20 |
| FRWY129 | 4 | 2294 | 269 | 799 | 634 | 37 | 4 | 49 | 11 |
| FRWY130 | 4 | 2372 | 278 | 826 | 655 | 47 | 5 | 46 | 10 |
| FRWY131 | 4 | 2017 | 237 | 703 | 557 | 36 | 4 | 39 | 9 |
| FRWY132 | 4 | 815 | 96 | 284 | 225 | 14 | 2 | 17 | 3 |
| FRWY133 | 4 | 3249 | 381 | 1131 | 897 | 56 | 6 | 66 | 14 |
| FRWY167 | 4 | 613 | 72 | 213 | 169 | 12 | 1 | 14 | 5 |
| FRWY168 | 4 | 427 | 50 | 149 | 118 | 11 | 1 | 12 | 4 |
| FRWY169 | 4 | 1420 | 166 | 494 | 392 | 40 | 4 | 42 | 23 |
| FRWY171 | 4 | 573 | 67 | 199 | 158 | 18 | 2 | 18 | 11 |
| FRWY172 | 4 | 822 | 96 | 286 | 227 | 25 | 3 | 25 | 15 |
| FRWY173 | 4 | 944 | 111 | 329 | 261 | 31 | 3 | 24 | 13 |
| FRWY174 | 4 | 392 | 46 | 136 | 108 | 14 | 1 | 11 | 6 |
| FRWY175 | 4 | 793 | 93 | 276 | 219 | 25 | 3 | 21 | 9 |
| FRWY176 | 4 | 697 | 82 | 243 | 192 | 22 | 2 | 18 | 8 |
| FRWY134 | 2 | 291 | 34 | 101 | 80 | 23 | 2 | 22 | 9 |
| FRWY135 | 2 | 353 | 41 | 123 | 98 | 28 | 3 | 25 | 11 |
| FRWY136 | 2 | 211 | 25 | 73 | 58 | 17 | 2 | 15 | 7 |
| FRWY137 | 2 | 270 | 32 | 94 | 75 | 19 | 2 | 18 | 9 |
| FRWY138 | 2 | 407 | 48 | 142 | 112 | 30 | 3 | 27 | 15 |
| FRWY139 | 2 | 312 | 37 | 109 | 86 | 24 | 3 | 21 | 11 |
| FRWY140 | 9 | 276 | 32 | 96 | 76 | 19 | 2 | 19 | 9 |
| FRWY141 | 9 | 247 | 29 | 86 | 68 | 18 | 2 | 14 | 8 |
| FRWY142 | 9 | 157 | 18 | 55 | 43 | 12 | 1 | 9 | 5 |
| FRWY143 | 9 | 325 | 38 | 113 | 90 | 25 | 3 | 20 | 9 |
| FRWY144 | 9 | 433 | 51 | 151 | 120 | 26 | 3 | 23 | 12 |
| **Total** | | **111770** | **13107** | **38928** | **30871** | **7579** | **799** | **7038** | **3714** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 17161 | 2012 | 5977 | 4740 | 1732 | 183 | 1614 | 1068 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 83992 | 9849 | 29254 | 23199 | 5075 | 535 | 4588 | 2190 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 10617 | 1245 | 3698 | 2932 | 772 | 81 | 837 | 456 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **111770** | **13107** | **38928** | **30871** | **7579** | **799** | **7038** | **3714** | **213806** |

**World Logistics Center**
**Project Phase 1 (2012)**
**Entrained Road Dust**
Freeways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | F | 1574 | 0.98 | 450 | 440 | 60 | 59 | 170 | 166 | 1,720 | 1682 | 2347 | 18.03 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.1 |
| FRWY2 | F | 2153 | 1.34 | 370 | 495 | 60 | 80 | 180 | 241 | 1,750 | 2341 | 3156 | 18.61 | 0.022 | 0.0003 | 1.0 | 0.0013 | 4.3 |
| FRWY3 | F | 1737 | 1.08 | 390 | 421 | 70 | 76 | 180 | 194 | 1,760 | 1899 | 2590 | 18.44 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.5 |
| FRWY4 | F | 1847 | 1.15 | 420 | 482 | 70 | 80 | 190 | 218 | 1,790 | 2054 | 2834 | 18.27 | 0.022 | 0.0003 | 0.9 | 0.0013 | 3.7 |
| FRWY5 | F | 1422 | 0.88 | 450 | 398 | 70 | 62 | 200 | 177 | 1,820 | 1608 | 2244 | 18.12 | 0.022 | 0.0003 | 0.7 | 0.0013 | 2.9 |
| FRWY6 | F | 2087 | 1.30 | 470 | 609 | 70 | 91 | 210 | 272 | 1,840 | 2386 | 3358 | 18.01 | 0.022 | 0.0003 | 1.1 | 0.0013 | 4.4 |
| FRWY7 | F | 1650 | 1.03 | 480 | 492 | 70 | 72 | 210 | 215 | 1,840 | 1886 | 2665 | 17.95 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.5 |
| FRWY8 | F | 1537 | 0.95 | 500 | 477 | 70 | 67 | 220 | 210 | 1,870 | 1785 | 2540 | 17.87 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.3 |
| FRWY9 | F | 1792 | 1.11 | 540 | 601 | 80 | 89 | 240 | 267 | 1,980 | 2204 | 3162 | 17.77 | 0.022 | 0.0003 | 1.0 | 0.0013 | 4.1 |
| FRWY10 | F | 1665 | 1.03 | 560 | 579 | 80 | 83 | 240 | 248 | 1,990 | 2058 | 2968 | 17.68 | 0.022 | 0.0003 | 0.9 | 0.0013 | 3.8 |
| FRWY11 | F | 849 | 0.53 | 580 | 306 | 80 | 42 | 250 | 132 | 2,010 | 1060 | 1540 | 17.59 | 0.022 | 0.0003 | 0.5 | 0.0013 | 2.0 |
| FRWY12 | F | 2299 | 1.43 | 860 | 1228 | 100 | 143 | 320 | 457 | 2,260 | 3228 | 5056 | 16.58 | 0.022 | 0.0003 | 1.5 | 0.0012 | 6.1 |
| FRWY13 | F | 1689 | 1.05 | 920 | 965 | 110 | 115 | 350 | 367 | 2,350 | 2466 | 3914 | 16.44 | 0.022 | 0.0003 | 1.1 | 0.0012 | 4.6 |
| FRWY14 | F | 2444 | 1.52 | 940 | 1427 | 110 | 167 | 360 | 547 | 2,410 | 3659 | 5800 | 16.46 | 0.022 | 0.0003 | 1.7 | 0.0012 | 6.9 |
| FRWY15 | F | 1608 | 1.00 | 940 | 939 | 110 | 110 | 360 | 360 | 2,410 | 2407 | 3816 | 16.46 | 0.022 | 0.0003 | 1.1 | 0.0012 | 4.5 |
| FRWY16 | F | 2722 | 1.69 | 1,010 | 1708 | 110 | 186 | 370 | 626 | 2,420 | 4092 | 6612 | 16.21 | 0.022 | 0.0003 | 1.9 | 0.0012 | 7.7 |
| FRWY17 | F | 3198 | 1.99 | 1,200 | 2384 | 120 | 238 | 390 | 775 | 2,480 | 4927 | 8324 | 15.63 | 0.022 | 0.0003 | 2.3 | 0.0011 | 9.4 |
| FRWY18 | F | 2509 | 1.56 | 1,380 | 2151 | 130 | 203 | 410 | 639 | 2,500 | 3897 | 6889 | 15.07 | 0.022 | 0.0003 | 1.8 | 0.0011 | 7.5 |
| FRWY19 | F | 910 | 0.57 | 1,490 | 842 | 140 | 79 | 440 | 249 | 2,550 | 1442 | 2612 | 14.81 | 0.022 | 0.0003 | 0.7 | 0.0011 | 2.8 |
| FRWY20 | F | 774 | 0.48 | 1,810 | 870 | 170 | 82 | 510 | 245 | 2,760 | 1327 | 2524 | 14.28 | 0.022 | 0.0003 | 0.6 | 0.0010 | 2.6 |
| FRWY21 | F | 1798 | 1.12 | 3,620 | 4043 | 280 | 313 | 920 | 1028 | 4,520 | 5049 | 10432 | 13.40 | 0.022 | 0.0002 | 2.5 | 0.0010 | 10.0 |
| FRWY22 | F | 1035 | 0.64 | 3,740 | 2405 | 290 | 186 | 960 | 617 | 4,610 | 2964 | 6172 | 13.34 | 0.022 | 0.0002 | 1.5 | 0.0010 | 5.9 |
| FRWY23 | F | 1042 | 0.65 | 3,700 | 2395 | 300 | 194 | 980 | 634 | 4,640 | 3003 | 6227 | 13.41 | 0.022 | 0.0002 | 1.5 | 0.0010 | 6.0 |
| FRWY24 | F | 2260 | 1.40 | 4,080 | 5728 | 320 | 449 | 1,050 | 1474 | 4,800 | 6739 | 14390 | 13.12 | 0.022 | 0.0002 | 3.3 | 0.0009 | 13.6 |
| FRWY25 | F | 1305 | 0.81 | 4,730 | 3835 | 340 | 276 | 1,100 | 892 | 4,890 | 3964 | 8966 | 12.53 | 0.022 | 0.0002 | 2.0 | 0.0009 | 8.1 |
| FRWY26 | F | 977 | 0.61 | 4,990 | 3029 | 330 | 200 | 1,070 | 649 | 4,760 | 2889 | 6767 | 12.17 | 0.022 | 0.0002 | 1.5 | 0.0009 | 5.9 |
| FRWY27 | F | 1186 | 0.74 | 6,450 | 4752 | 390 | 287 | 1,230 | 906 | 5,330 | 3927 | 9873 | 11.52 | 0.022 | 0.0002 | 2.0 | 0.0008 | 8.1 |
| FRWY28 | F | 1642 | 1.02 | 6,290 | 6416 | 400 | 408 | 1,260 | 1285 | 5,330 | 5437 | 13546 | 11.62 | 0.022 | 0.0002 | 2.8 | 0.0008 | 11.3 |
| FRWY29 | F | 1636 | 1.02 | 6,460 | 6565 | 420 | 427 | 1,300 | 1321 | 5,370 | 5458 | 13771 | 11.53 | 0.022 | 0.0002 | 2.8 | 0.0008 | 11.4 |
| FRWY30 | F | 1555 | 0.97 | 7,400 | 7148 | 450 | 435 | 1,340 | 1294 | 5,410 | 5226 | 14103 | 10.95 | 0.022 | 0.0002 | 2.7 | 0.0008 | 11.1 |
| FRWY31 | F | 3384 | 2.10 | 8,550 | 17974 | 500 | 1051 | 1,430 | 3006 | 5,530 | 11625 | 33656 | 10.39 | 0.022 | 0.0002 | 6.1 | 0.0007 | 25.0 |
| FRWY32 | F | 1112 | 0.69 | 9,180 | 6341 | 530 | 366 | 1,460 | 1009 | 5,530 | 3820 | 11536 | 10.08 | 0.022 | 0.0002 | 2.0 | 0.0007 | 8.3 |
| FRWY33 | F | 1935 | 1.20 | 11,470 | 13787 | 540 | 649 | 1,680 | 2019 | 6,190 | 7441 | 23897 | 9.61 | 0.022 | 0.0002 | 4.0 | 0.0007 | 16.4 |
| FRWY34 | F | 1675 | 1.04 | 12,400 | 12903 | 550 | 572 | 1,680 | 1748 | 6,430 | 6691 | 21914 | 9.44 | 0.022 | 0.0002 | 3.6 | 0.0007 | 14.8 |
| FRWY35 | F | 1143 | 0.71 | 2,400 | 1704 | 90 | 64 | 300 | 213 | 700 | 497 | 2478 | 7.28 | 0.022 | 0.0001 | 0.3 | 0.0005 | 1.3 |
| FRWY36 | F | 9120 | 5.67 | 2,140 | 12124 | 100 | 567 | 260 | 1473 | 610 | 3456 | 17620 | 7.19 | 0.022 | 0.0001 | 2.2 | 0.0005 | 9.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY37 | F | 3802 | 2.36 | 2,140 | 5054 | 100 | 236 | 260 | 614 | 610 | 1441 | 7345 | 7.19 | 0.022 | 0.0001 | 0.9 | 0.0005 | 3.7 |
| FRWY294 | F | 2926 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 124 | 124 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| FRWY295 | F | 1049 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 44 | 44 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY296 | F | 1811 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 77 | 77 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY297 | F | 1505 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 64 | 64 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY299 | F | 1654 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 70 | 70 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY75 | F | 2861 | 1.78 | 760 | 1351 | 60 | 107 | 230 | 409 | 1,250 | 2222 | 4088 | 14.66 | 0.022 | 0.0003 | 1.1 | 0.0011 | 4.3 |
| FRWY76 | F | 2500 | 1.55 | 890 | 1382 | 70 | 109 | 250 | 388 | 1,280 | 1988 | 3867 | 14.05 | 0.022 | 0.0002 | 1.0 | 0.0010 | 3.9 |
| FRWY77 | F | 450 | 0.28 | 890 | 249 | 70 | 20 | 250 | 70 | 1,280 | 358 | 696 | 14.05 | 0.022 | 0.0002 | 0.2 | 0.0010 | 0.7 |
| FRWY78 | F | 1384 | 0.86 | 950 | 817 | 70 | 60 | 260 | 224 | 1,300 | 1118 | 2218 | 13.84 | 0.022 | 0.0002 | 0.5 | 0.0010 | 2.2 |
| FRWY79 | F | 1713 | 1.06 | 1,050 | 1117 | 70 | 74 | 270 | 287 | 1,310 | 1394 | 2873 | 13.43 | 0.022 | 0.0002 | 0.7 | 0.0010 | 2.8 |
| FRWY80 | F | 1703 | 1.06 | 1,160 | 1227 | 80 | 85 | 280 | 296 | 1,330 | 1407 | 3015 | 13.03 | 0.022 | 0.0002 | 0.7 | 0.0009 | 2.8 |
| FRWY81 | F | 2512 | 1.56 | 1,240 | 1935 | 80 | 125 | 290 | 453 | 1,350 | 2107 | 4619 | 12.80 | 0.022 | 0.0002 | 1.0 | 0.0009 | 4.2 |
| FRWY82 | F | 1674 | 1.04 | 1,300 | 1352 | 80 | 83 | 300 | 312 | 1,370 | 1425 | 3172 | 12.65 | 0.022 | 0.0002 | 0.7 | 0.0009 | 2.9 |
| FRWY83 | F | 1819 | 1.13 | 1,320 | 1492 | 80 | 90 | 310 | 350 | 1,380 | 1559 | 3492 | 12.62 | 0.022 | 0.0002 | 0.8 | 0.0009 | 3.2 |
| FRWY84 | F | 1182 | 0.73 | 1,480 | 1087 | 80 | 59 | 320 | 235 | 1,390 | 1021 | 2401 | 12.13 | 0.022 | 0.0002 | 0.5 | 0.0009 | 2.1 |
| FRWY85 | F | 2360 | 1.47 | 1,490 | 2184 | 80 | 117 | 320 | 469 | 1,390 | 2038 | 4809 | 12.10 | 0.022 | 0.0002 | 1.0 | 0.0009 | 4.2 |
| FRWY86 | F | 783 | 0.49 | 1,360 | 662 | 70 | 34 | 280 | 136 | 1,260 | 613 | 1445 | 12.08 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.3 |
| FRWY87 | F | 1370 | 0.85 | 1,370 | 1166 | 70 | 60 | 280 | 238 | 1,280 | 1089 | 2553 | 12.12 | 0.022 | 0.0002 | 0.5 | 0.0009 | 2.2 |
| FRWY101 | F | 1703 | 1.06 | 1,080 | 1143 | 60 | 63 | 170 | 180 | 530 | 561 | 1947 | 9.22 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.3 |
| FRWY102 | F | 925 | 0.57 | 860 | 494 | 50 | 29 | 160 | 92 | 510 | 293 | 908 | 10.03 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.7 |
| FRWY103 | F | 1770 | 1.10 | 860 | 946 | 50 | 55 | 160 | 176 | 510 | 561 | 1737 | 10.03 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.2 |
| FRWY104 | F | 3182 | 1.98 | 630 | 1245 | 40 | 79 | 140 | 277 | 500 | 988 | 2589 | 11.33 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.1 |
| FRWY105 | F | 1010 | 0.63 | 510 | 320 | 40 | 25 | 130 | 82 | 490 | 307 | 734 | 12.16 | 0.022 | 0.0002 | 0.2 | 0.0009 | 0.6 |
| FRWY106 | F | 1305 | 0.81 | 460 | 373 | 40 | 32 | 120 | 97 | 490 | 397 | 900 | 12.62 | 0.022 | 0.0002 | 0.2 | 0.0009 | 0.8 |
| FRWY107 | F | 1655 | 1.03 | 370 | 380 | 30 | 31 | 110 | 113 | 470 | 483 | 1008 | 13.45 | 0.022 | 0.0002 | 0.2 | 0.0010 | 1.0 |
| FRWY108 | F | 4341 | 2.70 | 310 | 836 | 30 | 81 | 100 | 270 | 460 | 1240 | 2427 | 14.11 | 0.022 | 0.0002 | 0.6 | 0.0010 | 2.5 |
| FRWY109 | F | 1728 | 1.07 | 300 | 322 | 30 | 32 | 90 | 97 | 450 | 483 | 934 | 14.17 | 0.022 | 0.0003 | 0.2 | 0.0010 | 1.0 |
| FRWY110 | F | 2788 | 1.73 | 260 | 450 | 30 | 52 | 90 | 156 | 450 | 779 | 1438 | 14.75 | 0.022 | 0.0003 | 0.4 | 0.0011 | 1.5 |
| FRWY111 | F | 7717 | 4.79 | 260 | 1246 | 30 | 144 | 90 | 431 | 450 | 2157 | 3979 | 14.75 | 0.022 | 0.0003 | 1.0 | 0.0011 | 4.2 |
| FRWY112 | F | 1384 | 0.86 | 250 | 215 | 30 | 26 | 90 | 77 | 450 | 387 | 705 | 14.90 | 0.022 | 0.0003 | 0.2 | 0.0011 | 0.8 |
| FRWY113 | F | 3380 | 2.10 | 210 | 441 | 20 | 42 | 70 | 147 | 400 | 840 | 1470 | 15.26 | 0.022 | 0.0003 | 0.4 | 0.0011 | 1.6 |
| FRWY114 | F | 3719 | 2.31 | 210 | 485 | 20 | 46 | 70 | 162 | 400 | 924 | 1617 | 15.26 | 0.022 | 0.0003 | 0.4 | 0.0011 | 1.8 |
| FRWY129 | F | 4476 | 2.78 | 1,440 | 4004 | 20 | 56 | 90 | 250 | 180 | 500 | 4810 | 4.87 | 0.022 | 0.0001 | 0.4 | 0.0003 | 1.6 |
| FRWY130 | F | 3830 | 2.38 | 1,740 | 4140 | 30 | 71 | 100 | 238 | 190 | 452 | 4901 | 4.60 | 0.022 | 0.0001 | 0.4 | 0.0003 | 1.6 |
| FRWY131 | F | 2967 | 1.84 | 1,910 | 3520 | 30 | 55 | 110 | 203 | 210 | 387 | 4165 | 4.61 | 0.022 | 0.0001 | 0.3 | 0.0003 | 1.4 |
| FRWY132 | F | 1163 | 0.72 | 1,970 | 1423 | 30 | 22 | 120 | 87 | 210 | 152 | 1683 | 4.57 | 0.022 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| FRWY133 | F | 4541 | 2.82 | 2,010 | 5670 | 30 | 85 | 120 | 339 | 220 | 621 | 6714 | 4.61 | 0.022 | 0.0001 | 0.5 | 0.0003 | 2.2 |
| FRWY167 | F | 1471 | 0.91 | 1,170 | 1069 | 20 | 18 | 80 | 73 | 250 | 228 | 1389 | 6.16 | 0.022 | 0.0001 | 0.1 | 0.0004 | 0.6 |
| FRWY168 | F | 916 | 0.57 | 1,310 | 745 | 30 | 17 | 110 | 63 | 330 | 188 | 1013 | 6.70 | 0.022 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| FRWY169 | F | 4924 | 3.06 | 810 | 2478 | 20 | 61 | 70 | 214 | 340 | 1040 | 3793 | 8.52 | 0.022 | 0.0001 | 0.6 | 0.0006 | 2.3 |
| FRWY171 | F | 2145 | 1.33 | 750 | 999 | 20 | 27 | 70 | 93 | 360 | 480 | 1599 | 9.09 | 0.022 | 0.0002 | 0.3 | 0.0006 | 1.0 |
| FRWY172 | F | 3000 | 1.86 | 770 | 1435 | 20 | 37 | 70 | 130 | 370 | 690 | 2292 | 9.09 | 0.022 | 0.0002 | 0.4 | 0.0006 | 1.5 |
| FRWY173 | F | 2501 | 1.55 | 1,060 | 1647 | 30 | 47 | 80 | 124 | 380 | 590 | 2408 | 7.87 | 0.022 | 0.0001 | 0.3 | 0.0006 | 1.3 |
| FRWY174 | F | 1135 | 0.71 | 970 | 684 | 30 | 21 | 80 | 56 | 380 | 268 | 1029 | 8.23 | 0.022 | 0.0001 | 0.1 | 0.0006 | 0.6 |
| FRWY175 | F | 1547 | 0.96 | 1,440 | 1384 | 40 | 38 | 110 | 106 | 420 | 404 | 1932 | 7.14 | 0.022 | 0.0001 | 0.2 | 0.0005 | 1.0 |
| FRWY176 | F | 1359 | 0.84 | 1,440 | 1216 | 40 | 34 | 110 | 93 | 420 | 355 | 1697 | 7.14 | 0.022 | 0.0001 | 0.2 | 0.0005 | 0.9 |
| FRWY134 | F | 1385 | 0.86 | 590 | 508 | 40 | 34 | 130 | 112 | 490 | 422 | 1075 | 11.52 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.9 |
| FRWY135 | F | 1711 | 1.06 | 580 | 616 | 40 | 43 | 120 | 128 | 480 | 510 | 1297 | 11.50 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY136 | F | 1038 | 0.64 | 570 | 368 | 40 | 26 | 120 | 77 | 480 | 310 | 780 | 11.58 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.6 |
| FRWY137 | F | 1516 | 0.94 | 500 | 471 | 30 | 28 | 100 | 94 | 440 | 414 | 1008 | 11.81 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.9 |
| FRWY138 | F | 2485 | 1.54 | 460 | 710 | 30 | 46 | 90 | 139 | 430 | 664 | 1559 | 12.08 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.4 |
| FRWY139 | F | 1950 | 1.21 | 450 | 545 | 30 | 36 | 90 | 109 | 410 | 497 | 1187 | 11.96 | 0.022 | 0.0002 | 0.2 | 0.0009 | 1.0 |
| FRWY140 | F | 1581 | 0.98 | 490 | 481 | 30 | 29 | 100 | 98 | 410 | 403 | 1012 | 11.57 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| FRWY141 | F | 1447 | 0.90 | 480 | 431 | 30 | 27 | 80 | 72 | 380 | 342 | 872 | 11.31 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.7 |
| FRWY142 | F | 938 | 0.58 | 470 | 274 | 30 | 17 | 80 | 47 | 370 | 216 | 554 | 11.28 | 0.022 | 0.0002 | 0.1 | 0.0008 | 0.4 |
| FRWY143 | F | 2032 | 1.26 | 450 | 568 | 30 | 38 | 80 | 101 | 330 | 417 | 1123 | 10.94 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.9 |
| FRWY144 | F | 3119 | 1.94 | 390 | 756 | 20 | 39 | 60 | 116 | 290 | 562 | 1473 | 11.04 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.2 |
| | | | | | | | | | | | | | | | **Totals:** | **84.8** | | **345.6** |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 68 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 68 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 68 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 68 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 68 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 68 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 68 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 68 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 68 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 68 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 68 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 68 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 68 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 68 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 68 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 68 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 68 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 68 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 68 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 68 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 68 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 68 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 68 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 68 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 68 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 68 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 68 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 68 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 68 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 68 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 68 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 68 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 68 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 68 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 68 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 68 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 68 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 68 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 68 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 68 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 68 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 68 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 68 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 68 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 68 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 68 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 68 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 68 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 68 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 68 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 68 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 68 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 68 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 136 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 136 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 136 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 136 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 136 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 136 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 136 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 68 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 68 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 68 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 68 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 68 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 68 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 68 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 68 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 68 |

**World Logistics Center** **2012**
Project Phase 1 (2012)
Freeway to Port
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.3% | 6.9% | 80.5% | 97.8% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 68 | 0 | 0 | 0 | 68 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 77 |
| 229 | 68 | 0 | 0 | 0 | 68 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 48 |
| 228 | 68 | 0 | 0 | 0 | 68 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 21 |
| 227 | 68 | 0 | 0 | 0 | 68 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 34 |
| 226 | 68 | 0 | 0 | 0 | 68 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 88 |
| 225 | 68 | 0 | 0 | 0 | 68 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 43 |
| 224 | 68 | 0 | 0 | 0 | 68 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 113 |
| 223 | 68 | 0 | 0 | 0 | 68 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 49 |
| 222 | 68 | 0 | 0 | 0 | 68 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 51 |
| 221 | 68 | 0 | 0 | 0 | 68 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 48 |
| 220 | 68 | 0 | 0 | 0 | 68 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 60 |
| 219 | 68 | 0 | 0 | 0 | 68 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 102 |
| 218 | 68 | 0 | 0 | 0 | 68 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 112 |
| 217 | 68 | 0 | 0 | 0 | 68 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 128 |
| 216 | 68 | 0 | 0 | 0 | 68 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 103 |
| 215 | 68 | 0 | 0 | 0 | 68 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 60 |
| 214 | 68 | 0 | 0 | 0 | 68 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 65 |
| 213 | 68 | 0 | 0 | 0 | 68 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 101 |
| 212 | 68 | 0 | 0 | 0 | 68 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 97 |
| 211 | 68 | 0 | 0 | 0 | 68 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 73 |
| 210 | 68 | 0 | 0 | 0 | 68 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 155 |
| 209 | 68 | 0 | 0 | 0 | 68 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 82 |
| 263 | 68 | 0 | 0 | 0 | 68 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 85 |
| 264 | 68 | 0 | 0 | 0 | 68 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 41 |
| 265 | 68 | 0 | 0 | 0 | 68 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 30 |
| 266 | 68 | 0 | 0 | 0 | 68 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 28 |
| 267 | 68 | 0 | 0 | 0 | 68 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 27 |
| 268 | 68 | 0 | 0 | 0 | 68 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 42 |
| 269 | 68 | 0 | 0 | 0 | 68 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 80 |
| 270 | 68 | 0 | 0 | 0 | 68 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 74 |
| 271 | 68 | 0 | 0 | 0 | 68 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 44 |
| 272 | 68 | 0 | 0 | 0 | 68 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 28 |
| 273 | 68 | 0 | 0 | 0 | 68 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 10 |
| 274 | 68 | 0 | 0 | 0 | 68 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 71 |
| 275 | 68 | 0 | 0 | 0 | 68 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 73 |
| 276 | 68 | 0 | 0 | 0 | 68 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 73 |
| 277 | 68 | 0 | 0 | 0 | 68 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 43 |
| 278 | 68 | 0 | 0 | 0 | 68 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 73 |
| 279 | 68 | 0 | 0 | 0 | 68 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 76 |
| 280 | 68 | 0 | 0 | 0 | 68 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 62 |
| 281 | 68 | 0 | 0 | 0 | 68 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 88 |
| 282 | 68 | 0 | 0 | 0 | 68 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 47 |
| 283 | 68 | 0 | 0 | 0 | 68 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 60 |
| 284 | 68 | 0 | 0 | 0 | 68 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 61 |
| 285 | 68 | 0 | 0 | 0 | 68 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 74 |
| 286 | 68 | 0 | 0 | 0 | 68 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 66 |
| 287 | 68 | 0 | 0 | 0 | 68 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 52 |
| 288 | 68 | 0 | 0 | 0 | 68 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 60 |
| 289 | 68 | 0 | 0 | 0 | 68 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 94 |
| 290 | 68 | 0 | 0 | 0 | 68 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 195 |
| 291 | 68 | 0 | 0 | 0 | 68 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 123 |
| 292 | 68 | 0 | 0 | 0 | 68 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 223 |
| 293 | 68 | 0 | 0 | 0 | 68 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 63 |
| 262 | 136 | 0 | 0 | 0 | 136 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 140 |
| 261 | 136 | 0 | 0 | 0 | 136 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 71 |
| 260 | 136 | 0 | 0 | 0 | 136 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 110 |
| 259 | 136 | 0 | 0 | 0 | 136 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 209 |
| 258 | 136 | 0 | 0 | 0 | 136 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 185 |
| 257 | 136 | 0 | 0 | 0 | 136 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 162 |
| 256 | 136 | 0 | 0 | 0 | 136 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 133 | 119 |
| 255 | 68 | 0 | 0 | 0 | 68 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 62 |
| 254 | 68 | 0 | 0 | 0 | 68 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 67 |
| 253 | 68 | 0 | 0 | 0 | 68 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 126 |
| 252 | 68 | 0 | 0 | 0 | 68 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 96 |
| 251 | 68 | 0 | 0 | 0 | 68 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 89 |
| 250 | 68 | 0 | 0 | 0 | 68 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 143 |
| 249 | 68 | 0 | 0 | 0 | 68 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 30 |
| 248 | 68 | 0 | 0 | 0 | 68 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 50 |
| 247 | 68 | 0 | 0 | 0 | 68 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 87 |
| | | | | | | | | | | | | | | | | | 5623 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| 228 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 227 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 226 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| 225 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| 224 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 223 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| 222 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 221 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| 220 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 219 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 102 |
| 218 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| 217 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 128 |
| 216 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 103 |
| 215 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 214 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 213 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 |
| 212 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 |
| 211 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| 210 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 155 |
| 209 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 265 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 266 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 267 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 268 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 269 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| 270 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| 271 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| 272 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 273 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 274 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
| 275 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| 276 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| 277 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 195 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 223 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| 262 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 140 |
| 261 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
| 260 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 |
| 259 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 |
| 258 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 185 |
| 257 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 |
| 256 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 119 |
| 255 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| 254 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| 253 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 |
| 252 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| 251 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 250 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 |
| 249 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 248 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 247 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **5623** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1053 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2940 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1630 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **5623** | **5623** |

**World Logistics Center** 2012
Project Phase 1 (2012)
Freeway to Port
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 68 | 0 | 0 | 0 | 68 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 229 | 68 | 0 | 0 | 0 | 68 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 228 | 68 | 0 | 0 | 0 | 68 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 227 | 68 | 0 | 0 | 0 | 68 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 226 | 68 | 0 | 0 | 0 | 68 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 225 | 68 | 0 | 0 | 0 | 68 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 224 | 68 | 0 | 0 | 0 | 68 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 223 | 68 | 0 | 0 | 0 | 68 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 222 | 68 | 0 | 0 | 0 | 68 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 221 | 68 | 0 | 0 | 0 | 68 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 220 | 68 | 0 | 0 | 0 | 68 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 219 | 68 | 0 | 0 | 0 | 68 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 218 | 68 | 0 | 0 | 0 | 68 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 217 | 68 | 0 | 0 | 0 | 68 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 216 | 68 | 0 | 0 | 0 | 68 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 215 | 68 | 0 | 0 | 0 | 68 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 214 | 68 | 0 | 0 | 0 | 68 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 213 | 68 | 0 | 0 | 0 | 68 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 212 | 68 | 0 | 0 | 0 | 68 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 211 | 68 | 0 | 0 | 0 | 68 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 210 | 68 | 0 | 0 | 0 | 68 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 209 | 68 | 0 | 0 | 0 | 68 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 263 | 68 | 0 | 0 | 0 | 68 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 264 | 68 | 0 | 0 | 0 | 68 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 265 | 68 | 0 | 0 | 0 | 68 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 266 | 68 | 0 | 0 | 0 | 68 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 267 | 68 | 0 | 0 | 0 | 68 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 268 | 68 | 0 | 0 | 0 | 68 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 269 | 68 | 0 | 0 | 0 | 68 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 270 | 68 | 0 | 0 | 0 | 68 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 271 | 68 | 0 | 0 | 0 | 68 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 272 | 68 | 0 | 0 | 0 | 68 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 273 | 68 | 0 | 0 | 0 | 68 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 274 | 68 | 0 | 0 | 0 | 68 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 275 | 68 | 0 | 0 | 0 | 68 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 276 | 68 | 0 | 0 | 0 | 68 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 277 | 68 | 0 | 0 | 0 | 68 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 278 | 68 | 0 | 0 | 0 | 68 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 279 | 68 | 0 | 0 | 0 | 68 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 280 | 68 | 0 | 0 | 0 | 68 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 281 | 68 | 0 | 0 | 0 | 68 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 282 | 68 | 0 | 0 | 0 | 68 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 283 | 68 | 0 | 0 | 0 | 68 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 284 | 68 | 0 | 0 | 0 | 68 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 285 | 68 | 0 | 0 | 0 | 68 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 286 | 68 | 0 | 0 | 0 | 68 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 287 | 68 | 0 | 0 | 0 | 68 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 288 | 68 | 0 | 0 | 0 | 68 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 289 | 68 | 0 | 0 | 0 | 68 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 290 | 68 | 0 | 0 | 0 | 68 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 291 | 68 | 0 | 0 | 0 | 68 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 292 | 68 | 0 | 0 | 0 | 68 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| 293 | 68 | 0 | 0 | 0 | 68 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 262 | 136 | 0 | 0 | 0 | 136 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 261 | 136 | 0 | 0 | 0 | 136 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 260 | 136 | 0 | 0 | 0 | 136 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 259 | 136 | 0 | 0 | 0 | 136 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| 258 | 136 | 0 | 0 | 0 | 136 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 257 | 136 | 0 | 0 | 0 | 136 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 256 | 136 | 0 | 0 | 0 | 136 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 255 | 68 | 0 | 0 | 0 | 68 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 254 | 68 | 0 | 0 | 0 | 68 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 253 | 68 | 0 | 0 | 0 | 68 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 252 | 68 | 0 | 0 | 0 | 68 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 251 | 68 | 0 | 0 | 0 | 68 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 250 | 68 | 0 | 0 | 0 | 68 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 249 | 68 | 0 | 0 | 0 | 68 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 248 | 68 | 0 | 0 | 0 | 68 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 247 | 68 | 0 | 0 | 0 | 68 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | 127 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 228 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 227 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 226 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 225 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 224 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 223 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 222 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 221 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 220 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 219 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 218 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 217 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 216 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 215 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 214 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 213 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 212 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 211 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 210 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 209 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 265 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 266 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 267 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 268 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 269 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 270 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 271 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 272 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 273 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 275 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 276 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 277 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 262 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 261 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 260 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 259 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 258 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 257 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 256 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 255 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 254 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 253 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 252 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 251 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 250 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 249 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 248 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 247 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **127** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **127** | | **127** |

**World Logistics Center**
**Project Phase 1 (2012)**
**Entrained Road Dust**
Freeway to Port

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | F | 1854 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 78 | 78 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 229 | F | 1159 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 49 | 49 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 228 | F | 520 | 0.32 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 22 | 22 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 227 | F | 833 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 35 | 35 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 226 | F | 2141 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 90 | 90 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 225 | F | 1032 | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 44 | 44 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 224 | F | 2726 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 115 | 115 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 223 | F | 1185 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 50 | 50 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 222 | F | 1233 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 52 | 52 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 221 | F | 1153 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 49 | 49 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 220 | F | 1458 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 62 | 62 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 219 | F | 2467 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 104 | 104 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 218 | F | 2700 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 114 | 114 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 217 | F | 3089 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 130 | 130 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 216 | F | 2502 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 106 | 106 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 215 | F | 1445 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 61 | 61 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 214 | F | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 66 | 66 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 213 | F | 2452 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 104 | 104 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 212 | F | 2347 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 99 | 99 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 211 | F | 1767 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 75 | 75 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 210 | F | 3749 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 158 | 158 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 209 | F | 1985 | 1.23 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 84 | 84 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 263 | F | 2061 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 87 | 87 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 264 | F | 997 | 0.62 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 42 | 42 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 265 | F | 720 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 30 | 30 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 266 | F | 675 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 29 | 29 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 267 | F | 659 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 28 | 28 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 268 | F | 1012 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 43 | 43 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 269 | F | 1929 | 1.20 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 81 | 81 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 270 | F | 1798 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 76 | 76 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 271 | F | 1058 | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 45 | 45 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 272 | F | 676 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 29 | 29 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 273 | F | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 10 | 10 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 274 | F | 1725 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 73 | 73 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 275 | F | 1766 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 75 | 75 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 276 | F | 1776 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 75 | 75 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 277 | F | 1050 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 44 | 44 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 278 | F | 1765 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 75 | 75 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 279 | F | 1851 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 78 | 78 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 280 | F | 1510 | 0.94 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 64 | 64 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 281 | F | 2140 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 90 | 90 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 282 | F | 1138 | 0.71 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 48 | 48 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 283 | F | 1464 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 62 | 62 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 284 | F | 1480 | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 63 | 63 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 285 | F | 1797 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 76 | 76 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 286 | F | 1596 | 0.99 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 67 | 67 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 287 | F | 1247 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 53 | 53 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 288 | F | 1463 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 62 | 62 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 289 | F | 2284 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 96 | 96 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 290 | F | 4728 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 200 | 200 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 291 | F | 2967 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 125 | 125 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 292 | F | 5404 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 228 | 228 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 293 | F | 1533 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 65 | 65 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 262 | F | 1695 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 143 | 143 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 261 | F | 854 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 72 | 72 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 260 | F | 1330 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 112 | 112 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 259 | F | 2529 | 1.57 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 214 | 214 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 258 | F | 2243 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 189 | 189 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 257 | F | 1956 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 256 | F | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 122 | 122 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 255 | F | 1501 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 63 | 63 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 254 | F | 1627 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 69 | 69 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 253 | F | 3060 | 1.90 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 129 | 129 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 252 | F | 2329 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 98 | 98 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 251 | F | 2154 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 91 | 91 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 250 | F | 3452 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 146 | 146 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 249 | F | 722 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 30 | 30 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 248 | F | 1211 | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 51 | 51 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 247 | F | 2097 | 1.30 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 89 | 89 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| | | | | | | | | | | | | | | | **Totals:** | **2.4** | | **9.7** |

**World Logistics Center**
Project Phase 1 (2012)
Total Vehicle Miles Traveled

**Segment Vehicle Speed (mph)**

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT |
|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 1 | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| 2 | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| 3 | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| 4 | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| 5 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| 6 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| 7 | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| 8 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 9 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Total VMT per Source**

| | Gas | Diesel | Total |
|---|---|---|---|
| Area | 6600 | 1342 | 7942 |
| Internal | 46583 | 16742 | 63325 |
| Surface | 90716 | 12643 | 103359 |
| Freeways | 213806 | 197219 | 411025 |
| Freeways to Ports | 127 | 5623 | 5750 |
| Total | **357833** | **233568** | **591401** |

**TOTAL VMT Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 38 | 4 | 15 | 5 | 62 |
| 0 | (miles) | 3620 | 424 | 1261 | 1000 | 184 | 19 | 71 | 22 | 6600 |
| 1 | | 32447 | 3805 | 11301 | 8962 | 1814 | 191 | 1109 | 286 | 59914 |
| 2 | | 17161 | 2012 | 5977 | 4740 | 1732 | 183 | 1614 | 1092 | 34511 |
| 3 | | 12902 | 1513 | 4494 | 3564 | 467 | 49 | 326 | 9 | 23324 |
| 4 | | 83992 | 9849 | 29254 | 23199 | 5075 | 535 | 4588 | 2257 | 158748 |
| 5 | | 575 | 67 | 200 | 159 | 33 | 3 | 25 | 0 | 1063 |
| 6 | | 9695 | 1137 | 3377 | 2678 | 342 | 36 | 238 | 21 | 17523 |
| 7 | | 19306 | 2264 | 6724 | 5332 | 877 | 92 | 696 | 84 | 35377 |
| 8 | | 55 | 6 | 19 | 15 | 2 | 0 | 0 | 0 | 98 |
| 9 | | 10617 | 1245 | 3698 | 2932 | 772 | 81 | 837 | 493 | 20675 |
| Total | (miles) | **190369** | **22324** | **66304** | **52581** | **11298** | **1191** | **9503** | **4263** | **357833** |

**TOTAL VMT Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 12 | 4 | 61 | 203 | 281 |
| 0 | (miles) | 11 | 1 | 1 | 1 | 57 | 19 | 294 | 958 | 1342 |
| 1 | | 98 | 5 | 5 | 9 | 561 | 191 | 4591 | 12648 | 18107 |
| 2 | | 52 | 3 | 2 | 5 | 535 | 182 | 6680 | 48371 | 55831 |
| 3 | | 39 | 2 | 2 | 4 | 144 | 49 | 1350 | 392 | 1982 |
| 4 | | 254 | 12 | 12 | 23 | 1569 | 533 | 18991 | 99967 | 121361 |
| 5 | | 2 | 0 | 0 | 0 | 10 | 3 | 104 | 16 | 136 |
| 6 | | 29 | 1 | 1 | 3 | 106 | 36 | 983 | 945 | 2105 |
| 7 | | 58 | 3 | 3 | 5 | 271 | 92 | 2882 | 3739 | 7054 |
| 8 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 9 | | 32 | 2 | 2 | 3 | 239 | 81 | 3464 | 21828 | 25650 |
| Total | (miles) | **577** | **28** | **27** | **53** | **3492** | **1187** | **39340** | **188865** | **233568** |
| Grand total VMT | | **190946** | **22351** | **66331** | **52633** | **14790** | **2378** | **48843** | **193128** | **591401** |

**VMT: Area Source, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 38 | 4 | 15 | 5 | 62 |
| 0 | (miles) | 3620 | 424 | 1261 | 1000 | 184 | 19 | 71 | 22 | 6600 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **3620** | **424** | **1261** | **1000** | **184** | **19** | **71** | **22** | **6600** |

**VMT: Area Source, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 12 | 4 | 61 | 203 | 281 |
| 0 | (miles) | 11 | 1 | 1 | 1 | 57 | 19 | 294 | 958 | 1342 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **11** | **1** | **1** | **1** | **57** | **19** | **294** | **958** | **1342** |
| Grand total VMT | | **3630** | **425** | **1261** | **1001** | **240** | **39** | **365** | **980** | **7942** |

**VMT: Internal, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 25032 | 2935 | 8718 | 6914 | 1581 | 167 | 964 | 271 | 46583 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **25032** | **2935** | **8718** | **6914** | **1581** | **167** | **964** | **271** | **46583** |

**VMT: Internal, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 76 | 4 | 4 | 7 | 489 | 166 | 3992 | 12005 | 16742 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **76** | **4** | **4** | **7** | **489** | **166** | **3992** | **12005** | **16742** |
| Grand total VMT | | **25108** | **2939** | **8722** | **6921** | **2070** | **333** | **4956** | **12276** | **63325** |

**VMT: Surface, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 7415 | 869 | 2582 | 2048 | 233 | 25 | 145 | 15 | 13331 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 12902 | 1513 | 4494 | 3564 | 467 | 49 | 326 | 9 | 23324 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 575 | 67 | 200 | 159 | 33 | 3 | 25 | 0 | 1063 |
| 6 | | 9695 | 1137 | 3377 | 2678 | 342 | 36 | 238 | 21 | 17523 |
| 7 | | 19306 | 2264 | 6724 | 5332 | 877 | 92 | 696 | 84 | 35377 |
| 8 | | 55 | 6 | 19 | 15 | 2 | 0 | 0 | 0 | 98 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **49948** | **5857** | **17396** | **13796** | **1954** | **206** | **1430** | **129** | **90716** |

**VMT: Surface, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 22 | 1 | 1 | 2 | 72 | 24 | 599 | 644 | 1366 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 39 | 2 | 2 | 4 | 144 | 49 | 1350 | 392 | 1982 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | 2 | 0 | 0 | 0 | 10 | 3 | 104 | 16 | 136 |
| 6 | | 29 | 1 | 1 | 3 | 106 | 36 | 983 | 945 | 2105 |
| 7 | | 58 | 3 | 3 | 5 | 271 | 92 | 2882 | 3739 | 7054 |
| 8 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **151** | **7** | **7** | **14** | **604** | **205** | **5918** | **5736** | **12643** |
| Grand total VMT | | **50099** | **5864** | **17404** | **13810** | **2558** | **411** | **7348** | **5865** | **103359** |

**VMT: Freeways, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 17161 | 2012 | 5977 | 4740 | 1732 | 183 | 1614 | 1068 | 34487 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 83992 | 9849 | 29254 | 23199 | 5075 | 535 | 4588 | 2190 | 158681 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 10617 | 1245 | 3698 | 2932 | 772 | 81 | 837 | 456 | 20638 |
| Subtotal | (miles) | **111770** | **13107** | **38928** | **30871** | **7579** | **799** | **7038** | **3714** | **213806** |

**VMT: Freeways, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 52 | 3 | 2 | 5 | 535 | 182 | 6680 | 47319 | 54778 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 254 | 12 | 12 | 23 | 1569 | 533 | 18991 | 97026 | 118421 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 32 | 2 | 2 | 3 | 239 | 81 | 3464 | 20198 | 24020 |
| Subtotal | (miles) | **339** | **16** | **16** | **31** | **2342** | **796** | **29135** | **164543** | **197219** |
| Grand total VMT | | **112108** | **13123** | **38944** | **30902** | **9921** | **1595** | **36174** | **168257** | **411025** |

**VMT: Freeways to Ports, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 37 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **127** | **127** |

**VMT: Freeways to Ports, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1053 | 1053 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2940 | 2940 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1630 | 1630 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **5623** | **5623** |
| Grand total VMT | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **5750** | **5750** |

# World Logistics Center

## Project Phase 1 (2012)

## Emissions Estimates

**Emissions Summary: Pounds per day**

| Source | ROG | NOx | CO | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 20 | 101 | 115 | 2 | | | | 2 | | | | 24231 | | 2 | 0.1 |
| Internal | 53 | 428 | 391 | 13 | | | | 12 | | | | 111548 | | 4 | 0.7 |
| Surface | 41 | 286 | 467 | 8 | | | | 7 | | | | 112537 | | 4 | 1.2 |
| Freeways | 257 | 4203 | 2132 | 135 | | | | 129 | | | | 884316 | | 20 | 4.7 |
| Freeways to Ports | 6 | 123 | 39 | 4 | | | | 4 | | | | 20949 | | 0 | 0.1 |
| **Total** | **377** | **5141** | **3144** | **161** | **98** | **487** | **746** | **154** | **38** | **120** | **311** | **1153579** | **116** | **30** | **6.8** |

**Emissions Summary: tons per year**

| Source | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 3.57 | 18.38 | 21.05 | 0.44 | | | | 0.42 | | | | 4422 | 0.00 | 0.42 | 0.02 |
| Internal | 9.67 | 78.12 | 71.44 | 2.29 | | | | 2.19 | | | | 20357 | 0.00 | 0.74 | 0.13 |
| Surface | 7.49 | 52.15 | 85.23 | 1.38 | | | | 1.31 | | | | 20538 | 0.00 | 0.73 | 0.21 |
| Freeways | 46.95 | 767.09 | 389.09 | 24.60 | | | | 23.53 | | | | 161388 | 0.00 | 3.57 | 0.86 |
| Freeways to Ports | 1.11 | 22.41 | 7.04 | 0.72 | | | | 0.69 | | | | 3823 | 0.00 | 0.06 | 0.01 |
| **Total** | **68.80** | **938.15** | **573.85** | **29.43** | **17.81** | **88.88** | **136.11** | **28.14** | **6.88** | **21.82** | **56.84** | **210528** | **0.00** | **5.53** | **1.24** |

**World Logistics Center** 2012 **ROG**

**Project Phase 1 (2012)**

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 1.4443 | 3.7379 | 1.6319 | 2.2995 | 15.8530 | 16.1151 | 21.8066 | 46.6465 |
| 0 | 0.2885 | 0.9280 | 0.3670 | 0.3930 | 0.9175 | 0.7775 | 1.4070 | 6.1448 |
| 1 | 0.1148 | 0.3770 | 0.1449 | 0.1505 | 0.5400 | 0.4564 | 0.7981 | 3.5235 |
| 2 | 0.0830 | 0.2692 | 0.1026 | 0.1089 | 0.3011 | 0.1146 | 0.4441 | 1.9677 |
| 3 | 0.0916 | 0.3004 | 0.1146 | 0.1195 | 0.3802 | 0.3206 | 0.5525 | 2.4168 |
| 4 | 0.0850 | 0.2678 | 0.1024 | 0.1124 | 0.2631 | 0.2180 | 0.4201 | 1.8513 |
| 5 | 0.1359 | 0.4451 | 0.1718 | 0.1799 | 0.5400 | 0.4564 | 0.7981 | 3.5235 |
| 6 | 0.1009 | 0.3316 | 0.1270 | 0.1317 | 0.3802 | 0.3206 | 0.5525 | 2.4168 |
| 7 | 0.0859 | 0.2803 | 0.1069 | 0.1122 | 0.3345 | 0.2814 | 0.4883 | 2.1389 |
| 8 | 0.1666 | 0.5434 | 0.2111 | 0.2230 | 0.5400 | 0.4564 | 0.7981 | 3.5235 |
| 9 | 0.0826 | 0.2641 | 0.1005 | 0.1087 | 0.2780 | 0.2319 | 0.4206 | 1.8793 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 2.4184 | 4.8949 | 1.3856 | 1.3291 | 3.1731 | 3.1731 | 3.5132 | 6.8008 |
| 0 | 0.2468 | 0.4825 | 0.1114 | 0.1162 | 0.3376 | 0.3333 | 1.9129 | 2.8580 |
| 1 | 0.0886 | 0.2137 | 0.0250 | 0.0336 | 0.1855 | 0.1773 | 0.6589 | 1.0323 |
| 2 | 0.0778 | 0.1969 | 0.0195 | 0.0288 | 0.1161 | 0.1088 | 0.3267 | 0.4869 |
| 3 | 0.0755 | 0.1872 | 0.0199 | 0.0279 | 0.1341 | 0.1267 | 0.4405 | 0.6771 |
| 4 | 0.0928 | 0.2495 | 0.0231 | 0.0355 | 0.1212 | 0.1125 | 0.3148 | 0.4395 |
| 5 | 0.1062 | 0.2437 | 0.0299 | 0.0393 | 0.1855 | 0.1773 | 0.6589 | 1.0323 |
| 6 | 0.0793 | 0.1959 | 0.0220 | 0.0302 | 0.1341 | 0.1267 | 0.4405 | 0.6771 |
| 7 | 0.0747 | 0.1885 | 0.0193 | 0.0277 | 0.1221 | 0.1148 | 0.3722 | 0.5630 |
| 8 | 0.1316 | 0.2916 | 0.0379 | 0.0488 | 0.1855 | 0.1773 | 0.6589 | 1.0323 |
| 9 | 0.0839 | 0.2164 | 0.0202 | 0.0305 | 0.1160 | 0.1082 | 0.3075 | 0.4468 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2.418 | 0.484 | 0.247 | 0.132 | 0.106 | 0.089 | 0.079 | 0.076 | 0.075 | 0.078 | 0.084 | 0.093 |
| LDT1 | DSL | 4.895 | 0.979 | 0.483 | 0.292 | 0.244 | 0.214 | 0.196 | 0.187 | 0.189 | 0.197 | 0.216 | 0.249 |
| LDT2 | DSL | 1.386 | 0.277 | 0.111 | 0.038 | 0.030 | 0.025 | 0.022 | 0.020 | 0.019 | 0.019 | 0.020 | 0.023 |
| LHDT1 | DSL | 3.173 | 0.705 | 0.338 | 0.185 | 0.154 | 0.134 | 0.122 | 0.116 | 0.116 | 0.121 | 0.131 | 0.153 |
| LHDT2 | DSL | 3.173 | 0.702 | 0.333 | 0.177 | 0.147 | 0.127 | 0.115 | 0.109 | 0.108 | 0.113 | 0.122 | 0.140 |
| MDV | DSL | 1.329 | 0.266 | 0.116 | 0.049 | 0.039 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 | 0.031 | 0.035 |
| MH | DSL | 5.680 | 1.136 | 0.450 | 0.148 | 0.121 | 0.100 | 0.085 | 0.076 | 0.071 | 0.072 | 0.078 | 0.091 |
| OBUS | DSL | 6.323 | 5.537 | 2.260 | 0.789 | 0.632 | 0.512 | 0.426 | 0.371 | 0.348 | 0.354 | 0.368 | 0.368 |
| SBUS | DSL | 3.985 | 4.949 | 2.084 | 0.708 | 0.580 | 0.482 | 0.411 | 0.368 | 0.351 | 0.362 | 0.377 | 0.377 |
| T6 | DSL | 3.513 | 4.742 | 1.913 | 0.659 | 0.536 | 0.441 | 0.372 | 0.327 | 0.307 | 0.315 | 0.325 | 0.332 |
| T7 | DSL | 6.801 | 6.995 | 2.858 | 1.032 | 0.832 | 0.677 | 0.563 | 0.487 | 0.447 | 0.440 | 0.449 | 0.450 |
| UBUS | DSL | 29.939 | 5.988 | 2.668 | 0.929 | 0.783 | 0.666 | 0.580 | 0.524 | 0.501 | 0.509 | 0.545 | 0.615 |
| LDA | GAS | 1.444 | 0.289 | 0.138 | 0.076 | 0.061 | 0.050 | 0.044 | 0.041 | 0.041 | 0.042 | 0.045 | 0.050 |
| LDT1 | GAS | 3.738 | 0.748 | 0.384 | 0.217 | 0.173 | 0.144 | 0.128 | 0.119 | 0.117 | 0.121 | 0.128 | 0.142 |
| LDT2 | GAS | 1.632 | 0.326 | 0.159 | 0.086 | 0.068 | 0.056 | 0.049 | 0.045 | 0.045 | 0.046 | 0.049 | 0.054 |
| LHDT1 | GAS | 15.853 | 0.535 | 0.264 | 0.148 | 0.119 | 0.100 | 0.090 | 0.083 | 0.082 | 0.085 | 0.092 | 0.108 |
| LHDT2 | GAS | 16.115 | 0.410 | 0.197 | 0.108 | 0.086 | 0.072 | 0.064 | 0.059 | 0.058 | 0.060 | 0.065 | 0.076 |
| MCY | GAS | 66.389 | 13.278 | 6.205 | 3.547 | 2.890 | 2.474 | 2.223 | 2.097 | 2.075 | 2.156 | 2.349 | 2.685 |
| MDV | GAS | 2.300 | 0.460 | 0.219 | 0.118 | 0.093 | 0.076 | 0.066 | 0.061 | 0.060 | 0.061 | 0.065 | 0.072 |
| MH | GAS | 9.694 | 1.939 | 1.074 | 0.632 | 0.508 | 0.425 | 0.384 | 0.361 | 0.350 | 0.353 | 0.376 | 0.452 |
| OBUS | GAS | 16.414 | 0.848 | 0.354 | 0.187 | 0.149 | 0.125 | 0.110 | 0.101 | 0.099 | 0.103 | 0.111 | 0.124 |
| SBUS | GAS | 16.526 | 3.437 | 1.632 | 0.940 | 0.766 | 0.654 | 0.585 | 0.548 | 0.538 | 0.553 | 0.595 | 0.783 |
| T6 | GAS | 21.807 | 1.816 | 0.839 | 0.457 | 0.365 | 0.309 | 0.275 | 0.255 | 0.250 | 0.265 | 0.287 | 0.335 |
| T7 | GAS | 46.646 | 9.329 | 4.285 | 2.408 | 1.929 | 1.620 | 1.441 | 1.348 | 1.321 | 1.344 | 1.455 | 1.689 |
| UBUS | GAS | 22.860 | 4.572 | 2.171 | 1.332 | 1.061 | 0.882 | 0.788 | 0.733 | 0.728 | 0.741 | 0.816 | 0.963 |
| T7 | NG | 0.314 | 3.913 | 1.800 | 0.800 | 0.624 | 0.490 | 0.389 | 0.315 | 0.263 | 0.230 | 0.219 | 0.219 |
| UBUS | NG | 30.134 | 6.027 | 2.304 | 0.739 | 0.591 | 0.478 | 0.400 | 0.355 | 0.344 | 0.367 | 0.424 | 0.516 |

**EMFAC2014 Running Losses Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | GAS | | 0.452 | 0.151 | 0.090 | 0.075 | 0.065 | 0.057 | 0.050 | 0.045 | 0.041 | 0.038 | 0.035 |
| LDT1 | GAS | | 1.632 | 0.544 | 0.326 | 0.272 | 0.233 | 0.204 | 0.181 | 0.163 | 0.148 | 0.136 | 0.126 |
| LDT2 | GAS | | 0.623 | 0.208 | 0.125 | 0.104 | 0.089 | 0.078 | 0.069 | 0.062 | 0.057 | 0.052 | 0.048 |
| LHDT1 | GAS | | 1.960 | 0.653 | 0.392 | 0.327 | 0.280 | 0.245 | 0.218 | 0.196 | 0.178 | 0.163 | 0.151 |
| LHDT2 | GAS | | 1.741 | 0.580 | 0.348 | 0.290 | 0.249 | 0.218 | 0.193 | 0.174 | 0.158 | 0.145 | 0.134 |
| MCY | GAS | | 0.620 | 0.207 | 0.124 | 0.103 | 0.089 | 0.078 | 0.069 | 0.062 | 0.056 | 0.052 | 0.048 |
| MDV | GAS | | 0.523 | 0.174 | 0.105 | 0.087 | 0.075 | 0.065 | 0.058 | 0.052 | 0.048 | 0.044 | 0.040 |
| MH | GAS | | 8.274 | 2.758 | 1.655 | 1.379 | 1.182 | 1.034 | 0.919 | 0.827 | 0.752 | 0.689 | 0.636 |
| OBUS | GAS | | 0.748 | 0.249 | 0.150 | 0.125 | 0.107 | 0.094 | 0.083 | 0.075 | 0.068 | 0.062 | 0.058 |
| SBUS | GAS | | 2.808 | 0.936 | 0.562 | 0.468 | 0.401 | 0.351 | 0.312 | 0.281 | 0.255 | 0.234 | 0.216 |
| HHDT | GAS | | 1.705 | 0.568 | 0.341 | 0.284 | 0.244 | 0.213 | 0.189 | 0.171 | 0.155 | 0.142 | 0.131 |
| MHDT | GAS | | 5.579 | 1.860 | 1.116 | 0.930 | 0.797 | 0.697 | 0.620 | 0.558 | 0.507 | 0.465 | 0.429 |
| UBUS | GAS | | 2.585 | 0.862 | 0.517 | 0.431 | 0.369 | 0.323 | 0.287 | 0.258 | 0.235 | 0.215 | 0.199 |

**EMFAC2014 Total Emission Factors (grams/mile)**

| | | idle | 5mph | 15mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2.418 | 0.484 | 0.247 | 0.132 | 0.106 | 0.089 | 0.079 | 0.076 | 0.075 | 0.078 | 0.084 | 0.093 |
| LDT1 | DSL | 4.895 | 0.979 | 0.483 | 0.292 | 0.244 | 0.214 | 0.196 | 0.187 | 0.189 | 0.197 | 0.216 | 0.249 |
| LDT2 | DSL | 1.386 | 0.277 | 0.111 | 0.038 | 0.030 | 0.025 | 0.022 | 0.020 | 0.019 | 0.019 | 0.020 | 0.023 |
| LHDT1 | DSL | 3.173 | 0.705 | 0.338 | 0.185 | 0.154 | 0.134 | 0.122 | 0.116 | 0.116 | 0.121 | 0.131 | 0.153 |
| LHDT2 | DSL | 3.173 | 0.702 | 0.333 | 0.177 | 0.147 | 0.127 | 0.115 | 0.109 | 0.108 | 0.113 | 0.122 | 0.140 |
| MDV | DSL | 1.329 | 0.266 | 0.116 | 0.049 | 0.039 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 | 0.031 | 0.035 |
| MH | DSL | 5.680 | 1.136 | 0.450 | 0.148 | 0.121 | 0.100 | 0.085 | 0.076 | 0.071 | 0.072 | 0.078 | 0.091 |
| OBUS | DSL | 6.323 | 5.537 | 2.260 | 0.789 | 0.632 | 0.512 | 0.426 | 0.371 | 0.348 | 0.354 | 0.368 | 0.368 |
| SBUS | DSL | 3.985 | 4.949 | 2.084 | 0.708 | 0.580 | 0.482 | 0.411 | 0.368 | 0.351 | 0.362 | 0.377 | 0.377 |
| T6 | DSL | 3.513 | 4.742 | 1.913 | 0.659 | 0.536 | 0.441 | 0.372 | 0.327 | 0.307 | 0.315 | 0.325 | 0.332 |
| T7 | DSL | 6.801 | 6.995 | 2.858 | 1.032 | 0.832 | 0.677 | 0.563 | 0.487 | 0.447 | 0.440 | 0.449 | 0.450 |
| UBUS | DSL | 29.939 | 5.988 | 2.668 | 0.929 | 0.783 | 0.666 | 0.580 | 0.524 | 0.501 | 0.509 | 0.545 | 0.615 |
| LDA | GAS | 1.444 | 0.741 | 0.289 | 0.167 | 0.136 | 0.115 | 0.101 | 0.092 | 0.086 | 0.083 | 0.083 | 0.085 |
| LDT1 | GAS | 3.738 | 2.379 | 0.928 | 0.543 | 0.445 | 0.377 | 0.332 | 0.300 | 0.280 | 0.269 | 0.264 | 0.268 |
| LDT2 | GAS | 1.632 | 0.949 | 0.367 | 0.211 | 0.172 | 0.145 | 0.127 | 0.115 | 0.107 | 0.103 | 0.101 | 0.102 |
| LHDT1 | GAS | 15.853 | 2.495 | 0.918 | 0.540 | 0.446 | 0.380 | 0.335 | 0.301 | 0.278 | 0.263 | 0.255 | 0.259 |
| LHDT2 | GAS | 16.115 | 2.150 | 0.777 | 0.456 | 0.376 | 0.321 | 0.281 | 0.252 | 0.232 | 0.218 | 0.210 | 0.210 |
| MCY | GAS | 66.389 | 13.898 | 6.411 | 3.671 | 2.993 | 2.562 | 2.300 | 2.166 | 2.137 | 2.212 | 2.400 | 2.733 |
| MDV | GAS | 2.300 | 0.983 | 0.393 | 0.223 | 0.180 | 0.150 | 0.132 | 0.119 | 0.112 | 0.109 | 0.109 | 0.112 |
| MH | GAS | 9.694 | 10.212 | 3.832 | 2.287 | 1.887 | 1.607 | 1.418 | 1.280 | 1.178 | 1.105 | 1.065 | 1.088 |
| OBUS | GAS | 16.414 | 1.596 | 0.604 | 0.337 | 0.274 | 0.232 | 0.203 | 0.185 | 0.174 | 0.171 | 0.174 | 0.182 |
| SBUS | GAS | 16.526 | 6.245 | 2.568 | 1.502 | 1.234 | 1.055 | 0.936 | 0.860 | 0.818 | 0.808 | 0.829 | 0.999 |
| T6 | GAS | 21.807 | 3.521 | 1.407 | 0.798 | 0.650 | 0.553 | 0.488 | 0.444 | 0.421 | 0.420 | 0.429 | 0.466 |
| T7 | GAS | 46.646 | 14.908 | 6.145 | 3.524 | 2.858 | 2.417 | 2.139 | 1.968 | 1.879 | 1.851 | 1.920 | 2.118 |
| UBUS | GAS | 22.860 | 7.157 | 3.033 | 1.849 | 1.492 | 1.251 | 1.111 | 1.020 | 0.987 | 0.976 | 1.031 | 1.162 |
| T7 | NG | 0.314 | 3.913 | 1.800 | 0.800 | 0.624 | 0.490 | 0.389 | 0.315 | 0.263 | 0.230 | 0.219 | 0.219 |
| UBUS | NG | 30.134 | 6.027 | 2.304 | 0.739 | 0.591 | 0.478 | 0.400 | 0.355 | 0.344 | 0.367 | 0.424 | 0.516 |

# World Logistics Center ROG

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 6 |
| 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 6 | 13 |
| 1 | 8 | 3 | 4 | 3 | 2 | 0 | 9 | 31 | 60 |
| 2 | 3 | 1 | 1 | 1 | 1 | 0 | 6 | 57 | 71 |
| 3 | 3 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | 8 |
| 4 | 16 | 6 | 7 | 6 | 3 | 0 | 17 | 106 | 161 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 8 |
| 7 | 4 | 1 | 2 | 1 | 1 | 0 | 3 | 5 | 17 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 2 | 1 | 1 | 1 | 1 | 0 | 3 | 23 | 31 |
| **Total** | **40** | **15** | **17** | **15** | **11** | **1** | **44** | **234** | **377** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 6 |
| 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 6 | 13 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2** | **1** | **1** | **1** | **2** | **0** | **3** | **10** | **20** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 6 | 2 | 3 | 2 | 2 | 0 | 7 | 29 | 53 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **6** | **2** | **3** | **2** | **2** | **0** | **7** | **29** | **53** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 7 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 3 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | 8 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 8 |
| 7 | 4 | 1 | 2 | 1 | 1 | 0 | 3 | 5 | 17 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **10** | **4** | **5** | **4** | **2** | **0** | **7** | **9** | **41** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 3 | 1 | 1 | 1 | 1 | 0 | 6 | 55 | 70 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 16 | 6 | 7 | 6 | 3 | 0 | 17 | 103 | 158 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 2 | 1 | 1 | 1 | 1 | 0 | 3 | 22 | 30 |
| **Total** | **21** | **8** | **9** | **8** | **5** | **1** | **27** | **180** | **257** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **6** | **6** |

**World Logistics Center** **NOx**

**Project Phase 1 (2012)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 1.2237 | 3.5160 | 2.3219 | 3.1765 | 1.3599 | 1.3835 | 1.8742 | 42.6671 |
| 0 | 0.1943 | 0.5487 | 0.3668 | 0.4936 | 0.6400 | 0.5911 | 2.0789 | 6.9120 |
| 1 | 0.1408 | 0.3844 | 0.2486 | 0.3386 | 0.5537 | 0.5020 | 1.7355 | 6.0139 |
| 2 | 0.1376 | 0.3947 | 0.2418 | 0.3306 | 0.4894 | 0.2342 | 1.4688 | 5.3555 |
| 3 | 0.1344 | 0.3719 | 0.2342 | 0.3206 | 0.5067 | 0.4480 | 1.5522 | 5.5211 |
| 4 | 0.1473 | 0.4402 | 0.2619 | 0.3598 | 0.4986 | 0.4287 | 1.4967 | 5.3991 |
| 5 | 0.1494 | 0.4088 | 0.2675 | 0.3634 | 0.5537 | 0.5020 | 1.7355 | 6.0139 |
| 6 | 0.1362 | 0.3740 | 0.2388 | 0.3258 | 0.5067 | 0.4480 | 1.5522 | 5.5211 |
| 7 | 0.1350 | 0.3793 | 0.2355 | 0.3227 | 0.4961 | 0.4351 | 1.5038 | 5.4034 |
| 8 | 0.1607 | 0.4427 | 0.2925 | 0.3964 | 0.5537 | 0.5020 | 1.7355 | 6.0139 |
| 9 | 0.1416 | 0.4121 | 0.2488 | 0.3420 | 0.4903 | 0.4250 | 1.4621 | 5.3616 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 2.3979 | 4.9779 | 1.0451 | 1.1373 | 75.0510 | 75.0510 | 111.2046 | 73.7556 |
| 0 | 0.5100 | 1.0828 | 0.1704 | 0.1920 | 4.1803 | 3.8833 | 11.5366 | 17.1703 |
| 1 | 0.5414 | 1.2845 | 0.1384 | 0.1746 | 4.5530 | 4.2122 | 8.1763 | 12.1226 |
| 2 | 0.6277 | 1.5149 | 0.1555 | 0.2022 | 5.4410 | 4.9704 | 6.8778 | 9.9929 |
| 3 | 0.5798 | 1.3968 | 0.1426 | 0.1833 | 4.9951 | 4.5814 | 7.3344 | 10.7463 |
| 4 | 0.6606 | 1.6259 | 0.1652 | 0.2213 | 5.9271 | 5.3916 | 6.8506 | 9.7355 |
| 5 | 0.5329 | 1.2364 | 0.1395 | 0.1701 | 4.5530 | 4.2122 | 8.1763 | 12.1226 |
| 6 | 0.5586 | 1.3397 | 0.1407 | 0.1803 | 4.9951 | 4.5814 | 7.3344 | 10.7463 |
| 7 | 0.6024 | 1.4623 | 0.1490 | 0.1922 | 5.2221 | 4.7745 | 7.0799 | 10.2983 |
| 8 | 0.5227 | 1.1876 | 0.1428 | 0.1696 | 4.5530 | 4.2122 | 8.1763 | 12.1226 |
| 9 | 0.6452 | 1.5753 | 0.1576 | 0.2059 | 5.6815 | 5.1813 | 6.7961 | 9.8108 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2.398 | 0.480 | 0.510 | 0.523 | 0.533 | 0.541 | 0.559 | 0.580 | 0.602 | 0.628 | 0.645 | 0.661 |
| LDT1 | DSL | 4.978 | 0.996 | 1.083 | 1.188 | 1.236 | 1.285 | 1.340 | 1.397 | 1.462 | 1.515 | 1.575 | 1.626 |
| LDT2 | DSL | 1.045 | 0.209 | 0.170 | 0.143 | 0.139 | 0.138 | 0.141 | 0.143 | 0.149 | 0.155 | 0.158 | 0.165 |
| LHDT1 | DSL | 75.051 | 3.883 | 4.180 | 4.553 | 4.772 | 4.995 | 5.222 | 5.441 | 5.682 | 5.927 | 6.110 | 6.435 |
| LHDT2 | DSL | 75.051 | 3.581 | 3.883 | 4.212 | 4.397 | 4.581 | 4.775 | 4.970 | 5.181 | 5.392 | 5.578 | 5.812 |
| MDV | DSL | 1.137 | 0.227 | 0.192 | 0.170 | 0.170 | 0.175 | 0.180 | 0.183 | 0.192 | 0.202 | 0.206 | 0.221 |
| MH | DSL | 85.011 | 17.002 | 9.939 | 6.848 | 6.435 | 6.124 | 5.899 | 5.740 | 5.682 | 5.703 | 5.792 | 5.978 |
| OBUS | DSL | 93.585 | 22.965 | 13.577 | 9.719 | 9.224 | 8.851 | 8.581 | 8.403 | 8.313 | 8.306 | 8.327 | 8.327 |
| SBUS | DSL | 109.038 | 24.356 | 14.154 | 10.323 | 9.928 | 9.634 | 9.434 | 9.328 | 9.314 | 9.392 | 9.460 | 9.460 |
| T6 | DSL | 111.205 | 19.181 | 11.537 | 8.176 | 7.701 | 7.334 | 7.080 | 6.878 | 6.796 | 6.851 | 6.865 | 6.970 |
| T7 | DSL | 73.756 | 28.460 | 17.170 | 12.123 | 11.342 | 10.746 | 10.298 | 9.993 | 9.811 | 9.736 | 9.755 | 9.729 |
| UBUS | DSL | 311.876 | 62.375 | 40.268 | 30.493 | 28.732 | 27.364 | 26.441 | 25.852 | 25.699 | 25.919 | 26.461 | 27.560 |
| LDA | GAS | 1.224 | 0.245 | 0.194 | 0.161 | 0.149 | 0.141 | 0.136 | 0.134 | 0.135 | 0.138 | 0.142 | 0.147 |
| LDT1 | GAS | 3.516 | 0.703 | 0.549 | 0.443 | 0.409 | 0.384 | 0.374 | 0.372 | 0.379 | 0.395 | 0.412 | 0.440 |
| LDT2 | GAS | 2.322 | 0.464 | 0.367 | 0.293 | 0.267 | 0.249 | 0.239 | 0.234 | 0.236 | 0.242 | 0.249 | 0.262 |
| LHDT1 | GAS | 1.360 | 0.764 | 0.640 | 0.554 | 0.526 | 0.507 | 0.496 | 0.489 | 0.490 | 0.499 | 0.509 | 0.538 |
| LHDT2 | GAS | 1.383 | 0.715 | 0.591 | 0.502 | 0.471 | 0.448 | 0.435 | 0.426 | 0.425 | 0.429 | 0.438 | 0.464 |
| MCY | GAS | 6.281 | 1.256 | 1.123 | 1.066 | 1.056 | 1.057 | 1.066 | 1.082 | 1.105 | 1.135 | 1.171 | 1.214 |
| MDV | GAS | 3.177 | 0.635 | 0.494 | 0.396 | 0.363 | 0.339 | 0.326 | 0.321 | 0.323 | 0.331 | 0.342 | 0.360 |
| MH | GAS | 7.414 | 1.483 | 1.347 | 1.250 | 1.215 | 1.190 | 1.190 | 1.193 | 1.199 | 1.213 | 1.233 | 1.313 |
| OBUS | GAS | 1.401 | 1.570 | 1.192 | 0.981 | 0.917 | 0.872 | 0.839 | 0.818 | 0.814 | 0.830 | 0.851 | 0.875 |
| SBUS | GAS | 1.394 | 2.318 | 1.803 | 1.515 | 1.427 | 1.367 | 1.330 | 1.313 | 1.317 | 1.340 | 1.383 | 1.516 |
| T6 | GAS | 1.874 | 2.602 | 2.079 | 1.735 | 1.627 | 1.552 | 1.504 | 1.469 | 1.462 | 1.497 | 1.529 | 1.603 |
| T7 | GAS | 42.667 | 8.533 | 6.912 | 6.014 | 5.727 | 5.521 | 5.403 | 5.356 | 5.362 | 5.399 | 5.524 | 5.757 |
| UBUS | GAS | 19.322 | 3.864 | 3.177 | 2.810 | 2.692 | 2.605 | 2.560 | 2.539 | 2.557 | 2.588 | 2.662 | 2.784 |
| T7 | NG | 57.886 | 19.601 | 12.622 | 9.044 | 8.419 | 7.923 | 7.534 | 7.239 | 7.032 | 6.907 | 6.874 | 6.874 |
| UBUS | NG | 150.254 | 30.051 | 16.472 | 11.944 | 11.702 | 11.539 | 11.455 | 11.448 | 11.518 | 11.664 | 11.888 | 12.188 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center NOx

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 33 | 51 |
| 0 | 2 | 1 | 1 | 1 | 1 | 0 | 8 | 37 | 49 |
| 1 | 10 | 3 | 6 | 7 | 8 | 2 | 87 | 341 | 464 |
| 2 | 5 | 2 | 3 | 3 | 8 | 2 | 106 | 1076 | 1207 |
| 3 | 4 | 1 | 2 | 3 | 2 | 1 | 23 | 9 | 45 |
| 4 | 28 | 10 | 17 | 18 | 26 | 7 | 301 | 2168 | 2574 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| 6 | 3 | 1 | 2 | 2 | 2 | 0 | 17 | 23 | 49 |
| 7 | 6 | 2 | 3 | 4 | 4 | 1 | 47 | 86 | 153 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 3 | 1 | 2 | 2 | 4 | 1 | 54 | 477 | 545 |
| **Total** | **61** | **20** | **37** | **40** | **57** | **15** | **661** | **4250** | **5141** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 33 | 51 |
| 0 | 2 | 1 | 1 | 1 | 1 | 0 | 8 | 37 | 49 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2** | **1** | **1** | **1** | **3** | **1** | **23** | **70** | **101** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 8 | 2 | 5 | 5 | 7 | 2 | 75 | 324 | 428 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **8** | **2** | **5** | **5** | **7** | **2** | **75** | **324** | **428** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 2 | 1 | 1 | 2 | 1 | 0 | 11 | 17 | 36 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 4 | 1 | 2 | 3 | 2 | 1 | 23 | 9 | 45 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| 6 | 3 | 1 | 2 | 2 | 2 | 0 | 17 | 23 | 49 |
| 7 | 6 | 2 | 3 | 4 | 4 | 1 | 47 | 86 | 153 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **15** | **5** | **9** | **10** | **9** | **2** | **100** | **135** | **286** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 5 | 2 | 3 | 3 | 8 | 2 | 106 | 1053 | 1183 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 28 | 10 | 17 | 18 | 26 | 7 | 301 | 2104 | 2511 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 3 | 1 | 2 | 2 | 4 | 1 | 54 | 441 | 509 |
| **Total** | **36** | **12** | **22** | **24** | **38** | **10** | **462** | **3598** | **4203** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 23 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 64 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 36 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **123** | **123** |

## World Logistics Center

**Project Phase 1 (2012)**

# N2O

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 0 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 1 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 2 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 3 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 4 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 5 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 6 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 7 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 8 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 9 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 0 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 1 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 2 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 3 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 4 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 5 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 6 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 7 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 8 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 9 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |

Source: United States Environmental Protection Agency. April 4, 2014. Emission Factors for Greenhouse Gas Inventories. www.epa.gov/climateleadership/documents/emission-factors.pdf. N2O for Gasoline Vehicles is from Table 3; diesel vehicles from Table 4.

# World Logistics Center N2O

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.005 |
| 0 | 0.029 | 0.006 | 0.018 | 0.015 | 0.006 | 0.001 | 0.005 | 0.011 | 0.090 |
| 1 | 0.257 | 0.055 | 0.164 | 0.130 | 0.059 | 0.008 | 0.081 | 0.142 | 0.897 |
| 2 | 0.136 | 0.029 | 0.087 | 0.069 | 0.057 | 0.007 | 0.118 | 0.543 | 1.046 |
| 3 | 0.102 | 0.022 | 0.065 | 0.052 | 0.015 | 0.002 | 0.024 | 0.004 | 0.287 |
| 4 | 0.666 | 0.143 | 0.425 | 0.337 | 0.166 | 0.021 | 0.336 | 1.122 | 3.216 |
| 5 | 0.005 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.002 | 0.000 | 0.014 |
| 6 | 0.077 | 0.017 | 0.049 | 0.039 | 0.011 | 0.001 | 0.017 | 0.011 | 0.222 |
| 7 | 0.153 | 0.033 | 0.098 | 0.077 | 0.029 | 0.004 | 0.051 | 0.042 | 0.486 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.084 | 0.018 | 0.054 | 0.043 | 0.025 | 0.003 | 0.061 | 0.245 | 0.533 |
| **Total** | **1.509** | **0.324** | **0.963** | **0.764** | **0.371** | **0.048** | **0.697** | **2.122** | **6.798** |

**Area Source Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.005 |
| 0 | 0.029 | 0.006 | 0.018 | 0.015 | 0.006 | 0.001 | 0.005 | 0.011 | 0.090 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.029** | **0.006** | **0.018** | **0.015** | **0.007** | **0.001** | **0.006** | **0.013** | **0.095** |

**Internal Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.198 | 0.043 | 0.127 | 0.100 | 0.052 | 0.007 | 0.071 | 0.135 | 0.732 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.198** | **0.043** | **0.127** | **0.100** | **0.052** | **0.007** | **0.071** | **0.135** | **0.732** |

**Surface Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.059 | 0.013 | 0.038 | 0.030 | 0.008 | 0.001 | 0.011 | 0.007 | 0.165 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.102 | 0.022 | 0.065 | 0.052 | 0.015 | 0.002 | 0.024 | 0.004 | 0.287 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.005 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.002 | 0.000 | 0.014 |
| 6 | 0.077 | 0.017 | 0.049 | 0.039 | 0.011 | 0.001 | 0.017 | 0.011 | 0.222 |
| 7 | 0.153 | 0.033 | 0.098 | 0.077 | 0.029 | 0.004 | 0.051 | 0.042 | 0.486 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.396** | **0.085** | **0.253** | **0.200** | **0.064** | **0.008** | **0.105** | **0.064** | **1.175** |

**Freeway Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.136 | 0.029 | 0.087 | 0.069 | 0.057 | 0.007 | 0.118 | 0.531 | 1.034 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.666 | 0.143 | 0.425 | 0.337 | 0.166 | 0.021 | 0.336 | 1.089 | 3.183 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.084 | 0.018 | 0.054 | 0.043 | 0.025 | 0.003 | 0.061 | 0.227 | 0.515 |
| **Total** | **0.886** | **0.190** | **0.565** | **0.449** | **0.248** | **0.032** | **0.515** | **1.847** | **4.733** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.012 | 0.012 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.033 | 0.033 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.018 | 0.018 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.063** | **0.063** |

**World Logistics Center**
**Project Phase 1 (2012)**

# CO

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 17.3092 | 50.1435 | 21.3204 | 27.9734 | 132.9483 | 134.4640 | 328.7340 | 772.9642 |
| 0 | 2.6021 | 7.2618 | 3.3708 | 4.2858 | 4.4063 | 3.2571 | 14.0447 | 100.6371 |
| 1 | 1.6632 | 4.2858 | 2.1399 | 2.6995 | 3.1421 | 2.3947 | 10.5666 | 74.4589 |
| 2 | 1.3747 | 3.7427 | 1.7329 | 2.2168 | 2.3194 | 1.8598 | 7.9127 | 55.2254 |
| 3 | 1.4593 | 3.7935 | 1.8598 | 2.3611 | 2.5319 | 1.9325 | 8.7938 | 60.3768 |
| 4 | 1.4059 | 4.0715 | 1.7063 | 2.2250 | 2.4599 | 1.7724 | 8.1336 | 56.0021 |
| 5 | 1.8294 | 4.7639 | 2.3644 | 2.9838 | 3.1421 | 2.3947 | 10.5666 | 74.4589 |
| 6 | 1.5451 | 3.9865 | 1.9820 | 2.5038 | 2.5319 | 1.9325 | 8.7938 | 60.3768 |
| 7 | 1.4032 | 3.7152 | 1.7792 | 2.2686 | 2.3942 | 1.8165 | 8.2952 | 56.9596 |
| 8 | 2.0334 | 5.3865 | 2.6364 | 3.3316 | 3.1421 | 2.3947 | 10.5666 | 74.4589 |
| 9 | 1.3711 | 3.8280 | 1.6927 | 2.1964 | 2.3382 | 1.7238 | 7.8020 | 55.0351 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 16.8592 | 20.9614 | 8.8119 | 15.0193 | 26.3000 | 26.3000 | 28.2879 | 20.1744 |
| 0 | 1.5389 | 2.1693 | 0.7002 | 1.1792 | 1.4443 | 1.3906 | 3.4101 | 6.1729 |
| 1 | 0.5314 | 1.1095 | 0.1585 | 0.2607 | 0.8719 | 0.8192 | 1.9453 | 3.5234 |
| 2 | 0.5721 | 1.3313 | 0.1441 | 0.2330 | 0.6823 | 0.6299 | 1.1303 | 2.0105 |
| 3 | 0.4945 | 1.0947 | 0.1345 | 0.2199 | 0.6957 | 0.6467 | 1.4307 | 2.5650 |
| 4 | 0.8039 | 1.9930 | 0.1946 | 0.3178 | 0.8275 | 0.7582 | 1.0400 | 1.8109 |
| 5 | 0.6076 | 1.2080 | 0.1861 | 0.3040 | 0.8719 | 0.8192 | 1.9453 | 3.5234 |
| 6 | 0.4971 | 1.0747 | 0.1431 | 0.2351 | 0.6957 | 0.6467 | 1.4307 | 2.5650 |
| 7 | 0.5167 | 1.1804 | 0.1357 | 0.2202 | 0.6719 | 0.6218 | 1.2593 | 2.2417 |
| 8 | 0.7279 | 1.3864 | 0.2316 | 0.3777 | 0.8719 | 0.8192 | 1.9453 | 3.5234 |
| 9 | 0.6639 | 1.5881 | 0.1598 | 0.2579 | 0.7320 | 0.6734 | 1.0576 | 1.8691 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 16.8592 | 3.3718 | 1.5389 | 0.7279 | 0.6076 | 0.5314 | 0.4971 | 0.4945 | 0.5167 | 0.5721 | 0.6639 | 0.8039 |
| LDT1 | DSL | 20.9614 | 4.1923 | 2.1693 | 1.3864 | 1.2080 | 1.1095 | 1.0747 | 1.0947 | 1.1804 | 1.3313 | 1.5881 | 1.9930 |
| LDT2 | DSL | 8.8119 | 1.7624 | 0.7002 | 0.2316 | 0.1861 | 0.1585 | 0.1431 | 0.1345 | 0.1357 | 0.1441 | 0.1598 | 0.1946 |
| LHDT1 | DSL | 26.3000 | 2.8717 | 1.4443 | 0.8719 | 0.7588 | 0.6957 | 0.6719 | 0.6823 | 0.7320 | 0.8275 | 0.9773 | 1.2406 |
| LHDT2 | DSL | 26.3000 | 2.7841 | 1.3906 | 0.8192 | 0.7092 | 0.6467 | 0.6218 | 0.6299 | 0.6734 | 0.7582 | 0.8979 | 1.1259 |
| MDV | DSL | 15.0193 | 3.0039 | 1.1792 | 0.3777 | 0.3040 | 0.2607 | 0.2351 | 0.2199 | 0.2202 | 0.2330 | 0.2579 | 0.3178 |
| MH | DSL | 11.5016 | 2.3003 | 1.2931 | 0.7117 | 0.6071 | 0.5231 | 0.4602 | 0.4140 | 0.3863 | 0.3763 | 0.3830 | 0.4099 |
| OBUS | DSL | 29.2465 | 7.3381 | 4.4001 | 2.5344 | 2.1265 | 1.7978 | 1.5423 | 1.3554 | 1.2343 | 1.1769 | 1.1699 | 1.1699 |
| SBUS | DSL | 28.1660 | 5.4319 | 3.6288 | 2.2748 | 1.9150 | 1.6139 | 1.3701 | 1.1828 | 1.0514 | 0.9757 | 0.9577 | 0.9577 |
| T6 | DSL | 28.2879 | 5.8277 | 3.4101 | 1.9453 | 1.6592 | 1.4307 | 1.2593 | 1.1303 | 1.0576 | 1.0400 | 1.0425 | 1.0580 |
| T7 | DSL | 20.1744 | 10.6843 | 6.1729 | 3.5234 | 2.9885 | 2.5650 | 2.2417 | 2.0105 | 1.8691 | 1.8109 | 1.8081 | 1.8135 |
| UBUS | DSL | 96.8566 | 19.3713 | 14.7816 | 10.5748 | 8.9524 | 7.5605 | 6.4419 | 5.5097 | 4.8533 | 4.4087 | 4.1487 | 4.2052 |
| LDA | GAS | 17.3092 | 3.4618 | 2.6021 | 2.0334 | 1.8294 | 1.6632 | 1.5451 | 1.4593 | 1.4032 | 1.3747 | 1.3711 | 1.4059 |
| LDT1 | GAS | 50.1435 | 10.0287 | 7.2618 | 5.3865 | 4.7639 | 4.2858 | 3.9865 | 3.7935 | 3.7152 | 3.7427 | 3.8280 | 4.0715 |
| LDT2 | GAS | 21.3204 | 4.2641 | 3.3708 | 2.6364 | 2.3644 | 2.1399 | 1.9820 | 1.8598 | 1.7792 | 1.7329 | 1.6927 | 1.7063 |
| LHDT1 | GAS | 132.9483 | 6.6477 | 4.4063 | 3.1421 | 2.7796 | 2.5319 | 2.3942 | 2.3194 | 2.3382 | 2.4599 | 2.6947 | 3.2289 |
| LHDT2 | GAS | 134.4640 | 4.6603 | 3.2571 | 2.3947 | 2.1270 | 1.9325 | 1.8165 | 1.7382 | 1.7238 | 1.7724 | 1.8939 | 2.2190 |
| MCY | GAS | 334.0416 | 66.8083 | 38.2682 | 26.4268 | 23.3959 | 21.5529 | 20.6487 | 20.6030 | 21.4602 | 23.4310 | 26.8801 | 32.5564 |
| MDV | GAS | 27.9734 | 5.5947 | 4.2858 | 3.3316 | 2.9838 | 2.6995 | 2.5038 | 2.3611 | 2.2686 | 2.2168 | 2.1964 | 2.2250 |
| MH | GAS | 185.5518 | 37.1104 | 23.5123 | 15.7002 | 13.4330 | 11.9820 | 11.4667 | 11.4222 | 11.7473 | 12.5781 | 14.2463 | 18.3746 |
| OBUS | GAS | 135.7767 | 7.5104 | 5.5445 | 4.4887 | 4.1337 | 3.8486 | 3.5911 | 3.3866 | 3.2439 | 3.1764 | 3.1482 | 3.1151 |
| SBUS | GAS | 133.8322 | 46.0293 | 28.6715 | 20.8384 | 18.6227 | 17.1269 | 16.2092 | 15.8121 | 15.9498 | 16.7153 | 18.3084 | 25.1599 |
| T6 | GAS | 328.7340 | 20.0288 | 14.0447 | 10.5666 | 9.5228 | 8.7938 | 8.2952 | 7.9127 | 7.8020 | 8.1336 | 8.5759 | 9.7381 |
| T7 | GAS | 772.9642 | 154.5928 | 100.6371 | 74.4589 | 66.2370 | 60.3768 | 56.9596 | 55.2254 | 55.0351 | 56.0021 | 60.1774 | 70.0792 |
| UBUS | GAS | 182.8062 | 36.5612 | 23.1374 | 17.6652 | 15.5853 | 14.0989 | 13.2769 | 12.8344 | 12.8755 | 13.0885 | 14.3714 | 16.6083 |
| T7 | NG | 14.2695 | 30.9663 | 17.6004 | 9.3293 | 6.9104 | 5.1280 | 3.8157 | 2.8509 | 2.1432 | 1.6259 | 1.4228 | 1.4228 |
| UBUS | NG | 265.1911 | 53.0382 | 28.6941 | 14.8395 | 12.5838 | 10.7795 | 9.3935 | 8.4099 | 7.8199 | 7.6187 | 7.8166 | 8.4079 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 12 | 1 | 15 | 17 | 45 |
| 0 | 21 | 7 | 9 | 9 | 2 | 0 | 4 | 18 | 71 |
| 1 | 119 | 36 | 53 | 53 | 14 | 1 | 45 | 145 | 466 |
| 2 | 52 | 17 | 23 | 23 | 10 | 1 | 45 | 347 | 516 |
| 3 | 41 | 13 | 18 | 19 | 3 | 0 | 11 | 3 | 108 |
| 4 | 260 | 88 | 110 | 114 | 30 | 3 | 126 | 676 | 1407 |
| 5 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 7 |
| 6 | 33 | 10 | 15 | 15 | 2 | 0 | 8 | 8 | 91 |
| 7 | 60 | 19 | 26 | 27 | 5 | 0 | 21 | 29 | 186 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 32 | 10 | 14 | 14 | 4 | 0 | 22 | 149 | 247 |
| **Total** | **621** | **200** | **270** | **275** | **82** | **8** | **297** | **1393** | **3144** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 12 | 1 | 15 | 17 | 45 |
| 0 | 21 | 7 | 9 | 9 | 2 | 0 | 4 | 18 | 71 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **21** | **7** | **9** | **9** | **14** | **2** | **19** | **35** | **115** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 92 | 28 | 41 | 41 | 12 | 1 | 40 | 137 | 391 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **92** | **28** | **41** | **41** | **12** | **1** | **40** | **137** | **391** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 27 | 8 | 12 | 12 | 2 | 0 | 6 | 7 | 75 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 41 | 13 | 18 | 19 | 3 | 0 | 11 | 3 | 108 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 7 |
| 6 | 33 | 10 | 15 | 15 | 2 | 0 | 8 | 8 | 91 |
| 7 | 60 | 19 | 26 | 27 | 5 | 0 | 21 | 29 | 186 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **164** | **50** | **73** | **73** | **12** | **1** | **46** | **48** | **467** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 52 | 17 | 23 | 23 | 10 | 1 | 45 | 339 | 509 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 260 | 88 | 110 | 114 | 30 | 3 | 126 | 656 | 1387 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 32 | 10 | 14 | 14 | 4 | 0 | 22 | 138 | 236 |
| **Total** | **344** | **115** | **146** | **151** | **44** | **4** | **193** | **1134** | **2132** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **39** | **39** |

# PM10

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0723 | 0.1616 | 0.0689 | 0.0673 | 0.0586 | 0.0490 | 0.0632 | 0.0833 |
| 0 | 0.0065 | 0.0156 | 0.0064 | 0.0062 | 0.0053 | 0.0043 | 0.0058 | 0.0082 |
| 1 | 0.0022 | 0.0055 | 0.0021 | 0.0021 | 0.0028 | 0.0023 | 0.0031 | 0.0048 |
| 2 | 0.0018 | 0.0044 | 0.0017 | 0.0016 | 0.0015 | 0.0017 | 0.0017 | 0.0028 |
| 3 | 0.0018 | 0.0044 | 0.0017 | 0.0017 | 0.0018 | 0.0015 | 0.0021 | 0.0033 |
| 4 | 0.0021 | 0.0051 | 0.0020 | 0.0019 | 0.0015 | 0.0012 | 0.0018 | 0.0027 |
| 5 | 0.0027 | 0.0067 | 0.0026 | 0.0026 | 0.0028 | 0.0023 | 0.0031 | 0.0048 |
| 6 | 0.0019 | 0.0048 | 0.0018 | 0.0018 | 0.0018 | 0.0015 | 0.0021 | 0.0033 |
| 7 | 0.0017 | 0.0043 | 0.0016 | 0.0016 | 0.0016 | 0.0013 | 0.0019 | 0.0029 |
| 8 | 0.0035 | 0.0085 | 0.0034 | 0.0033 | 0.0028 | 0.0023 | 0.0031 | 0.0048 |
| 9 | 0.0019 | 0.0046 | 0.0018 | 0.0017 | 0.0015 | 0.0012 | 0.0017 | 0.0027 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 1.4363 | 3.6295 | 0.2507 | 0.4592 | 0.8486 | 0.8532 | 1.1837 | 1.0693 |
| 0 | 0.1610 | 0.3578 | 0.0289 | 0.0513 | 0.0722 | 0.0720 | 0.5659 | 0.6050 |
| 1 | 0.0646 | 0.1620 | 0.0129 | 0.0226 | 0.0441 | 0.0440 | 0.3203 | 0.3562 |
| 2 | 0.0579 | 0.1497 | 0.0120 | 0.0210 | 0.0281 | 0.0276 | 0.2502 | 0.2845 |
| 3 | 0.0557 | 0.1422 | 0.0112 | 0.0196 | 0.0322 | 0.0318 | 0.2568 | 0.2914 |
| 4 | 0.0691 | 0.1902 | 0.0148 | 0.0262 | 0.0294 | 0.0286 | 0.3032 | 0.3374 |
| 5 | 0.0771 | 0.1841 | 0.0147 | 0.0258 | 0.0441 | 0.0440 | 0.3203 | 0.3562 |
| 6 | 0.0581 | 0.1487 | 0.0119 | 0.0208 | 0.0322 | 0.0318 | 0.2568 | 0.2914 |
| 7 | 0.0553 | 0.1433 | 0.0114 | 0.0199 | 0.0294 | 0.0290 | 0.2471 | 0.2807 |
| 8 | 0.0950 | 0.2196 | 0.0177 | 0.0310 | 0.0441 | 0.0440 | 0.3203 | 0.3562 |
| 9 | 0.0625 | 0.1647 | 0.0127 | 0.0224 | 0.0281 | 0.0275 | 0.2687 | 0.3036 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 1.436 | 0.287 | 0.161 | 0.095 | 0.077 | 0.065 | 0.058 | 0.056 | 0.055 | 0.058 | 0.063 | 0.069 |
| LDT1 | DSL | 3.629 | 0.726 | 0.358 | 0.220 | 0.184 | 0.162 | 0.149 | 0.142 | 0.143 | 0.150 | 0.165 | 0.190 |
| LDT2 | DSL | 0.251 | 0.050 | 0.029 | 0.018 | 0.015 | 0.013 | 0.012 | 0.011 | 0.011 | 0.012 | 0.013 | 0.015 |
| LHDT1 | DSL | 0.849 | 0.139 | 0.072 | 0.044 | 0.037 | 0.032 | 0.029 | 0.028 | 0.028 | 0.029 | 0.032 | 0.037 |
| LHDT2 | DSL | 0.853 | 0.135 | 0.072 | 0.044 | 0.037 | 0.032 | 0.029 | 0.028 | 0.027 | 0.029 | 0.031 | 0.035 |
| MDV | DSL | 0.459 | 0.092 | 0.051 | 0.031 | 0.026 | 0.023 | 0.021 | 0.020 | 0.020 | 0.021 | 0.022 | 0.026 |
| MH | DSL | 2.424 | 0.485 | 0.294 | 0.176 | 0.157 | 0.146 | 0.143 | 0.147 | 0.160 | 0.180 | 0.207 | 0.243 |
| OBUS | DSL | 1.032 | 1.039 | 0.587 | 0.318 | 0.274 | 0.244 | 0.228 | 0.226 | 0.237 | 0.263 | 0.280 | 0.280 |
| SBUS | DSL | 1.317 | 1.312 | 0.743 | 0.402 | 0.344 | 0.301 | 0.273 | 0.260 | 0.262 | 0.280 | 0.294 | 0.294 |
| T6 | DSL | 1.184 | 0.958 | 0.566 | 0.320 | 0.281 | 0.257 | 0.247 | 0.250 | 0.269 | 0.303 | 0.325 | 0.328 |
| T7 | DSL | 1.069 | 1.017 | 0.605 | 0.356 | 0.317 | 0.291 | 0.281 | 0.285 | 0.304 | 0.337 | 0.360 | 0.361 |
| UBUS | DSL | 8.427 | 1.685 | 1.014 | 0.603 | 0.526 | 0.463 | 0.419 | 0.388 | 0.377 | 0.380 | 0.399 | 0.436 |
| LDA | GAS | 0.072 | 0.014 | 0.007 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT1 | GAS | 0.162 | 0.032 | 0.016 | 0.009 | 0.007 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 |
| LDT2 | GAS | 0.069 | 0.014 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LHDT1 | GAS | 0.059 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| LHDT2 | GAS | 0.049 | 0.010 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.039 | 0.008 | 0.004 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| MDV | GAS | 0.067 | 0.013 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MH | GAS | 0.107 | 0.021 | 0.011 | 0.006 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 |
| OBUS | GAS | 0.025 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.125 | 0.025 | 0.012 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.006 |
| T6 | GAS | 0.063 | 0.013 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| T7 | GAS | 0.083 | 0.017 | 0.008 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| UBUS | GAS | 0.072 | 0.014 | 0.007 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 |
| T7 | NG | 0.244 | 0.028 | 0.020 | 0.014 | 0.013 | 0.013 | 0.013 | 0.014 | 0.015 | 0.017 | 0.018 | 0.018 |
| UBUS | NG | 0.285 | 0.057 | 0.030 | 0.014 | 0.012 | 0.010 | 0.009 | 0.009 | 0.009 | 0.011 | 0.013 | 0.016 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| Source | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0370 | 0.0370 | 0.0370 | 0.0760 | 0.0890 | 0.0370 | 0.1300 | 0.0620 |
| Tires | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.012 | 0.02 |
| Total | **0.045** | **0.045** | **0.045** | **0.084** | **0.097** | **0.045** | **0.142** | **0.082** |

| Source | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.037 | 0.037 | 0.037 | 0.076 | 0.089 | 0.037 | 0.130 | 0.062 |
| Tires | 0.008 | 0.008 | 0.008 | 0.012 | 0.012 | 0.008 | 0.012 | 0.036 |
| Total | **0.045** | **0.045** | **0.045** | **0.088** | **0.101** | **0.045** | **0.142** | **0.098** |

**Paved Road Dust Emissions (pounds/day)**

| Source | PM10 |
|---|---|
| Freeways | 346 |
| Freeways to Ports | 10 |
| Internal | 49 |
| Surface | 83 |
| **Total** | **487** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 18.847 | 2.210 | 6.564 | 9.717 | 2.411 | 0.118 | 2.969 | 0.769 | 43.604 |
| Diesel | 0.057 | 0.003 | 0.003 | 0.010 | 0.776 | 0.118 | 12.290 | 40.719 | 53.975 |
| Total | **18.904** | **2.213** | **6.567** | **9.727** | **3.187** | **0.235** | **15.259** | **41.488** | **97.580** |

# World Logistics Center PM10

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.16 | 0.48 | 0.68 |
| 0 | 0.06 | 0.01 | 0.02 | 0.01 | 0.01 | 0.00 | 0.37 | 1.28 | 1.76 |
| 1 | 0.17 | 0.05 | 0.05 | 0.04 | 0.07 | 0.02 | 3.24 | 9.92 | 13.56 |
| 2 | 0.07 | 0.02 | 0.02 | 0.02 | 0.04 | 0.01 | 3.68 | 30.29 | 34.15 |
| 3 | 0.06 | 0.02 | 0.02 | 0.01 | 0.01 | 0.00 | 0.76 | 0.25 | 1.13 |
| 4 | 0.42 | 0.12 | 0.13 | 0.10 | 0.12 | 0.03 | 12.69 | 74.21 | 87.81 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.01 | 0.09 |
| 6 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.56 | 0.61 | 1.26 |
| 7 | 0.08 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 1.57 | 2.31 | 4.05 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 2.05 | 14.58 | 16.74 |
| **Total** | **0.95** | **0.26** | **0.29** | **0.23** | **0.32** | **0.10** | **25.16** | **133.93** | **161.23** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.16 | 0.48 | 0.68 |
| 0 | 0.06 | 0.01 | 0.02 | 0.01 | 0.01 | 0.00 | 0.37 | 1.28 | 1.76 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.06** | **0.01** | **0.02** | **0.01** | **0.04** | **0.01** | **0.53** | **1.76** | **2.44** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.13 | 0.04 | 0.04 | 0.03 | 0.06 | 0.02 | 2.82 | 9.41 | 12.55 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.13** | **0.04** | **0.04** | **0.03** | **0.06** | **0.02** | **2.82** | **9.41** | **12.55** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.42 | 0.50 | 1.01 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.06 | 0.02 | 0.02 | 0.01 | 0.01 | 0.00 | 0.76 | 0.25 | 1.13 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.01 | 0.09 |
| 6 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.56 | 0.61 | 1.26 |
| 7 | 0.08 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 1.57 | 2.31 | 4.05 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.22** | **0.06** | **0.07** | **0.05** | **0.05** | **0.02** | **3.39** | **3.68** | **7.54** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.07 | 0.02 | 0.02 | 0.02 | 0.04 | 0.01 | 3.68 | 29.63 | 33.49 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.42 | 0.12 | 0.13 | 0.10 | 0.12 | 0.03 | 12.69 | 72.03 | 85.63 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 2.05 | 13.49 | 15.65 |
| **Total** | **0.54** | **0.15** | **0.16** | **0.13** | **0.17** | **0.05** | **18.42** | **115.15** | **134.78** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.66 | 0.66 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.18 | 2.18 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.09 | 1.09 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **3.93** | **3.93** |

**World Logistics Center**
**Project Phase 1 (2012)**

## PM2.5

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0667 | 0.1492 | 0.0635 | 0.0621 | 0.0539 | 0.0451 | 0.0585 | 0.0783 |
| 0 | 0.0060 | 0.0144 | 0.0059 | 0.0057 | 0.0048 | 0.0040 | 0.0054 | 0.0077 |
| 1 | 0.0020 | 0.0051 | 0.0020 | 0.0019 | 0.0026 | 0.0021 | 0.0029 | 0.0045 |
| 2 | 0.0016 | 0.0040 | 0.0016 | 0.0015 | 0.0014 | 0.0016 | 0.0016 | 0.0026 |
| 3 | 0.0016 | 0.0041 | 0.0016 | 0.0015 | 0.0017 | 0.0014 | 0.0020 | 0.0031 |
| 4 | 0.0019 | 0.0047 | 0.0018 | 0.0018 | 0.0014 | 0.0011 | 0.0017 | 0.0026 |
| 5 | 0.0025 | 0.0062 | 0.0024 | 0.0024 | 0.0026 | 0.0021 | 0.0029 | 0.0045 |
| 6 | 0.0018 | 0.0045 | 0.0017 | 0.0017 | 0.0017 | 0.0014 | 0.0020 | 0.0031 |
| 7 | 0.0016 | 0.0040 | 0.0015 | 0.0015 | 0.0015 | 0.0012 | 0.0017 | 0.0028 |
| 8 | 0.0032 | 0.0079 | 0.0031 | 0.0030 | 0.0026 | 0.0021 | 0.0029 | 0.0045 |
| 9 | 0.0017 | 0.0042 | 0.0016 | 0.0016 | 0.0013 | 0.0011 | 0.0016 | 0.0026 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 1.3742 | 3.4725 | 0.2398 | 0.4393 | 0.8119 | 0.8163 | 1.1325 | 1.0230 |
| 0 | 0.1540 | 0.3423 | 0.0277 | 0.0490 | 0.0690 | 0.0688 | 0.5414 | 0.5788 |
| 1 | 0.0618 | 0.1550 | 0.0124 | 0.0216 | 0.0422 | 0.0421 | 0.3064 | 0.3408 |
| 2 | 0.0554 | 0.1432 | 0.0115 | 0.0201 | 0.0269 | 0.0264 | 0.2394 | 0.2722 |
| 3 | 0.0533 | 0.1360 | 0.0107 | 0.0188 | 0.0308 | 0.0305 | 0.2457 | 0.2788 |
| 4 | 0.0661 | 0.1820 | 0.0141 | 0.0251 | 0.0281 | 0.0273 | 0.2901 | 0.3228 |
| 5 | 0.0738 | 0.1761 | 0.0141 | 0.0247 | 0.0422 | 0.0421 | 0.3064 | 0.3408 |
| 6 | 0.0556 | 0.1423 | 0.0114 | 0.0199 | 0.0308 | 0.0305 | 0.2457 | 0.2788 |
| 7 | 0.0529 | 0.1371 | 0.0109 | 0.0190 | 0.0282 | 0.0277 | 0.2364 | 0.2685 |
| 8 | 0.0909 | 0.2101 | 0.0169 | 0.0297 | 0.0422 | 0.0421 | 0.3064 | 0.3408 |
| 9 | 0.0598 | 0.1576 | 0.0121 | 0.0214 | 0.0269 | 0.0263 | 0.2571 | 0.2904 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 1.374 | 0.275 | 0.154 | 0.091 | 0.074 | 0.062 | 0.056 | 0.053 | 0.053 | 0.055 | 0.060 | 0.066 |
| LDT1 | DSL | 3.472 | 0.694 | 0.342 | 0.210 | 0.176 | 0.155 | 0.142 | 0.136 | 0.137 | 0.143 | 0.158 | 0.182 |
| LDT2 | DSL | 0.240 | 0.048 | 0.028 | 0.017 | 0.014 | 0.012 | 0.011 | 0.011 | 0.011 | 0.011 | 0.012 | 0.014 |
| LHDT1 | DSL | 0.812 | 0.133 | 0.069 | 0.042 | 0.035 | 0.031 | 0.028 | 0.027 | 0.027 | 0.028 | 0.030 | 0.035 |
| LHDT2 | DSL | 0.816 | 0.129 | 0.069 | 0.042 | 0.035 | 0.030 | 0.028 | 0.026 | 0.026 | 0.027 | 0.030 | 0.034 |
| MDV | DSL | 0.439 | 0.088 | 0.049 | 0.030 | 0.025 | 0.022 | 0.020 | 0.019 | 0.019 | 0.020 | 0.021 | 0.025 |
| MH | DSL | 2.319 | 0.464 | 0.281 | 0.168 | 0.150 | 0.140 | 0.137 | 0.141 | 0.153 | 0.172 | 0.198 | 0.233 |
| OBUS | DSL | 0.988 | 0.994 | 0.562 | 0.304 | 0.262 | 0.233 | 0.218 | 0.216 | 0.227 | 0.251 | 0.268 | 0.268 |
| SBUS | DSL | 1.260 | 1.255 | 0.711 | 0.384 | 0.329 | 0.288 | 0.262 | 0.249 | 0.251 | 0.268 | 0.281 | 0.281 |
| T6 | DSL | 1.132 | 0.916 | 0.541 | 0.306 | 0.269 | 0.246 | 0.236 | 0.239 | 0.257 | 0.290 | 0.311 | 0.314 |
| T7 | DSL | 1.023 | 0.973 | 0.579 | 0.341 | 0.303 | 0.279 | 0.269 | 0.272 | 0.290 | 0.323 | 0.344 | 0.345 |
| UBUS | DSL | 8.063 | 1.613 | 0.970 | 0.576 | 0.503 | 0.443 | 0.401 | 0.372 | 0.360 | 0.364 | 0.381 | 0.417 |
| LDA | GAS | 0.067 | 0.013 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT1 | GAS | 0.149 | 0.030 | 0.014 | 0.008 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 |
| LDT2 | GAS | 0.064 | 0.013 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LHDT1 | GAS | 0.054 | 0.011 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| LHDT2 | GAS | 0.045 | 0.009 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.037 | 0.007 | 0.004 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| MDV | GAS | 0.062 | 0.012 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 |
| MH | GAS | 0.099 | 0.020 | 0.010 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| OBUS | GAS | 0.023 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.117 | 0.023 | 0.011 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 |
| T6 | GAS | 0.059 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| T7 | GAS | 0.078 | 0.016 | 0.008 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| UBUS | GAS | 0.067 | 0.013 | 0.006 | 0.004 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 |
| T7 | NG | 0.233 | 0.027 | 0.019 | 0.013 | 0.012 | 0.012 | 0.012 | 0.013 | 0.014 | 0.016 | 0.017 | 0.017 |
| UBUS | NG | 0.272 | 0.054 | 0.029 | 0.013 | 0.011 | 0.009 | 0.008 | 0.008 | 0.009 | 0.010 | 0.012 | 0.015 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0050 |
| Total | **0.018** | **0.018** | **0.018** | **0.035** | **0.04** | **0.018** | **0.059** | **0.031** |

| | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0030 | 0.0020 | 0.0030 | 0.0090 |
| Total | **0.018** | **0.018** | **0.018** | **0.036** | **0.041** | **0.018** | **0.059** | **0.035** |

**PM2.5 Paved Road Dust Emissions (pounds/day)**

| Source | PM.5 |
|---|---|
| Freeways | 84.8 |
| Freeways to Ports | 2.4 |
| Internal | 12.0 |
| Surface | 20.3 |
| **Total** | **119.5** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 7.539 | 0.884 | 2.626 | 4.049 | 0.994 | 0.047 | 1.234 | 0.291 | 17.663 |
| Diesel | 0.023 | 0.001 | 0.001 | 0.004 | 0.315 | 0.047 | 5.106 | 14.543 | 20.040 |
| Total | **7.561** | **0.885** | **2.627** | **4.053** | **1.309** | **0.094** | **6.340** | **14.833** | **37.703** |

**Black Carbon Emissions (pounds/day)**

Percent of diesel PM2.5 exhaust

| | |
|---|---|
| LDT1, LDT2, MDT: | 64% |
| LHDT1, LHDT2, MHDT, HHDT: | 77% |

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 2.38 | 7.30 | 9.74 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 2.71 | 22.31 | 25.05 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.56 | 0.19 | 0.76 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.02 | 9.33 | 54.66 | 64.09 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.01 | 0.06 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.41 | 0.45 | 0.86 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 1.15 | 1.70 | 2.87 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 1.51 | 10.74 | 12.26 |
| **Total** | **0.00** | **0.01** | **0.00** | **0.00** | **0.18** | **0.06** | **18.11** | **97.35** | **115.71** |

# World Logistics Center PM2.5

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 13 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 29 | 33 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 71 | 84 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 14 | 16 |
| **Total** | **1** | **0** | **0** | **0** | **0** | **0** | **24** | **128** | **154** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **2** | **2** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **9** | **12** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **4** | **7** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 32 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 69 | 82 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 15 |
| **Total** | **1** | **0** | **0** | **0** | **0** | **0** | **18** | **110** | **129** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **4** | **4** |

**World Logistics Center**
**Project Phase 1 (2012)**

# CO2

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 5319.1961 | 6136.5036 | 7256.9500 | 9244.2540 | 4776.9000 | 5557.1397 | 14401.7859 | 22187.5298 |
| 0 | 607.5152 | 701.0719 | 829.1423 | 1055.1495 | 961.7141 | 1095.7477 | 2330.3918 | 2715.3569 |
| 1 | 309.5400 | 357.0642 | 422.3382 | 538.0372 | 765.3980 | 867.1494 | 1430.7240 | 2063.8941 |
| 2 | 286.0215 | 329.8888 | 390.2846 | 497.1923 | 688.8582 | 376.8430 | 1049.3047 | 1776.4982 |
| 3 | 276.2053 | 318.5955 | 376.8430 | 480.1354 | 694.6470 | 783.7697 | 1213.8580 | 1884.6368 |
| 4 | 343.6996 | 396.3310 | 468.9774 | 597.6051 | 765.3980 | 815.1205 | 954.5206 | 1721.4022 |
| 5 | 346.4836 | 399.7522 | 472.7748 | 602.0741 | 765.3980 | 867.1494 | 1430.7240 | 2063.8941 |
| 6 | 287.0146 | 331.0552 | 391.6022 | 498.9297 | 694.6470 | 783.7697 | 1213.8580 | 1884.6368 |
| 7 | 275.8888 | 318.2109 | 376.4277 | 479.5859 | 692.0363 | 765.8665 | 1129.3159 | 1816.4477 |
| 8 | 402.5424 | 464.4831 | 549.3099 | 699.3214 | 765.3980 | 867.1494 | 1430.7240 | 2063.8941 |
| 9 | 307.7449 | 354.9367 | 419.8948 | 534.9927 | 726.4520 | 779.6246 | 981.5756 | 1754.4365 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 4197.4822 | 5018.8795 | 5021.1699 | 6553.6095 | 4098.0000 | 6512.9698 | 7165.6720 | 8473.7768 |
| 0 | 576.9391 | 698.8706 | 701.8713 | 945.8127 | 716.0030 | 813.7799 | 1764.2117 | 2768.1725 |
| 1 | 309.6060 | 375.8676 | 376.6700 | 519.1123 | 541.2642 | 618.5467 | 1334.1019 | 2123.1967 |
| 2 | 293.4283 | 354.4885 | 355.1770 | 495.3844 | 466.3199 | 516.6270 | 1085.3620 | 1717.3430 |
| 3 | 279.7348 | 338.3149 | 338.9042 | 467.1381 | 491.5264 | 557.8304 | 1182.0310 | 1875.6028 |
| 4 | 357.1575 | 431.4739 | 432.0277 | 601.5954 | 510.8561 | 554.4290 | 1035.2855 | 1626.0798 |
| 5 | 342.9299 | 416.4904 | 417.5786 | 572.7617 | 541.2642 | 618.5467 | 1334.1019 | 2123.1967 |
| 6 | 289.5859 | 350.8793 | 351.5348 | 485.3669 | 491.5264 | 557.8304 | 1182.0310 | 1875.6028 |
| 7 | 280.3890 | 339.1788 | 339.6147 | 469.4422 | 478.0702 | 537.4558 | 1127.3390 | 1786.4242 |
| 8 | 396.2732 | 481.7332 | 483.1845 | 663.7010 | 541.2642 | 618.5467 | 1334.1019 | 2123.1967 |
| 9 | 318.0005 | 384.1361 | 384.6225 | 536.3017 | 488.8741 | 535.6553 | 1054.7054 | 1663.4486 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 4197.5 | 839.5 | 576.9 | 396.3 | 342.9 | 309.6 | 289.6 | 279.7 | 280.4 | 293.4 | 318.0 | 357.2 |
| LDT1 | DSL | 5018.9 | 1003.8 | 698.9 | 481.7 | 416.5 | 375.9 | 350.9 | 338.3 | 339.2 | 354.5 | 384.1 | 431.5 |
| LDT2 | DSL | 5021.2 | 1004.2 | 701.9 | 483.2 | 417.6 | 376.7 | 351.5 | 338.9 | 339.6 | 355.2 | 384.6 | 432.0 |
| LHDT1 | DSL | 4098.0 | 1304.2 | 716.0 | 541.3 | 491.5 | 491.5 | 478.1 | 466.3 | 488.9 | 510.9 | 515.9 | 522.6 |
| LHDT2 | DSL | 6513.0 | 1375.6 | 813.8 | 618.5 | 557.8 | 557.8 | 537.5 | 516.6 | 535.7 | 554.4 | 556.4 | 557.8 |
| MDV | DSL | 6553.6 | 1310.7 | 945.8 | 663.7 | 572.8 | 519.1 | 485.4 | 467.1 | 469.4 | 495.4 | 536.3 | 601.6 |
| MH | DSL | 10595.6 | 2119.1 | 1581.0 | 1163.8 | 1092.2 | 1032.7 | 985.6 | 950.7 | 927.7 | 917.0 | 918.4 | 932.0 |
| OBUS | DSL | 7011.6 | 2830.9 | 2117.3 | 1622.1 | 1517.9 | 1434.2 | 1367.2 | 1314.6 | 1275.0 | 1247.5 | 1237.6 | 1237.6 |
| SBUS | DSL | 6906.0 | 2396.1 | 1787.6 | 1334.7 | 1250.7 | 1182.0 | 1127.3 | 1085.9 | 1057.4 | 1041.5 | 1037.8 | 1037.8 |
| T6 | DSL | 7165.7 | 2361.2 | 1764.2 | 1334.1 | 1250.3 | 1182.0 | 1127.3 | 1085.4 | 1054.7 | 1035.3 | 1029.8 | 1029.4 |
| T7 | DSL | 8473.8 | 3703.7 | 2768.2 | 2123.2 | 1986.1 | 1875.6 | 1786.4 | 1717.3 | 1663.4 | 1626.1 | 1615.2 | 1609.6 |
| UBUS | DSL | 21660.2 | 4332.0 | 3230.4 | 2382.9 | 2233.5 | 2109.0 | 2012.1 | 1937.7 | 1892.4 | 1872.4 | 1873.9 | 1911.1 |
| LDA | GAS | 5319.2 | 1063.8 | 607.5 | 402.5 | 346.5 | 309.5 | 287.0 | 276.2 | 275.9 | 286.0 | 307.7 | 343.7 |
| LDT1 | GAS | 6136.5 | 1227.3 | 701.1 | 464.5 | 399.8 | 357.1 | 331.1 | 318.6 | 318.2 | 329.9 | 354.9 | 396.3 |
| LDT2 | GAS | 7256.9 | 1451.4 | 829.1 | 549.3 | 472.8 | 422.3 | 391.6 | 376.8 | 376.4 | 390.3 | 419.9 | 469.0 |
| LHDT1 | GAS | 4776.9 | 1407.5 | 961.7 | 765.4 | 694.6 | 694.6 | 692.0 | 688.9 | 726.5 | 765.4 | 776.7 | 787.3 |
| LHDT2 | GAS | 5557.1 | 1500.7 | 1095.7 | 867.1 | 783.8 | 783.8 | 765.9 | 747.8 | 779.6 | 815.1 | 823.7 | 831.8 |
| MCY | GAS | 2641.5 | 528.3 | 301.6 | 199.9 | 172.0 | 153.7 | 142.5 | 137.1 | 137.0 | 142.0 | 152.8 | 170.6 |
| MDV | GAS | 9244.3 | 1848.9 | 1055.1 | 699.3 | 602.1 | 538.0 | 498.9 | 480.1 | 479.6 | 497.2 | 535.0 | 597.6 |
| MH | GAS | 19801.7 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| OBUS | GAS | 10101.2 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| SBUS | GAS | 4776.9 | 1872.9 | 1102.1 | 676.6 | 621.8 | 574.0 | 534.1 | 496.2 | 464.2 | 451.4 | 454.2 | 462.6 |
| T6 | GAS | 14401.8 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| T7 | GAS | 22187.5 | 4437.5 | 2715.4 | 2063.9 | 1965.0 | 1884.6 | 1816.4 | 1776.5 | 1754.4 | 1721.4 | 1697.3 | 1692.7 |
| UBUS | GAS | 19801.7 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| T7 | NG | 7095.5 | 5857.3 | 4383.4 | 3475.2 | 3263.0 | 3095.0 | 2958.6 | 2846.4 | 2753.6 | 2677.1 | 2644.2 | 2644.2 |
| UBUS | NG | 16028.1 | 3205.6 | 2389.9 | 1759.1 | 1651.2 | 1561.7 | 1490.5 | 1437.6 | 1403.1 | 1387.0 | 1389.3 | 1409.9 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO2

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 508 | 107 | 1437 | 4017 | 6068 |
| 0 | 4852 | 655 | 2300 | 2323 | 478 | 81 | 1507 | 5966 | 18162 |
| 1 | 22163 | 2993 | 10504 | 10618 | 3723 | 624 | 16965 | 60376 | 127966 |
| 2 | 10832 | 1462 | 5134 | 5190 | 3174 | 358 | 19677 | 187022 | 232849 |
| 3 | 7864 | 1062 | 3727 | 3768 | 870 | 145 | 4380 | 1656 | 23472 |
| 4 | 63709 | 8599 | 30194 | 30531 | 10308 | 1610 | 52887 | 366165 | 564005 |
| 5 | 440 | 59 | 208 | 211 | 68 | 11 | 384 | 76 | 1457 |
| 6 | 6140 | 829 | 2910 | 2942 | 638 | 106 | 3192 | 3987 | 20744 |
| 7 | 11754 | 1587 | 5571 | 5632 | 1620 | 265 | 8878 | 15033 | 50339 |
| 8 | 49 | 7 | 23 | 23 | 3 | 1 | 0 | 0 | 106 |
| 9 | 7211 | 973 | 3417 | 3455 | 1490 | 235 | 9846 | 81783 | 108411 |
| **Total** | **135013** | **18228** | **63989** | **64693** | **22880** | **3544** | **119152** | **726081** | **1153579** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 508 | 107 | 1437 | 4017 | 6068 |
| 0 | 4852 | 655 | 2300 | 2323 | 478 | 81 | 1507 | 5966 | 18162 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4852** | **655** | **2300** | **2323** | **986** | **188** | **2943** | **9984** | **24231** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 17098 | 2309 | 8104 | 8192 | 3245 | 544 | 14752 | 57304 | 111548 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **17098** | **2309** | **8104** | **8192** | **3245** | **544** | **14752** | **57304** | **111548** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 5065 | 684 | 2400 | 2426 | 478 | 80 | 2213 | 3072 | 16418 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 7864 | 1062 | 3727 | 3768 | 870 | 145 | 4380 | 1656 | 23472 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 440 | 59 | 208 | 211 | 68 | 11 | 384 | 76 | 1457 |
| 6 | 6140 | 829 | 2910 | 2942 | 638 | 106 | 3192 | 3987 | 20744 |
| 7 | 11754 | 1587 | 5571 | 5632 | 1620 | 265 | 8878 | 15033 | 50339 |
| 8 | 49 | 7 | 23 | 23 | 3 | 1 | 0 | 0 | 106 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **31312** | **4228** | **14840** | **15002** | **3677** | **608** | **19047** | **23823** | **112537** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 10832 | 1462 | 5134 | 5190 | 3174 | 358 | 19677 | 182952 | 228779 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 63709 | 8599 | 30194 | 30531 | 10308 | 1610 | 52887 | 355395 | 553234 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 7211 | 973 | 3417 | 3455 | 1490 | 235 | 9846 | 75675 | 102302 |
| **Total** | **81752** | **11035** | **38745** | **39176** | **14973** | **2203** | **82410** | **614022** | **884316** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4070 | 4070 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10770 | 10770 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6108 | 6108 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **20949** | **20949** |

**World Logistics Center**
**Project Phase 1 (2012)**

# CH4

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.4219 | 0.9923 | 0.5278 | 0.7795 | 6.3743 | 6.4991 | 7.9848 | 13.2011 |
| 0 | 0.0384 | 0.0972 | 0.0494 | 0.0713 | 0.0997 | 0.0774 | 0.2743 | 1.1366 |
| 1 | 0.0132 | 0.0351 | 0.0167 | 0.0241 | 0.0556 | 0.0424 | 0.1464 | 0.6069 |
| 2 | 0.0104 | 0.0277 | 0.0131 | 0.0189 | 0.0312 | 0.0133 | 0.0789 | 0.3266 |
| 3 | 0.0105 | 0.0282 | 0.0133 | 0.0192 | 0.0376 | 0.0280 | 0.0970 | 0.4017 |
| 4 | 0.0122 | 0.0318 | 0.0152 | 0.0221 | 0.0317 | 0.0232 | 0.0804 | 0.3262 |
| 5 | 0.0161 | 0.0425 | 0.0204 | 0.0296 | 0.0556 | 0.0424 | 0.1464 | 0.6069 |
| 6 | 0.0115 | 0.0308 | 0.0145 | 0.0210 | 0.0376 | 0.0280 | 0.0970 | 0.4017 |
| 7 | 0.0102 | 0.0273 | 0.0128 | 0.0186 | 0.0335 | 0.0249 | 0.0856 | 0.3529 |
| 8 | 0.0205 | 0.0538 | 0.0262 | 0.0379 | 0.0556 | 0.0424 | 0.1464 | 0.6069 |
| 9 | 0.0110 | 0.0289 | 0.0137 | 0.0200 | 0.0306 | 0.0225 | 0.0769 | 0.3178 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1123 | 0.2274 | 0.0644 | 0.0617 | 0.1474 | 0.1474 | 0.1632 | 0.3159 |
| 0 | 0.0115 | 0.0224 | 0.0052 | 0.0054 | 0.0157 | 0.0155 | 0.0888 | 0.1327 |
| 1 | 0.0041 | 0.0099 | 0.0012 | 0.0016 | 0.0086 | 0.0082 | 0.0306 | 0.0479 |
| 2 | 0.0036 | 0.0091 | 0.0009 | 0.0013 | 0.0054 | 0.0051 | 0.0152 | 0.0226 |
| 3 | 0.0035 | 0.0087 | 0.0009 | 0.0013 | 0.0062 | 0.0059 | 0.0205 | 0.0314 |
| 4 | 0.0043 | 0.0116 | 0.0011 | 0.0016 | 0.0056 | 0.0052 | 0.0146 | 0.0204 |
| 5 | 0.0049 | 0.0113 | 0.0014 | 0.0018 | 0.0086 | 0.0082 | 0.0306 | 0.0479 |
| 6 | 0.0037 | 0.0091 | 0.0010 | 0.0014 | 0.0062 | 0.0059 | 0.0205 | 0.0314 |
| 7 | 0.0035 | 0.0088 | 0.0009 | 0.0013 | 0.0057 | 0.0053 | 0.0173 | 0.0262 |
| 8 | 0.0061 | 0.0135 | 0.0018 | 0.0023 | 0.0086 | 0.0082 | 0.0306 | 0.0479 |
| 9 | 0.0039 | 0.0101 | 0.0009 | 0.0014 | 0.0054 | 0.0050 | 0.0143 | 0.0208 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.1123 | 0.0225 | 0.0115 | 0.0061 | 0.0049 | 0.0041 | 0.0037 | 0.0035 | 0.0035 | 0.0036 | 0.0039 | 0.0043 |
| LDT1 | DSL | 0.2274 | 0.0455 | 0.0224 | 0.0135 | 0.0113 | 0.0099 | 0.0091 | 0.0087 | 0.0088 | 0.0091 | 0.0101 | 0.0116 |
| LDT2 | DSL | 0.0644 | 0.0129 | 0.0052 | 0.0018 | 0.0014 | 0.0012 | 0.0010 | 0.0009 | 0.0009 | 0.0009 | 0.0009 | 0.0011 |
| LHDT1 | DSL | 0.1474 | 0.0327 | 0.0157 | 0.0086 | 0.0072 | 0.0062 | 0.0057 | 0.0054 | 0.0054 | 0.0056 | 0.0061 | 0.0071 |
| LHDT2 | DSL | 0.1474 | 0.0326 | 0.0155 | 0.0082 | 0.0068 | 0.0059 | 0.0053 | 0.0051 | 0.0050 | 0.0052 | 0.0057 | 0.0065 |
| MDV | DSL | 0.0617 | 0.0123 | 0.0054 | 0.0023 | 0.0018 | 0.0016 | 0.0014 | 0.0013 | 0.0013 | 0.0013 | 0.0014 | 0.0016 |
| MH | DSL | 0.2638 | 0.0528 | 0.0209 | 0.0069 | 0.0056 | 0.0046 | 0.0040 | 0.0035 | 0.0033 | 0.0034 | 0.0036 | 0.0042 |
| OBUS | DSL | 0.2937 | 0.2572 | 0.1050 | 0.0366 | 0.0294 | 0.0238 | 0.0198 | 0.0172 | 0.0162 | 0.0164 | 0.0171 | 0.0171 |
| SBUS | DSL | 0.1851 | 0.2299 | 0.0968 | 0.0329 | 0.0270 | 0.0224 | 0.0191 | 0.0171 | 0.0163 | 0.0168 | 0.0175 | 0.0175 |
| T6 | DSL | 0.1632 | 0.2203 | 0.0888 | 0.0306 | 0.0249 | 0.0205 | 0.0173 | 0.0152 | 0.0143 | 0.0146 | 0.0151 | 0.0154 |
| T7 | DSL | 0.3159 | 0.3249 | 0.1327 | 0.0479 | 0.0387 | 0.0314 | 0.0262 | 0.0226 | 0.0208 | 0.0204 | 0.0209 | 0.0209 |
| UBUS | DSL | 1.3906 | 0.2781 | 0.1239 | 0.0432 | 0.0364 | 0.0309 | 0.0270 | 0.0243 | 0.0233 | 0.0236 | 0.0253 | 0.0286 |
| LDA | GAS | 0.4219 | 0.0844 | 0.0384 | 0.0205 | 0.0161 | 0.0132 | 0.0115 | 0.0105 | 0.0102 | 0.0104 | 0.0110 | 0.0122 |
| LDT1 | GAS | 0.9923 | 0.1985 | 0.0972 | 0.0538 | 0.0425 | 0.0351 | 0.0308 | 0.0282 | 0.0273 | 0.0277 | 0.0289 | 0.0318 |
| LDT2 | GAS | 0.5278 | 0.1056 | 0.0494 | 0.0262 | 0.0204 | 0.0167 | 0.0145 | 0.0133 | 0.0128 | 0.0131 | 0.0137 | 0.0152 |
| LHDT1 | GAS | 6.3743 | 0.2035 | 0.0997 | 0.0556 | 0.0446 | 0.0376 | 0.0335 | 0.0312 | 0.0306 | 0.0317 | 0.0343 | 0.0404 |
| LHDT2 | GAS | 6.4991 | 0.1613 | 0.0774 | 0.0424 | 0.0336 | 0.0280 | 0.0249 | 0.0230 | 0.0225 | 0.0232 | 0.0251 | 0.0297 |
| MCY | GAS | 9.7562 | 1.9512 | 0.8933 | 0.5027 | 0.4066 | 0.3457 | 0.3091 | 0.2904 | 0.2866 | 0.2968 | 0.3229 | 0.3684 |
| MDV | GAS | 0.7795 | 0.1559 | 0.0713 | 0.0379 | 0.0296 | 0.0241 | 0.0210 | 0.0192 | 0.0186 | 0.0189 | 0.0200 | 0.0221 |
| MH | GAS | 2.3411 | 0.4682 | 0.2437 | 0.1408 | 0.1132 | 0.0952 | 0.0856 | 0.0804 | 0.0783 | 0.0799 | 0.0855 | 0.1016 |
| OBUS | GAS | 6.5142 | 0.3225 | 0.1344 | 0.0702 | 0.0555 | 0.0463 | 0.0405 | 0.0373 | 0.0363 | 0.0376 | 0.0407 | 0.0455 |
| SBUS | GAS | 6.0747 | 0.8405 | 0.3815 | 0.2109 | 0.1685 | 0.1410 | 0.1237 | 0.1136 | 0.1094 | 0.1103 | 0.1167 | 0.1362 |
| T6 | GAS | 7.9848 | 0.6163 | 0.2743 | 0.1464 | 0.1159 | 0.0970 | 0.0856 | 0.0789 | 0.0769 | 0.0804 | 0.0868 | 0.1002 |
| T7 | GAS | 13.2011 | 2.6402 | 1.1366 | 0.6069 | 0.4810 | 0.4017 | 0.3529 | 0.3266 | 0.3178 | 0.3262 | 0.3515 | 0.3990 |
| UBUS | GAS | 8.2849 | 1.6570 | 0.7806 | 0.4722 | 0.3758 | 0.3126 | 0.2791 | 0.2588 | 0.2574 | 0.2642 | 0.2892 | 0.3447 |
| T7 | NG | 2.1483 | 27.6642 | 13.3438 | 6.2059 | 4.7659 | 3.6814 | 2.8715 | 2.2763 | 1.8517 | 1.5654 | 1.4663 | 1.4663 |
| UBUS | NG | 179.0431 | 35.8086 | 13.6583 | 4.3189 | 3.4512 | 2.7903 | 2.3293 | 2.0647 | 1.9948 | 2.1185 | 2.4379 | 2.9519 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CH4

Project Phase 1 (2012)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.539 | 0.059 | 0.282 | 0.275 | 1.155 |
| 0 | 0.306 | 0.091 | 0.137 | 0.157 | 0.042 | 0.004 | 0.100 | 0.334 | 1.171 |
| 1 | 0.940 | 0.294 | 0.415 | 0.476 | 0.233 | 0.021 | 0.666 | 1.715 | 4.760 |
| 2 | 0.392 | 0.123 | 0.172 | 0.197 | 0.125 | 0.007 | 0.503 | 3.191 | 4.710 |
| 3 | 0.299 | 0.094 | 0.131 | 0.151 | 0.041 | 0.004 | 0.130 | 0.035 | 0.885 |
| 4 | 2.262 | 0.689 | 0.981 | 1.129 | 0.374 | 0.033 | 1.423 | 6.109 | 12.999 |
| 5 | 0.020 | 0.006 | 0.009 | 0.010 | 0.004 | 0.000 | 0.015 | 0.002 | 0.068 |
| 6 | 0.245 | 0.077 | 0.108 | 0.124 | 0.030 | 0.003 | 0.095 | 0.084 | 0.765 |
| 7 | 0.434 | 0.136 | 0.190 | 0.218 | 0.068 | 0.006 | 0.241 | 0.281 | 1.574 |
| 8 | 0.002 | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.006 |
| 9 | 0.257 | 0.079 | 0.112 | 0.129 | 0.055 | 0.005 | 0.251 | 1.341 | 2.229 |
| **Total** | **5.158** | **1.590** | **2.255** | **2.592** | **1.511** | **0.143** | **3.707** | **13.367** | **30.322** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.539 | 0.059 | 0.282 | 0.275 | 1.155 |
| 0 | 0.306 | 0.091 | 0.137 | 0.157 | 0.042 | 0.004 | 0.100 | 0.334 | 1.171 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.306** | **0.091** | **0.137** | **0.157** | **0.582** | **0.063** | **0.383** | **0.609** | **2.326** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.725 | 0.227 | 0.320 | 0.367 | 0.203 | 0.019 | 0.579 | 1.628 | 4.068 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.725** | **0.227** | **0.320** | **0.367** | **0.203** | **0.019** | **0.579** | **1.628** | **4.068** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.215 | 0.067 | 0.095 | 0.109 | 0.030 | 0.003 | 0.087 | 0.087 | 0.692 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.299 | 0.094 | 0.131 | 0.151 | 0.041 | 0.004 | 0.130 | 0.035 | 0.885 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.020 | 0.006 | 0.009 | 0.010 | 0.004 | 0.000 | 0.015 | 0.002 | 0.068 |
| 6 | 0.245 | 0.077 | 0.108 | 0.124 | 0.030 | 0.003 | 0.095 | 0.084 | 0.765 |
| 7 | 0.434 | 0.136 | 0.190 | 0.218 | 0.068 | 0.006 | 0.241 | 0.281 | 1.574 |
| 8 | 0.002 | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.006 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.216** | **0.381** | **0.534** | **0.613** | **0.173** | **0.016** | **0.568** | **0.489** | **3.989** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.392 | 0.123 | 0.172 | 0.197 | 0.125 | 0.007 | 0.503 | 3.122 | 4.641 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 2.262 | 0.689 | 0.981 | 1.129 | 0.374 | 0.033 | 1.423 | 5.929 | 12.820 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.257 | 0.079 | 0.112 | 0.129 | 0.055 | 0.005 | 0.251 | 1.241 | 2.128 |
| **Total** | **2.911** | **0.891** | **1.264** | **1.454** | **0.554** | **0.046** | **2.176** | **10.292** | **19.589** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.069 | 0.069 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.180 | 0.180 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.100 | 0.100 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.349** | **0.349** |

# E.4 - Mobile Spreadsheets: Full Buildout 2012

# World Logistics Center

## Project Full Buildout 2012

## Trip and Vehicle Miles Traveled Calculation

**2012**

**World Logistics Center**
**Vehicle Fleet Mix**
Project Full Buildout 2012

**Vehicle VMT for South Coast Air Basin per EMFAC2011 @ All Speeds**

| GAS Vehicle Class | VMT (miles/day) |
|---|---|
| LDA-GAS | 192,038,766 |
| LDT1-GAS | 22,519,393 |
| LDT2-GAS | 66,885,372 |
| MDT-GAS | 53,041,833 |
| LHDT1-GAS | 11,744,390 |
| LHDT2-GAS | 1,237,829 |
| MHDT-GAS | 1,034,400 |
| HHDT-GAS | 204,980 |
| Subtotal | 348,706,963 |
| **DSL Vehicle Class** | |
| LDA-DSL | 581,758 |
| LDT1-DSL | 27,976 |
| LDT2-DSL | 27,520 |
| MDT-DSL | 53,264 |
| LHDT1-DSL | 3,629,896 |
| LHDT2-DSL | 1,234,271 |
| MHDT-DSL | 4,281,961 |
| HHDT-DSL | 9,080,350 |
| Subtotal | 18,916,995 |
| Grand Total | 367,623,958 |

| Vehicle Class | | VMT-GAS | VMT-DSL | VMT-Total | % VMT-Total | %GAS | %DSL |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 192,038,766 | 581,758 | 192,620,524 | 57.47% | 99.7% | 0.30% |
| LDT1 | Pass Car | 22,519,393 | 27,976 | 22,547,369 | 6.73% | 99.9% | 0.12% |
| LDT2 | Pass Car | 66,885,372 | 27,520 | 66,912,892 | 19.96% | 100.0% | 0.04% |
| MDT | Pass Car | 53,041,833 | 53,264 | 53,095,097 | 15.84% | 99.9% | 0.10% |
| Subtotal | | 334,485,364 | 690,518 | 335,175,882 | 100.00% | 99.8% | 0.21% |
| LHDT1 | Light Heavy Truck | 11,744,390 | 3,629,896 | 15,374,286 | 86.15% | 76.4% | 23.61% |
| LHDT2 | Light Heavy Truck | 1,237,829 | 1,234,271 | 2,472,100 | 13.85% | 50.1% | 49.93% |
| Subtotal | | 12,982,219 | 4,864,167 | 17,846,386 | | | |
| MHDT | Medium Heavy Truck | 1,034,400 | 4,281,961 | 5,316,361 | 100% | 19.5% | 80.54% |
| HHDT | Heavy Heavy Truck | 204,980 | 9,080,350 | 9,285,330 | 100% | 2.2% | 97.79% |

**Area Source Assumptions**

| | |
|---|---|
| Onsite truck idle time: | 5 minutes (truck idling only applies to HDT vehicles) |
| Onsite Travel: | 15 mph |
| Facility Operations for Warehouses: | 24 hrs |
| Facility operations for All Others: | 24 hrs |

| Onsite Diesel Truck Travel Links | Location | Diesel Truck Travel Distance (m) |
|---|---|---|
| | High Cube | 330 |
| | Light Logistics | 175 |
| | Utility Service | 100 |
| | Gas Station w/Convenience | 50 |
| | Convenience Store | 50 |
| | Fire Station | 50 |

**World Logistics Center**
**Project Full Buildout 2012**
Area Source Trip Distribution

| | Building Size (sq-ft) | |
|---|---|---|
| High Cube Warehouse | 40,400,000 | Sq-feet |
| Light Logistics | 200,000 | Sq-feet |
| Utilities Service Station | 30,800 | Sq-feet |
| Gas Station w/Convenience Store | 12 | Pumps |
| Convenience Store | 3,000 | Sq-feet |
| Fire Station | 1 | Sq-feet |

**Trip Generation**

| | trips/day (Non-PCE) | Source |
|---|---|---|
| High Cube Warehouse | 67872 | Traffic Impact Analysis Report |
| Light Logistics | 712 | prepared by Parsons Brinckerhoff, Inc. |
| Utilities Service Station | 248 | September 2014 |
| Gas Station w/Convenience Store | 219 | |
| Convenience Store | 354 | |
| Fire Station | 137 | |
| Total | 69542 | |

**Vehicle Fleet for High Cube Warehouse**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 79.6% | 57.47% | 0.30% | 94 | 30954 | 31048 |
| LDT1 | | 6.73% | 0.12% | 5 | 3630 | 3634 |
| LDT2 | | 19.96% | 0.04% | 4 | 10781 | 10786 |
| MDT | | 15.84% | 0.10% | 9 | 8550 | 8558 |
| SubTotal | | 100.00% | 0.21% | 111 | 53915 | 54026 |
| LHDT1 (2 axle truck) | 3.5% | 86.15% | 23.61% | 483 | 1563 | 2046 |
| LHDT2 | | 13.85% | 49.93% | 164 | 165 | 329 |
| Subtotal | | 100.0% | | 647 | 1728 | 2376 |
| MHDT (3 axle truck) | 4.6% | 100.00% | 80.54% | 2515 | 607 | 3122 |
| HHDT (4+ axle truck) | 12.3% | 100.00% | 97.79% | 8164 | 184 | 8348 |
| Total | 100.0% | | | 11437 | 56435 | 67872 |

**Vehicle Fleet for Light Logistics**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 80.3% | 57.47% | 0.30% | 1 | 328 | 329 |
| LDT1 | | 6.73% | 0.12% | 0 | 38 | 38 |
| LDT2 | | 19.96% | 0.04% | 0 | 114 | 114 |
| MDT | | 15.84% | 0.10% | 0 | 90 | 91 |
| SubTotal | | 100.00% | 0.21% | 1 | 571 | 572 |
| LHDT1 (2 axle truck) | 5.2% | 86.15% | 23.61% | 8 | 24 | 32 |
| LHDT2 | | 13.85% | 49.93% | 3 | 3 | 5 |
| Subtotal | | 100.0% | | 10 | 27 | 37 |
| MHDT (3 axle truck) | 4.5% | 100.0% | 80.54% | 26 | 6 | 32 |
| HHDT (4+ axle truck) | 10.0% | 100.0% | 97.79% | 70 | 2 | 71 |
| Total | 100.0% | | | 107 | 605 | 712 |

**Vehicle Fleet for Utilities Service Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 77.3% | 57.47% | 0.30% | 0.3 | 110 | 110 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 13 | 13 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 38 | 38 |
| MDT | | 15.84% | 0.10% | 0.0 | 30 | 30 |
| SubTotal | | 100.00% | 0.21% | 0.4 | 191 | 192 |
| LHDT1 (2 axle truck) | 11.3% | 86.15% | 23.61% | 6 | 19 | 24 |
| LHDT2 | | 13.85% | 49.93% | 2 | 2 | 4 |
| Subtotal | | 100.00% | | 8 | 20 | 28 |
| MHDT (3 axle truck) | 2.4% | 100.00% | 80.54% | 5 | 1 | 6 |
| HHDT (4+ axle truck) | 8.9% | 100.00% | 97.79% | 22 | 0 | 22 |
| Total | 100.0% | | | 35 | 214 | 248 |

**Vehicle Fleet for Gas Station with Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 50.7% | 57.47% | 0.30% | 0.2 | 64 | 64 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 7 | 7 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 22 | 22 |
| MDT | | 15.84% | 0.10% | 0.0 | 18 | 18 |
| SubTotal | | 100.00% | 0.21% | 0.2 | 111 | 111 |
| LHDT1 (2 axle truck) | 1.8% | 86.15% | 23.61% | 0.8 | 3 | 3 |
| LHDT2 | | 13.85% | 49.93% | 0.3 | 0 | 1 |
| Subtotal | | 100.00% | | 1.1 | 3 | 4 |
| MHDT (3 axle truck) | 7.8% | 100.00% | 80.54% | 13.8 | 3 | 17 |
| HHDT (4+ axle truck) | 39.7% | 100.00% | 97.79% | 85.0 | 2 | 87 |
| Total | 100.0% | | | 100.1 | 119 | 219 |

**Vehicle Fleet for Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 52.0% | 57.47% | 0.30% | 0.5 | 105 | 106 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 12 | 12 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 37 | 37 |
| MDT | | 15.84% | 0.10% | 0.0 | 29 | 29 |
| SubTotal | | 100.00% | 0.21% | 0.6 | 183 | 184 |
| LHDT1 (2 axle truck) | 1.7% | 86.15% | 23.61% | 1.2 | 4 | 5 |
| LHDT2 | | 13.85% | 49.93% | 0.4 | 0 | 1 |
| Subtotal | | 100.00% | | 1.6 | 4 | 6 |
| MHDT (3 axle truck) | 7.9% | 100.00% | 80.54% | 22.5 | 5 | 28 |
| HHDT (4+ axle truck) | 38.4% | 100.00% | 97.79% | 132.9 | 3 | 136 |
| Total | 100.0% | | | 157.7 | 196 | 354 |

**Vehicle Fleet for Fire Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 100.0% | 57.47% | 0.30% | 0.2 | 79 | 79 |
| LDT1 | | 6.73% | 0.12% | 0.0 | 9 | 9 |
| LDT2 | | 19.96% | 0.04% | 0.0 | 27 | 27 |
| MDT | | 15.84% | 0.10% | 0.0 | 22 | 22 |
| SubTotal | | 100.00% | 0.21% | 0.2 | 137 | 137 |
| LHDT1 (2 axle truck) | 0.0% | 86.15% | 23.61% | 0.0 | 0 | 0 |
| LHDT2 | | 13.85% | 49.93% | 0.0 | 0 | 0 |
| Subtotal | | 100.00% | | 0.0 | 0 | 0 |
| MHDT (3 axle truck) | 0.0% | 100.00% | 80.54% | 0.0 | 0 | 0 |
| HHDT (4+ axle truck) | 0.0% | 100.00% | 97.79% | 0.0 | 0 | 0 |
| Total | 100.0% | | | 0.2 | 137 | 137 |

**Vehicle Summary (Phase Summary)**

| Vehicle Class | Daily Diesel Trips | Daily Non Diesel Trips | Total Daily Trips |
|---|---|---|---|
| LDA | 96 | 31639 | 31735 |
| LDT1 | 5 | 3710 | 3715 |
| LDT2 | 5 | 11020 | 11024 |
| MDT | 9 | 8739 | 8748 |
| LHDT1 | 498 | 1613 | 2111 |
| LHDT2 | 169 | 170 | 339 |
| MHDT | 2582 | 624 | 3205 |
| HHDT | 8473 | 191 | 8664 |
| Total | 11837 | 57705 | 69542 |

Trip Generation from PB 2013 Traffic Study
Vehicle Fleet Mix taken from EMFAC2011 for the SoCAB in **2012** and the PB 2013 Traffic Study
% Diesel taken from EMAC2011 for the SoCAB in **2012**

# World Logistics Center

Project Full Buildout 2012
Area Source: Diesel Trip Distribution by Land Use and Building

## Land Use

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 40,400,000 |
| Light Logistics | 200,000 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

## Vehicle Allocation - Number of Daily Diesel Trips

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 94 | 5 | 4 | 9 | 483 | 164 | 2515 | 8164 | 11437 |
| Light Logistics | 1 | 0 | 0 | 0 | 8 | 3 | 26 | 70 | 107 |
| Utilities Service Station | 0 | 0 | 0 | 0 | 6 | 2 | 5 | 22 | 35 |
| Gas Station w/Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 85 | 100 |
| Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 133 | 158 |
| Fire Station | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | |
| Total | 96 | 5 | 5 | 9 | 498 | 169 | 2582 | 8473 | 11837 |

# World Logistics Center

Project Full Buildout 2012

Area Source: Non-Diesel Trip Distribution by Land Use and Building

**Land Use:**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 40,400,000 |
| Light Logistics | 200,000 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Non-Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 30954 | 3630 | 10781 | 8550 | 1563 | 165 | 607 | 184 | 56435 |
| Light Logistics | 328 | 38 | 114 | 90 | 24 | 3 | 6 | 2 | 605 |
| Utilities Service Station | 110 | 13 | 38 | 30 | 19 | 2 | 1 | 0 | 214 |
| Gas Station w/Convenience Store | 64 | 7 | 22 | 18 | 3 | 0 | 3 | 2 | 119 |
| Convenience Store | 105 | 12 | 37 | 29 | 4 | 0 | 5 | 3 | 196 |
| Fire Station | 79 | 9 | 27 | 22 | 0 | 0 | 0 | 0 | 137 |
| | | | | | | | | | |
| Total | 31639 | 3710 | 11020 | 8739 | 1613 | 170 | 624 | 191 | 57705 |

# World Logistics Center
## Project Full Buildout 2012
Area Source Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 94 | 330 | 0.21 | 19.2 |
| | **LDT1** | 15 | 5 | 330 | 0.21 | 0.9 |
| | **LDT2** | 15 | 4 | 330 | 0.21 | 0.9 |
| | **MDT** | 15 | 9 | 330 | 0.21 | 1.8 |
| | **LHDT1** | 15 | 483 | 330 | 0.21 | 99.1 |
| | **LHDT2** | 15 | 164 | 330 | 0.21 | 33.7 |
| | **MHDT** | 15 | 2515 | 330 | 0.21 | 515.5 |
| | **HHDT** | 15 | 8164 | 330 | 0.21 | 1673.6 |
| **Travel at Light Logistics** | **LDA** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **LDT1** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT2** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **MDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LHDT1** | 15 | 8 | 175 | 0.11 | 0.8 |
| | **LHDT2** | 15 | 3 | 175 | 0.11 | 0.3 |
| | **MHDT** | 15 | 26 | 175 | 0.11 | 2.8 |
| | **HHDT** | 15 | 70 | 175 | 0.11 | 7.6 |
| **Travel at Utility** | **LDA** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT1** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT2** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **MDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LHDT1** | 15 | 6 | 100 | 0.06 | 0.4 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 5 | 100 | 0.06 | 0.3 |
| | **HHDT** | 15 | 22 | 100 | 0.06 | 1.3 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 14 | 50 | 0.03 | 0.4 |
| | **HHDT** | 15 | 85 | 50 | 0.03 | 2.6 |
| **Travel at Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **HHDT** | 15 | 133 | 50 | 0.03 | 4.1 |
| **Travel at Fire Station** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 19 | 1 | 1 | 2 | 100 | 34 | 520 | 1689 | **2366** |

## Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| Idle at High Cube Warehouses | LHDT1 | 5 | 242 | 1208 |
| | LHDT2 | 5 | 82 | 411 |
| | MHDT | 5 | 1257 | 6287 |
| | HHDT | 5 | 4082 | 20410 |
| Idle at Light Logistics | LHDT1 | 5 | 4 | 19 |
| | LHDT2 | 5 | 1 | 6 |
| | MHDT | 5 | 13 | 65 |
| | HHDT | 5 | 35 | 174 |
| Idle at Utility | LHDT1 | 5 | 3 | 14 |
| | LHDT2 | 5 | 1 | 5 |
| | MHDT | 5 | 2 | 12 |
| | HHDT | 5 | 11 | 54 |
| Idle at Gas Station/Convenience Store | LHDT1 | 5 | 0 | 2 |
| | LHDT2 | 5 | 0 | 1 |
| | MHDT | 5 | 7 | 34 |
| | HHDT | 5 | 43 | 213 |
| Idle at Convenience Store | LHDT1 | 5 | 1 | 3 |
| | LHDT2 | 5 | 0 | 1 |
| | MHDT | 5 | 11 | 56 |
| | HHDT | 5 | 66 | 332 |
| Idle at Firestation | LHDT1 | 5 | 0 | 0 |
| | LHDT2 | 5 | 0 | 0 |
| | MHDT | 5 | 0 | 0 |
| | HHDT | 5 | 0 | 0 |

| Total DSL (hrs) | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|
| | 20.8 | 7.1 | 107.6 | 353.0 | 488.4 |

# World Logistics Center
## Project Full Buildout 2012
Area Source Non-Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 30954 | 330 | 0.21 | 6345.6 |
| | **LDT1** | 15 | 3630 | 330 | 0.21 | 744.1 |
| | **LDT2** | 15 | 10781 | 330 | 0.21 | 2210.1 |
| | **MDT** | 15 | 8550 | 330 | 0.21 | 1752.7 |
| | **LHDT1** | 15 | 1563 | 330 | 0.21 | 320.5 |
| | **LHDT2** | 15 | 165 | 330 | 0.21 | 33.8 |
| | **MHDT** | 15 | 607 | 330 | 0.21 | 124.5 |
| | **HHDT** | 15 | 184 | 330 | 0.21 | 37.8 |
| **Travel at Light Logistics** | **LDA** | 15 | 328 | 175 | 0.11 | 35.6 |
| | **LDT1** | 15 | 38 | 175 | 0.11 | 4.2 |
| | **LDT2** | 15 | 114 | 175 | 0.11 | 12.4 |
| | **MDT** | 15 | 90 | 175 | 0.11 | 9.8 |
| | **LHDT1** | 15 | 24 | 175 | 0.11 | 2.6 |
| | **LHDT2** | 15 | 3 | 175 | 0.11 | 0.3 |
| | **MHDT** | 15 | 6 | 175 | 0.11 | 0.7 |
| | **HHDT** | 15 | 2 | 175 | 0.11 | 0.2 |
| **Travel at Utility** | **LDA** | 15 | 110 | 100 | 0.06 | 6.8 |
| | **LDT1** | 15 | 13 | 100 | 0.06 | 0.8 |
| | **LDT2** | 15 | 38 | 100 | 0.06 | 2.4 |
| | **MDT** | 15 | 30 | 100 | 0.06 | 1.9 |
| | **LHDT1** | 15 | 19 | 100 | 0.06 | 1.1 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 1 | 100 | 0.06 | 0.1 |
| | **HHDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 64 | 50 | 0.03 | 2.0 |
| | **LDT1** | 15 | 7 | 50 | 0.03 | 0.2 |
| | **LDT2** | 15 | 22 | 50 | 0.03 | 0.7 |
| | **MDT** | 15 | 18 | 50 | 0.03 | 0.5 |
| | **LHDT1** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **HHDT** | 15 | 2 | 50 | 0.03 | 0.1 |
| **Travel at Convenience Store** | **LDA** | 15 | 105 | 50 | 0.03 | 3.3 |
| | **LDT1** | 15 | 12 | 50 | 0.03 | 0.4 |
| | **LDT2** | 15 | 37 | 50 | 0.03 | 1.1 |
| | **MDT** | 15 | 29 | 50 | 0.03 | 0.9 |
| | **LHDT1** | 15 | 4 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 5 | 50 | 0.03 | 0.2 |
| | **HHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| **Travel at Fire Station** | **LDA** | 15 | 79 | 50 | 0.03 | 2.4 |
| | **LDT1** | 15 | 9 | 50 | 0.03 | 0.3 |
| | **LDT2** | 15 | 27 | 50 | 0.03 | 0.8 |
| | **MDT** | 15 | 22 | 50 | 0.03 | 0.7 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 6396 | 750 | 2228 | 1767 | 324 | 34 | 126 | 38 | **11662** |

## Non-Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 782 | 3908 |
| | **LHDT2** | 5 | 82 | 412 |
| | **MHDT** | 5 | 304 | 1519 |
| | **HHDT** | 5 | 92 | 461 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 12 | 61 |
| | **LHDT2** | 5 | 1 | 6 |
| | **MHDT** | 5 | 3 | 16 |
| | **HHDT** | 5 | 1 | 4 |
| **Idle at Utility** | **LHDT1** | 5 | 9 | 46 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 1 | 6 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 2 | 8 |
| | **HHDT** | 5 | 1 | 5 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 2 | 10 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 14 |
| | **HHDT** | 5 | 2 | 8 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |
| **Total GAS Idle Time (hours)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** |
| | 67.2 | 7.1 | 26.0 | 8.0 |

| ID | Arterial | From | To | Internal Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | Gilman Springs Rd | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | east of Street A | Street F | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | 4,604 | 147 | 307 | 402 |

**World Logistics Center** **2012**
Project Full Buildout 2012
Internal Roadway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 | 2440 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 | 5816 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 | 6604 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 | 342 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 | 3576 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 | 523 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 | 9 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 | 22 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 | 600 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 | 476 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 | 2367 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 | 2474 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 | 2184 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 | 784 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 | 3429 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 | 351 |
| | | | | | | | | | | | | | | | | Total | 31998 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 8 | 0 | 0 | 1 | 47 | 16 | 507 | 1862 |
| 2 | 1 | 17 | 1 | 1 | 2 | 157 | 53 | 1171 | 4415 |
| 3 | 1 | 20 | 1 | 1 | 2 | 189 | 64 | 1358 | 4968 |
| 5 | 1 | 9 | 0 | 0 | 1 | 39 | 13 | 250 | 30 |
| 6 | 1 | 13 | 1 | 1 | 1 | 96 | 32 | 774 | 2659 |
| 8 | 1 | 15 | 1 | 1 | 1 | 67 | 23 | 415 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 12 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 16 | 0 |
| 14 | 1 | 3 | 0 | 0 | 0 | 12 | 4 | 98 | 482 |
| 18 | 1 | 2 | 0 | 0 | 0 | 23 | 8 | 120 | 322 |
| 19 | 1 | 7 | 0 | 0 | 1 | 54 | 18 | 468 | 1818 |
| 21 | 1 | 14 | 1 | 1 | 1 | 82 | 28 | 683 | 1665 |
| 24 | 1 | 15 | 1 | 1 | 1 | 75 | 25 | 655 | 1410 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 2 | 0 | 0 | 0 | 15 | 5 | 145 | 616 |
| 30 | 1 | 12 | 1 | 1 | 1 | 74 | 25 | 604 | 2712 |
| 31 | 1 | 4 | 0 | 0 | 0 | 15 | 5 | 126 | 200 |
| Total | | **142** | **7** | **7** | **13** | **951** | **323** | **7397** | **23159** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 142 | 7 | 7 | 13 | 951 | 323 | 7397 | 23159 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | **142** | **7** | **7** | **13** | **951** | **323** | **7397** | **23159** | **31998** |

**World Logistics Center** **2012**
Project Full Buildout 2012
Internal Roadway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 | 4697 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 | 10897 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 | 12856 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 | 5211 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 | 7785 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 | 8745 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 | 223 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 | 336 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 | 1979 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 | 1294 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 | 4429 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 | 8588 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 | 9181 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 | 1507 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 | 7117 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 | 2430 |
| | | | | | | | | | | | | | | | | Total | 87275 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2507 | 294 | 873 | 692 | 151 | 16 | 122 | 42 |
| 2 | 1 | 5715 | 670 | 1990 | 1578 | 507 | 53 | 283 | 100 |
| 3 | 1 | 6740 | 790 | 2347 | 1862 | 612 | 65 | 328 | 112 |
| 5 | 1 | 2876 | 337 | 1002 | 794 | 126 | 13 | 60 | 1 |
| 6 | 1 | 4131 | 484 | 1439 | 1141 | 309 | 33 | 187 | 60 |
| 8 | 1 | 4825 | 566 | 1680 | 1333 | 218 | 23 | 100 | 0 |
| 11 | 1 | 124 | 15 | 43 | 34 | 4 | 0 | 2 | 0 |
| 12 | 1 | 183 | 21 | 64 | 50 | 13 | 1 | 4 | 0 |
| 14 | 1 | 1091 | 128 | 380 | 301 | 40 | 4 | 24 | 11 |
| 18 | 1 | 674 | 79 | 235 | 186 | 76 | 8 | 29 | 7 |
| 19 | 1 | 2343 | 275 | 816 | 647 | 176 | 19 | 113 | 41 |
| 21 | 1 | 4647 | 545 | 1618 | 1283 | 264 | 28 | 165 | 38 |
| 24 | 1 | 5008 | 587 | 1744 | 1383 | 242 | 25 | 158 | 32 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 807 | 95 | 281 | 223 | 48 | 5 | 35 | 14 |
| 30 | 1 | 3815 | 447 | 1329 | 1054 | 239 | 25 | 146 | 61 |
| 31 | 1 | 1344 | 158 | 468 | 371 | 49 | 5 | 30 | 5 |
| Total | | **46829** | **5491** | **16310** | **12934** | **3076** | **324** | **1787** | **523** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 46829 | 5491 | 16310 | 12934 | 3076 | 324 | 1787 | 523 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **46829** | **5491** | **16310** | **12934** | **3076** | **324** | **1787** | **523** | **87275** |

**World Logistics Center**
**Project Full Buildout 2012**
**Entrained Road Dust**
Internal Roadways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 21,539 | 4375 | 1,127 | 229 | 3,097 | 629 | 9,375 | 1904 | 7138 | 8.73 | 0.035 | 0.0002 | 1.7 | 0.0009 | 6.8 |
| 2 | A | 731 | 0.45 | 21,965 | 9974 | 1,698 | 771 | 3,202 | 1454 | 9,941 | 4514 | 16714 | 8.83 | 0.035 | 0.0002 | 3.9 | 0.0010 | 16.1 |
| 3 | A | 2352 | 1.46 | 8,051 | 11763 | 637 | 931 | 1,154 | 1686 | 3,477 | 5080 | 19460 | 8.64 | 0.035 | 0.0002 | 4.5 | 0.0009 | 18.3 |
| 5 | A | 953 | 0.59 | 8,480 | 5020 | 324 | 192 | 525 | 311 | 51 | 30 | 5553 | 2.90 | 0.035 | 0.0001 | 0.4 | 0.0003 | 1.7 |
| 6 | A | 1099 | 0.68 | 10,562 | 7211 | 688 | 470 | 1,408 | 961 | 3,983 | 2719 | 11361 | 8.14 | 0.035 | 0.0002 | 2.5 | 0.0009 | 10.0 |
| 8 | A | 1091 | 0.68 | 12,425 | 8421 | 489 | 331 | 760 | 515 | 0 | 0 | 9267 | 2.79 | 0.035 | 0.0001 | 0.7 | 0.0003 | 2.7 |
| 11 | A | 1201 | 0.75 | 290 | 216 | 9 | 7 | 12 | 9 | 0 | 0 | 232 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 12 | A | 824 | 0.51 | 623 | 319 | 38 | 19 | 39 | 20 | 0 | 0 | 358 | 2.86 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 14 | A | 1618 | 1.01 | 1,894 | 1904 | 61 | 61 | 121 | 122 | 490 | 493 | 2579 | 6.70 | 0.035 | 0.0002 | 0.5 | 0.0007 | 1.9 |
| 18 | A | 1412 | 0.88 | 1,341 | 1176 | 131 | 115 | 170 | 149 | 375 | 329 | 1769 | 7.09 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.4 |
| 19 | A | 2386 | 1.48 | 2,759 | 4089 | 180 | 267 | 392 | 581 | 1,254 | 1859 | 6796 | 8.87 | 0.035 | 0.0002 | 1.6 | 0.0010 | 6.6 |
| 21 | A | 1258 | 0.78 | 10,378 | 8110 | 514 | 402 | 1,085 | 848 | 2,179 | 1703 | 11063 | 6.25 | 0.035 | 0.0002 | 1.8 | 0.0007 | 7.5 |
| 24 | A | 1946 | 1.21 | 7,231 | 8741 | 304 | 367 | 673 | 814 | 1,193 | 1442 | 11365 | 5.61 | 0.035 | 0.0001 | 1.7 | 0.0006 | 6.9 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 29 | A | 675 | 0.42 | 3,357 | 1408 | 175 | 73 | 428 | 179 | 1,503 | 630 | 2291 | 8.81 | 0.035 | 0.0002 | 0.5 | 0.0010 | 2.2 |
| 30 | A | 2827 | 1.76 | 3,792 | 6659 | 207 | 364 | 427 | 750 | 1,579 | 2773 | 10546 | 8.49 | 0.035 | 0.0002 | 2.4 | 0.0009 | 9.7 |
| 31 | A | 820 | 0.51 | 4,604 | 2345 | 147 | 75 | 307 | 156 | 402 | 205 | 2781 | 4.32 | 0.035 | 0.0001 | 0.3 | 0.0005 | 1.3 |
| | | | | | | | | | | | | | | | **Totals:** | **22.9** | | **93.1** |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 8,747 | 300 | 592 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1,032 | 46 | 55 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1,545 | 29 | 86 | 490 |
| 32 | Cactus Ave | west of Redlands Blvd | | 2,211 | 104 | 101 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 864 | 30 | 47 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 421 | 32 | 59 | 647 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1,582 | 109 | 254 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 710 | 66 | 212 | 560 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 3,010 | 219 | 521 | 2 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 2,379 | 178 | 415 | 639 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 209 | 10 | 11 | 29 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 142 | 7 | 4 | 16 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 160 | 3 | 2 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 478 | 11 | 18 | 17 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 12,425 | 489 | 760 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 175 | 2 | 5 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 8,429 | 261 | 573 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 404 | 26 | 10 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 57 | 5 | 2 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,722 | 120 | 267 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 172 | 13 | 9 | 22 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 16 | 0 | 4 | 8 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 1,437 | 48 | 136 | 492 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 434 | 13 | 25 | 246 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | |
| 65 | Alessandro Blvd | Nason St | Oliver St | 605 | 15 | 21 | 20 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 694 | 23 | 33 | 20 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 9 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 74 | 1 | 2 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 1,134 | 46 | 58 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 1,710 | 70 | 86 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 8,291 | 254 | 570 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 661 | 15 | 9 | 2 |
| 75 | Ironwood Ave | Graham St | Heacock St | 207 | 8 | 12 | 7 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 41 | 2 | 7 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 869 | 21 | 19 | 10 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 1,130 | 29 | 31 | 8 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,640 | 49 | 64 | 82 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 751 | 24 | 28 | 41 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,895 | 87 | 136 | 230 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 22 | 1 | 0 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 61 | 3 | 2 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 783 | 27 | 39 | 44 |
| 96 | N California Ave | W 6th St | E 8th St | 616 | 12 | 2 | 4 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 74 | 4 | 13 | 8 |
| 98 | N California Ave | W 6th St | I-10 | 84 | 4 | 2 | 14 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 71 | 1 | 2 | 2 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 334 | 11 | 22 | 30 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 1,026 | 27 | 54 | 77 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 1,029 | 28 | 60 | 97 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 205 | 3 | 9 | 31 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 25 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 215 | 3 | 9 | 31 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 6 | 0 | 0 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 41 | 2 | 5 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 184 | 3 | 9 | 22 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 204 | 6 | 20 | 63 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 21 | 3 | 9 | 21 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 38 | 3 | 9 | 40 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 204 | 4 | 10 | 28 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 4 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 17 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 227 | 4 | 10 | 31 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 45 | 5 | 6 | 35 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 261 | 5 | 12 | 30 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 12 | 2 | 3 | 23 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 30 | 1 | 1 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 315 | 7 | 15 | 30 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 355 | 7 | 15 | 19 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 69 | 4 | 10 | 144 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 394 | 9 | 9 | 16 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 86 | 3 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 24 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 107 | 5 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 59 | 3 | 1 | 2 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 537 | 14 | 20 | 20 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 108 | 3 | 0 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 7 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 62 | 3 | 8 | 5 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 116 | 3 | 6 | 5 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 272 | 4 | 8 | 5 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 295 | 5 | 11 | 5 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 36 | 1 | 3 | 4 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 364 | 9 | 24 | 4 |
| 144 | Cactus Ave | Frederick St | Graham St | 368 | 9 | 24 | 0 |
| 145 | Cactus Ave | Graham St | Heacock St | 378 | 10 | 25 | 0 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 1 | 0 | 0 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 441 | 14 | 26 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 6 | 1 | 1 | 12 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 543 | 19 | 33 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 590 | 22 | 38 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 50 | 3 | 7 | 146 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 761 | 27 | 45 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,533 | 63 | 81 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 623 | 27 | 23 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,703 | 70 | 83 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 218 | 9 | 28 | 19 |
| 159 | Beaumont Ave | E 6th St | I-10 | 238 | 6 | 0 | 19 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,717 | 71 | 194 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 3,544 | 130 | 365 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 1,741 | 55 | 165 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 22 | 1 | 2 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 8,065 | 242 | 548 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 1,440 | 41 | 134 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 4,292 | 103 | 180 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 4,084 | 95 | 172 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 2,432 | 185 | 478 | 560 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 427 | 31 | 55 | 83 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 2,872 | 216 | 534 | 632 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 115 | 0 | 0 | 0 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 4,501 | 127 | 284 | 156 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 3,733 | 105 | 252 | 121 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 768 | 22 | 33 | 38 |
| 194 | Crescent Ave | West of Alessandro Rd | | 471 | 39 | 98 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 938 | 54 | 147 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 1,409 | 102 | 246 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 83 | 4 | 8 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 231 | 6 | 12 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,722 | 120 | 267 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 164 | 18 | 51 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 164 | 18 | 51 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 7 | 0 | 0 | 0 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 338 | 8 | 16 | 20 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 612 | 16 | 27 | 34 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 80 | 1 | 4 | 6 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 21 | 1 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 8 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 19 | 0 | 0 | 0 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 43 | 1 | 4 | 5 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 2 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 65 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 92 | 3 | 8 | 18 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 846 | 24 | 50 | 80 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 79 | 2 | 5 | 7 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 22 | 1 | 4 | 3 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 634 | 19 | 55 | 59 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 267 | 7 | 24 | 26 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 330 | 11 | 15 | 8 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 350 | 12 | 9 | 31 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 22 | 1 | 3 | 6 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 3 | 0 | 0 | 0 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 81 | 3 | 0 | 27 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 11 | 1 | 2 | 7 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 355 | 12 | 22 | 47 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 886 | 24 | 56 | 79 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 2 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 356 | 8 | 8 | 12 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 3 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 1,235 | 31 | 65 | 95 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 109 | 5 | 4 | 1 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 194 | 5 | 6 | 1 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 1,244 | 36 | 61 | 87 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 681 | 18 | 48 | 70 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,601 | 46 | 82 | 132 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 227 | 8 | 19 | 20 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 1,301 | 0 | 73 | 114 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 650 | 34 | 117 | 299 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 3 | 0 | 0 | 1 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 654 | 35 | 114 | 300 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 4 | 0 | 0 | 1 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 671 | 35 | 119 | 301 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 24 | 2 | 0 | 0 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 691 | 36 | 108 | 309 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 11 | 0 | 0 | 0 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 310 | 16 | 52 | 138 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 724 | 38 | 129 | 325 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 3 | 1 | 0 | 10 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 618 | 30 | 100 | 261 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 2 | 0 | 0 | 28 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,543 | 49 | 45 | 123 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 460 | 20 | 30 | 69 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 1,028 | 43 | 88 | 11 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 985 | 42 | 78 | 128 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 253 | 12 | 25 | 9 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 1,049 | 44 | 82 | 86 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 660 | 30 | 50 | 194 |
| 294 | Via Del Lago | South of Iris Ave | | 78 | 3 | 2 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 155 | 9 | 7 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 203 | 10 | 9 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 55 | 3 | 8 | 143 |
| 304 | Iris Ave | Indian St | Perris Blvd | 268 | 10 | 24 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 1,374 | 57 | 171 | 140 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 2,646 | 91 | 292 | 140 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 35 | 1 | 2 | 1 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 1,780 | 49 | 35 | 159 |
| 326 | Ramona Expy | Sanderson Ave | State St | 593 | 12 | 31 | 27 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 1,216 | 37 | 53 | 133 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 14 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 3,730 | 105 | 241 | 121 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 7 | 0 | 0 | 0 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 2,759 | 80 | 165 | 60 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,941 | 51 | 146 | 120 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 5 | 0 | 0 | 0 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,954 | 56 | 100 | 21 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 1,604 | 47 | 104 | 79 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 1,025 | 27 | 50 | 69 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 1 | 0 | 0 | 7 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ran | Mid County Pkwy | 3rd St | | | | |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | | | | |
| 377 | Mid County Pkwy WB Off-Ran | Mid County Pkwy | 3rd St | | | | |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | | | | |
| 379 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | 3rd St | | | | |
| 380 | Mid County Pkwy EB On-Ram | 3rd St | Mid County Pkwy | | | | |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | | | | |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 2,437 | 84 | 264 | 115 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 21 | 0 | 0 | 0 |
| 390 | Ramona Expy | Webster Ave | Indian St | 404 | 21 | 52 | 17 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 278 | 30 | 114 | 38 |
| 393 | Indian St | Ramona Expy | Morgan St | 64 | 16 | 95 | 65 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 2,406 | 83 | 263 | 110 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 2,560 | 69 | 193 | 63 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 1,361 | 32 | 95 | 7 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 3,640 | 82 | 175 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 58 | 1 | 1 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 1,152 | 27 | 29 | 3 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 3 | 1 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 405 | Morgan St | Evans Rd | Bradley Rd | 299 | 12 | 0 | 5 |
| 406 | Ironwood Ave | East of Thedore St | | 63 | 7 | 3 | 2 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 19 | 0 | 0 | 1 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 213 | 5 | 4 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 367 | 12 | 0 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 1 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 17 | 1 | 4 | 4 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 1 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 2,525 | 66 | 141 | 41 |
| 416 | Mid County Pkwy WB On-Ran | Mid County Pkwy | Perris Blvd | | | | |
| 417 | Mid County Pkwy WB Off-Ran | Perris Blvd | Mid County Pkwy | | | | |
| 419 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | Perris Blvd | | | | |
| 420 | Mid County Pkwy EB On-Ram | Perris Blvd | Mid County Pkwy | | | | |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 197 | 10 | 18 | 180 |
| 425 | Mid County Pkwy WB On-Ran | West of Evan | | | | | |
| 426 | Mid County Pkwy WB Off-Ran | East of Evan | | | | | |
| 427 | Day St | south of Alessandro Blvd | | 5 | 1 | 1 | 11 |
| 428 | Mid County Pkwy EB Off-Ram | West of Evan | | | | | |
| 429 | Mid County Pkwy EB On-Ram | East of Evan | | | | | |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 692 | 17 | 30 | 45 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | |
| 433 | Evans Rd | Rider St | Orange Ave | 432 | 6 | 7 | 0 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 12 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 172 | 2 | 2 | 0 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 126 | 1 | 3 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | |
| 453 | Evans Rd | North of San Jancito Ave | | | | | |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | |
| 455 | Evans Rd | South of San Jancito Ave | | | | | |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | |
| 477 | Ellis Ave | West of Evan Rd | | | | | |
| 478 | Evans Rd | North of Ellis Ave | | | | | |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | |
| 482 | Ellis Ave | East of SR-215 | | | | | |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | |
| 488 | Nason St | North of Iris Ave | | | | | |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 496 | 24 | 16 | 162 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 573 | 27 | 19 | 174 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | |
| 504 | Krameria Ave | west of Perris Blvd | | 165 | 6 | 12 | 0 |

**World Logistics Center** **2012**
Project Full Buildout 2012
Surface Street Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Daily VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9639 | 8,747 | 300 | 592 | 0 | 1820 | 1.131 | 15 | 1 | 1 | 1 | 61 | 21 | 477 | 0 | 577 | 652 |
| 10 | 1133 | 1,032 | 46 | 55 | 0 | 826 | 0.513 | 2 | 0 | 0 | 0 | 9 | 3 | 44 | 0 | 59 | 30 |
| 13 | 2150 | 1,545 | 29 | 86 | 490 | 345 | 0.214 | 3 | 0 | 0 | 0 | 6 | 2 | 69 | 479 | 560 | 120 |
| 32 | 2416 | 2,211 | 104 | 101 | 0 | 1551 | 0.964 | 4 | 0 | 0 | 0 | 21 | 7 | 81 | 0 | 114 | 110 |
| 33 | 941 | 864 | 30 | 47 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 6 | 2 | 38 | 0 | 48 | 60 |
| 35 | 1159 | 421 | 32 | 59 | 647 | 801 | 0.498 | 1 | 0 | 0 | 0 | 7 | 2 | 48 | 633 | 690 | 343 |
| 36 | 1945 | 1,582 | 109 | 254 | 0 | 1627 | 1.011 | 3 | 0 | 0 | 0 | 22 | 8 | 205 | 0 | 238 | 240 |
| 37 | 1548 | 710 | 66 | 212 | 560 | 219 | 0.136 | 1 | 0 | 0 | 0 | 13 | 5 | 171 | 548 | 738 | 100 |
| 38 | 3752 | 3,010 | 219 | 521 | 2 | 659 | 0.409 | 5 | 0 | 0 | 0 | 45 | 15 | 420 | 2 | 487 | 200 |
| 42 | 3611 | 2,379 | 178 | 415 | 639 | 5338 | 3.316 | 4 | 0 | 0 | 0 | 36 | 12 | 334 | 625 | 1013 | 3358 |
| 43 | 259 | 209 | 10 | 11 | 29 | 2598 | 1.614 | 0 | 0 | 0 | 0 | 2 | 1 | 9 | 28 | 40 | 65 |
| 46 | 169 | 142 | 7 | 4 | 16 | 806 | 0.501 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 16 | 21 | 11 |
| 47 | 165 | 160 | 3 | 2 | 0 | 1995 | 1.239 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 3 |
| 48 | 524 | 478 | 11 | 18 | 17 | 795 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 14 | 17 | 35 | 17 |
| 50 | 13674 | 12,425 | 489 | 760 | 0 | 479 | 0.298 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 | 229 |
| 51 | 182 | 175 | 2 | 5 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 3 |
| 52 | 9263 | 8,429 | 261 | 573 | 0 | 1269 | 0.788 | 15 | 1 | 1 | 1 | 53 | 18 | 462 | 0 | 550 | 434 |
| 53 | 440 | 404 | 26 | 10 | 0 | 795 | 0.494 | 1 | 0 | 0 | 0 | 5 | 2 | 8 | 0 | 16 | 8 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 64 | 57 | 5 | 2 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 4 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 2109 | 1,722 | 120 | 267 | 0 | 246 | 0.153 | 3 | 0 | 0 | 0 | 24 | 8 | 215 | 0 | 251 | 38 |
| 58 | 216 | 172 | 13 | 9 | 22 | 172 | 0.107 | 0 | 0 | 0 | 0 | 3 | 1 | 7 | 22 | 33 | 3 |
| 59 | 28 | 16 | 0 | 4 | 8 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 11 | 5 |
| 60 | 2113 | 1,437 | 48 | 136 | 492 | 159 | 0.099 | 2 | 0 | 0 | 0 | 10 | 3 | 110 | 481 | 607 | 60 |
| 61 | 718 | 434 | 13 | 25 | 246 | 97 | 0.060 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 241 | 265 | 16 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 661 | 605 | 15 | 21 | 20 | 795 | 0.494 | 1 | 0 | 0 | 0 | 3 | 1 | 17 | 20 | 42 | 21 |
| 66 | 770 | 694 | 23 | 33 | 20 | 812 | 0.504 | 1 | 0 | 0 | 0 | 5 | 2 | 27 | 20 | 54 | 27 |
| 67 | 9 | 9 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 77 | 74 | 1 | 2 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 69 | 1238 | 1,134 | 46 | 58 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 9 | 3 | 47 | 0 | 62 | 31 |
| 70 | 1866 | 1,710 | 70 | 86 | 0 | 795 | 0.494 | 3 | 0 | 0 | 0 | 14 | 5 | 69 | 0 | 92 | 45 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 9115 | 8,291 | 254 | 570 | 0 | 742 | 0.461 | 14 | 1 | 1 | 1 | 52 | 18 | 459 | 0 | 545 | 251 |
| 74 | 687 | 661 | 15 | 9 | 2 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 3 | 1 | 7 | 2 | 15 | 14 |
| 75 | 234 | 207 | 8 | 12 | 7 | 805 | 0.500 | 0 | 0 | 0 | 0 | 2 | 1 | 10 | 7 | 19 | 10 |
| 76 | 50 | 41 | 2 | 7 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 6 |
| 77 | 919 | 869 | 21 | 19 | 10 | 438 | 0.272 | 2 | 0 | 0 | 0 | 4 | 1 | 15 | 10 | 33 | 9 |
| 80 | 1198 | 1,130 | 29 | 31 | 8 | 138 | 0.086 | 2 | 0 | 0 | 0 | 6 | 2 | 25 | 8 | 43 | 4 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1835 | 1,640 | 49 | 64 | 82 | 322 | 0.200 | 3 | 0 | 0 | 0 | 10 | 3 | 52 | 80 | 148 | 30 |
| 83 | 844 | 751 | 24 | 28 | 41 | 95 | 0.059 | 1 | 0 | 0 | 0 | 5 | 2 | 23 | 40 | 71 | 4 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 2348 | 1,895 | 87 | 136 | 230 | 284 | 0.176 | 3 | 0 | 0 | 0 | 18 | 6 | 110 | 225 | 362 | 64 |
| 87 | 23 | 22 | 1 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88 | 66 | 61 | 3 | 2 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 1 |
| 95 | 893 | 783 | 27 | 39 | 44 | 439 | 0.273 | 1 | 0 | 0 | 0 | 5 | 2 | 31 | 43 | 83 | 23 |
| 96 | 634 | 616 | 12 | 2 | 4 | 399 | 0.248 | 1 | 0 | 0 | 0 | 2 | 1 | 2 | 4 | 10 | 2 |
| 97 | 99 | 74 | 4 | 13 | 8 | 389 | 0.242 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 8 | 20 | 5 |
| 98 | 104 | 84 | 4 | 2 | 14 | 160 | 0.099 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 14 | 17 | 2 |
| 99 | 76 | 71 | 1 | 2 | 2 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 100 | 397 | 334 | 11 | 22 | 30 | 227 | 0.141 | 1 | 0 | 0 | 0 | 2 | 1 | 18 | 29 | 51 | 7 |
| 101 | 1184 | 1,026 | 27 | 54 | 77 | 313 | 0.194 | 2 | 0 | 0 | 0 | 5 | 2 | 43 | 75 | 128 | 25 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1214 | 1,029 | 28 | 60 | 97 | 291 | 0.181 | 2 | 0 | 0 | 0 | 6 | 2 | 48 | 95 | 153 | 28 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 104 | 248 | 205 | 3 | 9 | 31 | 404 | 0.251 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 30 | 39 | 10 |
| 105 | 25 | 25 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 0 | 0 | 0 | 0 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107 | 258 | 215 | 3 | 9 | 31 | 388 | 0.241 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 30 | 39 | 9 |
| 108 | 6 | 6 | 0 | 0 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 109 | 48 | 41 | 2 | 5 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 2 |
| 110 | 218 | 184 | 3 | 9 | 22 | 756 | 0.470 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 22 | 30 | 14 |
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 293 | 204 | 6 | 20 | 63 | 817 | 0.508 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 62 | 80 | 40 |
| 113 | 54 | 21 | 3 | 9 | 21 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 21 | 29 | 14 |
| 114 | 90 | 38 | 3 | 9 | 40 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 39 | 47 | 23 |
| 115 | 246 | 204 | 4 | 10 | 28 | 851 | 0.529 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 27 | 37 | 20 |
| 116 | 4 | 0 | 0 | 0 | 4 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 |
| 117 | 17 | 17 | 0 | 0 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 272 | 227 | 4 | 10 | 31 | 765 | 0.475 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 30 | 40 | 19 |
| 119 | 1 | 1 | 0 | 0 | 0 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120 | 91 | 45 | 5 | 6 | 35 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 34 | 41 | 20 |
| 121 | 308 | 261 | 5 | 12 | 30 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 29 | 41 | 21 |
| 122 | 40 | 12 | 2 | 3 | 23 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 22 | 25 | 12 |
| 123 | 32 | 30 | 1 | 1 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 124 | 367 | 315 | 7 | 15 | 30 | 800 | 0.497 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 29 | 44 | 22 |
| 125 | 0 | 0 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 396 | 355 | 7 | 15 | 19 | 774 | 0.481 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 19 | 33 | 16 |
| 127 | 227 | 69 | 4 | 10 | 144 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 141 | 150 | 77 |
| 128 | 0 | 0 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 428 | 394 | 9 | 9 | 16 | 823 | 0.511 | 1 | 0 | 0 | 0 | 2 | 1 | 7 | 16 | 26 | 13 |
| 130 | 90 | 86 | 3 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 |
| 131 | 24 | 24 | 0 | 0 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 112 | 107 | 5 | 0 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 |
| 134 | 65 | 59 | 3 | 1 | 2 | 760 | 0.472 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 4 | 2 |
| 135 | 591 | 537 | 14 | 20 | 20 | 816 | 0.507 | 1 | 0 | 0 | 0 | 3 | 1 | 16 | 20 | 41 | 21 |
| 136 | 111 | 108 | 3 | 0 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 137 | 7 | 7 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 78 | 62 | 3 | 8 | 5 | 267 | 0.166 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 | 12 | 2 |
| 139 | 130 | 116 | 3 | 6 | 5 | 504 | 0.313 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 5 | 11 | 3 |
| 140 | 289 | 272 | 4 | 8 | 5 | 527 | 0.327 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 | 13 | 4 |
| 141 | 316 | 295 | 5 | 11 | 5 | 1001 | 0.622 | 1 | 0 | 0 | 0 | 1 | 0 | 9 | 5 | 16 | 10 |
| 142 | 44 | 36 | 1 | 3 | 4 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 1 |
| 143 | 401 | 364 | 9 | 24 | 4 | 845 | 0.525 | 1 | 0 | 0 | 0 | 2 | 1 | 19 | 4 | 26 | 14 |
| 144 | 401 | 368 | 9 | 24 | 0 | 783 | 0.486 | 1 | 0 | 0 | 0 | 2 | 1 | 19 | 0 | 23 | 11 |
| 145 | 413 | 378 | 10 | 25 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 0 | 24 | 12 |
| 146 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 481 | 441 | 14 | 26 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 0 | 26 | 13 |
| 148 | 20 | 6 | 1 | 1 | 12 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 13 | 6 |
| 149 | 595 | 543 | 19 | 33 | 0 | 808 | 0.502 | 1 | 0 | 0 | 0 | 4 | 1 | 27 | 0 | 33 | 17 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 650 | 590 | 22 | 38 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 4 | 2 | 31 | 0 | 38 | 18 |
| 152 | 206 | 50 | 3 | 7 | 146 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 143 | 149 | 73 |
| 153 | 833 | 761 | 27 | 45 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 5 | 2 | 36 | 0 | 45 | 22 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1677 | 1,533 | 63 | 81 | 0 | 775 | 0.481 | 3 | 0 | 0 | 0 | 13 | 4 | 65 | 0 | 86 | 41 |
| 156 | 673 | 623 | 27 | 23 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 5 | 2 | 19 | 0 | 27 | 13 |
| 157 | 1856 | 1,703 | 70 | 83 | 0 | 804 | 0.499 | 3 | 0 | 0 | 0 | 14 | 5 | 67 | 0 | 89 | 45 |
| 158 | 274 | 218 | 9 | 28 | 19 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 2 | 1 | 23 | 19 | 44 | 28 |
| 159 | 263 | 238 | 6 | 0 | 19 | 170 | 0.106 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 19 | 21 | 2 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1982 | 1,717 | 71 | 194 | 0 | 784 | 0.487 | 3 | 0 | 0 | 0 | 14 | 5 | 156 | 0 | 179 | 87 |
| 162 | 4039 | 3,544 | 130 | 365 | 0 | 1052 | 0.654 | 6 | 0 | 0 | 1 | 26 | 9 | 294 | 0 | 337 | 220 |
| 163 | 1961 | 1,741 | 55 | 165 | 0 | 350 | 0.217 | 3 | 0 | 0 | 0 | 11 | 4 | 133 | 0 | 151 | 33 |
| 164 | 25 | 22 | 1 | 2 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 165 | 8855 | 8,065 | 242 | 548 | 0 | 1541 | 0.957 | 14 | 1 | 1 | 1 | 49 | 17 | 441 | 0 | 524 | 502 |
| 168 | 1615 | 1,440 | 41 | 134 | 0 | 758 | 0.471 | 2 | 0 | 0 | 0 | 8 | 3 | 108 | 0 | 122 | 57 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 4575 | 4,292 | 103 | 180 | 0 | 522 | 0.324 | 7 | 0 | 0 | 1 | 21 | 7 | 145 | 0 | 182 | 59 |
| 172 | 4351 | 4,084 | 95 | 172 | 0 | 993 | 0.617 | 7 | 0 | 0 | 1 | 19 | 7 | 139 | 0 | 173 | 107 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 3655 | 2,432 | 185 | 478 | 560 | 1110 | 0.690 | 4 | 0 | 0 | 0 | 38 | 13 | 385 | 548 | 988 | 681 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 178 | 596 | 427 | 31 | 55 | 83 | 7132 | 4.430 | 1 | 0 | 0 | 0 | 6 | 2 | 44 | 81 | 135 | 597 |
| 179 | 4254 | 2,872 | 216 | 534 | 632 | 2189 | 1.360 | 5 | 0 | 0 | 0 | 44 | 15 | 430 | 618 | 1113 | 1513 |
| 180 | 115 | 115 | 0 | 0 | 0 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 5068 | 4,501 | 127 | 284 | 156 | 6368 | 3.956 | 8 | 0 | 0 | 1 | 26 | 9 | 229 | 153 | 425 | 1682 |
| 191 | 4211 | 3,733 | 105 | 252 | 121 | 4906 | 3.048 | 6 | 0 | 0 | 1 | 21 | 7 | 203 | 118 | 358 | 1090 |
| 192 | 861 | 768 | 22 | 33 | 38 | 4358 | 2.707 | 1 | 0 | 0 | 0 | 4 | 2 | 27 | 37 | 71 | 193 |
| 194 | 608 | 471 | 39 | 98 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 8 | 3 | 79 | 0 | 91 | 20 |
| 195 | 1139 | 938 | 54 | 147 | 0 | 397 | 0.247 | 2 | 0 | 0 | 0 | 11 | 4 | 118 | 0 | 135 | 33 |
| 196 | 1757 | 1,409 | 102 | 246 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 21 | 7 | 198 | 0 | 229 | 102 |
| 198 | 95 | 83 | 4 | 8 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 8 | 5 |
| 199 | 249 | 231 | 6 | 12 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 12 | 3 |
| 200 | 2109 | 1,722 | 120 | 267 | 0 | 1403 | 0.872 | 3 | 0 | 0 | 0 | 24 | 8 | 215 | 0 | 251 | 219 |
| 205 | 233 | 164 | 18 | 51 | 0 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 4 | 1 | 41 | 0 | 46 | 43 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 233 | 164 | 18 | 51 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 4 | 1 | 41 | 0 | 46 | 75 |
| 215 | 7 | 7 | 0 | 0 | 0 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 382 | 338 | 8 | 16 | 20 | 2000 | 1.242 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 20 | 35 | 44 |
| 217 | 689 | 612 | 16 | 27 | 34 | 663 | 0.412 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 33 | 61 | 25 |
| 218 | 91 | 80 | 1 | 4 | 6 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 10 | 7 |
| 219 | 23 | 21 | 1 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 8 | 8 | 0 | 0 | 0 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 19 | 19 | 0 | 0 | 0 | 359 | 0.223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 53 | 43 | 1 | 4 | 5 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 8 | 9 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 2 | 2 | 0 | 0 | 0 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 65 | 65 | 0 | 0 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 121 | 92 | 3 | 8 | 18 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 18 | 25 | 31 |
| 232 | 1000 | 846 | 24 | 50 | 80 | 1719 | 1.068 | 1 | 0 | 0 | 0 | 5 | 2 | 40 | 78 | 127 | 135 |
| 233 | 93 | 79 | 2 | 5 | 7 | 976 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 12 | 7 |
| 236 | 30 | 22 | 1 | 4 | 3 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 3 |
| 237 | 767 | 634 | 19 | 55 | 59 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 4 | 1 | 44 | 58 | 108 | 105 |
| 238 | 324 | 267 | 7 | 24 | 26 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 25 | 47 | 33 |
| 239 | 364 | 330 | 11 | 15 | 8 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 8 | 24 | 20 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 402 | 350 | 12 | 9 | 31 | 989 | 0.614 | 1 | 0 | 0 | 0 | 2 | 1 | 7 | 30 | 42 | 26 |
| 243 | 32 | 22 | 1 | 3 | 6 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 0 |
| 244 | 3 | 3 | 0 | 0 | 0 | 173 | 0.107 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 245 | 111 | 81 | 3 | 0 | 27 | 181 | 0.112 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 26 | 27 | 3 |
| 246 | 21 | 11 | 1 | 2 | 7 | 273 | 0.170 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 1 |
| 247 | 436 | 355 | 12 | 22 | 47 | 87 | 0.054 | 1 | 0 | 0 | 0 | 2 | 1 | 18 | 46 | 68 | 4 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 1045 | 886 | 24 | 56 | 79 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 5 | 2 | 45 | 77 | 131 | 129 |
| 254 | 2 | 2 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 384 | 356 | 8 | 8 | 12 | 943 | 0.586 | 1 | 0 | 0 | 0 | 2 | 1 | 6 | 12 | 21 | 12 |
| 258 | 3 | 3 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1426 | 1,235 | 31 | 65 | 95 | 1783 | 1.108 | 2 | 0 | 0 | 0 | 6 | 2 | 52 | 93 | 156 | 173 |
| 261 | 119 | 109 | 5 | 4 | 1 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 6 | 4 |
| 262 | 206 | 194 | 5 | 6 | 1 | 860 | 0.534 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 1 | 8 | 4 |
| 263 | 1428 | 1,244 | 36 | 61 | 87 | 141 | 0.088 | 2 | 0 | 0 | 0 | 7 | 2 | 49 | 85 | 147 | 13 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 817 | 681 | 18 | 48 | 70 | 98 | 0.061 | 1 | 0 | 0 | 0 | 4 | 1 | 39 | 68 | 113 | 7 |
| 266 | 1861 | 1,601 | 46 | 82 | 132 | 171 | 0.106 | 3 | 0 | 0 | 0 | 9 | 3 | 66 | 129 | 211 | 22 |
| 267 | 274 | 227 | 8 | 19 | 20 | 156 | 0.097 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 20 | 38 | 4 |
| 268 | 1488 | 1,301 | 0 | 73 | 114 | 159 | 0.099 | 2 | 0 | 0 | 0 | 0 | 0 | 59 | 111 | 173 | 17 |
| 269 | 1100 | 650 | 34 | 117 | 299 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 7 | 2 | 94 | 292 | 397 | 605 |
| 270 | 4 | 3 | 0 | 0 | 1 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 271 | 1103 | 654 | 35 | 114 | 300 | 370 | 0.230 | 1 | 0 | 0 | 0 | 7 | 2 | 92 | 293 | 396 | 91 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 5 | 4 | 0 | 0 | 1 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 274 | 1126 | 671 | 35 | 119 | 301 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 7 | 2 | 96 | 294 | 401 | 307 |
| 275 | 26 | 24 | 2 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 276 | 1144 | 691 | 36 | 108 | 309 | 159 | 0.099 | 1 | 0 | 0 | 0 | 7 | 2 | 87 | 302 | 400 | 40 |
| 277 | 11 | 11 | 0 | 0 | 0 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 516 | 310 | 16 | 52 | 138 | 157 | 0.098 | 1 | 0 | 0 | 0 | 3 | 1 | 42 | 135 | 182 | 18 |
| 280 | 1216 | 724 | 38 | 129 | 325 | 163 | 0.101 | 1 | 0 | 0 | 0 | 8 | 3 | 104 | 318 | 434 | 44 |
| 281 | 14 | 3 | 1 | 0 | 10 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 2 |
| 282 | 1009 | 618 | 30 | 100 | 261 | 167 | 0.104 | 1 | 0 | 0 | 0 | 6 | 2 | 81 | 255 | 345 | 36 |
| 283 | 30 | 2 | 0 | 0 | 28 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 27 | 7 |
| 284 | 1760 | 1,543 | 49 | 45 | 123 | 365 | 0.227 | 3 | 0 | 0 | 0 | 10 | 3 | 36 | 120 | 173 | 39 |
| 285 | 579 | 460 | 20 | 30 | 69 | 230 | 0.143 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 67 | 98 | 14 |
| 286 | 1170 | 1,028 | 43 | 88 | 11 | 209 | 0.130 | 2 | 0 | 0 | 0 | 9 | 3 | 71 | 11 | 95 | 12 |
| 287 | 1233 | 985 | 42 | 78 | 128 | 292 | 0.181 | 2 | 0 | 0 | 0 | 9 | 3 | 63 | 125 | 201 | 37 |
| 288 | 299 | 253 | 12 | 25 | 9 | 152 | 0.094 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 9 | 33 | 3 |
| 289 | 1261 | 1,049 | 44 | 82 | 86 | 285 | 0.177 | 2 | 0 | 0 | 0 | 9 | 3 | 66 | 84 | 164 | 29 |
| 290 | 934 | 660 | 30 | 50 | 194 | 328 | 0.204 | 1 | 0 | 0 | 0 | 6 | 2 | 40 | 190 | 240 | 49 |
| 294 | 83 | 78 | 3 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 1 |
| 301 | 171 | 155 | 9 | 7 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 0 | 8 | 4 |
| 302 | 222 | 203 | 10 | 9 | 0 | 796 | 0.494 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 0 | 10 | 5 |
| 303 | 209 | 55 | 3 | 8 | 143 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 140 | 147 | 138 |
| 304 | 302 | 268 | 10 | 24 | 0 | 729 | 0.453 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 0 | 23 | 10 |
| 306 | 1742 | 1,374 | 57 | 171 | 140 | 818 | 0.508 | 2 | 0 | 0 | 0 | 12 | 4 | 138 | 137 | 293 | 149 |
| 307 | 3169 | 2,646 | 91 | 292 | 140 | 0 | 0.000 | 5 | 0 | 0 | 0 | 19 | 6 | 235 | 137 | 402 | 0 |
| 324 | 39 | 35 | 1 | 2 | 1 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 5 |
| 325 | 2023 | 1,780 | 49 | 35 | 159 | 2224 | 1.382 | 3 | 0 | 0 | 0 | 10 | 3 | 28 | 155 | 201 | 277 |
| 326 | 663 | 593 | 12 | 31 | 27 | 3506 | 2.178 | 1 | 0 | 0 | 0 | 2 | 1 | 25 | 26 | 56 | 122 |
| 327 | 1439 | 1,216 | 37 | 53 | 133 | 227 | 0.141 | 2 | 0 | 0 | 0 | 8 | 3 | 43 | 130 | 185 | 26 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 14 | 14 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 4197 | 3,730 | 105 | 241 | 121 | 0 | 0.000 | 6 | 0 | 0 | 1 | 21 | 7 | 194 | 118 | 349 | 0 |
| 359 | 7 | 7 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 360 | 3064 | 2,759 | 80 | 165 | 60 | 247 | 0.153 | 5 | 0 | 0 | 0 | 16 | 6 | 133 | 59 | 219 | 34 |
| 361 | 2258 | 1,941 | 51 | 146 | 120 | 337 | 0.209 | 3 | 0 | 0 | 0 | 10 | 4 | 118 | 117 | 253 | 53 |
| 362 | 5 | 5 | 0 | 0 | 0 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 2131 | 1,954 | 56 | 100 | 21 | 4495 | 2.792 | 3 | 0 | 0 | 0 | 11 | 4 | 81 | 21 | 120 | 336 |
| 364 | 1834 | 1,604 | 47 | 104 | 79 | 286 | 0.178 | 3 | 0 | 0 | 0 | 10 | 3 | 84 | 77 | 177 | 31 |
| 365 | 1171 | 1,025 | 27 | 50 | 69 | 1602 | 0.995 | 2 | 0 | 0 | 0 | 5 | 2 | 40 | 67 | 117 | 117 |
| 366 | 8 | 1 | 0 | 0 | 7 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 7 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 0 | 0 | 0 | 0 | 0 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 387 | 2900 | 2,437 | 84 | 264 | 115 | 2761 | 1.715 | 4 | 0 | 0 | 0 | 17 | 6 | 213 | 112 | 353 | 605 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 21 | 21 | 0 | 0 | 0 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 494 | 404 | 21 | 52 | 17 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 4 | 1 | 42 | 17 | 65 | 48 |
| 392 | 460 | 278 | 30 | 114 | 38 | 436 | 0.271 | 0 | 0 | 0 | 0 | 6 | 2 | 92 | 37 | 138 | 37 |
| 393 | 240 | 64 | 16 | 95 | 65 | 934 | 0.580 | 0 | 0 | 0 | 0 | 3 | 1 | 77 | 64 | 145 | 84 |
| 394 | 2862 | 2,406 | 83 | 263 | 110 | 1292 | 0.803 | 4 | 0 | 0 | 0 | 17 | 6 | 212 | 108 | 347 | 278 |
| 396 | 2885 | 2,560 | 69 | 193 | 63 | 2366 | 1.470 | 4 | 0 | 0 | 0 | 14 | 5 | 155 | 62 | 241 | 354 |
| 397 | 1495 | 1,361 | 32 | 95 | 7 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 77 | 7 | 95 | 94 |
| 398 | 3897 | 3,640 | 82 | 175 | 0 | 560 | 0.348 | 6 | 0 | 0 | 1 | 17 | 6 | 141 | 0 | 171 | 59 |
| 399 | 60 | 58 | 1 | 1 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| 400 | 1211 | 1,152 | 27 | 29 | 3 | 1704 | 1.059 | 2 | 0 | 0 | 0 | 5 | 2 | 23 | 3 | 36 | 38 |
| 401 | 5 | 1 | 0 | 3 | 1 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 2 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 316 | 299 | 12 | 0 | 5 | 1010 | 0.627 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 9 | 6 |
| 406 | 75 | 63 | 7 | 3 | 2 | 395 | 0.245 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 6 | 2 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 20 | 19 | 0 | 0 | 1 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 409 | 222 | 213 | 5 | 4 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 5 | 4 |
| 410 | 379 | 367 | 12 | 0 | 0 | 884 | 0.549 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 4 | 2 |
| 411 | 1 | 1 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 413 | 26 | 17 | 1 | 4 | 4 | 678 | 0.421 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 7 | 3 |
| 414 | 1 | 1 | 0 | 0 | 0 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 2773 | 2,525 | 66 | 141 | 41 | 855 | 0.531 | 4 | 0 | 0 | 0 | 13 | 5 | 114 | 40 | 177 | 94 |
| 416 | 0 | 0 | 0 | 0 | 0 | 284 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 0 | 0 | 0 | 0 | 0 | 343 | 0.213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 0 | 0 | 0 | 0 | 0 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 405 | 197 | 10 | 18 | 180 | 828 | 0.514 | 0 | 0 | 0 | 0 | 2 | 1 | 14 | 176 | 194 | 100 |
| 425 | 0 | 0 | 0 | 0 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 0 | 0 | 0 | 0 | 0 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 18 | 5 | 1 | 1 | 11 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 12 | 5 |
| 428 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 0 | 0 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 784 | 692 | 17 | 30 | 45 | 114 | 0.071 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 44 | 74 | 5 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 445 | 432 | 6 | 7 | 0 | 1802 | 1.119 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 8 | 9 |
| 434 | 12 | 12 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 176 | 172 | 2 | 2 | 0 | 2365 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 4 |
| 443 | 130 | 126 | 1 | 3 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 3 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 698 | 496 | 24 | 16 | 162 | 660 | 0.410 | 1 | 0 | 0 | 0 | 5 | 2 | 13 | 158 | 179 | 73 |
| 500 | 793 | 573 | 27 | 19 | 174 | 395 | 0.245 | 1 | 0 | 0 | 0 | 5 | 2 | 15 | 170 | 194 | 48 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 183 | 165 | 6 | 12 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 12 | 3 |
| | | | | | | | | | | | | | | | | | 20192 |

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 17 | 1 | 1 | 2 | 69 | 23 | 539 | 0 |
| 10 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 23 | 0 |
| 13 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | 103 |
| 32 | 3 | 4 | 0 | 0 | 0 | 20 | 7 | 78 | 0 |
| 33 | 1 | 2 | 0 | 0 | 0 | 8 | 3 | 47 | 0 |
| 35 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 24 | 315 |
| 36 | 7 | 3 | 0 | 0 | 0 | 22 | 8 | 207 | 0 |
| 37 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 23 | 75 |
| 38 | 7 | 2 | 0 | 0 | 0 | 18 | 6 | 172 | 1 |
| 42 | 7 | 14 | 1 | 1 | 1 | 120 | 41 | 1108 | 2072 |
| 43 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 14 | 46 |
| 46 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 8 |
| 47 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| 48 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 8 |
| 50 | 3 | 6 | 0 | 0 | 1 | 30 | 10 | 182 | 0 |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 52 | 3 | 12 | 1 | 1 | 1 | 42 | 14 | 364 | 0 |
| 53 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 0 |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 57 | 7 | 0 | 0 | 0 | 0 | 4 | 1 | 33 | 0 |
| 58 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 60 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 48 |
| 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 14 |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 8 | 10 |
| 66 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 10 |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 69 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 24 | 0 |
| 70 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 34 | 0 |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 3 | 7 | 0 | 0 | 1 | 24 | 8 | 212 | 0 |
| 74 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 7 | 2 |
| 75 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 3 |
| 76 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 77 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 |
| 80 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 16 |
| 83 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 19 | 40 |
| 87 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 95 | 6 | 0 | 0 | 0 | 0 | 1 | 1 | 9 | 12 |
| 96 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 97 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 98 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 101 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 15 |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 17 |
| 104 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 |
| 108 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 109 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 110 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 31 |
| 113 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 10 |
| 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 19 |
| 115 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 14 |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 117 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 14 |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 17 |
| 121 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 15 |
| 122 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 |
| 123 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 15 |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 9 |
| 127 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 72 |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 8 |
| 130 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 131 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 134 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 135 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 136 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 139 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 140 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 141 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 3 |
| 142 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 143 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 2 |
| 144 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 0 |
| 145 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 149 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 13 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 0 |
| 152 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 69 |
| 153 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 18 | 0 |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 31 | 0 |
| 156 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 9 | 0 |
| 157 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 33 | 0 |
| 158 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 12 |
| 159 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 76 | 0 |
| 162 | 3 | 4 | 0 | 0 | 0 | 17 | 6 | 192 | 0 |
| 163 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 0 |
| 164 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165 | 1 | 13 | 1 | 1 | 1 | 47 | 16 | 423 | 0 |
| 168 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3 | 2 | 0 | 0 | 0 | 7 | 2 | 47 | 0 |
| 172 | 6 | 4 | 0 | 0 | 0 | 12 | 4 | 85 | 0 |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 7 | 3 | 0 | 0 | 0 | 26 | 9 | 265 | 378 |
| 178 | 7 | 3 | 0 | 0 | 0 | 28 | 9 | 196 | 360 |
| 179 | 7 | 7 | 0 | 0 | 1 | 60 | 20 | 585 | 840 |
| 180 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 7 | 31 | 1 | 1 | 3 | 102 | 35 | 905 | 603 |
| 191 | 7 | 20 | 1 | 1 | 2 | 65 | 22 | 619 | 361 |
| 192 | 7 | 4 | 0 | 0 | 0 | 12 | 4 | 72 | 101 |
| 194 | 5 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 0 |
| 195 | 5 | 0 | 0 | 0 | 0 | 3 | 1 | 29 | 0 |
| 196 | 5 | 1 | 0 | 0 | 0 | 9 | 3 | 88 | 0 |
| 198 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 199 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 200 | 6 | 3 | 0 | 0 | 0 | 21 | 7 | 187 | 0 |
| 205 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 38 | 0 |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 6 | 0 | 0 | 0 | 0 | 6 | 2 | 67 | 0 |
| 215 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 16 | 24 |
| 217 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 14 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 219 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 22 |
| 232 | 7 | 2 | 0 | 0 | 0 | 5 | 2 | 43 | 84 |
| 233 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 236 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 237 | 7 | 1 | 0 | 0 | 0 | 4 | 1 | 43 | 56 |
| 238 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 18 |
| 239 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 10 | 7 |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 19 |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 245 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 246 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 247 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 6 | 2 | 0 | 0 | 0 | 5 | 2 | 44 | 76 |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 7 |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 3 | 2 | 0 | 0 | 0 | 7 | 2 | 58 | 103 |
| 261 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| 262 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 |
| 263 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 7 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 266 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 14 |
| 267 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 268 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 11 |
| 269 | 6 | 2 | 0 | 0 | 0 | 11 | 4 | 143 | 445 |
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 271 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 67 |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 73 | 225 |
| 275 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 276 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 30 |
| 277 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 |
| 280 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 32 |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 282 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 26 |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 284 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 8 | 27 |
| 285 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 10 |
| 286 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 1 |
| 287 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 11 | 23 |
| 288 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 289 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 12 | 15 |
| 290 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 39 |
| 294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 301 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 302 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 303 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 132 |
| 304 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 0 |
| 306 | 6 | 1 | 0 | 0 | 0 | 6 | 2 | 70 | 70 |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 325 | 7 | 4 | 0 | 0 | 0 | 14 | 5 | 39 | 215 |
| 326 | 7 | 2 | 0 | 0 | 0 | 5 | 2 | 54 | 58 |
| 327 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 18 |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 359 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 360 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 9 |
| 361 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 25 | 25 |
| 362 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 1 | 9 | 0 | 0 | 1 | 32 | 11 | 225 | 57 |
| 364 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 14 |
| 365 | 6 | 2 | 0 | 0 | 0 | 5 | 2 | 40 | 67 |
| 366 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 387 | 3 | 7 | 0 | 0 | 1 | 29 | 10 | 365 | 193 |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 31 | 12 |
| 392 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 10 |
| 393 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 44 | 37 |
| 394 | 3 | 3 | 0 | 0 | 0 | 14 | 5 | 170 | 86 |
| 396 | 3 | 7 | 0 | 0 | 1 | 21 | 7 | 228 | 91 |
| 397 | 7 | 2 | 0 | 0 | 0 | 6 | 2 | 75 | 7 |
| 398 | 6 | 2 | 0 | 0 | 0 | 6 | 2 | 49 | 0 |
| 399 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 400 | 6 | 2 | 0 | 0 | 0 | 6 | 2 | 25 | 3 |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 |
| 406 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 409 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| 410 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 413 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 3 | 2 | 0 | 0 | 0 | 7 | 2 | 60 | 21 |
| 416 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 91 |
| 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 0 |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| 443 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 65 |
| 500 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 42 |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Total | | **259** | **12** | **12** | **24** | **1130** | **384** | **9723** | **8647** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37 | 2 | 2 | 3 | 137 | 47 | 1069 | 936 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 68 | 3 | 3 | 6 | 270 | 92 | 2286 | 555 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 3 | 0 | 0 | 0 | 18 | 6 | 160 | 25 | |
| 6 | 48 | 2 | 2 | 4 | 192 | 65 | 1601 | 1461 | |
| 7 | 102 | 5 | 5 | 9 | 513 | 174 | 4607 | 5670 | |
| 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **259** | **12** | **12** | **24** | **1130** | **384** | **9723** | **8647** | **20192** |

**World Logistics Center** **2012**
Project Full Buildout 2012
Surface Street Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9639 | 8,747 | 300 | 592 | 0 | 1820 | 1.131 | 5012 | 588 | 1745 | 1384 | 197 | 21 | 115 | 0 | 9062 | 10246 |
| 10 | 1133 | 1,032 | 46 | 55 | 0 | 826 | 0.513 | 591 | 69 | 206 | 163 | 30 | 3 | 11 | 0 | 1074 | 551 |
| 13 | 2150 | 1,545 | 29 | 86 | 490 | 345 | 0.214 | 885 | 104 | 308 | 244 | 19 | 2 | 17 | 11 | 1590 | 341 |
| 32 | 2416 | 2,211 | 104 | 101 | 0 | 1551 | 0.964 | 1267 | 149 | 441 | 350 | 68 | 7 | 20 | 0 | 2302 | 2218 |
| 33 | 941 | 864 | 30 | 47 | 0 | 2006 | 1.246 | 495 | 58 | 172 | 137 | 20 | 2 | 9 | 0 | 893 | 1113 |
| 35 | 1159 | 421 | 32 | 59 | 647 | 801 | 0.498 | 241 | 28 | 84 | 67 | 21 | 2 | 11 | 14 | 469 | 233 |
| 36 | 1945 | 1,582 | 109 | 254 | 0 | 1627 | 1.011 | 906 | 106 | 316 | 250 | 72 | 8 | 49 | 0 | 1707 | 1726 |
| 37 | 1548 | 710 | 66 | 212 | 560 | 219 | 0.136 | 407 | 48 | 142 | 112 | 43 | 5 | 41 | 12 | 810 | 110 |
| 38 | 3752 | 3,010 | 219 | 521 | 2 | 659 | 0.409 | 1725 | 202 | 601 | 476 | 144 | 15 | 101 | 0 | 3265 | 1336 |
| 42 | 3611 | 2,379 | 178 | 415 | 639 | 5338 | 3.316 | 1363 | 160 | 475 | 376 | 117 | 12 | 81 | 14 | 2598 | 8616 |
| 43 | 259 | 209 | 10 | 11 | 29 | 2598 | 1.614 | 120 | 14 | 42 | 33 | 7 | 1 | 2 | 1 | 219 | 353 |
| 46 | 169 | 142 | 7 | 4 | 16 | 806 | 0.501 | 81 | 10 | 28 | 22 | 5 | 0 | 1 | 0 | 148 | 74 |
| 47 | 165 | 160 | 3 | 2 | 0 | 1995 | 1.239 | 92 | 11 | 32 | 25 | 2 | 0 | 0 | 0 | 162 | 201 |
| 48 | 524 | 478 | 11 | 18 | 17 | 795 | 0.494 | 274 | 32 | 95 | 76 | 7 | 1 | 4 | 0 | 489 | 241 |
| 50 | 13674 | 12,425 | 489 | 760 | 0 | 479 | 0.298 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 | 3839 |
| 51 | 182 | 175 | 2 | 5 | 0 | 975 | 0.606 | 100 | 12 | 35 | 28 | 1 | 0 | 1 | 0 | 177 | 107 |
| 52 | 9263 | 8,429 | 261 | 573 | 0 | 1269 | 0.788 | 4829 | 566 | 1682 | 1334 | 172 | 18 | 111 | 0 | 8713 | 6869 |
| 53 | 440 | 404 | 26 | 10 | 0 | 795 | 0.494 | 231 | 27 | 81 | 64 | 17 | 2 | 2 | 0 | 424 | 209 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 64 | 57 | 5 | 2 | 0 | 2042 | 1.269 | 33 | 4 | 11 | 9 | 3 | 0 | 0 | 0 | 61 | 77 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 2109 | 1,722 | 120 | 267 | 0 | 246 | 0.153 | 987 | 116 | 344 | 273 | 79 | 8 | 52 | 0 | 1858 | 284 |
| 58 | 216 | 172 | 13 | 9 | 22 | 172 | 0.107 | 99 | 12 | 34 | 27 | 9 | 1 | 2 | 0 | 183 | 20 |
| 59 | 28 | 16 | 0 | 4 | 8 | 786 | 0.488 | 9 | 1 | 3 | 3 | 0 | 0 | 1 | 0 | 17 | 8 |
| 60 | 2113 | 1,437 | 48 | 136 | 492 | 159 | 0.099 | 823 | 97 | 287 | 227 | 32 | 3 | 26 | 11 | 1506 | 149 |
| 61 | 718 | 434 | 13 | 25 | 246 | 97 | 0.060 | 249 | 29 | 87 | 69 | 9 | 1 | 5 | 5 | 453 | 27 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 661 | 605 | 15 | 21 | 20 | 795 | 0.494 | 347 | 41 | 121 | 96 | 10 | 1 | 4 | 0 | 619 | 306 |
| 66 | 770 | 694 | 23 | 33 | 20 | 812 | 0.504 | 398 | 47 | 138 | 110 | 15 | 2 | 6 | 0 | 716 | 361 |
| 67 | 9 | 9 | 0 | 0 | 0 | 778 | 0.483 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 4 |
| 68 | 77 | 74 | 1 | 2 | 0 | 814 | 0.506 | 42 | 5 | 15 | 12 | 1 | 0 | 0 | 0 | 75 | 38 |
| 69 | 1238 | 1,134 | 46 | 58 | 0 | 819 | 0.509 | 650 | 76 | 226 | 179 | 30 | 3 | 11 | 0 | 1176 | 599 |
| 70 | 1866 | 1,710 | 70 | 86 | 0 | 795 | 0.494 | 980 | 115 | 341 | 271 | 46 | 5 | 17 | 0 | 1774 | 876 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 9115 | 8,291 | 254 | 570 | 0 | 742 | 0.461 | 4750 | 557 | 1654 | 1312 | 167 | 18 | 111 | 0 | 8570 | 3950 |
| 74 | 687 | 661 | 15 | 9 | 2 | 1573 | 0.977 | 379 | 44 | 132 | 105 | 10 | 1 | 2 | 0 | 672 | 657 |
| 75 | 234 | 207 | 8 | 12 | 7 | 805 | 0.500 | 119 | 14 | 41 | 33 | 5 | 1 | 2 | 0 | 215 | 107 |
| 76 | 50 | 41 | 2 | 7 | 0 | 1597 | 0.992 | 23 | 3 | 8 | 6 | 1 | 0 | 1 | 0 | 44 | 43 |
| 77 | 919 | 869 | 21 | 19 | 10 | 438 | 0.272 | 498 | 58 | 173 | 138 | 14 | 1 | 4 | 0 | 886 | 241 |
| 80 | 1198 | 1,130 | 29 | 31 | 8 | 138 | 0.086 | 647 | 76 | 225 | 179 | 19 | 2 | 6 | 0 | 1155 | 99 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1835 | 1,640 | 49 | 64 | 82 | 322 | 0.200 | 940 | 110 | 327 | 260 | 32 | 3 | 12 | 2 | 1687 | 337 |
| 83 | 844 | 751 | 24 | 28 | 41 | 95 | 0.059 | 430 | 50 | 150 | 119 | 16 | 2 | 5 | 1 | 773 | 46 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 2348 | 1,895 | 87 | 136 | 230 | 284 | 0.176 | 1086 | 127 | 378 | 300 | 57 | 6 | 26 | 5 | 1986 | 350 |
| 87 | 23 | 22 | 1 | 0 | 0 | 800 | 0.497 | 13 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 23 | 11 |
| 88 | 66 | 61 | 3 | 2 | 0 | 809 | 0.503 | 35 | 4 | 12 | 10 | 2 | 0 | 0 | 0 | 63 | 32 |
| 95 | 893 | 783 | 27 | 39 | 44 | 439 | 0.273 | 449 | 53 | 156 | 124 | 18 | 2 | 8 | 1 | 810 | 221 |
| 96 | 634 | 616 | 12 | 2 | 4 | 399 | 0.248 | 353 | 41 | 123 | 97 | 8 | 1 | 0 | 0 | 624 | 155 |
| 97 | 99 | 74 | 4 | 13 | 8 | 389 | 0.242 | 42 | 5 | 15 | 12 | 3 | 0 | 3 | 0 | 79 | 19 |
| 98 | 104 | 84 | 4 | 2 | 14 | 160 | 0.099 | 48 | 6 | 17 | 13 | 3 | 0 | 0 | 0 | 87 | 9 |
| 99 | 76 | 71 | 1 | 2 | 2 | 405 | 0.252 | 41 | 5 | 14 | 11 | 1 | 0 | 0 | 0 | 72 | 18 |
| 100 | 397 | 334 | 11 | 22 | 30 | 227 | 0.141 | 191 | 22 | 67 | 53 | 7 | 1 | 4 | 1 | 346 | 49 |
| 101 | 1184 | 1,026 | 27 | 54 | 77 | 313 | 0.194 | 588 | 69 | 205 | 162 | 18 | 2 | 11 | 2 | 1056 | 205 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1214 | 1,029 | 28 | 60 | 97 | 291 | 0.181 | 590 | 69 | 205 | 163 | 18 | 2 | 12 | 2 | 1061 | 192 |
| 104 | 248 | 205 | 3 | 9 | 31 | 404 | 0.251 | 117 | 14 | 41 | 32 | 2 | 0 | 2 | 1 | 209 | 53 |
| 105 | 25 | 25 | 0 | 0 | 0 | 195 | 0.121 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 25 | 3 |
| 106 | 0 | 0 | 0 | 0 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107 | 258 | 215 | 3 | 9 | 31 | 388 | 0.241 | 123 | 14 | 43 | 34 | 2 | 0 | 2 | 1 | 219 | 53 |
| 108 | 6 | 6 | 0 | 0 | 0 | 997 | 0.619 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 6 | 4 |
| 109 | 48 | 41 | 2 | 5 | 0 | 787 | 0.489 | 23 | 3 | 8 | 6 | 1 | 0 | 1 | 0 | 43 | 21 |
| 110 | 218 | 184 | 3 | 9 | 22 | 756 | 0.470 | 105 | 12 | 37 | 29 | 2 | 0 | 2 | 0 | 188 | 88 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 293 | 204 | 6 | 20 | 63 | 817 | 0.508 | 117 | 14 | 41 | 32 | 4 | 0 | 4 | 1 | 213 | 108 |
| 113 | 54 | 21 | 3 | 9 | 21 | 791 | 0.491 | 12 | 1 | 4 | 3 | 2 | 0 | 2 | 0 | 25 | 12 |
| 114 | 90 | 38 | 3 | 9 | 40 | 791 | 0.491 | 22 | 3 | 8 | 6 | 2 | 0 | 2 | 1 | 43 | 21 |
| 115 | 246 | 204 | 4 | 10 | 28 | 851 | 0.529 | 117 | 14 | 41 | 32 | 3 | 0 | 2 | 1 | 209 | 111 |
| 116 | 4 | 0 | 0 | 0 | 4 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117 | 17 | 17 | 0 | 0 | 0 | 757 | 0.470 | 10 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 17 | 8 |
| 118 | 272 | 227 | 4 | 10 | 31 | 765 | 0.475 | 130 | 15 | 45 | 36 | 3 | 0 | 2 | 1 | 232 | 110 |
| 119 | 1 | 1 | 0 | 0 | 0 | 782 | 0.486 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 120 | 91 | 45 | 5 | 6 | 35 | 814 | 0.506 | 26 | 3 | 9 | 7 | 3 | 0 | 1 | 1 | 50 | 26 |
| 121 | 308 | 261 | 5 | 12 | 30 | 825 | 0.513 | 150 | 18 | 52 | 41 | 3 | 0 | 2 | 1 | 267 | 137 |
| 122 | 40 | 12 | 2 | 3 | 23 | 782 | 0.486 | 7 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 15 | 7 |
| 123 | 32 | 30 | 1 | 1 | 0 | 791 | 0.491 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 | 15 |
| 124 | 367 | 315 | 7 | 15 | 30 | 800 | 0.497 | 180 | 21 | 63 | 50 | 5 | 0 | 3 | 1 | 323 | 161 |
| 125 | 0 | 0 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 396 | 355 | 7 | 15 | 19 | 774 | 0.481 | 203 | 24 | 71 | 56 | 5 | 0 | 3 | 0 | 363 | 174 |
| 127 | 227 | 69 | 4 | 10 | 144 | 825 | 0.513 | 40 | 5 | 14 | 11 | 3 | 0 | 2 | 3 | 77 | 39 |
| 128 | 0 | 0 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 428 | 394 | 9 | 9 | 16 | 823 | 0.511 | 226 | 26 | 79 | 62 | 6 | 1 | 2 | 0 | 402 | 205 |
| 130 | 90 | 86 | 3 | 1 | 0 | 800 | 0.497 | 49 | 6 | 17 | 14 | 2 | 0 | 0 | 0 | 88 | 44 |
| 131 | 24 | 24 | 0 | 0 | 0 | 775 | 0.481 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 12 |
| 133 | 112 | 107 | 5 | 0 | 0 | 804 | 0.499 | 61 | 7 | 21 | 17 | 3 | 0 | 0 | 0 | 110 | 55 |
| 134 | 65 | 59 | 3 | 1 | 2 | 760 | 0.472 | 34 | 4 | 12 | 9 | 2 | 0 | 0 | 0 | 61 | 29 |
| 135 | 591 | 537 | 14 | 20 | 20 | 816 | 0.507 | 308 | 36 | 107 | 85 | 9 | 1 | 4 | 0 | 550 | 279 |
| 136 | 111 | 108 | 3 | 0 | 0 | 786 | 0.488 | 62 | 7 | 22 | 17 | 2 | 0 | 0 | 0 | 110 | 54 |
| 137 | 7 | 7 | 0 | 0 | 0 | 790 | 0.491 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 | 3 |
| 138 | 78 | 62 | 3 | 8 | 5 | 267 | 0.166 | 36 | 4 | 12 | 10 | 2 | 0 | 2 | 0 | 66 | 11 |
| 139 | 130 | 116 | 3 | 6 | 5 | 504 | 0.313 | 66 | 8 | 23 | 18 | 2 | 0 | 1 | 0 | 119 | 37 |
| 140 | 289 | 272 | 4 | 8 | 5 | 527 | 0.327 | 156 | 18 | 54 | 43 | 3 | 0 | 2 | 0 | 276 | 90 |
| 141 | 316 | 295 | 5 | 11 | 5 | 1001 | 0.622 | 169 | 20 | 59 | 47 | 3 | 0 | 2 | 0 | 300 | 187 |
| 142 | 44 | 36 | 1 | 3 | 4 | 291 | 0.181 | 21 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | 37 | 7 |
| 143 | 401 | 364 | 9 | 24 | 4 | 845 | 0.525 | 209 | 24 | 73 | 58 | 6 | 1 | 5 | 0 | 375 | 197 |
| 144 | 401 | 368 | 9 | 24 | 0 | 783 | 0.486 | 211 | 25 | 73 | 58 | 6 | 1 | 5 | 0 | 378 | 184 |
| 145 | 413 | 378 | 10 | 25 | 0 | 787 | 0.489 | 217 | 25 | 75 | 60 | 7 | 1 | 5 | 0 | 389 | 190 |
| 146 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 147 | 481 | 441 | 14 | 26 | 0 | 798 | 0.496 | 253 | 30 | 88 | 70 | 9 | 1 | 5 | 0 | 455 | 226 |
| 148 | 20 | 6 | 1 | 1 | 12 | 731 | 0.454 | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 7 | 3 |
| 149 | 595 | 543 | 19 | 33 | 0 | 808 | 0.502 | 311 | 36 | 108 | 86 | 13 | 1 | 6 | 0 | 562 | 282 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 650 | 590 | 22 | 38 | 0 | 787 | 0.489 | 338 | 40 | 118 | 93 | 14 | 2 | 7 | 0 | 612 | 299 |
| 152 | 206 | 50 | 3 | 7 | 146 | 782 | 0.486 | 29 | 3 | 10 | 8 | 2 | 0 | 1 | 3 | 57 | 28 |
| 153 | 833 | 761 | 27 | 45 | 0 | 798 | 0.496 | 436 | 51 | 152 | 120 | 18 | 2 | 9 | 0 | 788 | 391 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1677 | 1,533 | 63 | 81 | 0 | 775 | 0.481 | 878 | 103 | 306 | 243 | 41 | 4 | 16 | 0 | 1591 | 766 |
| 156 | 673 | 623 | 27 | 23 | 0 | 771 | 0.479 | 357 | 42 | 124 | 99 | 18 | 2 | 4 | 0 | 646 | 309 |
| 157 | 1856 | 1,703 | 70 | 83 | 0 | 804 | 0.499 | 976 | 114 | 340 | 270 | 46 | 5 | 16 | 0 | 1767 | 882 |
| 158 | 274 | 218 | 9 | 28 | 19 | 1039 | 0.645 | 125 | 15 | 44 | 34 | 6 | 1 | 5 | 0 | 230 | 148 |
| 159 | 263 | 238 | 6 | 0 | 19 | 170 | 0.106 | 136 | 16 | 47 | 38 | 4 | 0 | 0 | 0 | 242 | 26 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1982 | 1,717 | 71 | 194 | 0 | 784 | 0.487 | 984 | 115 | 343 | 272 | 47 | 5 | 38 | 0 | 1803 | 878 |
| 162 | 4039 | 3,544 | 130 | 365 | 0 | 1052 | 0.654 | 2031 | 238 | 707 | 561 | 86 | 9 | 71 | 0 | 3702 | 2419 |
| 163 | 1961 | 1,741 | 55 | 165 | 0 | 350 | 0.217 | 998 | 117 | 347 | 276 | 36 | 4 | 32 | 0 | 1810 | 393 |
| 164 | 25 | 22 | 1 | 2 | 0 | 473 | 0.294 | 13 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 23 | 7 |
| 165 | 8855 | 8,065 | 242 | 548 | 0 | 1541 | 0.957 | 4621 | 542 | 1609 | 1276 | 159 | 17 | 107 | 0 | 8331 | 7975 |
| 168 | 1615 | 1,440 | 41 | 134 | 0 | 758 | 0.471 | 825 | 97 | 287 | 228 | 27 | 3 | 26 | 0 | 1493 | 703 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 4575 | 4,292 | 103 | 180 | 0 | 522 | 0.324 | 2459 | 288 | 856 | 679 | 68 | 7 | 35 | 0 | 4393 | 1425 |
| 172 | 4351 | 4,084 | 95 | 172 | 0 | 993 | 0.617 | 2340 | 274 | 815 | 646 | 63 | 7 | 33 | 0 | 4178 | 2577 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 3655 | 2,432 | 185 | 478 | 560 | 1110 | 0.690 | 1393 | 163 | 485 | 385 | 122 | 13 | 93 | 12 | 2667 | 1839 |
| 178 | 596 | 427 | 31 | 55 | 83 | 7132 | 4.430 | 245 | 29 | 85 | 68 | 20 | 2 | 11 | 2 | 461 | 2043 |
| 179 | 4254 | 2,872 | 216 | 534 | 632 | 2189 | 1.360 | 1646 | 193 | 573 | 454 | 142 | 15 | 104 | 14 | 3141 | 4271 |
| 180 | 115 | 115 | 0 | 0 | 0 | 6725 | 4.178 | 66 | 8 | 23 | 18 | 0 | 0 | 0 | 0 | 115 | 479 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 5068 | 4,501 | 127 | 284 | 156 | 6368 | 3.956 | 2579 | 302 | 898 | 712 | 84 | 9 | 55 | 3 | 4643 | 18366 |
| 191 | 4211 | 3,733 | 105 | 252 | 121 | 4906 | 3.048 | 2139 | 251 | 745 | 591 | 69 | 7 | 49 | 3 | 3853 | 11744 |
| 192 | 861 | 768 | 22 | 33 | 38 | 4358 | 2.707 | 440 | 52 | 153 | 122 | 14 | 2 | 6 | 1 | 790 | 2138 |
| 194 | 608 | 471 | 39 | 98 | 0 | 355 | 0.221 | 270 | 32 | 94 | 75 | 26 | 3 | 19 | 0 | 517 | 114 |
| 195 | 1139 | 938 | 54 | 147 | 0 | 397 | 0.247 | 537 | 63 | 187 | 148 | 36 | 4 | 29 | 0 | 1004 | 248 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196 | 1757 | 1,409 | 102 | 246 | 0 | 716 | 0.445 | 807 | 95 | 281 | 223 | 67 | 7 | 48 | 0 | 1528 | 680 |
| 198 | 95 | 83 | 4 | 8 | 0 | 1009 | 0.627 | 48 | 6 | 17 | 13 | 3 | 0 | 2 | 0 | 87 | 55 |
| 199 | 249 | 231 | 6 | 12 | 0 | 378 | 0.235 | 132 | 16 | 46 | 37 | 4 | 0 | 2 | 0 | 237 | 56 |
| 200 | 2109 | 1,722 | 120 | 267 | 0 | 1403 | 0.872 | 987 | 116 | 344 | 273 | 79 | 8 | 52 | 0 | 1858 | 1619 |
| 205 | 233 | 164 | 18 | 51 | 0 | 1501 | 0.932 | 94 | 11 | 33 | 26 | 12 | 1 | 10 | 0 | 187 | 174 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 233 | 164 | 18 | 51 | 0 | 2611 | 1.622 | 94 | 11 | 33 | 26 | 12 | 1 | 10 | 0 | 187 | 303 |
| 215 | 7 | 7 | 0 | 0 | 0 | 2937 | 1.825 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 | 13 |
| 216 | 382 | 338 | 8 | 16 | 20 | 2000 | 1.242 | 194 | 23 | 67 | 53 | 5 | 1 | 3 | 0 | 347 | 431 |
| 217 | 689 | 612 | 16 | 27 | 34 | 663 | 0.412 | 351 | 41 | 122 | 97 | 11 | 1 | 5 | 1 | 628 | 259 |
| 218 | 91 | 80 | 1 | 4 | 6 | 1167 | 0.725 | 46 | 5 | 16 | 13 | 1 | 0 | 1 | 0 | 81 | 59 |
| 219 | 23 | 21 | 1 | 0 | 1 | 2672 | 1.660 | 12 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 22 | 36 |
| 221 | 8 | 8 | 0 | 0 | 0 | 2622 | 1.629 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 13 |
| 223 | 19 | 19 | 0 | 0 | 0 | 359 | 0.223 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 19 | 4 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 53 | 43 | 1 | 4 | 5 | 1643 | 1.021 | 25 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | 45 | 45 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 2 | 2 | 0 | 0 | 0 | 1122 | 0.697 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 230 | 65 | 65 | 0 | 0 | 0 | 1007 | 0.626 | 37 | 4 | 13 | 10 | 0 | 0 | 0 | 0 | 65 | 41 |
| 231 | 121 | 92 | 3 | 8 | 18 | 1968 | 1.223 | 53 | 6 | 18 | 15 | 2 | 0 | 2 | 0 | 96 | 117 |
| 232 | 1000 | 846 | 24 | 50 | 80 | 1719 | 1.068 | 485 | 57 | 169 | 134 | 16 | 2 | 10 | 2 | 873 | 932 |
| 233 | 93 | 79 | 2 | 5 | 7 | 976 | 0.606 | 45 | 5 | 16 | 13 | 1 | 0 | 1 | 0 | 81 | 49 |
| 236 | 30 | 22 | 1 | 4 | 3 | 794 | 0.493 | 13 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | 24 | 12 |
| 237 | 767 | 634 | 19 | 55 | 59 | 1556 | 0.967 | 363 | 43 | 127 | 100 | 13 | 1 | 11 | 1 | 659 | 637 |
| 238 | 324 | 267 | 7 | 24 | 26 | 1120 | 0.696 | 153 | 18 | 53 | 42 | 5 | 0 | 5 | 1 | 277 | 193 |
| 239 | 364 | 330 | 11 | 15 | 8 | 1385 | 0.860 | 189 | 22 | 66 | 52 | 7 | 1 | 3 | 0 | 340 | 293 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 402 | 350 | 12 | 9 | 31 | 989 | 0.614 | 201 | 24 | 70 | 55 | 8 | 1 | 2 | 1 | 360 | 221 |
| 243 | 32 | 22 | 1 | 3 | 6 | 64 | 0.040 | 13 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | 23 | 1 |
| 244 | 3 | 3 | 0 | 0 | 0 | 173 | 0.107 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 245 | 111 | 81 | 3 | 0 | 27 | 181 | 0.112 | 46 | 5 | 16 | 13 | 2 | 0 | 0 | 1 | 84 | 9 |
| 246 | 21 | 11 | 1 | 2 | 7 | 273 | 0.170 | 6 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 12 | 2 |
| 247 | 436 | 355 | 12 | 22 | 47 | 87 | 0.054 | 203 | 24 | 71 | 56 | 8 | 1 | 4 | 1 | 368 | 20 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 1045 | 886 | 24 | 56 | 79 | 1588 | 0.986 | 508 | 60 | 177 | 140 | 16 | 2 | 11 | 2 | 914 | 902 |
| 254 | 2 | 2 | 0 | 0 | 0 | 424 | 0.263 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 256 | 384 | 356 | 8 | 8 | 12 | 943 | 0.586 | 204 | 24 | 71 | 56 | 5 | 1 | 2 | 0 | 363 | 213 |
| 258 | 3 | 3 | 0 | 0 | 0 | 472 | 0.293 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 260 | 1426 | 1,235 | 31 | 65 | 95 | 1783 | 1.108 | 708 | 83 | 246 | 195 | 20 | 2 | 13 | 2 | 1270 | 1406 |
| 261 | 119 | 109 | 5 | 4 | 1 | 1181 | 0.734 | 62 | 7 | 22 | 17 | 3 | 0 | 1 | 0 | 113 | 83 |
| 262 | 206 | 194 | 5 | 6 | 1 | 860 | 0.534 | 111 | 13 | 39 | 31 | 3 | 0 | 1 | 0 | 198 | 106 |
| 263 | 1428 | 1,244 | 36 | 61 | 87 | 141 | 0.088 | 713 | 84 | 248 | 197 | 24 | 2 | 12 | 2 | 1281 | 112 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 817 | 681 | 18 | 48 | 70 | 98 | 0.061 | 390 | 46 | 136 | 108 | 12 | 1 | 9 | 2 | 704 | 43 |
| 266 | 1861 | 1,601 | 46 | 82 | 132 | 171 | 0.106 | 917 | 108 | 319 | 253 | 30 | 3 | 16 | 3 | 1650 | 175 |
| 267 | 274 | 227 | 8 | 19 | 20 | 156 | 0.097 | 130 | 15 | 45 | 36 | 5 | 1 | 4 | 0 | 236 | 23 |
| 268 | 1488 | 1,301 | 0 | 73 | 114 | 159 | 0.099 | 745 | 87 | 260 | 206 | 0 | 0 | 14 | 3 | 1315 | 130 |
| 269 | 1100 | 650 | 34 | 117 | 299 | 2450 | 1.522 | 372 | 44 | 130 | 103 | 22 | 2 | 23 | 7 | 703 | 1070 |
| 270 | 4 | 3 | 0 | 0 | 1 | 620 | 0.385 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 271 | 1103 | 654 | 35 | 114 | 300 | 370 | 0.230 | 375 | 44 | 131 | 103 | 23 | 2 | 22 | 7 | 707 | 162 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 5 | 4 | 0 | 0 | 1 | 625 | 0.388 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 274 | 1126 | 671 | 35 | 119 | 301 | 1231 | 0.765 | 384 | 45 | 134 | 106 | 23 | 2 | 23 | 7 | 725 | 554 |
| 275 | 26 | 24 | 2 | 0 | 0 | 377 | 0.234 | 14 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 25 | 6 |
| 276 | 1144 | 691 | 36 | 108 | 309 | 159 | 0.099 | 396 | 46 | 138 | 109 | 24 | 2 | 21 | 7 | 744 | 73 |
| 277 | 11 | 11 | 0 | 0 | 0 | 1074 | 0.667 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 7 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 516 | 310 | 16 | 52 | 138 | 157 | 0.098 | 178 | 21 | 62 | 49 | 11 | 1 | 10 | 3 | 334 | 33 |
| 280 | 1216 | 724 | 38 | 129 | 325 | 163 | 0.101 | 415 | 49 | 144 | 115 | 25 | 3 | 25 | 7 | 782 | 79 |
| 281 | 14 | 3 | 1 | 0 | 10 | 280 | 0.174 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 1 |
| 282 | 1009 | 618 | 30 | 100 | 261 | 167 | 0.104 | 354 | 42 | 123 | 98 | 20 | 2 | 19 | 6 | 664 | 69 |
| 283 | 30 | 2 | 0 | 0 | 28 | 405 | 0.252 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 |
| 284 | 1760 | 1,543 | 49 | 45 | 123 | 365 | 0.227 | 884 | 104 | 308 | 244 | 32 | 3 | 9 | 3 | 1587 | 360 |
| 285 | 579 | 460 | 20 | 30 | 69 | 230 | 0.143 | 264 | 31 | 92 | 73 | 13 | 1 | 6 | 2 | 481 | 69 |
| 286 | 1170 | 1,028 | 43 | 88 | 11 | 209 | 0.130 | 589 | 69 | 205 | 163 | 28 | 3 | 17 | 0 | 1075 | 140 |
| 287 | 1233 | 985 | 42 | 78 | 128 | 292 | 0.181 | 564 | 66 | 197 | 156 | 28 | 3 | 15 | 3 | 1032 | 187 |
| 288 | 299 | 253 | 12 | 25 | 9 | 152 | 0.094 | 145 | 17 | 50 | 40 | 8 | 1 | 5 | 0 | 266 | 25 |
| 289 | 1261 | 1,049 | 44 | 82 | 86 | 285 | 0.177 | 601 | 70 | 209 | 166 | 29 | 3 | 16 | 2 | 1097 | 194 |
| 290 | 934 | 660 | 30 | 50 | 194 | 328 | 0.204 | 378 | 44 | 132 | 104 | 20 | 2 | 10 | 4 | 694 | 142 |
| 294 | 83 | 78 | 3 | 2 | 0 | 824 | 0.512 | 45 | 5 | 16 | 12 | 2 | 0 | 0 | 0 | 80 | 41 |
| 301 | 171 | 155 | 9 | 7 | 0 | 774 | 0.481 | 89 | 10 | 31 | 25 | 6 | 1 | 1 | 0 | 163 | 78 |
| 302 | 222 | 203 | 10 | 9 | 0 | 796 | 0.494 | 116 | 14 | 41 | 32 | 7 | 1 | 2 | 0 | 212 | 105 |
| 303 | 209 | 55 | 3 | 8 | 143 | 1514 | 0.941 | 32 | 4 | 11 | 9 | 2 | 0 | 2 | 3 | 62 | 58 |
| 304 | 302 | 268 | 10 | 24 | 0 | 729 | 0.453 | 154 | 18 | 53 | 42 | 7 | 1 | 5 | 0 | 279 | 127 |
| 306 | 1742 | 1,374 | 57 | 171 | 140 | 818 | 0.508 | 787 | 92 | 274 | 217 | 38 | 4 | 33 | 3 | 1449 | 736 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 307 | 3169 | 2,646 | 91 | 292 | 140 | 0 | 0.000 | 1516 | 178 | 528 | 419 | 60 | 6 | 57 | 3 | 2767 | 0 |
| 324 | 39 | 35 | 1 | 2 | 1 | 2925 | 1.817 | 20 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | 36 | 66 |
| 325 | 2023 | 1,780 | 49 | 35 | 159 | 2224 | 1.382 | 1020 | 120 | 355 | 282 | 32 | 3 | 7 | 4 | 1822 | 2518 |
| 326 | 663 | 593 | 12 | 31 | 27 | 3506 | 2.178 | 340 | 40 | 118 | 94 | 8 | 1 | 6 | 1 | 607 | 1322 |
| 327 | 1439 | 1,216 | 37 | 53 | 133 | 227 | 0.141 | 697 | 82 | 243 | 192 | 24 | 3 | 10 | 3 | 1254 | 177 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 14 | 14 | 0 | 0 | 0 | 0 | 0.000 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 0 |
| 358 | 4197 | 3,730 | 105 | 241 | 121 | 0 | 0.000 | 2137 | 251 | 744 | 590 | 69 | 7 | 47 | 3 | 3848 | 0 |
| 359 | 7 | 7 | 0 | 0 | 0 | 339 | 0.211 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 | 1 |
| 360 | 3064 | 2,759 | 80 | 165 | 60 | 247 | 0.153 | 1581 | 185 | 551 | 437 | 53 | 6 | 32 | 1 | 2845 | 437 |
| 361 | 2258 | 1,941 | 51 | 146 | 120 | 337 | 0.209 | 1112 | 130 | 387 | 307 | 34 | 4 | 28 | 3 | 2005 | 420 |
| 362 | 5 | 5 | 0 | 0 | 0 | 338 | 0.210 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 1 |
| 363 | 2131 | 1,954 | 56 | 100 | 21 | 4495 | 2.792 | 1120 | 131 | 390 | 309 | 37 | 4 | 19 | 0 | 2011 | 5614 |
| 364 | 1834 | 1,604 | 47 | 104 | 79 | 286 | 0.178 | 919 | 108 | 320 | 254 | 31 | 3 | 20 | 2 | 1657 | 294 |
| 365 | 1171 | 1,025 | 27 | 50 | 69 | 1602 | 0.995 | 587 | 69 | 205 | 162 | 18 | 2 | 10 | 2 | 1054 | 1049 |
| 366 | 8 | 1 | 0 | 0 | 7 | 1742 | 1.082 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 0 | 0 | 0 | 0 | 0 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 387 | 2900 | 2,437 | 84 | 264 | 115 | 2761 | 1.715 | 1396 | 164 | 486 | 386 | 55 | 6 | 51 | 3 | 2547 | 4369 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 21 | 21 | 0 | 0 | 0 | 189 | 0.117 | 12 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 21 | 2 |
| 390 | 494 | 404 | 21 | 52 | 17 | 1189 | 0.739 | 231 | 27 | 81 | 64 | 14 | 1 | 10 | 0 | 429 | 317 |
| 392 | 460 | 278 | 30 | 114 | 38 | 436 | 0.271 | 159 | 19 | 55 | 44 | 20 | 2 | 22 | 1 | 322 | 87 |
| 393 | 240 | 64 | 16 | 95 | 65 | 934 | 0.580 | 37 | 4 | 13 | 10 | 11 | 1 | 18 | 1 | 95 | 55 |
| 394 | 2862 | 2,406 | 83 | 263 | 110 | 1292 | 0.803 | 1379 | 162 | 480 | 381 | 55 | 6 | 51 | 2 | 2515 | 2019 |
| 396 | 2885 | 2,560 | 69 | 193 | 63 | 2366 | 1.470 | 1467 | 172 | 511 | 405 | 45 | 5 | 38 | 1 | 2644 | 3886 |
| 397 | 1495 | 1,361 | 32 | 95 | 7 | 1588 | 0.986 | 780 | 91 | 272 | 215 | 21 | 2 | 18 | 0 | 1400 | 1381 |
| 398 | 3897 | 3,640 | 82 | 175 | 0 | 560 | 0.348 | 2086 | 245 | 726 | 576 | 54 | 6 | 34 | 0 | 3726 | 1296 |
| 399 | 60 | 58 | 1 | 1 | 0 | 3389 | 2.105 | 33 | 4 | 12 | 9 | 1 | 0 | 0 | 0 | 59 | 124 |
| 400 | 1211 | 1,152 | 27 | 29 | 3 | 1704 | 1.059 | 660 | 77 | 230 | 182 | 18 | 2 | 6 | 0 | 1175 | 1244 |
| 401 | 5 | 1 | 0 | 3 | 1 | 790 | 0.491 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 316 | 299 | 12 | 0 | 5 | 1010 | 0.627 | 171 | 20 | 60 | 47 | 8 | 1 | 0 | 0 | 307 | 193 |
| 406 | 75 | 63 | 7 | 3 | 2 | 395 | 0.245 | 36 | 4 | 13 | 10 | 5 | 0 | 1 | 0 | 69 | 17 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 20 | 19 | 0 | 0 | 1 | 1072 | 0.666 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 19 | 13 |
| 409 | 222 | 213 | 5 | 4 | 0 | 1137 | 0.706 | 122 | 14 | 43 | 34 | 3 | 0 | 1 | 0 | 217 | 153 |
| 410 | 379 | 367 | 12 | 0 | 0 | 884 | 0.549 | 210 | 25 | 73 | 58 | 8 | 1 | 0 | 0 | 375 | 206 |
| 411 | 1 | 1 | 0 | 0 | 0 | 2332 | 1.449 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 26 | 17 | 1 | 4 | 4 | 678 | 0.421 | 10 | 1 | 3 | 3 | 1 | 0 | 1 | 0 | 19 | 8 |
| 414 | 1 | 1 | 0 | 0 | 0 | 895 | 0.556 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 415 | 2773 | 2,525 | 66 | 141 | 41 | 855 | 0.531 | 1447 | 170 | 504 | 400 | 43 | 5 | 27 | 1 | 2596 | 1379 |
| 416 | 0 | 0 | 0 | 0 | 0 | 284 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 0 | 0 | 0 | 0 | 0 | 343 | 0.213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 0 | 0 | 0 | 0 | 0 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 405 | 197 | 10 | 18 | 180 | 828 | 0.514 | 113 | 13 | 39 | 31 | 7 | 1 | 4 | 4 | 211 | 109 |
| 425 | 0 | 0 | 0 | 0 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 0 | 0 | 0 | 0 | 0 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 18 | 5 | 1 | 1 | 11 | 654 | 0.406 | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 6 | 3 |
| 428 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 0 | 0 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 784 | 692 | 17 | 30 | 45 | 114 | 0.071 | 396 | 46 | 138 | 110 | 11 | 1 | 6 | 1 | 710 | 50 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 445 | 432 | 6 | 7 | 0 | 1802 | 1.119 | 248 | 29 | 86 | 68 | 4 | 0 | 1 | 0 | 437 | 489 |
| 434 | 12 | 12 | 0 | 0 | 0 | 1269 | 0.788 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 9 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 176 | 172 | 2 | 2 | 0 | 2365 | 1.469 | 99 | 12 | 34 | 27 | 1 | 0 | 0 | 0 | 173 | 255 |
| 443 | 130 | 126 | 1 | 3 | 0 | 1588 | 0.986 | 72 | 8 | 25 | 20 | 1 | 0 | 1 | 0 | 127 | 125 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 698 | 496 | 24 | 16 | 162 | 660 | 0.410 | 284 | 33 | 99 | 78 | 16 | 2 | 3 | 4 | 519 | 213 |
| 500 | 793 | 573 | 27 | 19 | 174 | 395 | 0.245 | 328 | 38 | 114 | 91 | 18 | 2 | 4 | 4 | 599 | 147 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 183 | 165 | 6 | 12 | 0 | 360 | 0.224 | 95 | 11 | 33 | 26 | 4 | 0 | 2 | 0 | 171 | 38 |

Total 155471

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2-GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) | Road Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 5666 | 664 | 1973 | 1565 | 223 | 24 | 130 | 0 | A |
| 10 | 3 | 303 | 36 | 106 | 84 | 16 | 2 | 5 | 0 | A |
| 13 | 6 | 190 | 22 | 66 | 52 | 4 | 0 | 4 | 2 | A |
| 32 | 3 | 1221 | 143 | 425 | 337 | 66 | 7 | 19 | 0 | A |
| 33 | 1 | 617 | 72 | 215 | 170 | 25 | 3 | 11 | 0 | M |
| 35 | 7 | 120 | 14 | 42 | 33 | 10 | 1 | 6 | 7 | A |
| 36 | 7 | 916 | 107 | 319 | 253 | 72 | 8 | 50 | 0 | A |
| 37 | 7 | 55 | 6 | 19 | 15 | 6 | 1 | 6 | 2 | A |
| 38 | 7 | 706 | 83 | 246 | 195 | 59 | 6 | 41 | 0 | A |
| 42 | 7 | 4520 | 530 | 1574 | 1248 | 388 | 41 | 268 | 47 | A |
| 43 | 7 | 193 | 23 | 67 | 53 | 11 | 1 | 3 | 1 | A |
| 46 | 7 | 41 | 5 | 14 | 11 | 2 | 0 | 0 | 0 | A |
| 47 | 7 | 114 | 13 | 40 | 31 | 2 | 0 | 0 | 0 | A |
| 48 | 6 | 135 | 16 | 47 | 37 | 4 | 0 | 2 | 0 | A |
| 50 | 3 | 2118 | 248 | 738 | 585 | 96 | 10 | 44 | 0 | A |
| 51 | 7 | 61 | 7 | 21 | 17 | 1 | 0 | 1 | 0 | A |
| 52 | 3 | 3807 | 446 | 1326 | 1052 | 135 | 14 | 88 | 0 | A |
| 53 | 6 | 114 | 13 | 40 | 32 | 8 | 1 | 1 | 0 | A |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 55 | 6 | 41 | 5 | 14 | 11 | 4 | 0 | 0 | 0 | A |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 57 | 7 | 151 | 18 | 53 | 42 | 12 | 1 | 8 | 0 | A |
| 58 | 1 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | M |
| 59 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 60 | 1 | 81 | 10 | 28 | 22 | 3 | 0 | 3 | 1 | M |
| 61 | 1 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | M |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 65 | 3 | 171 | 20 | 60 | 47 | 5 | 1 | 2 | 0 | A |
| 66 | 3 | 201 | 24 | 70 | 55 | 8 | 1 | 3 | 0 | A |
| 67 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 68 | 7 | 21 | 3 | 7 | 6 | 0 | 0 | 0 | 0 | A |
| 69 | 3 | 331 | 39 | 115 | 91 | 15 | 2 | 6 | 0 | A |
| 70 | 3 | 484 | 57 | 169 | 134 | 23 | 2 | 8 | 0 | A |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 73 | 3 | 2190 | 257 | 763 | 605 | 77 | 8 | 51 | 0 | A |
| 74 | 6 | 370 | 43 | 129 | 102 | 10 | 1 | 2 | 0 | A |
| 75 | 1 | 59 | 7 | 21 | 16 | 3 | 0 | 1 | 0 | M |
| 76 | 1 | 23 | 3 | 8 | 6 | 1 | 0 | 1 | 0 | M |
| 77 | 5 | 135 | 16 | 47 | 37 | 4 | 0 | 1 | 0 | A |
| 80 | 5 | 56 | 7 | 19 | 15 | 2 | 0 | 1 | 0 | A |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 82 | 1 | 188 | 22 | 65 | 52 | 6 | 1 | 2 | 0 | M |
| 83 | 5 | 25 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | A |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 86 | 1 | 192 | 22 | 67 | 53 | 10 | 1 | 5 | 1 | M |
| 87 | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 88 | 1 | 18 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | M |
| 95 | 6 | 122 | 14 | 43 | 34 | 5 | 1 | 2 | 0 | A |
| 96 | 8 | 87 | 10 | 30 | 24 | 2 | 0 | 0 | 0 | A |
| 97 | 5 | 10 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | A |
| 98 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 99 | 5 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 100 | 1 | 27 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | M |
| 101 | 1 | 114 | 13 | 40 | 32 | 3 | 0 | 2 | 0 | M |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 103 | 1 | 107 | 12 | 37 | 29 | 3 | 0 | 2 | 0 | M |
| 104 | 1 | 29 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | M |
| 105 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 107 | 1 | 30 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 109 | 5 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| 110 | 6 | 50 | 6 | 17 | 14 | 1 | 0 | 1 | 0 | A |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 112 | 6 | 59 | 7 | 21 | 16 | 2 | 0 | 2 | 1 | A |
| 113 | 5 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | A |
| 114 | 1 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | M |
| 115 | 6 | 62 | 7 | 22 | 17 | 1 | 0 | 1 | 0 | A |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 117 | 6 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 118 | 6 | 62 | 7 | 22 | 17 | 1 | 0 | 1 | 0 | A |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 120 | 1 | 13 | 2 | 5 | 4 | 2 | 0 | 1 | 0 | M |
| 121 | 6 | 77 | 9 | 27 | 21 | 2 | 0 | 1 | 0 | A |
| 122 | 3 | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | A |
| 123 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 124 | 6 | 90 | 11 | 31 | 25 | 2 | 0 | 1 | 0 | A |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 126 | 6 | 98 | 11 | 34 | 27 | 2 | 0 | 1 | 0 | A |
| 127 | 1 | 20 | 2 | 7 | 6 | 1 | 0 | 1 | 2 | M |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 129 | 6 | 115 | 14 | 40 | 32 | 3 | 0 | 1 | 0 | A |
| 130 | 6 | 24 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | A |
| 131 | 6 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 133 | 3 | 31 | 4 | 11 | 8 | 2 | 0 | 0 | 0 | A |
| 134 | 1 | 16 | 2 | 6 | 4 | 1 | 0 | 0 | 0 | M |
| 135 | 3 | 156 | 18 | 54 | 43 | 5 | 0 | 2 | 0 | A |
| 136 | 6 | 30 | 4 | 11 | 8 | 1 | 0 | 0 | 0 | A |
| 137 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 138 | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 139 | 1 | 21 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | M |
| 140 | 1 | 51 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | M |
| 141 | 1 | 105 | 12 | 37 | 29 | 2 | 0 | 1 | 0 | M |
| 142 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 143 | 3 | 109 | 13 | 38 | 30 | 3 | 0 | 2 | 0 | A |
| 144 | 3 | 103 | 12 | 36 | 28 | 3 | 0 | 2 | 0 | A |
| 145 | 3 | 106 | 12 | 37 | 29 | 3 | 0 | 2 | 0 | A |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 147 | 6 | 125 | 15 | 44 | 35 | 5 | 0 | 3 | 0 | A |
| 148 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 149 | 6 | 156 | 18 | 54 | 43 | 6 | 1 | 3 | 0 | A |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 151 | 1 | 165 | 19 | 58 | 46 | 7 | 1 | 4 | 0 | M |
| 152 | 1 | 14 | 2 | 5 | 4 | 1 | 0 | 1 | 2 | M |
| 153 | 1 | 216 | 25 | 75 | 60 | 9 | 1 | 4 | 0 | M |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 155 | 3 | 423 | 50 | 147 | 117 | 20 | 2 | 8 | 0 | A |
| 156 | 3 | 171 | 20 | 60 | 47 | 9 | 1 | 2 | 0 | A |
| 157 | 3 | 487 | 57 | 170 | 135 | 23 | 2 | 8 | 0 | A |
| 158 | 6 | 81 | 9 | 28 | 22 | 4 | 0 | 4 | 0 | A |
| 159 | 6 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 161 | 3 | 479 | 56 | 167 | 132 | 23 | 2 | 18 | 0 | A |
| 162 | 3 | 1327 | 156 | 462 | 367 | 56 | 6 | 46 | 0 | A |
| 163 | 3 | 217 | 25 | 76 | 60 | 8 | 1 | 7 | 0 | A |
| 164 | 3 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 165 | 1 | 4423 | 519 | 1541 | 1222 | 152 | 16 | 102 | 0 | M |
| 168 | 1 | 388 | 46 | 135 | 107 | 13 | 1 | 12 | 0 | M |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 171 | 3 | 797 | 94 | 278 | 220 | 22 | 2 | 11 | 0 | A |
| 172 | 6 | 1443 | 169 | 503 | 399 | 39 | 4 | 21 | 0 | A |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 177 | 7 | 961 | 113 | 335 | 265 | 84 | 9 | 64 | 9 | A |
| 178 | 7 | 1084 | 127 | 378 | 299 | 90 | 10 | 47 | 8 | A |
| 179 | 7 | 2238 | 262 | 779 | 618 | 193 | 20 | 141 | 19 | A |
| 180 | 7 | 275 | 32 | 96 | 76 | 0 | 0 | 0 | 0 | A |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 190 | 7 | 10202 | 1196 | 3553 | 2818 | 331 | 35 | 219 | 14 | A |
| 191 | 7 | 6518 | 764 | 2270 | 1800 | 211 | 22 | 149 | 8 | A |
| 192 | 7 | 1191 | 140 | 415 | 329 | 39 | 4 | 17 | 2 | A |
| 194 | 5 | 60 | 7 | 21 | 16 | 6 | 1 | 4 | 0 | A |
| 195 | 5 | 133 | 16 | 46 | 37 | 9 | 1 | 7 | 0 | A |
| 196 | 5 | 359 | 42 | 125 | 99 | 30 | 3 | 21 | 0 | A |
| 198 | 5 | 30 | 3 | 10 | 8 | 2 | 0 | 1 | 0 | A |
| 199 | 5 | 31 | 4 | 11 | 9 | 1 | 0 | 1 | 0 | A |
| 200 | 6 | 860 | 101 | 299 | 238 | 69 | 7 | 45 | 0 | A |
| 205 | 6 | 88 | 10 | 31 | 24 | 11 | 1 | 9 | 0 | A |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 207 | 6 | 152 | 18 | 53 | 42 | 19 | 2 | 16 | 0 | A |
| 215 | 3 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 216 | 6 | 241 | 28 | 84 | 66 | 7 | 1 | 4 | 1 | A |
| 217 | 3 | 144 | 17 | 50 | 40 | 4 | 0 | 2 | 0 | A |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 7 | 33 | 4 | 12 | 9 | 0 | 0 | 1 | 0 | A |
| 219 | 6 | 20 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | A |
| 221 | 6 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 223 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 226 | 7 | 25 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 229 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 230 | 6 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | A |
| 231 | 6 | 64 | 8 | 22 | 18 | 2 | 0 | 2 | 0 | A |
| 232 | 7 | 518 | 61 | 180 | 143 | 17 | 2 | 10 | 2 | A |
| 233 | 7 | 27 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | A |
| 236 | 6 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 237 | 7 | 351 | 41 | 122 | 97 | 12 | 1 | 10 | 1 | A |
| 238 | 6 | 106 | 12 | 37 | 29 | 3 | 0 | 3 | 0 | A |
| 239 | 6 | 163 | 19 | 57 | 45 | 6 | 1 | 3 | 0 | A |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 242 | 1 | 123 | 14 | 43 | 34 | 5 | 1 | 1 | 0 | M |
| 243 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 245 | 1 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 246 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 247 | 1 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 252 | 6 | 501 | 59 | 174 | 138 | 16 | 2 | 11 | 2 | A |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 256 | 6 | 119 | 14 | 42 | 33 | 3 | 0 | 1 | 0 | A |
| 258 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 260 | 3 | 784 | 92 | 273 | 216 | 23 | 2 | 14 | 2 | A |
| 261 | 5 | 46 | 5 | 16 | 13 | 2 | 0 | 1 | 0 | A |
| 262 | 1 | 59 | 7 | 21 | 16 | 2 | 0 | 1 | 0 | M |
| 263 | 1 | 62 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | M |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 265 | 1 | 24 | 3 | 8 | 7 | 1 | 0 | 1 | 0 | M |
| 266 | 1 | 97 | 11 | 34 | 27 | 3 | 0 | 2 | 0 | M |
| 267 | 1 | 13 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | M |
| 268 | 1 | 74 | 9 | 26 | 20 | 0 | 0 | 1 | 0 | M |
| 269 | 6 | 567 | 66 | 197 | 157 | 34 | 4 | 35 | 10 | A |
| 270 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 271 | 6 | 86 | 10 | 30 | 24 | 5 | 1 | 5 | 2 | A |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 273 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 274 | 6 | 294 | 34 | 102 | 81 | 18 | 2 | 18 | 5 | A |
| 275 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 276 | 6 | 39 | 5 | 14 | 11 | 2 | 0 | 2 | 1 | A |
| 277 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 279 | 1 | 17 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | M |
| 280 | 1 | 42 | 5 | 15 | 12 | 3 | 0 | 3 | 1 | M |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 282 | 1 | 37 | 4 | 13 | 10 | 2 | 0 | 2 | 1 | M |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 284 | 1 | 200 | 24 | 70 | 55 | 7 | 1 | 2 | 1 | M |
| 285 | 1 | 38 | 4 | 13 | 10 | 2 | 0 | 1 | 0 | M |
| 286 | 1 | 76 | 9 | 27 | 21 | 4 | 0 | 2 | 0 | M |
| 287 | 1 | 102 | 12 | 36 | 28 | 5 | 1 | 3 | 1 | M |
| 288 | 1 | 14 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | M |
| 289 | 1 | 106 | 12 | 37 | 29 | 5 | 1 | 3 | 0 | M |
| 290 | 1 | 77 | 9 | 27 | 21 | 4 | 0 | 2 | 1 | M |
| 294 | 7 | 23 | 3 | 8 | 6 | 1 | 0 | 0 | 0 | A |
| 301 | 6 | 43 | 5 | 15 | 12 | 3 | 0 | 1 | 0 | A |
| 302 | 6 | 58 | 7 | 20 | 16 | 3 | 0 | 1 | 0 | A |
| 303 | 6 | 30 | 3 | 10 | 8 | 2 | 0 | 1 | 3 | A |
| 304 | 6 | 70 | 8 | 24 | 19 | 3 | 0 | 2 | 0 | A |
| 306 | 6 | 400 | 47 | 139 | 110 | 19 | 2 | 17 | 2 | A |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 324 | 7 | 36 | 4 | 13 | 10 | 1 | 0 | 1 | 0 | A |
| 325 | 7 | 1409 | 165 | 491 | 389 | 45 | 5 | 9 | 5 | A |
| 326 | 7 | 740 | 87 | 258 | 204 | 17 | 2 | 13 | 1 | A |
| 327 | 7 | 98 | 12 | 34 | 27 | 3 | 0 | 1 | 0 | A |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 359 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 360 | 1 | 243 | 28 | 84 | 67 | 8 | 1 | 5 | 0 | M |
| 361 | 1 | 233 | 27 | 81 | 64 | 7 | 1 | 6 | 1 | M |
| 362 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 363 | 1 | 3126 | 367 | 1089 | 863 | 103 | 11 | 54 | 1 | M |
| 364 | 1 | 163 | 19 | 57 | 45 | 5 | 1 | 4 | 0 | M |
| 365 | 6 | 584 | 69 | 204 | 161 | 18 | 2 | 10 | 2 | A |
| 366 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 386 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 387 | 3 | 2395 | 281 | 834 | 661 | 95 | 10 | 88 | 4 | A |
| | 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 389 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 390 | 7 | 171 | 20 | 60 | 47 | 10 | 1 | 7 | 0 | A |
| | 392 | 7 | 43 | 5 | 15 | 12 | 5 | 1 | 6 | 0 | A |
| | 393 | 7 | 21 | 2 | 7 | 6 | 6 | 1 | 11 | 1 | A |
| | 394 | 3 | 1106 | 130 | 385 | 306 | 44 | 5 | 41 | 2 | A |
| | 396 | 3 | 2156 | 253 | 751 | 595 | 67 | 7 | 55 | 2 | A |
| | 397 | 7 | 769 | 90 | 268 | 212 | 21 | 2 | 18 | 0 | A |
| | 398 | 6 | 726 | 85 | 253 | 200 | 19 | 2 | 12 | 0 | A |
| | 399 | 7 | 70 | 8 | 24 | 19 | 1 | 0 | 0 | 0 | A |
| | 400 | 6 | 699 | 82 | 243 | 193 | 19 | 2 | 6 | 0 | A |
| | 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 405 | 1 | 107 | 13 | 37 | 30 | 5 | 1 | 0 | 0 | M |
| | 406 | 7 | 9 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | A |
| | 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 408 | 6 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| | 409 | 7 | 86 | 10 | 30 | 24 | 2 | 0 | 1 | 0 | A |
| | 410 | 6 | 115 | 14 | 40 | 32 | 4 | 0 | 0 | 0 | A |
| | 411 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 413 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 415 | 3 | 768 | 90 | 268 | 212 | 23 | 2 | 15 | 0 | A |
| | 416 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 419 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 424 | 1 | 58 | 7 | 20 | 16 | 3 | 0 | 2 | 2 | M |
| | 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 427 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 430 | 1 | 28 | 3 | 10 | 8 | 1 | 0 | 0 | 0 | M |
| | 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 433 | 6 | 277 | 32 | 97 | 77 | 4 | 0 | 2 | 0 | A |
| | 434 | 6 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| | 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 442 | 6 | 145 | 17 | 50 | 40 | 2 | 0 | 1 | 0 | A |
| | 443 | 6 | 71 | 8 | 25 | 20 | 1 | 0 | 1 | 0 | A |
| | 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 499 | 1 | 117 | 14 | 41 | 32 | 6 | 1 | 1 | 1 | M |
| | 500 | 1 | 81 | 9 | 28 | 22 | 4 | 0 | 1 | 1 | M |
| | 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 504 | 1 | 21 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | M |
| Total | | **1177** | **85479** | **10024** | **29772** | **23610** | **3657** | **385** | **2349** | **195** | |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 12358 | 1449 | 4304 | 3413 | 443 | 47 | 258 | 21 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 22601 | 2650 | 7872 | 6242 | 872 | 92 | 552 | 13 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 918 | 108 | 320 | 254 | 59 | 6 | 39 | 1 | |
| 6 | 15717 | 1843 | 5474 | 4341 | 622 | 66 | 387 | 33 | |
| 7 | 33799 | 3963 | 11772 | 9335 | 1658 | 175 | 1113 | 128 | |
| 8 | 87 | 10 | 30 | 24 | 2 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **85479** | **10024** | **29772** | **23610** | **3657** | **385** | **2349** | **195** | **155471** |

**World Logistics Center**
**Project Full Buildout 2012**
**Entrained Road Dust**
Surface Streets

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1820 | 1.13 | 8,747 | 9889 | 300 | 339 | 592 | 669 | 0 | 0 | 10898 | 2.83 | 0.035 | 0.0001 | 0.8 | 0.0003 | 3.3 |
| 10 | A | 826 | 0.51 | 1,032 | 530 | 46 | 24 | 55 | 28 | 0 | 0 | 581 | 2.74 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 13 | A | 345 | 0.21 | 1,545 | 331 | 29 | 6 | 86 | 18 | 490 | 105 | 461 | 7.38 | 0.035 | 0.0002 | 0.1 | 0.0008 | 0.4 |
| 32 | A | 1551 | 0.96 | 2,211 | 2130 | 104 | 100 | 101 | 97 | 0 | 0 | 2328 | 2.68 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.7 |
| 33 | M | 2006 | 1.25 | 864 | 1077 | 30 | 37 | 47 | 59 | 0 | 0 | 1173 | 2.72 | 0.32 | 0.0005 | 0.6 | 0.0022 | 2.5 |
| 35 | A | 801 | 0.50 | 421 | 209 | 32 | 16 | 59 | 29 | 647 | 322 | 577 | 14.51 | 0.035 | 0.0004 | 0.2 | 0.0016 | 0.9 |
| 36 | A | 1627 | 1.01 | 1,582 | 1599 | 109 | 110 | 254 | 257 | 0 | 0 | 1966 | 3.58 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.8 |
| 37 | A | 219 | 0.14 | 710 | 97 | 66 | 9 | 212 | 29 | 560 | 76 | 211 | 11.24 | 0.035 | 0.0003 | 0.1 | 0.0012 | 0.3 |
| 38 | A | 659 | 0.41 | 3,010 | 1232 | 219 | 90 | 521 | 213 | 2 | 1 | 1536 | 3.68 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.6 |
| 42 | A | 5338 | 3.32 | 2,379 | 7889 | 178 | 590 | 415 | 1376 | 639 | 2119 | 11974 | 7.15 | 0.035 | 0.0002 | 2.3 | 0.0008 | 9.3 |
| 43 | A | 2598 | 1.61 | 209 | 337 | 10 | 16 | 11 | 18 | 29 | 47 | 418 | 5.04 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.2 |
| 46 | A | 806 | 0.50 | 142 | 71 | 7 | 4 | 4 | 2 | 16 | 8 | 85 | 4.50 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 47 | A | 1995 | 1.24 | 160 | 198 | 3 | 4 | 2 | 2 | 0 | 0 | 204 | 2.31 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.1 |
| 48 | A | 795 | 0.49 | 478 | 236 | 11 | 5 | 18 | 9 | 17 | 8 | 259 | 3.22 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 50 | A | 479 | 0.30 | 12,425 | 3697 | 489 | 146 | 760 | 226 | 0 | 0 | 4069 | 2.79 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.2 |
| 51 | A | 975 | 0.61 | 175 | 106 | 2 | 1 | 5 | 3 | 0 | 0 | 110 | 2.43 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 52 | A | 1269 | 0.79 | 8,429 | 6645 | 261 | 206 | 573 | 452 | 0 | 0 | 7302 | 2.82 | 0.035 | 0.0001 | 0.5 | 0.0003 | 2.2 |
| 53 | A | 795 | 0.49 | 404 | 200 | 26 | 13 | 10 | 5 | 0 | 0 | 217 | 2.56 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 54 | A | 325 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 55 | A | 2042 | 1.27 | 57 | 72 | 5 | 6 | 2 | 3 | 0 | 0 | 81 | 2.70 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 56 | A | 1152 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 57 | A | 246 | 0.15 | 1,722 | 263 | 120 | 18 | 267 | 41 | 0 | 0 | 322 | 3.55 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 58 | M | 172 | 0.11 | 172 | 18 | 13 | 1 | 9 | 1 | 22 | 2 | 23 | 4.89 | 0.32 | 0.0010 | 0.0 | 0.0039 | 0.1 |
| 59 | M | 786 | 0.49 | 16 | 8 | 0 | 0 | 4 | 2 | 8 | 4 | 14 | 9.54 | 0.32 | 0.0019 | 0.0 | 0.0078 | 0.1 |
| 60 | M | 159 | 0.10 | 1,437 | 142 | 48 | 5 | 136 | 13 | 492 | 49 | 209 | 7.75 | 0.32 | 0.0015 | 0.3 | 0.0063 | 1.3 |
| 61 | M | 97 | 0.06 | 434 | 26 | 13 | 1 | 25 | 2 | 246 | 15 | 43 | 9.76 | 0.32 | 0.0020 | 0.1 | 0.0080 | 0.3 |
| 62 | M | 781 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 65 | A | 795 | 0.49 | 605 | 299 | 15 | 7 | 21 | 10 | 20 | 10 | 326 | 3.15 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 66 | A | 812 | 0.50 | 694 | 350 | 23 | 12 | 33 | 17 | 20 | 10 | 388 | 3.20 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 67 | M | 778 | 0.48 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 68 | A | 814 | 0.51 | 74 | 37 | 1 | 1 | 2 | 1 | 0 | 0 | 39 | 2.43 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 69 | A | 819 | 0.51 | 1,134 | 577 | 46 | 23 | 58 | 30 | 0 | 0 | 630 | 2.71 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 70 | A | 795 | 0.49 | 1,710 | 845 | 70 | 35 | 86 | 42 | 0 | 0 | 922 | 2.70 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 71 | M | 803 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 72 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 73 | A | 742 | 0.46 | 8,291 | 3822 | 254 | 117 | 570 | 263 | 0 | 0 | 4201 | 2.83 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 74 | A | 1573 | 0.98 | 661 | 646 | 15 | 15 | 9 | 9 | 2 | 2 | 671 | 2.39 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 75 | M | 805 | 0.50 | 207 | 104 | 8 | 4 | 12 | 6 | 7 | 4 | 117 | 3.37 | 0.32 | 0.0007 | 0.1 | 0.0027 | 0.3 |
| 76 | M | 1597 | 0.99 | 41 | 41 | 2 | 2 | 7 | 7 | 0 | 0 | 50 | 3.62 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.1 |
| 77 | A | 438 | 0.27 | 869 | 236 | 21 | 6 | 19 | 5 | 10 | 3 | 250 | 2.64 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 80 | A | 138 | 0.09 | 1,130 | 97 | 29 | 2 | 31 | 3 | 8 | 1 | 103 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 81 | M | 407 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 82 | M | 322 | 0.20 | 1,640 | 328 | 49 | 10 | 64 | 13 | 82 | 16 | 367 | 3.50 | 0.32 | 0.0007 | 0.3 | 0.0028 | 1.0 |
| 83 | A | 95 | 0.06 | 751 | 44 | 24 | 1 | 28 | 2 | 41 | 2 | 50 | 3.57 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 85 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 86 | M | 284 | 0.18 | 1,895 | 334 | 87 | 15 | 136 | 24 | 230 | 41 | 414 | 4.89 | 0.32 | 0.0010 | 0.4 | 0.0039 | 1.6 |
| 87 | M | 800 | 0.50 | 22 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 11 | 2.28 | 0.32 | 0.0004 | 0.0 | 0.0018 | 0.0 |
| 88 | M | 809 | 0.50 | 61 | 31 | 3 | 2 | 2 | 1 | 0 | 0 | 33 | 2.58 | 0.32 | 0.0005 | 0.0 | 0.0021 | 0.1 |
| 95 | A | 439 | 0.27 | 783 | 214 | 27 | 7 | 39 | 11 | 44 | 12 | 244 | 3.70 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 96 | A | 399 | 0.25 | 616 | 153 | 12 | 3 | 2 | 0 | 4 | 1 | 157 | 2.36 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 97 | A | 389 | 0.24 | 74 | 18 | 4 | 1 | 13 | 3 | 8 | 2 | 24 | 5.24 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 98 | A | 160 | 0.10 | 84 | 8 | 4 | 0 | 2 | 0 | 14 | 1 | 10 | 5.29 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 99 | A | 405 | 0.25 | 71 | 18 | 1 | 0 | 2 | 1 | 2 | 1 | 19 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 100 | M | 227 | 0.14 | 334 | 47 | 11 | 2 | 22 | 3 | 30 | 4 | 56 | 4.36 | 0.32 | 0.0009 | 0.0 | 0.0035 | 0.2 |
| 101 | M | 313 | 0.19 | 1,026 | 199 | 27 | 5 | 54 | 10 | 77 | 15 | 230 | 4.02 | 0.32 | 0.0008 | 0.2 | 0.0032 | 0.7 |
| 102 | M | 246 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 103 | M | 291 | 0.18 | 1,029 | 186 | 28 | 5 | 60 | 11 | 97 | 18 | 219 | 4.37 | 0.32 | 0.0009 | 0.2 | 0.0035 | 0.8 |
| 104 | M | 404 | 0.25 | 205 | 51 | 3 | 1 | 9 | 2 | 31 | 8 | 62 | 5.16 | 0.32 | 0.0010 | 0.1 | 0.0042 | 0.3 |
| 105 | M | 195 | 0.12 | 25 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 106 | M | 1803 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 107 | M | 388 | 0.24 | 215 | 52 | 3 | 1 | 9 | 2 | 31 | 7 | 62 | 5.04 | 0.32 | 0.0010 | 0.1 | 0.0041 | 0.3 |
| 108 | M | 997 | 0.62 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 109 | A | 787 | 0.49 | 41 | 20 | 2 | 1 | 5 | 2 | 0 | 0 | 23 | 3.28 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 110 | A | 756 | 0.47 | 184 | 86 | 3 | 1 | 9 | 4 | 22 | 10 | 102 | 4.71 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 111 | A | 800 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 112 | A | 817 | 0.51 | 204 | 104 | 6 | 3 | 20 | 10 | 63 | 32 | 149 | 7.40 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 113 | A | 791 | 0.49 | 21 | 10 | 3 | 1 | 9 | 4 | 21 | 10 | 27 | 12.14 | 0.035 | 0.0003 | 0.0 | 0.0013 | 0.0 |
| 114 | M | 791 | 0.49 | 38 | 19 | 3 | 1 | 9 | 4 | 40 | 20 | 44 | 12.60 | 0.32 | 0.0025 | 0.1 | 0.0103 | 0.5 |
| 115 | A | 851 | 0.53 | 204 | 108 | 4 | 2 | 10 | 5 | 28 | 15 | 130 | 4.98 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 116 | M | 819 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 117 | A | 757 | 0.47 | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 118 | A | 765 | 0.48 | 227 | 108 | 4 | 2 | 10 | 5 | 31 | 15 | 129 | 4.94 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 119 | A | 782 | 0.49 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 120 | M | 814 | 0.51 | 45 | 23 | 5 | 3 | 6 | 3 | 35 | 18 | 46 | 11.08 | 0.32 | 0.0022 | 0.1 | 0.0091 | 0.4 |
| 121 | A | 825 | 0.51 | 261 | 134 | 5 | 3 | 12 | 6 | 30 | 15 | 158 | 4.62 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 122 | A | 782 | 0.49 | 12 | 6 | 2 | 1 | 3 | 1 | 23 | 11 | 19 | 15.17 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 123 | M | 791 | 0.49 | 30 | 15 | 1 | 0 | 1 | 0 | 0 | 0 | 16 | 2.54 | 0.32 | 0.0005 | 0.0 | 0.0020 | 0.0 |
| 124 | A | 800 | 0.50 | 315 | 157 | 7 | 3 | 15 | 7 | 30 | 15 | 182 | 4.32 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 125 | A | 817 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 126 | A | 774 | 0.48 | 355 | 171 | 7 | 3 | 15 | 7 | 19 | 9 | 190 | 3.57 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 127 | M | 825 | 0.51 | 69 | 35 | 4 | 2 | 10 | 5 | 144 | 74 | 116 | 16.01 | 0.32 | 0.0032 | 0.4 | 0.0132 | 1.5 |
| 128 | A | 774 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 129 | A | 823 | 0.51 | 394 | 201 | 9 | 5 | 9 | 5 | 16 | 8 | 219 | 3.20 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 130 | A | 800 | 0.50 | 86 | 43 | 3 | 1 | 1 | 0 | 0 | 0 | 45 | 2.35 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 131 | A | 775 | 0.48 | 24 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 133 | A | 804 | 0.50 | 107 | 53 | 5 | 2 | 0 | 0 | 0 | 0 | 56 | 2.29 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 134 | M | 760 | 0.47 | 59 | 28 | 3 | 1 | 1 | 0 | 2 | 1 | 31 | 3.09 | 0.32 | 0.0006 | 0.0 | 0.0025 | 0.1 |
| 135 | A | 816 | 0.51 | 537 | 272 | 14 | 7 | 20 | 10 | 20 | 10 | 300 | 3.25 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 136 | A | 786 | 0.49 | 108 | 53 | 3 | 1 | 0 | 0 | 0 | 0 | 54 | 2.22 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 137 | A | 790 | 0.49 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 138 | M | 267 | 0.17 | 62 | 10 | 3 | 0 | 8 | 1 | 5 | 1 | 13 | 4.61 | 0.32 | 0.0009 | 0.0 | 0.0037 | 0.0 |
| 139 | M | 504 | 0.31 | 116 | 36 | 3 | 1 | 6 | 2 | 5 | 2 | 41 | 3.47 | 0.32 | 0.0007 | 0.0 | 0.0028 | 0.1 |
| 140 | M | 527 | 0.33 | 272 | 89 | 4 | 1 | 8 | 3 | 5 | 2 | 95 | 2.81 | 0.32 | 0.0005 | 0.1 | 0.0022 | 0.2 |
| 141 | M | 1001 | 0.62 | 295 | 183 | 5 | 3 | 11 | 7 | 5 | 3 | 196 | 2.85 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.4 |
| 142 | M | 291 | 0.18 | 36 | 7 | 1 | 0 | 3 | 1 | 4 | 1 | 8 | 4.79 | 0.32 | 0.0009 | 0.0 | 0.0039 | 0.0 |
| 143 | A | 845 | 0.52 | 364 | 191 | 9 | 5 | 24 | 13 | 4 | 2 | 210 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 144 | A | 783 | 0.49 | 368 | 179 | 9 | 4 | 24 | 12 | 0 | 0 | 195 | 2.78 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 145 | A | 787 | 0.49 | 378 | 185 | 10 | 5 | 25 | 12 | 0 | 0 | 202 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 146 | A | 814 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 147 | A | 798 | 0.50 | 441 | 219 | 14 | 7 | 26 | 13 | 0 | 0 | 238 | 2.75 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 148 | A | 731 | 0.45 | 6 | 3 | 1 | 0 | 1 | 0 | 12 | 5 | 9 | 15.46 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 149 | A | 808 | 0.50 | 543 | 273 | 19 | 10 | 33 | 17 | 0 | 0 | 299 | 2.78 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | A | 793 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 151 | M | 787 | 0.49 | 590 | 288 | 22 | 11 | 38 | 19 | 0 | 0 | 318 | 2.81 | 0.32 | 0.0005 | 0.2 | 0.0022 | 0.7 |
| 152 | M | 782 | 0.49 | 50 | 24 | 3 | 1 | 7 | 3 | 146 | 71 | 100 | 17.48 | 0.32 | 0.0035 | 0.4 | 0.0144 | 1.4 |
| 153 | M | 798 | 0.50 | 761 | 377 | 27 | 13 | 45 | 22 | 0 | 0 | 413 | 2.76 | 0.32 | 0.0005 | 0.2 | 0.0022 | 0.9 |
| 154 | A | 901 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 155 | A | 775 | 0.48 | 1,533 | 738 | 63 | 30 | 81 | 39 | 0 | 0 | 807 | 2.73 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 156 | A | 771 | 0.48 | 623 | 298 | 27 | 13 | 23 | 11 | 0 | 0 | 322 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 157 | A | 804 | 0.50 | 1,703 | 851 | 70 | 35 | 83 | 41 | 0 | 0 | 927 | 2.69 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 158 | A | 1039 | 0.65 | 218 | 141 | 9 | 6 | 28 | 18 | 19 | 12 | 177 | 4.69 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 159 | A | 170 | 0.11 | 238 | 25 | 6 | 1 | 0 | 0 | 19 | 2 | 28 | 3.74 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 160 | A | 717 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 161 | A | 784 | 0.49 | 1,717 | 836 | 71 | 35 | 194 | 94 | 0 | 0 | 965 | 3.20 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 162 | A | 1052 | 0.65 | 3,544 | 2316 | 130 | 85 | 365 | 239 | 0 | 0 | 2640 | 3.11 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.9 |
| 163 | A | 350 | 0.22 | 1,741 | 379 | 55 | 12 | 165 | 36 | 0 | 0 | 426 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 164 | A | 473 | 0.29 | 22 | 6 | 1 | 0 | 2 | 1 | 0 | 0 | 7 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 165 | M | 1541 | 0.96 | 8,065 | 7721 | 242 | 232 | 548 | 525 | 0 | 0 | 8477 | 2.82 | 0.32 | 0.0006 | 4.7 | 0.0022 | 19.0 |
| 168 | M | 758 | 0.47 | 1,440 | 678 | 41 | 19 | 134 | 63 | 0 | 0 | 760 | 3.02 | 0.32 | 0.0006 | 0.4 | 0.0024 | 1.8 |
| 169 | A | 931 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 170 | A | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 171 | A | 522 | 0.32 | 4,292 | 1392 | 103 | 33 | 180 | 58 | 0 | 0 | 1484 | 2.59 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 172 | A | 993 | 0.62 | 4,084 | 2519 | 95 | 59 | 172 | 106 | 0 | 0 | 2684 | 2.59 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.7 |
| 173 | A | 1615 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 174 | A | 330 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 177 | A | 1110 | 0.69 | 2,432 | 1677 | 185 | 128 | 478 | 330 | 560 | 386 | 2520 | 6.80 | 0.035 | 0.0002 | 0.5 | 0.0007 | 1.9 |
| 178 | A | 7132 | 4.43 | 427 | 1892 | 31 | 137 | 55 | 244 | 83 | 368 | 2641 | 6.14 | 0.035 | 0.0002 | 0.4 | 0.0007 | 1.8 |
| 179 | A | 2189 | 1.36 | 2,872 | 3905 | 216 | 294 | 534 | 726 | 632 | 859 | 5785 | 6.65 | 0.035 | 0.0002 | 1.0 | 0.0007 | 4.2 |
| 180 | A | 6725 | 4.18 | 115 | 480 | 0 | 0 | 0 | 0 | 0 | 0 | 480 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.1 |
| 181 | M | 625 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 182 | M | 349 | 0.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 183 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 184 | M | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 185 | M | 287 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 186 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 190 | A | 6368 | 3.96 | 4,501 | 17805 | 127 | 502 | 284 | 1123 | 156 | 617 | 20048 | 3.41 | 0.035 | 0.0001 | 1.8 | 0.0004 | 7.3 |
| 191 | A | 4906 | 3.05 | 3,733 | 11377 | 105 | 320 | 252 | 768 | 121 | 369 | 12834 | 3.40 | 0.035 | 0.0001 | 1.1 | 0.0004 | 4.7 |
| 192 | A | 4358 | 2.71 | 768 | 2079 | 22 | 60 | 33 | 89 | 38 | 103 | 2331 | 3.52 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.9 |
| 194 | A | 355 | 0.22 | 471 | 104 | 39 | 9 | 98 | 22 | 0 | 0 | 134 | 3.91 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 195 | A | 397 | 0.25 | 938 | 231 | 54 | 13 | 147 | 36 | 0 | 0 | 281 | 3.54 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 196 | A | 716 | 0.44 | 1,409 | 627 | 102 | 45 | 246 | 109 | 0 | 0 | 781 | 3.68 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 198 | A | 1009 | 0.63 | 83 | 52 | 4 | 3 | 8 | 5 | 0 | 0 | 60 | 3.09 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 199 | A | 378 | 0.23 | 231 | 54 | 6 | 1 | 12 | 3 | 0 | 0 | 58 | 2.68 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 200 | A | 1403 | 0.87 | 1,722 | 1501 | 120 | 105 | 267 | 233 | 0 | 0 | 1838 | 3.55 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.7 |
| 205 | A | 1501 | 0.93 | 164 | 153 | 18 | 17 | 51 | 48 | 0 | 0 | 217 | 4.51 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 206 | A | 2658 | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 207 | A | 2611 | 1.62 | 164 | 266 | 18 | 29 | 51 | 83 | 0 | 0 | 378 | 4.51 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.2 |
| 215 | A | 2937 | 1.82 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 216 | A | 2000 | 1.24 | 338 | 420 | 8 | 10 | 16 | 20 | 20 | 25 | 475 | 3.71 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 217 | A | 663 | 0.41 | 612 | 252 | 16 | 7 | 27 | 11 | 34 | 14 | 284 | 3.63 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 218 | A | 1167 | 0.72 | 80 | 58 | 1 | 1 | 4 | 3 | 6 | 4 | 66 | 3.98 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 219 | A | 2672 | 1.66 | 21 | 35 | 1 | 2 | 0 | 0 | 1 | 2 | 38 | 3.20 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 221 | A | 2622 | 1.63 | 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 223 | A | 359 | 0.22 | 19 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 225 | M | 1243 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 226 | A | 1643 | 1.02 | 43 | 44 | 1 | 1 | 4 | 4 | 5 | 5 | 54 | 4.91 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 227 | M | 1154 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 229 | A | 1122 | 0.70 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 230 | A | 1007 | 0.63 | 65 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 231 | A | 1968 | 1.22 | 92 | 112 | 3 | 4 | 8 | 10 | 18 | 22 | 148 | 5.99 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 232 | A | 1719 | 1.07 | 846 | 903 | 24 | 26 | 50 | 53 | 80 | 85 | 1068 | 4.38 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 233 | A | 976 | 0.61 | 79 | 48 | 2 | 1 | 5 | 3 | 7 | 4 | 56 | 4.31 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 236 | A | 794 | 0.49 | 22 | 11 | 1 | 0 | 4 | 2 | 3 | 1 | 15 | 5.64 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 237 | A | 1556 | 0.97 | 634 | 613 | 19 | 18 | 55 | 53 | 59 | 57 | 741 | 4.53 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.4 |
| 238 | A | 1120 | 0.70 | 267 | 186 | 7 | 5 | 24 | 17 | 26 | 18 | 225 | 4.61 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 239 | A | 1385 | 0.86 | 330 | 284 | 11 | 9 | 15 | 13 | 8 | 7 | 313 | 3.10 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 240 | A | 240 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 241 | A | 843 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 242 | M | 989 | 0.61 | 350 | 215 | 12 | 7 | 9 | 6 | 31 | 19 | 247 | 4.08 | 0.32 | 0.0008 | 0.2 | 0.0033 | 0.8 |
| 243 | M | 64 | 0.04 | 22 | 1 | 1 | 0 | 3 | 0 | 6 | 0 | 1 | 7.10 | 0.32 | 0.0014 | 0.0 | 0.0058 | 0.0 |
| 244 | M | 173 | 0.11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 245 | M | 181 | 0.11 | 81 | 9 | 3 | 0 | 0 | 0 | 27 | 3 | 12 | 7.36 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.1 |
| 246 | M | 273 | 0.17 | 11 | 2 | 1 | 0 | 2 | 0 | 7 | 1 | 4 | 10.25 | 0.32 | 0.0021 | 0.0 | 0.0084 | 0.0 |
| 247 | M | 87 | 0.05 | 355 | 19 | 12 | 1 | 22 | 1 | 47 | 3 | 24 | 4.99 | 0.32 | 0.0010 | 0.0 | 0.0040 | 0.1 |
| 250 | A | 1366 | 0.85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 252 | A | 1588 | 0.99 | 886 | 874 | 24 | 24 | 56 | 55 | 79 | 78 | 1031 | 4.32 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 254 | A | 424 | 0.26 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 256 | A | 943 | 0.59 | 356 | 209 | 8 | 5 | 8 | 5 | 12 | 7 | 225 | 3.06 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 258 | A | 472 | 0.29 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 260 | A | 1783 | 1.11 | 1,235 | 1368 | 31 | 34 | 65 | 72 | 95 | 105 | 1579 | 4.05 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.7 |
| 261 | A | 1181 | 0.73 | 109 | 80 | 5 | 4 | 4 | 3 | 1 | 1 | 87 | 2.78 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 262 | M | 860 | 0.53 | 194 | 104 | 5 | 3 | 6 | 3 | 1 | 1 | 110 | 2.60 | 0.32 | 0.0005 | 0.1 | 0.0021 | 0.2 |
| 263 | M | 141 | 0.09 | 1,244 | 109 | 36 | 3 | 61 | 5 | 87 | 8 | 125 | 3.92 | 0.32 | 0.0008 | 0.1 | 0.0031 | 0.4 |
| 264 | M | 224 | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 265 | M | 98 | 0.06 | 681 | 41 | 18 | 1 | 48 | 3 | 70 | 4 | 50 | 4.58 | 0.32 | 0.0009 | 0.0 | 0.0037 | 0.2 |
| 266 | M | 171 | 0.11 | 1,601 | 170 | 46 | 5 | 82 | 9 | 132 | 14 | 198 | 4.14 | 0.32 | 0.0008 | 0.2 | 0.0033 | 0.7 |
| 267 | M | 156 | 0.10 | 227 | 22 | 8 | 1 | 19 | 2 | 20 | 2 | 27 | 4.44 | 0.32 | 0.0009 | 0.0 | 0.0036 | 0.1 |
| 268 | M | 159 | 0.10 | 1,301 | 129 | 0 | 0 | 73 | 7 | 114 | 11 | 147 | 4.22 | 0.32 | 0.0008 | 0.1 | 0.0034 | 0.5 |
| 269 | A | 2450 | 1.52 | 650 | 989 | 34 | 52 | 117 | 178 | 299 | 455 | 1674 | 9.00 | 0.035 | 0.0002 | 0.4 | 0.0010 | 1.6 |
| 270 | A | 620 | 0.39 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 7.41 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 271 | A | 370 | 0.23 | 654 | 150 | 35 | 8 | 114 | 26 | 300 | 69 | 254 | 8.98 | 0.035 | 0.0002 | 0.1 | 0.0010 | 0.2 |
| 272 | A | 1246 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 273 | M | 625 | 0.39 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 6.35 | 0.32 | 0.0013 | 0.0 | 0.0051 | 0.0 |
| 274 | A | 1231 | 0.76 | 671 | 513 | 35 | 27 | 119 | 91 | 301 | 230 | 861 | 8.90 | 0.035 | 0.0002 | 0.2 | 0.0010 | 0.8 |
| 275 | M | 377 | 0.23 | 24 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 2.40 | 0.32 | 0.0005 | 0.0 | 0.0019 | 0.0 |
| 276 | A | 159 | 0.10 | 691 | 68 | 36 | 4 | 108 | 11 | 309 | 31 | 113 | 8.85 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.1 |
| 277 | M | 1074 | 0.67 | 11 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 278 | M | 239 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 279 | M | 157 | 0.10 | 310 | 30 | 16 | 2 | 52 | 5 | 138 | 13 | 50 | 8.86 | 0.32 | 0.0018 | 0.1 | 0.0072 | 0.4 |
| 280 | M | 163 | 0.10 | 724 | 73 | 38 | 4 | 129 | 13 | 325 | 33 | 123 | 8.90 | 0.32 | 0.0018 | 0.2 | 0.0073 | 0.9 |
| 281 | M | 280 | 0.17 | 3 | 1 | 1 | 0 | 0 | 0 | 10 | 2 | 2 | 17.47 | 0.32 | 0.0035 | 0.0 | 0.0144 | 0.0 |
| 282 | M | 167 | 0.10 | 618 | 64 | 30 | 3 | 100 | 10 | 261 | 27 | 105 | 8.65 | 0.32 | 0.0017 | 0.2 | 0.0070 | 0.7 |
| 283 | M | 405 | 0.25 | 2 | 1 | 0 | 0 | 0 | 0 | 28 | 7 | 8 | 21.84 | 0.32 | 0.0044 | 0.0 | 0.0181 | 0.1 |
| 284 | M | 365 | 0.23 | 1,543 | 350 | 49 | 11 | 45 | 10 | 123 | 28 | 399 | 3.95 | 0.32 | 0.0008 | 0.3 | 0.0032 | 1.3 |
| 285 | M | 230 | 0.14 | 460 | 66 | 20 | 3 | 30 | 4 | 69 | 10 | 83 | 5.27 | 0.32 | 0.0010 | 0.1 | 0.0042 | 0.4 |
| 286 | M | 209 | 0.13 | 1,028 | 133 | 43 | 6 | 88 | 11 | 11 | 1 | 152 | 3.18 | 0.32 | 0.0006 | 0.1 | 0.0025 | 0.4 |
| 287 | M | 292 | 0.18 | 985 | 179 | 42 | 8 | 78 | 14 | 128 | 23 | 224 | 5.05 | 0.32 | 0.0010 | 0.2 | 0.0041 | 0.9 |
| 288 | M | 152 | 0.09 | 253 | 24 | 12 | 1 | 25 | 2 | 9 | 1 | 28 | 3.71 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.1 |
| 289 | M | 285 | 0.18 | 1,049 | 186 | 44 | 8 | 82 | 15 | 86 | 15 | 223 | 4.32 | 0.32 | 0.0009 | 0.2 | 0.0035 | 0.8 |
| 290 | M | 328 | 0.20 | 660 | 134 | 30 | 6 | 50 | 10 | 194 | 40 | 190 | 7.14 | 0.32 | 0.0014 | 0.3 | 0.0058 | 1.1 |
| 294 | A | 824 | 0.51 | 78 | 40 | 3 | 2 | 2 | 1 | 0 | 0 | 42 | 2.49 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 301 | A | 774 | 0.48 | 155 | 75 | 9 | 4 | 7 | 3 | 0 | 0 | 82 | 2.71 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 302 | A | 796 | 0.49 | 203 | 100 | 10 | 5 | 9 | 4 | 0 | 0 | 110 | 2.68 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 303 | A | 1514 | 0.94 | 55 | 52 | 3 | 3 | 8 | 8 | 143 | 134 | 197 | 17.00 | 0.035 | 0.0005 | 0.1 | 0.0019 | 0.4 |
| 304 | A | 729 | 0.45 | 268 | 121 | 10 | 5 | 24 | 11 | 0 | 0 | 137 | 3.01 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 306 | A | 818 | 0.51 | 1,374 | 698 | 57 | 29 | 171 | 87 | 140 | 71 | 885 | 4.89 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 307 | M | 0 | 0.00 | 2,646 | 0 | 91 | 0 | 292 | 0 | 140 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 324 | A | 2925 | 1.82 | 35 | 64 | 1 | 2 | 2 | 4 | 1 | 2 | 71 | 3.25 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 325 | A | 2224 | 1.38 | 1,780 | 2459 | 49 | 68 | 35 | 48 | 159 | 220 | 2795 | 4.04 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.2 |
| 326 | A | 3506 | 2.18 | 593 | 1292 | 12 | 26 | 31 | 68 | 27 | 59 | 1444 | 3.50 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 327 | A | 227 | 0.14 | 1,216 | 171 | 37 | 5 | 53 | 7 | 133 | 19 | 203 | 4.53 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 340 | A | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 351 | A | 0 | 0.00 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 358 | A | 0 | 0.00 | 3,730 | 0 | 105 | 0 | 241 | 0 | 121 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 359 | M | 339 | 0.21 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 360 | M | 247 | 0.15 | 2,759 | 423 | 80 | 12 | 165 | 25 | 60 | 9 | 470 | 3.15 | 0.32 | 0.0006 | 0.3 | 0.0025 | 1.2 |
| 361 | M | 337 | 0.21 | 1,941 | 406 | 51 | 11 | 146 | 31 | 120 | 25 | 473 | 3.95 | 0.32 | 0.0008 | 0.4 | 0.0032 | 1.5 |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 362 | M | 338 | 0.21 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 363 | M | 4495 | 2.79 | 1,954 | 5456 | 56 | 156 | 100 | 279 | 21 | 59 | 5950 | 2.88 | 0.32 | 0.0006 | 3.4 | 0.0023 | 13.7 |
| 364 | M | 286 | 0.18 | 1,604 | 285 | 47 | 8 | 104 | 18 | 79 | 14 | 326 | 3.67 | 0.32 | 0.0007 | 0.2 | 0.0029 | 1.0 |
| 365 | A | 1602 | 1.00 | 1,025 | 1020 | 27 | 27 | 50 | 50 | 69 | 69 | 1165 | 3.87 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 366 | A | 1742 | 1.08 | 1 | 1 | 0 | 0 | 0 | 0 | 7 | 8 | 9 | 20.61 | 0.035 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 367 | A | 1054 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 375 | M | 388 | 0.24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 376 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 377 | M | 339 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 378 | M | 212 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 379 | M | 331 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 380 | M | 283 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 381 | M | 469 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 386 | A | 810 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 387 | A | 2761 | 1.72 | 2,437 | 4180 | 84 | 144 | 264 | 453 | 115 | 197 | 4974 | 3.94 | 0.035 | 0.0001 | 0.5 | 0.0004 | 2.1 |
| 388 | A | 175 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 389 | A | 189 | 0.12 | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 390 | A | 1189 | 0.74 | 404 | 298 | 21 | 16 | 52 | 38 | 17 | 13 | 365 | 4.02 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 392 | A | 436 | 0.27 | 278 | 75 | 30 | 8 | 114 | 31 | 38 | 10 | 125 | 6.49 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 393 | A | 934 | 0.58 | 64 | 37 | 16 | 9 | 95 | 55 | 65 | 38 | 139 | 11.89 | 0.035 | 0.0003 | 0.0 | 0.0013 | 0.2 |
| 394 | A | 1292 | 0.80 | 2,406 | 1931 | 83 | 67 | 263 | 211 | 110 | 88 | 2297 | 3.93 | 0.035 | 0.0001 | 0.2 | 0.0004 | 1.0 |
| 396 | A | 2366 | 1.47 | 2,560 | 3763 | 69 | 101 | 193 | 284 | 63 | 93 | 4240 | 3.32 | 0.035 | 0.0001 | 0.4 | 0.0004 | 1.5 |
| 397 | A | 1588 | 0.99 | 1,361 | 1343 | 32 | 32 | 95 | 94 | 7 | 7 | 1475 | 2.92 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 398 | A | 560 | 0.35 | 3,640 | 1266 | 82 | 29 | 175 | 61 | 0 | 0 | 1356 | 2.64 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 399 | A | 3389 | 2.11 | 58 | 122 | 1 | 2 | 1 | 2 | 0 | 0 | 126 | 2.35 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 400 | A | 1704 | 1.06 | 1,152 | 1219 | 27 | 29 | 29 | 31 | 3 | 3 | 1282 | 2.49 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 401 | M | 790 | 0.49 | 1 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 2 | 12.13 | 0.32 | 0.0024 | 0.0 | 0.0099 | 0.0 |
| 402 | M | 1199 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 404 | M | 768 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 405 | M | 1010 | 0.63 | 299 | 188 | 12 | 8 | 0 | 0 | 5 | 3 | 198 | 2.60 | 0.32 | 0.0005 | 0.1 | 0.0021 | 0.4 |
| 406 | A | 395 | 0.25 | 63 | 15 | 7 | 2 | 3 | 1 | 2 | 0 | 18 | 3.40 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 407 | A | 756 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 408 | A | 1072 | 0.67 | 19 | 13 | 0 | 0 | 0 | 0 | 1 | 1 | 13 | 3.19 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 409 | A | 1137 | 0.71 | 213 | 150 | 5 | 4 | 4 | 3 | 0 | 0 | 157 | 2.38 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 410 | A | 884 | 0.55 | 367 | 202 | 12 | 7 | 0 | 0 | 0 | 0 | 208 | 2.24 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 411 | A | 2332 | 1.45 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 412 | A | 141 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 413 | A | 678 | 0.42 | 17 | 7 | 1 | 0 | 4 | 2 | 4 | 2 | 11 | 6.99 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 414 | A | 895 | 0.56 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 415 | A | 855 | 0.53 | 2,525 | 1341 | 66 | 35 | 141 | 75 | 41 | 22 | 1473 | 3.01 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 416 | M | 284 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 417 | M | 303 | 0.19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 419 | M | 343 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 420 | M | 300 | 0.19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 421 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 424 | M | 828 | 0.51 | 197 | 101 | 10 | 5 | 18 | 9 | 180 | 93 | 208 | 12.03 | 0.32 | 0.0024 | 0.5 | 0.0099 | 2.1 |
| 425 | M | 203 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 426 | M | 276 | 0.17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 427 | A | 654 | 0.41 | 5 | 2 | 1 | 0 | 1 | 0 | 11 | 4 | 7 | 15.77 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 428 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 429 | M | 219 | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 430 | M | 114 | 0.07 | 692 | 49 | 17 | 1 | 30 | 2 | 45 | 3 | 56 | 3.79 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.2 |
| 431 | M | 524 | 0.33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 432 | M | 629 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 433 | A | 1802 | 1.12 | 432 | 484 | 6 | 7 | 7 | 8 | 0 | 0 | 498 | 2.33 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.1 |
| 434 | A | 1269 | 0.79 | 12 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 435 | A | 1537 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 436 | M | 178 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 441 | A | 1192 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 442 | A | 2365 | 1.47 | 172 | 253 | 2 | 3 | 2 | 3 | 0 | 0 | 259 | 2.28 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.1 |
| 443 | A | 1588 | 0.99 | 126 | 124 | 1 | 1 | 3 | 3 | 0 | 0 | 128 | 2.38 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 444 | A | 905 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 452 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 453 | A | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 454 | M | 661 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 455 | A | 366 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 458 | M | 237 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 464 | A | 702 | 0.44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 477 | M | 750 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 478 | M | 253 | 0.16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 479 | M | 461 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 480 | A | 500 | 0.31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 481 | M | 377 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 482 | A | 1353 | 0.84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 483 | M | 589 | 0.37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 484 | M | 684 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 485 | M | 319 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 488 | A | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 494 | A | 1039 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 498 | M | 792 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 499 | M | 660 | 0.41 | 496 | 203 | 24 | 10 | 16 | 7 | 162 | 66 | 286 | 7.37 | 0.32 | 0.0015 | 0.4 | 0.0060 | 1.7 |
| 500 | M | 395 | 0.25 | 573 | 141 | 27 | 7 | 19 | 5 | 174 | 43 | 195 | 7.11 | 0.32 | 0.0014 | 0.3 | 0.0058 | 1.1 |
| 502 | A | 855 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 503 | A | 820 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 504 | M | 360 | 0.22 | 165 | 37 | 6 | 1 | 12 | 3 | 0 | 0 | 41 | 2.88 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.1 |
| | | | | **194571** | **149192** | **7133** | **5556** | **15164** | **12072** | **12121** | **8842** | **175663** | | **Totals:** | | **33.3** | | **135.5** |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 790 | 110 | 310 | 3,060 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 660 | 110 | 320 | 3,100 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 700 | 120 | 330 | 3,120 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 750 | 120 | 340 | 3,180 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 790 | 120 | 360 | 3,230 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 830 | 130 | 370 | 3,260 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 860 | 130 | 370 | 3,270 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 880 | 130 | 380 | 3,310 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 960 | 140 | 430 | 3,510 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 990 | 140 | 430 | 3,530 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 1,020 | 140 | 440 | 3,560 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,530 | 180 | 570 | 4,010 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,630 | 190 | 620 | 4,160 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,660 | 200 | 650 | 4,270 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,660 | 200 | 650 | 4,270 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,780 | 200 | 650 | 4,290 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 2,130 | 220 | 690 | 4,390 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 2,450 | 230 | 720 | 4,420 |
| FRWY19 | SR60 | Market St to Main St | 2,640 | 250 | 770 | 4,530 |
| FRWY20 | SR60 | Main St to SR-91 | 3,210 | 290 | 910 | 4,890 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 6,420 | 500 | 1,630 | 8,020 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 6,630 | 520 | 1,710 | 8,180 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 6,560 | 530 | 1,740 | 8,230 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 7,230 | 560 | 1,850 | 8,510 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 8,380 | 610 | 1,950 | 8,660 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 8,850 | 590 | 1,890 | 8,430 |
| FRWY27 | SR60 | I-215 to Day St | 11,440 | 690 | 2,180 | 9,450 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 11,150 | 710 | 2,230 | 9,450 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 11,460 | 740 | 2,310 | 9,510 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 13,130 | 790 | 2,370 | 9,590 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 15,160 | 880 | 2,540 | 9,810 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 16,270 | 940 | 2,590 | 9,810 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 17,000 | 960 | 2,600 | 9,860 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 18,170 | 970 | 2,590 | 10,020 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 5,430 | 260 | 690 | 2,130 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 3,790 | 170 | 460 | 1,080 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 3,790 | 170 | 460 | 1,080 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 68 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 68 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 68 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 68 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 68 |
| FRWY75 | SR91 | I-15 to McKinley St | 1,350 | 110 | 410 | 2,210 |
| FRWY76 | SR91 | McKinley St to Pierce St | 1,580 | 120 | 440 | 2,270 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 1,580 | 120 | 440 | 2,270 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 1,680 | 130 | 460 | 2,300 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,860 | 130 | 470 | 2,320 |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 2,050 | 140 | 500 | 2,360 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 2,200 | 140 | 520 | 2,400 |
| FRWY82 | SR91 | Adam St to Madison St | 2,300 | 140 | 540 | 2,420 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 2,340 | 150 | 550 | 2,450 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 2,620 | 150 | 560 | 2,470 |
| FRWY85 | SR91 | Central Ave to 14th St | 2,640 | 150 | 560 | 2,460 |
| FRWY86 | SR91 | 14th St to University Ave | 2,410 | 130 | 500 | 2,240 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 2,430 | 130 | 500 | 2,260 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 1,920 | 100 | 310 | 940 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 1,530 | 90 | 280 | 910 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 1,530 | 90 | 280 | 910 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 1,110 | 70 | 240 | 890 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 910 | 70 | 230 | 880 |
| FRWY106 | I-10 | 22nd St to S 8th St | 820 | 60 | 220 | 870 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 660 | 60 | 200 | 840 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 560 | 50 | 190 | 820 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 520 | 50 | 160 | 800 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 470 | 50 | 150 | 790 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 460 | 50 | 150 | 790 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 450 | 50 | 150 | 790 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 370 | 40 | 120 | 710 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 370 | 40 | 120 | 710 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 2,550 | 40 | 160 | 320 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 3,080 | 50 | 180 | 340 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 3,390 | 60 | 200 | 370 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 3,480 | 60 | 210 | 380 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 3,560 | 60 | 220 | 390 |
| FRWY167 | I-215 | Redlands Ave to D St | 2,070 | 40 | 150 | 440 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 2,320 | 50 | 190 | 590 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 1,440 | 40 | 130 | 600 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 1,330 | 30 | 120 | 640 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 1,360 | 40 | 130 | 650 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 1,870 | 50 | 150 | 670 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 1,720 | 50 | 150 | 670 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 2,560 | 70 | 200 | 750 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 2,540 | 70 | 200 | 750 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 1,050 | 80 | 220 | 870 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 1,020 | 80 | 210 | 860 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 1,010 | 70 | 210 | 850 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 880 | 60 | 170 | 780 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 810 | 60 | 160 | 760 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 800 | 60 | 160 | 730 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 860 | 60 | 170 | 730 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 850 | 60 | 150 | 670 |
| FRWY142 | SR-215 | Mill St to 2rd St | 840 | 60 | 150 | 660 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 800 | 50 | 130 | 580 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 690 | 40 | 100 | 510 |

**World Logistics Center** **2012**
Project Full Buildout 2012
Freeway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 4270 | 790 | 110 | 310 | 3,060 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 22 | 8 | 250 | 2992 | 3274 | 3201 |
| FRWY2 | 4190 | 660 | 110 | 320 | 3,100 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 22 | 8 | 258 | 3032 | 3321 | 4441 |
| FRWY3 | 4270 | 700 | 120 | 330 | 3,120 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 24 | 8 | 266 | 3051 | 3351 | 3616 |
| FRWY4 | 4390 | 750 | 120 | 340 | 3,180 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 24 | 8 | 274 | 3110 | 3418 | 3922 |
| FRWY5 | 4500 | 790 | 120 | 360 | 3,230 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 24 | 8 | 290 | 3159 | 3483 | 3077 |
| FRWY6 | 4590 | 830 | 130 | 370 | 3,260 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 26 | 9 | 298 | 3188 | 3523 | 4568 |
| FRWY7 | 4630 | 860 | 130 | 370 | 3,270 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 26 | 9 | 298 | 3198 | 3533 | 3621 |
| FRWY8 | 4700 | 880 | 130 | 380 | 3,310 | 1537 | 0.955 | 2 | 0 | 0 | 0 | 26 | 9 | 306 | 3237 | 3580 | 3418 |
| FRWY9 | 5040 | 960 | 140 | 430 | 3,510 | 1792 | 1.113 | 2 | 0 | 0 | 0 | 28 | 10 | 346 | 3433 | 3819 | 4251 |
| FRWY10 | 5090 | 990 | 140 | 430 | 3,530 | 1665 | 1.034 | 2 | 0 | 0 | 0 | 28 | 10 | 346 | 3452 | 3839 | 3970 |
| FRWY11 | 5160 | 1,020 | 140 | 440 | 3,560 | 849 | 0.527 | 2 | 0 | 0 | 0 | 28 | 10 | 354 | 3481 | 3876 | 2044 |
| FRWY12 | 6290 | 1,530 | 180 | 570 | 4,010 | 2299 | 1.428 | 3 | 0 | 0 | 0 | 37 | 12 | 459 | 3921 | 4433 | 6331 |
| FRWY13 | 6600 | 1,630 | 190 | 620 | 4,160 | 1689 | 1.049 | 3 | 0 | 0 | 0 | 39 | 13 | 499 | 4068 | 4623 | 4850 |
| FRWY14 | 6780 | 1,660 | 200 | 650 | 4,270 | 2444 | 1.518 | 3 | 0 | 0 | 0 | 41 | 14 | 524 | 4176 | 4757 | 7223 |
| FRWY15 | 6780 | 1,660 | 200 | 650 | 4,270 | 1608 | 0.999 | 3 | 0 | 0 | 0 | 41 | 14 | 524 | 4176 | 4757 | 4752 |
| FRWY16 | 6920 | 1,780 | 200 | 650 | 4,290 | 2722 | 1.691 | 3 | 0 | 0 | 0 | 41 | 14 | 524 | 4195 | 4777 | 8078 |
| FRWY17 | 7430 | 2,130 | 220 | 690 | 4,390 | 3198 | 1.987 | 4 | 0 | 0 | 0 | 45 | 15 | 556 | 4293 | 4913 | 9761 |
| FRWY18 | 7820 | 2,450 | 230 | 720 | 4,420 | 2509 | 1.559 | 4 | 0 | 0 | 0 | 47 | 16 | 580 | 4322 | 4970 | 7746 |
| FRWY19 | 8190 | 2,640 | 250 | 770 | 4,530 | 910 | 0.565 | 5 | 0 | 0 | 0 | 51 | 17 | 620 | 4430 | 5124 | 2896 |
| FRWY20 | 9300 | 3,210 | 290 | 910 | 4,890 | 774 | 0.481 | 6 | 0 | 0 | 1 | 59 | 20 | 733 | 4782 | 5601 | 2693 |
| FRWY21 | 16570 | 6,420 | 500 | 1,630 | 8,020 | 1798 | 1.117 | 11 | 1 | 1 | 1 | 102 | 35 | 1313 | 7843 | 9305 | 10393 |
| FRWY22 | 17040 | 6,630 | 520 | 1,710 | 8,180 | 1035 | 0.643 | 12 | 1 | 1 | 1 | 106 | 36 | 1377 | 7999 | 9532 | 6129 |
| FRWY23 | 17060 | 6,560 | 530 | 1,740 | 8,230 | 1042 | 0.647 | 11 | 1 | 1 | 1 | 108 | 37 | 1401 | 8048 | 9608 | 6219 |
| FRWY24 | 18150 | 7,230 | 560 | 1,850 | 8,510 | 2260 | 1.404 | 13 | 1 | 1 | 1 | 114 | 39 | 1490 | 8322 | 9980 | 14011 |
| FRWY25 | 19600 | 8,380 | 610 | 1,950 | 8,660 | 1305 | 0.811 | 15 | 1 | 1 | 1 | 124 | 42 | 1571 | 8469 | 10223 | 8288 |
| FRWY26 | 19760 | 8,850 | 590 | 1,890 | 8,430 | 977 | 0.607 | 15 | 1 | 1 | 1 | 120 | 41 | 1522 | 8244 | 9945 | 6036 |
| FRWY27 | 23760 | 11,440 | 690 | 2,180 | 9,450 | 1186 | 0.737 | 20 | 1 | 1 | 2 | 140 | 48 | 1756 | 9241 | 11209 | 8258 |
| FRWY28 | 23540 | 11,150 | 710 | 2,230 | 9,450 | 1642 | 1.020 | 19 | 1 | 1 | 2 | 144 | 49 | 1796 | 9241 | 11254 | 11479 |
| FRWY29 | 24020 | 11,460 | 740 | 2,310 | 9,510 | 1636 | 1.016 | 20 | 1 | 1 | 2 | 151 | 51 | 1861 | 9300 | 11386 | 11572 |
| FRWY30 | 25880 | 13,130 | 790 | 2,370 | 9,590 | 1555 | 0.966 | 23 | 1 | 1 | 2 | 161 | 55 | 1909 | 9378 | 11530 | 11137 |
| FRWY31 | 28390 | 15,160 | 880 | 2,540 | 9,810 | 3384 | 2.102 | 26 | 1 | 1 | 2 | 179 | 61 | 2046 | 9593 | 11910 | 25038 |
| FRWY32 | 29610 | 16,270 | 940 | 2,590 | 9,810 | 1112 | 0.691 | 28 | 1 | 1 | 3 | 191 | 65 | 2086 | 9593 | 11969 | 8268 |
| FRWY33 | 30420 | 17,000 | 960 | 2,600 | 9,860 | 1935 | 1.202 | 30 | 1 | 1 | 3 | 195 | 66 | 2094 | 9642 | 12033 | 14464 |
| FRWY34 | 31750 | 18,170 | 970 | 2,590 | 10,020 | 1675 | 1.041 | 32 | 2 | 1 | 3 | 197 | 67 | 2086 | 9799 | 12187 | 12681 |
| FRWY35 | 8510 | 5,430 | 260 | 690 | 2,130 | 1143 | 0.710 | 9 | 0 | 0 | 1 | 53 | 18 | 556 | 2083 | 2721 | 1932 |
| FRWY36 | 5500 | 3,790 | 170 | 460 | 1,080 | 9120 | 5.665 | 7 | 0 | 0 | 1 | 35 | 12 | 370 | 1056 | 1481 | 8389 |
| FRWY37 | 5500 | 3,790 | 170 | 460 | 1,080 | 3802 | 2.362 | 7 | 0 | 0 | 1 | 35 | 12 | 370 | 1056 | 1481 | 3497 |
| FRWY294 | 68 | 0 | 0 | 0 | 68 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 121 |
| FRWY295 | 68 | 0 | 0 | 0 | 68 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 43 |
| FRWY296 | 68 | 0 | 0 | 0 | 68 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 75 |
| FRWY297 | 68 | 0 | 0 | 0 | 68 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 62 |
| FRWY299 | 68 | 0 | 0 | 0 | 68 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 68 |
| FRWY75 | 4080 | 1,350 | 110 | 410 | 2,210 | 2861 | 1.777 | 2 | 0 | 0 | 0 | 22 | 8 | 330 | 2161 | 2524 | 4486 |
| FRWY76 | 4410 | 1,580 | 120 | 440 | 2,270 | 2500 | 1.553 | 3 | 0 | 0 | 0 | 24 | 8 | 354 | 2220 | 2610 | 4054 |
| FRWY77 | 4410 | 1,580 | 120 | 440 | 2,270 | 450 | 0.280 | 3 | 0 | 0 | 0 | 24 | 8 | 354 | 2220 | 2610 | 730 |
| FRWY78 | 4570 | 1,680 | 130 | 460 | 2,300 | 1384 | 0.860 | 3 | 0 | 0 | 0 | 26 | 9 | 370 | 2249 | 2659 | 2286 |
| FRWY79 | 4780 | 1,860 | 130 | 470 | 2,320 | 1713 | 1.064 | 3 | 0 | 0 | 0 | 26 | 9 | 379 | 2269 | 2687 | 2859 |
| FRWY80 | 5050 | 2,050 | 140 | 500 | 2,360 | 1703 | 1.058 | 4 | 0 | 0 | 0 | 28 | 10 | 403 | 2308 | 2753 | 2912 |
| FRWY81 | 5260 | 2,200 | 140 | 520 | 2,400 | 2512 | 1.560 | 4 | 0 | 0 | 0 | 28 | 10 | 419 | 2347 | 2809 | 4383 |
| FRWY82 | 5400 | 2,300 | 140 | 540 | 2,420 | 1674 | 1.040 | 4 | 0 | 0 | 0 | 28 | 10 | 435 | 2367 | 2844 | 2958 |
| FRWY83 | 5490 | 2,340 | 150 | 550 | 2,450 | 1819 | 1.130 | 4 | 0 | 0 | 0 | 31 | 10 | 443 | 2396 | 2885 | 3260 |
| FRWY84 | 5800 | 2,620 | 150 | 560 | 2,470 | 1182 | 0.734 | 5 | 0 | 0 | 0 | 31 | 10 | 451 | 2415 | 2913 | 2139 |
| FRWY85 | 5810 | 2,640 | 150 | 560 | 2,460 | 2360 | 1.466 | 5 | 0 | 0 | 0 | 31 | 10 | 451 | 2406 | 2903 | 4256 |
| FRWY86 | 5280 | 2,410 | 130 | 500 | 2,240 | 783 | 0.486 | 4 | 0 | 0 | 0 | 26 | 9 | 403 | 2191 | 2634 | 1281 |
| FRWY87 | 5320 | 2,430 | 130 | 500 | 2,260 | 1370 | 0.851 | 4 | 0 | 0 | 0 | 26 | 9 | 403 | 2210 | 2653 | 2258 |
| FRWY101 | 3270 | 1,920 | 100 | 310 | 940 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 20 | 7 | 250 | 919 | 1200 | 1270 |
| FRWY102 | 2810 | 1,530 | 90 | 280 | 910 | 925 | 0.575 | 3 | 0 | 0 | 0 | 18 | 6 | 226 | 890 | 1143 | 657 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 2810 | 1,530 | 90 | 280 | 910 | 1770 | 1.100 | 3 | 0 | 0 | 0 | 18 | 6 | 226 | 890 | 1143 | 1257 |
| FRWY104 | 2310 | 1,110 | 70 | 240 | 890 | 3182 | 1.977 | 2 | 0 | 0 | 0 | 14 | 5 | 193 | 870 | 1085 | 2145 |
| FRWY105 | 2090 | 910 | 70 | 230 | 880 | 1010 | 0.627 | 2 | 0 | 0 | 0 | 14 | 5 | 185 | 861 | 1067 | 669 |
| FRWY106 | 1970 | 820 | 60 | 220 | 870 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 12 | 4 | 177 | 851 | 1046 | 848 |
| FRWY107 | 1760 | 660 | 60 | 200 | 840 | 1655 | 1.028 | 1 | 0 | 0 | 0 | 12 | 4 | 161 | 821 | 1000 | 1028 |
| FRWY108 | 1620 | 560 | 50 | 190 | 820 | 4341 | 2.697 | 1 | 0 | 0 | 0 | 10 | 3 | 153 | 802 | 970 | 2615 |
| FRWY109 | 1530 | 520 | 50 | 160 | 800 | 1728 | 1.073 | 1 | 0 | 0 | 0 | 10 | 3 | 129 | 782 | 926 | 994 |
| FRWY110 | 1460 | 470 | 50 | 150 | 790 | 2788 | 1.732 | 1 | 0 | 0 | 0 | 10 | 3 | 121 | 773 | 908 | 1573 |
| FRWY111 | 1450 | 460 | 50 | 150 | 790 | 7717 | 4.794 | 1 | 0 | 0 | 0 | 10 | 3 | 121 | 773 | 908 | 4353 |
| FRWY112 | 1440 | 450 | 50 | 150 | 790 | 1384 | 0.860 | 1 | 0 | 0 | 0 | 10 | 3 | 121 | 773 | 908 | 781 |
| FRWY113 | 1240 | 370 | 40 | 120 | 710 | 3380 | 2.100 | 1 | 0 | 0 | 0 | 8 | 3 | 97 | 694 | 803 | 1685 |
| FRWY114 | 1240 | 370 | 40 | 120 | 710 | 3719 | 2.310 | 1 | 0 | 0 | 0 | 8 | 3 | 97 | 694 | 803 | 1854 |
| FRWY129 | 3070 | 2,550 | 40 | 160 | 320 | 4476 | 2.781 | 4 | 0 | 0 | 0 | 8 | 3 | 129 | 313 | 458 | 1273 |
| FRWY130 | 3650 | 3,080 | 50 | 180 | 340 | 3830 | 2.379 | 5 | 0 | 0 | 0 | 10 | 3 | 145 | 332 | 497 | 1184 |
| FRWY131 | 4020 | 3,390 | 60 | 200 | 370 | 2967 | 1.843 | 6 | 0 | 0 | 1 | 12 | 4 | 161 | 362 | 546 | 1007 |
| FRWY132 | 4130 | 3,480 | 60 | 210 | 380 | 1163 | 0.722 | 6 | 0 | 0 | 1 | 12 | 4 | 169 | 372 | 564 | 408 |
| FRWY133 | 4230 | 3,560 | 60 | 220 | 390 | 4541 | 2.821 | 6 | 0 | 0 | 1 | 12 | 4 | 177 | 381 | 582 | 1643 |
| FRWY167 | 2700 | 2,070 | 40 | 150 | 440 | 1471 | 0.914 | 4 | 0 | 0 | 0 | 8 | 3 | 121 | 430 | 566 | 517 |
| FRWY168 | 3150 | 2,320 | 50 | 190 | 590 | 916 | 0.569 | 4 | 0 | 0 | 0 | 10 | 3 | 153 | 577 | 748 | 426 |
| FRWY169 | 2210 | 1,440 | 40 | 130 | 600 | 4924 | 3.059 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 587 | 705 | 2157 |
| FRWY171 | 2120 | 1,330 | 30 | 120 | 640 | 2145 | 1.333 | 2 | 0 | 0 | 0 | 6 | 2 | 97 | 626 | 733 | 977 |
| FRWY172 | 2180 | 1,360 | 40 | 130 | 650 | 3000 | 1.864 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 636 | 754 | 1405 |
| FRWY173 | 2740 | 1,870 | 50 | 150 | 670 | 2501 | 1.554 | 3 | 0 | 0 | 0 | 10 | 3 | 121 | 655 | 794 | 1233 |
| FRWY174 | 2590 | 1,720 | 50 | 150 | 670 | 1135 | 0.705 | 3 | 0 | 0 | 0 | 10 | 3 | 121 | 655 | 793 | 559 |
| FRWY175 | 3580 | 2,560 | 70 | 200 | 750 | 1547 | 0.961 | 4 | 0 | 0 | 0 | 14 | 5 | 161 | 733 | 919 | 883 |
| FRWY176 | 3560 | 2,540 | 70 | 200 | 750 | 1359 | 0.844 | 4 | 0 | 0 | 0 | 14 | 5 | 161 | 733 | 919 | 776 |
| FRWY134 | 2220 | 1,050 | 80 | 220 | 870 | 1385 | 0.860 | 2 | 0 | 0 | 0 | 16 | 6 | 177 | 851 | 1052 | 905 |
| FRWY135 | 2170 | 1,020 | 80 | 210 | 860 | 1711 | 1.063 | 2 | 0 | 0 | 0 | 16 | 6 | 169 | 841 | 1034 | 1099 |
| FRWY136 | 2140 | 1,010 | 70 | 210 | 850 | 1038 | 0.645 | 2 | 0 | 0 | 0 | 14 | 5 | 169 | 831 | 1022 | 659 |
| FRWY137 | 1890 | 880 | 60 | 170 | 780 | 1516 | 0.942 | 2 | 0 | 0 | 0 | 12 | 4 | 137 | 763 | 918 | 864 |
| FRWY138 | 1790 | 810 | 60 | 160 | 760 | 2485 | 1.544 | 1 | 0 | 0 | 0 | 12 | 4 | 129 | 743 | 890 | 1374 |
| FRWY139 | 1750 | 800 | 60 | 160 | 730 | 1950 | 1.211 | 1 | 0 | 0 | 0 | 12 | 4 | 129 | 714 | 861 | 1043 |
| FRWY140 | 1820 | 860 | 60 | 170 | 730 | 1581 | 0.982 | 1 | 0 | 0 | 0 | 12 | 4 | 137 | 714 | 869 | 853 |
| FRWY141 | 1730 | 850 | 60 | 150 | 670 | 1447 | 0.899 | 1 | 0 | 0 | 0 | 12 | 4 | 121 | 655 | 794 | 714 |
| FRWY142 | 1710 | 840 | 60 | 150 | 660 | 938 | 0.583 | 1 | 0 | 0 | 0 | 12 | 4 | 121 | 645 | 784 | 457 |
| FRWY143 | 1560 | 800 | 50 | 130 | 580 | 2032 | 1.262 | 1 | 0 | 0 | 0 | 10 | 3 | 105 | 567 | 687 | 867 |
| FRWY144 | 1340 | 690 | 40 | 100 | 510 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 8 | 3 | 81 | 499 | 592 | 1146 |
| | | | | | | | | | | | | | | | | | **346641** |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2 | 1 | 0 | 0 | 0 | 22 | 7 | 244 | 2926 |
| FRWY2 | 2 | 2 | 0 | 0 | 0 | 30 | 10 | 345 | 4055 |
| FRWY3 | 2 | 1 | 0 | 0 | 0 | 26 | 9 | 287 | 3292 |
| FRWY4 | 2 | 1 | 0 | 0 | 0 | 28 | 10 | 314 | 3568 |
| FRWY5 | 2 | 1 | 0 | 0 | 0 | 22 | 7 | 256 | 2790 |
| FRWY6 | 2 | 2 | 0 | 0 | 0 | 34 | 12 | 386 | 4133 |
| FRWY7 | 2 | 2 | 0 | 0 | 0 | 27 | 9 | 305 | 3278 |
| FRWY8 | 2 | 1 | 0 | 0 | 0 | 25 | 9 | 292 | 3091 |
| FRWY9 | 2 | 2 | 0 | 0 | 0 | 32 | 11 | 386 | 3821 |
| FRWY10 | 2 | 2 | 0 | 0 | 0 | 29 | 10 | 358 | 3571 |
| FRWY11 | 2 | 1 | 0 | 0 | 0 | 15 | 5 | 187 | 1836 |
| FRWY12 | 4 | 4 | 0 | 0 | 0 | 52 | 18 | 656 | 5601 |
| FRWY13 | 4 | 3 | 0 | 0 | 0 | 41 | 14 | 524 | 4268 |
| FRWY14 | 4 | 4 | 0 | 0 | 0 | 62 | 21 | 795 | 6340 |
| FRWY15 | 4 | 3 | 0 | 0 | 0 | 41 | 14 | 523 | 4171 |
| FRWY16 | 4 | 5 | 0 | 0 | 0 | 69 | 23 | 885 | 7094 |
| FRWY17 | 4 | 7 | 0 | 0 | 1 | 89 | 30 | 1104 | 8529 |
| FRWY18 | 4 | 7 | 0 | 0 | 1 | 73 | 25 | 904 | 6737 |
| FRWY19 | 4 | 3 | 0 | 0 | 0 | 29 | 10 | 351 | 2504 |
| FRWY20 | 4 | 3 | 0 | 0 | 0 | 28 | 10 | 352 | 2299 |
| FRWY21 | 2 | 12 | 1 | 1 | 1 | 114 | 39 | 1466 | 8760 |
| FRWY22 | 2 | 7 | 0 | 0 | 1 | 68 | 23 | 886 | 5143 |
| FRWY23 | 2 | 7 | 0 | 0 | 1 | 70 | 24 | 907 | 5210 |
| FRWY24 | 2 | 18 | 1 | 1 | 2 | 160 | 54 | 2092 | 11684 |
| FRWY25 | 2 | 12 | 1 | 1 | 1 | 101 | 34 | 1273 | 6866 |
| FRWY26 | 2 | 9 | 0 | 0 | 1 | 73 | 25 | 924 | 5003 |
| FRWY27 | 4 | 15 | 1 | 1 | 1 | 103 | 35 | 1294 | 6809 |
| FRWY28 | 4 | 20 | 1 | 1 | 2 | 147 | 50 | 1832 | 9426 |
| FRWY29 | 4 | 20 | 1 | 1 | 2 | 153 | 52 | 1891 | 9452 |
| FRWY30 | 4 | 22 | 1 | 1 | 2 | 155 | 53 | 1844 | 9059 |
| FRWY31 | 4 | 55 | 3 | 3 | 5 | 376 | 128 | 4301 | 20167 |
| FRWY32 | 4 | 20 | 1 | 1 | 2 | 132 | 45 | 1441 | 6627 |
| FRWY33 | 4 | 35 | 2 | 2 | 3 | 235 | 80 | 2517 | 11591 |
| FRWY34 | 4 | 33 | 2 | 2 | 3 | 205 | 70 | 2171 | 10196 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY35 | 4 | 7 | 0 | 0 | 1 | 38 | 13 | 395 | 1479 |
| FRWY36 | 4 | 37 | 2 | 2 | 3 | 196 | 67 | 2099 | 5984 |
| FRWY37 | 4 | 16 | 1 | 1 | 1 | 82 | 28 | 875 | 2494 |
| FRWY294 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 |
| FRWY295 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| FRWY296 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| FRWY297 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| FRWY299 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
| FRWY75 | 9 | 4 | 0 | 0 | 0 | 40 | 14 | 587 | 3841 |
| FRWY76 | 9 | 4 | 0 | 0 | 0 | 38 | 13 | 550 | 3448 |
| FRWY77 | 9 | 1 | 0 | 0 | 0 | 7 | 2 | 99 | 621 |
| FRWY78 | 9 | 3 | 0 | 0 | 0 | 23 | 8 | 319 | 1934 |
| FRWY79 | 9 | 3 | 0 | 0 | 0 | 28 | 10 | 403 | 2414 |
| FRWY80 | 9 | 4 | 0 | 0 | 0 | 30 | 10 | 426 | 2442 |
| FRWY81 | 9 | 6 | 0 | 0 | 1 | 44 | 15 | 654 | 3662 |
| FRWY82 | 9 | 4 | 0 | 0 | 0 | 30 | 10 | 452 | 2461 |
| FRWY83 | 9 | 5 | 0 | 0 | 0 | 34 | 12 | 501 | 2707 |
| FRWY84 | 9 | 3 | 0 | 0 | 0 | 22 | 8 | 331 | 1774 |
| FRWY85 | 9 | 7 | 0 | 0 | 1 | 45 | 15 | 661 | 3527 |
| FRWY86 | 9 | 2 | 0 | 0 | 0 | 13 | 4 | 196 | 1066 |
| FRWY87 | 9 | 4 | 0 | 0 | 0 | 23 | 8 | 343 | 1881 |
| FRWY101 | 4 | 4 | 0 | 0 | 0 | 22 | 7 | 264 | 972 |
| FRWY102 | 4 | 2 | 0 | 0 | 0 | 11 | 4 | 130 | 511 |
| FRWY103 | 4 | 3 | 0 | 0 | 0 | 20 | 7 | 248 | 978 |
| FRWY104 | 4 | 4 | 0 | 0 | 0 | 28 | 10 | 382 | 1720 |
| FRWY105 | 4 | 1 | 0 | 0 | 0 | 9 | 3 | 116 | 540 |
| FRWY106 | 4 | 1 | 0 | 0 | 0 | 10 | 3 | 144 | 690 |
| FRWY107 | 4 | 1 | 0 | 0 | 0 | 13 | 4 | 166 | 845 |
| FRWY108 | 4 | 3 | 0 | 0 | 0 | 27 | 9 | 413 | 2162 |
| FRWY109 | 4 | 1 | 0 | 0 | 0 | 11 | 4 | 138 | 840 |
| FRWY110 | 4 | 1 | 0 | 0 | 0 | 18 | 6 | 209 | 1338 |
| FRWY111 | 4 | 4 | 0 | 0 | 0 | 49 | 17 | 579 | 3704 |
| FRWY112 | 4 | 1 | 0 | 0 | 0 | 9 | 3 | 104 | 664 |
| FRWY113 | 4 | 1 | 0 | 0 | 0 | 17 | 6 | 203 | 1458 |
| FRWY114 | 4 | 1 | 0 | 0 | 0 | 19 | 6 | 223 | 1604 |
| FRWY129 | 4 | 12 | 1 | 1 | 1 | 23 | 8 | 358 | 870 |
| FRWY130 | 4 | 13 | 1 | 1 | 1 | 24 | 8 | 345 | 791 |
| FRWY131 | 4 | 11 | 1 | 1 | 1 | 22 | 8 | 297 | 667 |
| FRWY132 | 4 | 4 | 0 | 0 | 0 | 9 | 3 | 122 | 268 |
| FRWY133 | 4 | 17 | 1 | 1 | 2 | 34 | 12 | 500 | 1076 |
| FRWY167 | 4 | 3 | 0 | 0 | 0 | 7 | 3 | 110 | 393 |
| FRWY168 | 4 | 2 | 0 | 0 | 0 | 6 | 2 | 87 | 328 |
| FRWY169 | 4 | 8 | 0 | 0 | 1 | 25 | 8 | 320 | 1795 |
| FRWY171 | 4 | 3 | 0 | 0 | 0 | 8 | 3 | 129 | 834 |
| FRWY172 | 4 | 4 | 0 | 0 | 0 | 15 | 5 | 195 | 1185 |
| FRWY173 | 4 | 5 | 0 | 0 | 0 | 16 | 5 | 188 | 1018 |
| FRWY174 | 4 | 2 | 0 | 0 | 0 | 7 | 2 | 85 | 462 |
| FRWY175 | 4 | 4 | 0 | 0 | 0 | 14 | 5 | 155 | 705 |
| FRWY176 | 4 | 4 | 0 | 0 | 0 | 12 | 4 | 136 | 619 |
| FRWY134 | 2 | 2 | 0 | 0 | 0 | 14 | 5 | 152 | 732 |
| FRWY135 | 2 | 2 | 0 | 0 | 0 | 17 | 6 | 180 | 894 |
| FRWY136 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 109 | 536 |
| FRWY137 | 2 | 1 | 0 | 0 | 0 | 11 | 4 | 129 | 718 |
| FRWY138 | 2 | 2 | 0 | 0 | 0 | 19 | 6 | 199 | 1147 |
| FRWY139 | 2 | 2 | 0 | 0 | 0 | 15 | 5 | 156 | 865 |
| FRWY140 | 9 | 1 | 0 | 0 | 0 | 12 | 4 | 134 | 701 |
| FRWY141 | 9 | 1 | 0 | 0 | 0 | 11 | 4 | 109 | 589 |
| FRWY142 | 9 | 1 | 0 | 0 | 0 | 7 | 2 | 70 | 376 |
| FRWY143 | 9 | 2 | 0 | 0 | 0 | 13 | 4 | 132 | 716 |
| FRWY144 | 9 | 2 | 0 | 0 | 0 | 16 | 5 | 156 | 966 |
| **Total** | | **588** | **28** | **28** | **54** | **4185** | **1423** | **51056** | **289279** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2_DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 92 | 4 | 4 | 8 | 961 | 327 | 11834 | 83919 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 439 | 21 | 21 | 40 | 2789 | 948 | 33099 | 169866 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 57 | 3 | 3 | 5 | 435 | 148 | 6123 | 35495 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **588** | **28** | **28** | **54** | **4185** | **1423** | **51056** | **289279** | **346641** |

**World Logistics Center** **2012**
Project Full Buildout 2012
Freeway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 4270 | 790 | 110 | 310 | 3,060 | 1574 | 0.978 | 453 | 53 | 158 | 125 | 72 | 8 | 60 | 68 | 996 | 974 |
| FRWY2 | 4190 | 660 | 110 | 320 | 3,100 | 2153 | 1.337 | 378 | 44 | 132 | 104 | 72 | 8 | 62 | 68 | 869 | 1163 |
| FRWY3 | 4270 | 700 | 120 | 330 | 3,120 | 1737 | 1.079 | 401 | 47 | 140 | 111 | 79 | 8 | 64 | 69 | 919 | 992 |
| FRWY4 | 4390 | 750 | 120 | 340 | 3,180 | 1847 | 1.147 | 430 | 50 | 150 | 119 | 79 | 8 | 66 | 70 | 972 | 1115 |
| FRWY5 | 4500 | 790 | 120 | 360 | 3,230 | 1422 | 0.883 | 453 | 53 | 158 | 125 | 79 | 8 | 70 | 71 | 1017 | 898 |
| FRWY6 | 4590 | 830 | 130 | 370 | 3,260 | 2087 | 1.296 | 476 | 56 | 166 | 131 | 86 | 9 | 72 | 72 | 1067 | 1383 |
| FRWY7 | 4630 | 860 | 130 | 370 | 3,270 | 1650 | 1.025 | 493 | 58 | 172 | 136 | 86 | 9 | 72 | 72 | 1097 | 1124 |
| FRWY8 | 4700 | 880 | 130 | 380 | 3,310 | 1537 | 0.955 | 504 | 59 | 176 | 139 | 86 | 9 | 74 | 73 | 1120 | 1069 |
| FRWY9 | 5040 | 960 | 140 | 430 | 3,510 | 1792 | 1.113 | 550 | 64 | 192 | 152 | 92 | 10 | 84 | 77 | 1221 | 1359 |
| FRWY10 | 5090 | 990 | 140 | 430 | 3,530 | 1665 | 1.034 | 567 | 67 | 198 | 157 | 92 | 10 | 84 | 78 | 1251 | 1294 |
| FRWY11 | 5160 | 1,020 | 140 | 440 | 3,560 | 849 | 0.527 | 584 | 69 | 204 | 161 | 92 | 10 | 86 | 79 | 1284 | 677 |
| FRWY12 | 6290 | 1,530 | 180 | 570 | 4,010 | 2299 | 1.428 | 877 | 103 | 305 | 242 | 118 | 12 | 111 | 89 | 1857 | 2652 |
| FRWY13 | 6600 | 1,630 | 190 | 620 | 4,160 | 1689 | 1.049 | 934 | 110 | 325 | 258 | 125 | 13 | 121 | 92 | 1977 | 2075 |
| FRWY14 | 6780 | 1,660 | 200 | 650 | 4,270 | 2444 | 1.518 | 951 | 112 | 331 | 263 | 132 | 14 | 126 | 94 | 2023 | 3071 |
| FRWY15 | 6780 | 1,660 | 200 | 650 | 4,270 | 1608 | 0.999 | 951 | 112 | 331 | 263 | 132 | 14 | 126 | 94 | 2023 | 2021 |
| FRWY16 | 6920 | 1,780 | 200 | 650 | 4,290 | 2722 | 1.691 | 1020 | 120 | 355 | 282 | 132 | 14 | 126 | 95 | 2143 | 3624 |
| FRWY17 | 7430 | 2,130 | 220 | 690 | 4,390 | 3198 | 1.987 | 1220 | 143 | 425 | 337 | 145 | 15 | 134 | 97 | 2517 | 5000 |
| FRWY18 | 7820 | 2,450 | 230 | 720 | 4,420 | 2509 | 1.559 | 1404 | 165 | 489 | 388 | 151 | 16 | 140 | 98 | 2850 | 4442 |
| FRWY19 | 8190 | 2,640 | 250 | 770 | 4,530 | 910 | 0.565 | 1513 | 177 | 527 | 418 | 165 | 17 | 150 | 100 | 3066 | 1733 |
| FRWY20 | 9300 | 3,210 | 290 | 910 | 4,890 | 774 | 0.481 | 1839 | 216 | 641 | 508 | 191 | 20 | 177 | 108 | 3699 | 1779 |
| FRWY21 | 16570 | 6,420 | 500 | 1,630 | 8,020 | 1798 | 1.117 | 3678 | 431 | 1281 | 1016 | 329 | 35 | 317 | 177 | 7265 | 8114 |
| FRWY22 | 17040 | 6,630 | 520 | 1,710 | 8,180 | 1035 | 0.643 | 3799 | 445 | 1323 | 1049 | 342 | 36 | 333 | 181 | 7508 | 4827 |
| FRWY23 | 17060 | 6,560 | 530 | 1,740 | 8,230 | 1042 | 0.647 | 3759 | 441 | 1309 | 1038 | 349 | 37 | 339 | 182 | 7452 | 4824 |
| FRWY24 | 18150 | 7,230 | 560 | 1,850 | 8,510 | 2260 | 1.404 | 4142 | 486 | 1443 | 1144 | 369 | 39 | 360 | 188 | 8170 | 11471 |
| FRWY25 | 19600 | 8,380 | 610 | 1,950 | 8,660 | 1305 | 0.811 | 4801 | 563 | 1672 | 1326 | 401 | 42 | 379 | 191 | 9377 | 7602 |
| FRWY26 | 19760 | 8,850 | 590 | 1,890 | 8,430 | 977 | 0.607 | 5071 | 595 | 1766 | 1401 | 388 | 41 | 368 | 186 | 9815 | 5957 |
| FRWY27 | 23760 | 11,440 | 690 | 2,180 | 9,450 | 1186 | 0.737 | 6555 | 769 | 2283 | 1810 | 454 | 48 | 424 | 209 | 12551 | 9247 |
| FRWY28 | 23540 | 11,150 | 710 | 2,230 | 9,450 | 1642 | 1.020 | 6388 | 749 | 2225 | 1764 | 467 | 49 | 434 | 209 | 12286 | 12532 |
| FRWY29 | 24020 | 11,460 | 740 | 2,310 | 9,510 | 1636 | 1.016 | 6566 | 770 | 2287 | 1814 | 487 | 51 | 449 | 210 | 12634 | 12840 |
| FRWY30 | 25880 | 13,130 | 790 | 2,370 | 9,590 | 1555 | 0.966 | 7523 | 882 | 2620 | 2078 | 520 | 55 | 461 | 212 | 14350 | 13862 |
| FRWY31 | 28390 | 15,160 | 880 | 2,540 | 9,810 | 3384 | 2.102 | 8686 | 1019 | 3025 | 2399 | 579 | 61 | 494 | 217 | 16480 | 34643 |
| FRWY32 | 29610 | 16,270 | 940 | 2,590 | 9,810 | 1112 | 0.691 | 9322 | 1093 | 3247 | 2575 | 619 | 65 | 504 | 217 | 17641 | 12186 |
| FRWY33 | 30420 | 17,000 | 960 | 2,600 | 9,860 | 1935 | 1.202 | 9740 | 1142 | 3392 | 2690 | 632 | 67 | 506 | 218 | 18387 | 22102 |
| FRWY34 | 31750 | 18,170 | 970 | 2,590 | 10,020 | 1675 | 1.041 | 10410 | 1221 | 3626 | 2875 | 638 | 67 | 504 | 221 | 19563 | 20356 |
| FRWY35 | 8510 | 5,430 | 260 | 690 | 2,130 | 1143 | 0.710 | 3111 | 365 | 1084 | 859 | 171 | 18 | 134 | 47 | 5789 | 4111 |
| FRWY36 | 5500 | 3,790 | 170 | 460 | 1,080 | 9120 | 5.665 | 2171 | 255 | 756 | 600 | 112 | 12 | 90 | 24 | 4019 | 22771 |
| FRWY37 | 5500 | 3,790 | 170 | 460 | 1,080 | 3802 | 2.362 | 2171 | 255 | 756 | 600 | 112 | 12 | 90 | 24 | 4019 | 9493 |
| FRWY294 | 68 | 0 | 0 | 0 | 68 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| FRWY295 | 68 | 0 | 0 | 0 | 68 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| FRWY296 | 68 | 0 | 0 | 0 | 68 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY297 | 68 | 0 | 0 | 0 | 68 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| FRWY299 | 68 | 0 | 0 | 0 | 68 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY75 | 4080 | 1,350 | 110 | 410 | 2,210 | 2861 | 1.777 | 773 | 91 | 269 | 214 | 72 | 8 | 80 | 49 | 1556 | 2765 |
| FRWY76 | 4410 | 1,580 | 120 | 440 | 2,270 | 2500 | 1.553 | 905 | 106 | 315 | 250 | 79 | 8 | 86 | 50 | 1800 | 2795 |
| FRWY77 | 4410 | 1,580 | 120 | 440 | 2,270 | 450 | 0.280 | 905 | 106 | 315 | 250 | 79 | 8 | 86 | 50 | 1800 | 503 |
| FRWY78 | 4570 | 1,680 | 130 | 460 | 2,300 | 1384 | 0.860 | 963 | 113 | 335 | 266 | 86 | 9 | 90 | 51 | 1911 | 1643 |
| FRWY79 | 4780 | 1,860 | 130 | 470 | 2,320 | 1713 | 1.064 | 1066 | 125 | 371 | 294 | 86 | 9 | 91 | 51 | 2093 | 2228 |
| FRWY80 | 5050 | 2,050 | 140 | 500 | 2,360 | 1703 | 1.058 | 1175 | 138 | 409 | 324 | 92 | 10 | 97 | 52 | 2297 | 2430 |
| FRWY81 | 5260 | 2,200 | 140 | 520 | 2,400 | 2512 | 1.560 | 1260 | 148 | 439 | 348 | 92 | 10 | 101 | 53 | 2451 | 3825 |
| FRWY82 | 5400 | 2,300 | 140 | 540 | 2,420 | 1674 | 1.040 | 1318 | 155 | 459 | 364 | 92 | 10 | 105 | 53 | 2556 | 2658 |
| FRWY83 | 5490 | 2,340 | 150 | 550 | 2,450 | 1819 | 1.130 | 1341 | 157 | 467 | 370 | 99 | 10 | 107 | 54 | 2605 | 2944 |
| FRWY84 | 5800 | 2,620 | 150 | 560 | 2,470 | 1182 | 0.734 | 1501 | 176 | 523 | 415 | 99 | 10 | 109 | 55 | 2887 | 2120 |
| FRWY85 | 5810 | 2,640 | 150 | 560 | 2,460 | 2360 | 1.466 | 1513 | 177 | 527 | 418 | 99 | 10 | 109 | 54 | 2907 | 4262 |
| FRWY86 | 5280 | 2,410 | 130 | 500 | 2,240 | 783 | 0.486 | 1381 | 162 | 481 | 381 | 86 | 9 | 97 | 49 | 2646 | 1287 |
| FRWY87 | 5320 | 2,430 | 130 | 500 | 2,260 | 1370 | 0.851 | 1392 | 163 | 485 | 385 | 86 | 9 | 97 | 50 | 2667 | 2270 |
| FRWY101 | 3270 | 1,920 | 100 | 310 | 940 | 1703 | 1.058 | 1100 | 129 | 383 | 304 | 66 | 7 | 60 | 21 | 2070 | 2190 |
| FRWY102 | 2810 | 1,530 | 90 | 280 | 910 | 925 | 0.575 | 877 | 103 | 305 | 242 | 59 | 6 | 54 | 20 | 1667 | 958 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 2810 | 1,530 | 90 | 280 | 910 | 1770 | 1.100 | 877 | 103 | 305 | 242 | 59 | 6 | 54 | 20 | 1667 | 1833 |
| FRWY104 | 2310 | 1,110 | 70 | 240 | 890 | 3182 | 1.977 | 636 | 75 | 222 | 176 | 46 | 5 | 47 | 20 | 1225 | 2421 |
| FRWY105 | 2090 | 910 | 70 | 230 | 880 | 1010 | 0.627 | 521 | 61 | 182 | 144 | 46 | 5 | 45 | 19 | 1023 | 642 |
| FRWY106 | 1970 | 820 | 60 | 220 | 870 | 1305 | 0.811 | 470 | 55 | 164 | 130 | 39 | 4 | 43 | 19 | 924 | 749 |
| FRWY107 | 1760 | 660 | 60 | 200 | 840 | 1655 | 1.028 | 378 | 44 | 132 | 104 | 39 | 4 | 39 | 19 | 760 | 781 |
| FRWY108 | 1620 | 560 | 50 | 190 | 820 | 4341 | 2.697 | 321 | 38 | 112 | 89 | 33 | 3 | 37 | 18 | 650 | 1754 |
| FRWY109 | 1530 | 520 | 50 | 160 | 800 | 1728 | 1.073 | 298 | 35 | 104 | 82 | 33 | 3 | 31 | 18 | 604 | 648 |
| FRWY110 | 1460 | 470 | 50 | 150 | 790 | 2788 | 1.732 | 269 | 32 | 94 | 74 | 33 | 3 | 29 | 17 | 552 | 956 |
| FRWY111 | 1450 | 460 | 50 | 150 | 790 | 7717 | 4.794 | 264 | 31 | 92 | 73 | 33 | 3 | 29 | 17 | 542 | 2599 |
| FRWY112 | 1440 | 450 | 50 | 150 | 790 | 1384 | 0.860 | 258 | 30 | 90 | 71 | 33 | 3 | 29 | 17 | 532 | 457 |
| FRWY113 | 1240 | 370 | 40 | 120 | 710 | 3380 | 2.100 | 212 | 25 | 74 | 59 | 26 | 3 | 23 | 16 | 437 | 918 |
| FRWY114 | 1240 | 370 | 40 | 120 | 710 | 3719 | 2.310 | 212 | 25 | 74 | 59 | 26 | 3 | 23 | 16 | 437 | 1010 |
| FRWY129 | 3070 | 2,550 | 40 | 160 | 320 | 4476 | 2.781 | 1461 | 171 | 509 | 404 | 26 | 3 | 31 | 7 | 2612 | 7263 |
| FRWY130 | 3650 | 3,080 | 50 | 180 | 340 | 3830 | 2.379 | 1765 | 207 | 615 | 487 | 33 | 3 | 35 | 8 | 3153 | 7501 |
| FRWY131 | 4020 | 3,390 | 60 | 200 | 370 | 2967 | 1.843 | 1942 | 228 | 676 | 536 | 39 | 4 | 39 | 8 | 3474 | 6403 |
| FRWY132 | 4130 | 3,480 | 60 | 210 | 380 | 1163 | 0.722 | 1994 | 234 | 694 | 551 | 39 | 4 | 41 | 8 | 3566 | 2576 |
| FRWY133 | 4230 | 3,560 | 60 | 220 | 390 | 4541 | 2.821 | 2040 | 239 | 710 | 563 | 39 | 4 | 43 | 9 | 3648 | 10290 |
| FRWY167 | 2700 | 2,070 | 40 | 150 | 440 | 1471 | 0.914 | 1186 | 139 | 413 | 328 | 26 | 3 | 29 | 10 | 2134 | 1950 |
| FRWY168 | 3150 | 2,320 | 50 | 190 | 590 | 916 | 0.569 | 1329 | 156 | 463 | 367 | 33 | 3 | 37 | 13 | 2402 | 1367 |
| FRWY169 | 2210 | 1,440 | 40 | 130 | 600 | 4924 | 3.059 | 825 | 97 | 287 | 228 | 26 | 3 | 25 | 13 | 1505 | 4603 |
| FRWY171 | 2120 | 1,330 | 30 | 120 | 640 | 2145 | 1.333 | 762 | 89 | 265 | 210 | 20 | 2 | 23 | 14 | 1387 | 1848 |
| FRWY172 | 2180 | 1,360 | 40 | 130 | 650 | 3000 | 1.864 | 779 | 91 | 271 | 215 | 26 | 3 | 25 | 14 | 1426 | 2657 |
| FRWY173 | 2740 | 1,870 | 50 | 150 | 670 | 2501 | 1.554 | 1071 | 126 | 373 | 296 | 33 | 3 | 29 | 15 | 1946 | 3024 |
| FRWY174 | 2590 | 1,720 | 50 | 150 | 670 | 1135 | 0.705 | 985 | 116 | 343 | 272 | 33 | 3 | 29 | 15 | 1797 | 1267 |
| FRWY175 | 3580 | 2,560 | 70 | 200 | 750 | 1547 | 0.961 | 1467 | 172 | 511 | 405 | 46 | 5 | 39 | 17 | 2661 | 2557 |
| FRWY176 | 3560 | 2,540 | 70 | 200 | 750 | 1359 | 0.844 | 1455 | 171 | 507 | 402 | 46 | 5 | 39 | 17 | 2641 | 2230 |
| FRWY134 | 2220 | 1,050 | 80 | 220 | 870 | 1385 | 0.860 | 602 | 71 | 210 | 166 | 53 | 6 | 43 | 19 | 1168 | 1005 |
| FRWY135 | 2170 | 1,020 | 80 | 210 | 860 | 1711 | 1.063 | 584 | 69 | 204 | 161 | 53 | 6 | 41 | 19 | 1136 | 1207 |
| FRWY136 | 2140 | 1,010 | 70 | 210 | 850 | 1038 | 0.645 | 579 | 68 | 202 | 160 | 46 | 5 | 41 | 19 | 1118 | 721 |
| FRWY137 | 1890 | 880 | 60 | 170 | 780 | 1516 | 0.942 | 504 | 59 | 176 | 139 | 39 | 4 | 33 | 17 | 972 | 916 |
| FRWY138 | 1790 | 810 | 60 | 160 | 760 | 2485 | 1.544 | 464 | 54 | 162 | 128 | 39 | 4 | 31 | 17 | 900 | 1389 |
| FRWY139 | 1750 | 800 | 60 | 160 | 730 | 1950 | 1.211 | 458 | 54 | 160 | 127 | 39 | 4 | 31 | 16 | 889 | 1077 |
| FRWY140 | 1820 | 860 | 60 | 170 | 730 | 1581 | 0.982 | 493 | 58 | 172 | 136 | 39 | 4 | 33 | 16 | 951 | 934 |
| FRWY141 | 1730 | 850 | 60 | 150 | 670 | 1447 | 0.899 | 487 | 57 | 170 | 135 | 39 | 4 | 29 | 15 | 936 | 841 |
| FRWY142 | 1710 | 840 | 60 | 150 | 660 | 938 | 0.583 | 481 | 56 | 168 | 133 | 39 | 4 | 29 | 15 | 926 | 539 |
| FRWY143 | 1560 | 800 | 50 | 130 | 580 | 2032 | 1.262 | 458 | 54 | 160 | 127 | 33 | 3 | 25 | 13 | 873 | 1102 |
| FRWY144 | 1340 | 690 | 40 | 100 | 510 | 3119 | 1.938 | 395 | 46 | 138 | 109 | 26 | 3 | 19 | 11 | 748 | 1450 |
| | | | | | | | | | | | | | | | | | 371755 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2 | 443 | 52 | 154 | 122 | 71 | 7 | 59 | 66 |
| FRWY2 | 2 | 506 | 59 | 176 | 140 | 97 | 10 | 83 | 92 |
| FRWY3 | 2 | 433 | 51 | 151 | 120 | 85 | 9 | 69 | 74 |
| FRWY4 | 2 | 493 | 58 | 172 | 136 | 91 | 10 | 76 | 81 |
| FRWY5 | 2 | 400 | 47 | 139 | 110 | 70 | 7 | 62 | 63 |
| FRWY6 | 2 | 617 | 72 | 215 | 170 | 111 | 12 | 93 | 93 |
| FRWY7 | 2 | 505 | 59 | 176 | 139 | 88 | 9 | 74 | 74 |
| FRWY8 | 2 | 481 | 56 | 168 | 133 | 82 | 9 | 71 | 70 |
| FRWY9 | 2 | 612 | 72 | 213 | 169 | 103 | 11 | 93 | 86 |
| FRWY10 | 2 | 587 | 69 | 204 | 162 | 95 | 10 | 87 | 81 |
| FRWY11 | 2 | 308 | 36 | 107 | 85 | 49 | 5 | 45 | 41 |
| FRWY12 | 4 | 1252 | 147 | 436 | 346 | 169 | 18 | 158 | 126 |
| FRWY13 | 4 | 980 | 115 | 341 | 271 | 131 | 14 | 127 | 96 |
| FRWY14 | 4 | 1444 | 169 | 503 | 399 | 200 | 21 | 192 | 143 |
| FRWY15 | 4 | 950 | 111 | 331 | 262 | 131 | 14 | 126 | 94 |
| FRWY16 | 4 | 1725 | 202 | 601 | 476 | 223 | 23 | 214 | 160 |
| FRWY17 | 4 | 2424 | 284 | 844 | 670 | 288 | 30 | 267 | 193 |
| FRWY18 | 4 | 2188 | 257 | 762 | 604 | 236 | 25 | 218 | 152 |
| FRWY19 | 4 | 855 | 100 | 298 | 236 | 93 | 10 | 85 | 57 |
| FRWY20 | 4 | 884 | 104 | 308 | 244 | 92 | 10 | 85 | 52 |
| FRWY21 | 2 | 4108 | 482 | 1431 | 1135 | 368 | 39 | 354 | 198 |
| FRWY22 | 2 | 2442 | 286 | 851 | 675 | 220 | 23 | 214 | 116 |
| FRWY23 | 2 | 2433 | 285 | 847 | 672 | 226 | 24 | 219 | 118 |
| FRWY24 | 2 | 5816 | 682 | 2026 | 1606 | 517 | 55 | 505 | 264 |
| FRWY25 | 2 | 3892 | 456 | 1356 | 1075 | 325 | 34 | 308 | 155 |
| FRWY26 | 2 | 3077 | 361 | 1072 | 850 | 236 | 25 | 223 | 113 |
| FRWY27 | 4 | 4829 | 566 | 1682 | 1334 | 335 | 35 | 313 | 154 |
| FRWY28 | 4 | 6516 | 764 | 2270 | 1800 | 477 | 50 | 443 | 213 |
| FRWY29 | 4 | 6673 | 783 | 2324 | 1843 | 495 | 52 | 457 | 213 |
| FRWY30 | 4 | 7267 | 852 | 2531 | 2007 | 502 | 53 | 445 | 205 |
| FRWY31 | 4 | 18259 | 2141 | 6360 | 5043 | 1217 | 128 | 1039 | 455 |
| FRWY32 | 4 | 6439 | 755 | 2243 | 1779 | 427 | 45 | 348 | 150 |
| FRWY33 | 4 | 11708 | 1373 | 4078 | 3234 | 759 | 80 | 608 | 262 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY34 | 4 | 10832 | 1270 | 3773 | 2992 | 664 | 70 | 524 | 230 |
| FRWY35 | 4 | 2209 | 259 | 769 | 610 | 121 | 13 | 95 | 33 |
| FRWY36 | 4 | 12302 | 1443 | 4285 | 3398 | 634 | 67 | 507 | 135 |
| FRWY37 | 4 | 5129 | 601 | 1786 | 1417 | 264 | 28 | 211 | 56 |
| FRWY294 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| FRWY295 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FRWY296 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY297 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FRWY299 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY75 | 9 | 1375 | 161 | 479 | 380 | 129 | 14 | 142 | 87 |
| FRWY76 | 9 | 1406 | 165 | 490 | 388 | 123 | 13 | 133 | 78 |
| FRWY77 | 9 | 253 | 30 | 88 | 70 | 22 | 2 | 24 | 14 |
| FRWY78 | 9 | 828 | 97 | 288 | 229 | 74 | 8 | 77 | 44 |
| FRWY79 | 9 | 1134 | 133 | 395 | 313 | 91 | 10 | 97 | 55 |
| FRWY80 | 9 | 1243 | 146 | 433 | 343 | 97 | 10 | 103 | 55 |
| FRWY81 | 9 | 1967 | 231 | 685 | 543 | 144 | 15 | 158 | 83 |
| FRWY82 | 9 | 1370 | 161 | 477 | 379 | 96 | 10 | 109 | 56 |
| FRWY83 | 9 | 1515 | 178 | 528 | 418 | 112 | 12 | 121 | 61 |
| FRWY84 | 9 | 1102 | 129 | 384 | 304 | 72 | 8 | 80 | 40 |
| FRWY85 | 9 | 2218 | 260 | 772 | 612 | 145 | 15 | 160 | 80 |
| FRWY86 | 9 | 672 | 79 | 234 | 186 | 42 | 4 | 47 | 24 |
| FRWY87 | 9 | 1185 | 139 | 413 | 327 | 73 | 8 | 83 | 42 |
| FRWY101 | 4 | 1164 | 136 | 405 | 321 | 70 | 7 | 64 | 22 |
| FRWY102 | 4 | 504 | 59 | 175 | 139 | 34 | 4 | 31 | 12 |
| FRWY103 | 4 | 964 | 113 | 336 | 266 | 65 | 7 | 60 | 22 |
| FRWY104 | 4 | 1257 | 147 | 438 | 347 | 91 | 10 | 92 | 39 |
| FRWY105 | 4 | 327 | 38 | 114 | 90 | 29 | 3 | 28 | 12 |
| FRWY106 | 4 | 381 | 45 | 133 | 105 | 32 | 3 | 35 | 16 |
| FRWY107 | 4 | 389 | 46 | 135 | 107 | 41 | 4 | 40 | 19 |
| FRWY108 | 4 | 865 | 101 | 301 | 239 | 89 | 9 | 100 | 49 |
| FRWY109 | 4 | 320 | 38 | 111 | 88 | 35 | 4 | 33 | 19 |
| FRWY110 | 4 | 466 | 55 | 162 | 129 | 57 | 6 | 51 | 30 |
| FRWY111 | 4 | 1263 | 148 | 440 | 349 | 158 | 17 | 140 | 84 |
| FRWY112 | 4 | 222 | 26 | 77 | 61 | 28 | 3 | 25 | 15 |
| FRWY113 | 4 | 445 | 52 | 155 | 123 | 55 | 6 | 49 | 33 |
| FRWY114 | 4 | 490 | 57 | 171 | 135 | 61 | 6 | 54 | 36 |
| FRWY129 | 4 | 4062 | 476 | 1415 | 1122 | 73 | 8 | 87 | 20 |
| FRWY130 | 4 | 4199 | 492 | 1462 | 1160 | 78 | 8 | 83 | 18 |
| FRWY131 | 4 | 3580 | 420 | 1247 | 989 | 73 | 8 | 72 | 15 |
| FRWY132 | 4 | 1441 | 169 | 502 | 398 | 29 | 3 | 30 | 6 |
| FRWY133 | 4 | 5754 | 675 | 2004 | 1589 | 111 | 12 | 121 | 24 |
| FRWY167 | 4 | 1084 | 127 | 377 | 299 | 24 | 3 | 27 | 9 |
| FRWY168 | 4 | 756 | 89 | 263 | 209 | 19 | 2 | 21 | 7 |
| FRWY169 | 4 | 2524 | 296 | 879 | 697 | 81 | 8 | 77 | 41 |
| FRWY171 | 4 | 1015 | 119 | 354 | 280 | 26 | 3 | 31 | 19 |
| FRWY172 | 4 | 1452 | 170 | 506 | 401 | 49 | 5 | 47 | 27 |
| FRWY173 | 4 | 1665 | 195 | 580 | 460 | 51 | 5 | 45 | 23 |
| FRWY174 | 4 | 695 | 81 | 242 | 192 | 23 | 2 | 21 | 10 |
| FRWY175 | 4 | 1410 | 165 | 491 | 389 | 44 | 5 | 37 | 16 |
| FRWY176 | 4 | 1229 | 144 | 428 | 339 | 39 | 4 | 33 | 14 |
| FRWY134 | 2 | 518 | 61 | 180 | 143 | 45 | 5 | 37 | 17 |
| FRWY135 | 2 | 621 | 73 | 216 | 172 | 56 | 6 | 43 | 20 |
| FRWY136 | 2 | 373 | 44 | 130 | 103 | 30 | 3 | 26 | 12 |
| FRWY137 | 2 | 475 | 56 | 165 | 131 | 37 | 4 | 31 | 16 |
| FRWY138 | 2 | 716 | 84 | 250 | 198 | 61 | 6 | 48 | 26 |
| FRWY139 | 2 | 555 | 65 | 193 | 153 | 48 | 5 | 38 | 20 |
| FRWY140 | 9 | 484 | 57 | 169 | 134 | 39 | 4 | 32 | 16 |
| FRWY141 | 9 | 438 | 51 | 152 | 121 | 35 | 4 | 26 | 13 |
| FRWY142 | 9 | 280 | 33 | 98 | 77 | 23 | 2 | 17 | 8 |
| FRWY143 | 9 | 579 | 68 | 202 | 160 | 42 | 4 | 32 | 16 |
| FRWY144 | 9 | 766 | 90 | 267 | 212 | 51 | 5 | 38 | 22 |
| **Total** | | **194013** | **22751** | **67573** | **53587** | **13540** | **1427** | **12334** | **6530** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 30412 | 3566 | 10592 | 8400 | 3109 | 328 | 2859 | 1894 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 144788 | 16979 | 50428 | 39991 | 9023 | 951 | 7996 | 3835 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 18813 | 2206 | 6552 | 5196 | 1408 | 148 | 1479 | 801 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **194013** | **22751** | **67573** | **53587** | **13540** | **1427** | **12334** | **6530** | **371755** |

**World Logistics Center**
**Project Full Buildout 2012**
**Entrained Road Dust**
Freeways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | F | 1574 | 0.98 | 790 | 772 | 110 | 108 | 310 | 303 | 3,060 | 2992 | 4175 | 18.05 | 0.022 | 0.0003 | 1.3 | 0.0013 | 5.5 |
| FRWY2 | F | 2153 | 1.34 | 660 | 883 | 110 | 147 | 320 | 428 | 3,100 | 4146 | 5604 | 18.58 | 0.022 | 0.0003 | 1.8 | 0.0013 | 7.5 |
| FRWY3 | F | 1737 | 1.08 | 700 | 755 | 120 | 129 | 330 | 356 | 3,120 | 3367 | 4608 | 18.40 | 0.022 | 0.0003 | 1.5 | 0.0013 | 6.1 |
| FRWY4 | F | 1847 | 1.15 | 750 | 861 | 120 | 138 | 340 | 390 | 3,180 | 3649 | 5037 | 18.27 | 0.022 | 0.0003 | 1.6 | 0.0013 | 6.7 |
| FRWY5 | F | 1422 | 0.88 | 790 | 698 | 120 | 106 | 360 | 318 | 3,230 | 2853 | 3975 | 18.15 | 0.022 | 0.0003 | 1.3 | 0.0013 | 5.2 |
| FRWY6 | F | 2087 | 1.30 | 830 | 1076 | 130 | 169 | 370 | 480 | 3,260 | 4226 | 5951 | 18.00 | 0.022 | 0.0003 | 1.9 | 0.0013 | 7.7 |
| FRWY7 | F | 1650 | 1.03 | 860 | 882 | 130 | 133 | 370 | 379 | 3,270 | 3352 | 4746 | 17.91 | 0.022 | 0.0003 | 1.5 | 0.0013 | 6.1 |
| FRWY8 | F | 1537 | 0.95 | 880 | 840 | 130 | 124 | 380 | 363 | 3,310 | 3160 | 4488 | 17.88 | 0.022 | 0.0003 | 1.4 | 0.0013 | 5.8 |
| FRWY9 | F | 1792 | 1.11 | 960 | 1069 | 140 | 156 | 430 | 479 | 3,510 | 3907 | 5611 | 17.76 | 0.022 | 0.0003 | 1.8 | 0.0013 | 7.2 |
| FRWY10 | F | 1665 | 1.03 | 990 | 1024 | 140 | 145 | 430 | 445 | 3,530 | 3651 | 5265 | 17.69 | 0.022 | 0.0003 | 1.7 | 0.0013 | 6.7 |
| FRWY11 | F | 849 | 0.53 | 1,020 | 538 | 140 | 74 | 440 | 232 | 3,560 | 1878 | 2721 | 17.62 | 0.022 | 0.0003 | 0.9 | 0.0013 | 3.5 |
| FRWY12 | F | 2299 | 1.43 | 1,530 | 2185 | 180 | 257 | 570 | 814 | 4,010 | 5727 | 8983 | 16.57 | 0.022 | 0.0003 | 2.6 | 0.0012 | 10.7 |
| FRWY13 | F | 1689 | 1.05 | 1,630 | 1710 | 190 | 199 | 620 | 651 | 4,160 | 4365 | 6925 | 16.45 | 0.022 | 0.0003 | 2.0 | 0.0012 | 8.2 |
| FRWY14 | F | 2444 | 1.52 | 1,660 | 2520 | 200 | 304 | 650 | 987 | 4,270 | 6483 | 10294 | 16.46 | 0.022 | 0.0003 | 3.0 | 0.0012 | 12.2 |
| FRWY15 | F | 1608 | 1.00 | 1,660 | 1658 | 200 | 200 | 650 | 649 | 4,270 | 4265 | 6773 | 16.46 | 0.022 | 0.0003 | 2.0 | 0.0012 | 8.0 |
| FRWY16 | F | 2722 | 1.69 | 1,780 | 3010 | 200 | 338 | 650 | 1099 | 4,290 | 7254 | 11701 | 16.23 | 0.022 | 0.0003 | 3.4 | 0.0012 | 13.7 |
| FRWY17 | F | 3198 | 1.99 | 2,130 | 4232 | 220 | 437 | 690 | 1371 | 4,390 | 8721 | 14761 | 15.61 | 0.022 | 0.0003 | 4.1 | 0.0011 | 16.6 |
| FRWY18 | F | 2509 | 1.56 | 2,450 | 3819 | 230 | 358 | 720 | 1122 | 4,420 | 6889 | 12188 | 15.06 | 0.022 | 0.0003 | 3.2 | 0.0011 | 13.2 |
| FRWY19 | F | 910 | 0.57 | 2,640 | 1492 | 250 | 141 | 770 | 435 | 4,530 | 2561 | 4630 | 14.82 | 0.022 | 0.0003 | 1.2 | 0.0011 | 4.9 |
| FRWY20 | F | 774 | 0.48 | 3,210 | 1543 | 290 | 139 | 910 | 438 | 4,890 | 2351 | 4472 | 14.29 | 0.022 | 0.0003 | 1.1 | 0.0010 | 4.6 |
| FRWY21 | F | 1798 | 1.12 | 6,420 | 7171 | 500 | 558 | 1,630 | 1821 | 8,020 | 8958 | 18508 | 13.40 | 0.022 | 0.0002 | 4.4 | 0.0010 | 17.8 |
| FRWY22 | F | 1035 | 0.64 | 6,630 | 4263 | 520 | 334 | 1,710 | 1099 | 8,180 | 5259 | 10956 | 13.34 | 0.022 | 0.0002 | 2.6 | 0.0010 | 10.5 |
| FRWY23 | F | 1042 | 0.65 | 6,560 | 4246 | 530 | 343 | 1,740 | 1126 | 8,230 | 5327 | 11043 | 13.41 | 0.022 | 0.0002 | 2.6 | 0.0010 | 10.6 |
| FRWY24 | F | 2260 | 1.40 | 7,230 | 10150 | 560 | 786 | 1,850 | 2597 | 8,510 | 11948 | 25482 | 13.12 | 0.022 | 0.0002 | 5.9 | 0.0009 | 24.0 |
| FRWY25 | F | 1305 | 0.81 | 8,380 | 6794 | 610 | 495 | 1,950 | 1581 | 8,660 | 7021 | 15889 | 12.53 | 0.022 | 0.0002 | 3.5 | 0.0009 | 14.3 |
| FRWY26 | F | 977 | 0.61 | 8,850 | 5371 | 590 | 358 | 1,890 | 1147 | 8,430 | 5116 | 11993 | 12.16 | 0.022 | 0.0002 | 2.6 | 0.0009 | 10.5 |
| FRWY27 | F | 1186 | 0.74 | 11,440 | 8429 | 690 | 508 | 2,180 | 1606 | 9,450 | 6962 | 17505 | 11.51 | 0.022 | 0.0002 | 3.5 | 0.0008 | 14.4 |
| FRWY28 | F | 1642 | 1.02 | 11,150 | 11373 | 710 | 724 | 2,230 | 2275 | 9,450 | 9639 | 24012 | 11.63 | 0.022 | 0.0002 | 4.9 | 0.0008 | 20.0 |
| FRWY29 | F | 1636 | 1.02 | 11,460 | 11647 | 740 | 752 | 2,310 | 2348 | 9,510 | 9665 | 24412 | 11.52 | 0.022 | 0.0002 | 4.9 | 0.0008 | 20.2 |
| FRWY30 | F | 1555 | 0.97 | 13,130 | 12683 | 790 | 763 | 2,370 | 2289 | 9,590 | 9264 | 25000 | 10.94 | 0.022 | 0.0002 | 4.8 | 0.0008 | 19.6 |
| FRWY31 | F | 3384 | 2.10 | 15,160 | 31869 | 880 | 1850 | 2,540 | 5340 | 9,810 | 20622 | 59681 | 10.40 | 0.022 | 0.0002 | 10.9 | 0.0007 | 44.4 |
| FRWY32 | F | 1112 | 0.69 | 16,270 | 11239 | 940 | 649 | 2,590 | 1789 | 9,810 | 6777 | 20454 | 10.08 | 0.022 | 0.0002 | 3.6 | 0.0007 | 14.7 |
| FRWY33 | F | 1935 | 1.20 | 17,000 | 20435 | 960 | 1154 | 2,600 | 3125 | 9,860 | 11852 | 36566 | 9.91 | 0.022 | 0.0002 | 6.4 | 0.0007 | 25.9 |
| FRWY34 | F | 1675 | 1.04 | 18,170 | 18906 | 970 | 1009 | 2,590 | 2695 | 10,020 | 10426 | 33037 | 9.69 | 0.022 | 0.0002 | 5.6 | 0.0007 | 22.9 |
| FRWY35 | F | 1143 | 0.71 | 5,430 | 3856 | 260 | 185 | 690 | 490 | 2,130 | 1512 | 6042 | 8.30 | 0.022 | 0.0001 | 0.9 | 0.0006 | 3.6 |
| FRWY36 | F | 9120 | 5.67 | 3,790 | 21472 | 170 | 963 | 460 | 2606 | 1,080 | 6119 | 31160 | 7.19 | 0.022 | 0.0001 | 3.9 | 0.0005 | 15.9 |
| FRWY37 | F | 3802 | 2.36 | 3,790 | 8951 | 170 | 402 | 460 | 1086 | 1,080 | 2551 | 12990 | 7.19 | 0.022 | 0.0001 | 1.6 | 0.0005 | 6.6 |
| FRWY294 | F | 2926 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 124 | 124 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY295 | F | 1049 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 44 | 44 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY296 | F | 1811 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 77 | 77 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY297 | F | 1505 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 64 | 64 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY299 | F | 1654 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 70 | 70 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY75 | F | 2861 | 1.78 | 1,350 | 2399 | 110 | 196 | 410 | 729 | 2,210 | 3928 | 7251 | 14.63 | 0.022 | 0.0003 | 1.9 | 0.0011 | 7.6 |
| FRWY76 | F | 2500 | 1.55 | 1,580 | 2454 | 120 | 186 | 440 | 683 | 2,270 | 3525 | 6849 | 14.06 | 0.022 | 0.0002 | 1.7 | 0.0010 | 6.9 |
| FRWY77 | F | 450 | 0.28 | 1,580 | 442 | 120 | 34 | 440 | 123 | 2,270 | 635 | 1233 | 14.06 | 0.022 | 0.0002 | 0.3 | 0.0010 | 1.2 |
| FRWY78 | F | 1384 | 0.86 | 1,680 | 1444 | 130 | 112 | 460 | 395 | 2,300 | 1977 | 3929 | 13.83 | 0.022 | 0.0002 | 1.0 | 0.0010 | 3.9 |
| FRWY79 | F | 1713 | 1.06 | 1,860 | 1979 | 130 | 138 | 470 | 500 | 2,320 | 2469 | 5087 | 13.42 | 0.022 | 0.0002 | 1.2 | 0.0010 | 4.9 |
| FRWY80 | F | 1703 | 1.06 | 2,050 | 2169 | 140 | 148 | 500 | 529 | 2,360 | 2497 | 5343 | 13.05 | 0.022 | 0.0002 | 1.2 | 0.0009 | 5.0 |
| FRWY81 | F | 2512 | 1.56 | 2,200 | 3433 | 140 | 218 | 520 | 811 | 2,400 | 3745 | 8208 | 12.81 | 0.022 | 0.0002 | 1.9 | 0.0009 | 7.6 |
| FRWY82 | F | 1674 | 1.04 | 2,300 | 2392 | 140 | 146 | 540 | 562 | 2,420 | 2517 | 5616 | 12.65 | 0.022 | 0.0002 | 1.3 | 0.0009 | 5.1 |
| FRWY83 | F | 1819 | 1.13 | 2,340 | 2644 | 150 | 169 | 550 | 621 | 2,450 | 2768 | 6204 | 12.61 | 0.022 | 0.0002 | 1.4 | 0.0009 | 5.6 |
| FRWY84 | F | 1182 | 0.73 | 2,620 | 1924 | 150 | 110 | 560 | 411 | 2,470 | 1814 | 4259 | 12.14 | 0.022 | 0.0002 | 0.9 | 0.0009 | 3.7 |
| FRWY85 | F | 2360 | 1.47 | 2,640 | 3870 | 150 | 220 | 560 | 821 | 2,460 | 3607 | 8518 | 12.09 | 0.022 | 0.0002 | 1.8 | 0.0009 | 7.4 |
| FRWY86 | F | 783 | 0.49 | 2,410 | 1172 | 130 | 63 | 500 | 243 | 2,240 | 1090 | 2568 | 12.09 | 0.022 | 0.0002 | 0.5 | 0.0009 | 2.2 |
| FRWY87 | F | 1370 | 0.85 | 2,430 | 2068 | 130 | 111 | 500 | 426 | 2,260 | 1923 | 4528 | 12.09 | 0.022 | 0.0002 | 1.0 | 0.0009 | 3.9 |
| FRWY101 | F | 1703 | 1.06 | 1,920 | 2031 | 100 | 106 | 310 | 328 | 940 | 994 | 3459 | 9.22 | 0.022 | 0.0002 | 0.6 | 0.0007 | 2.3 |
| FRWY102 | F | 925 | 0.57 | 1,530 | 879 | 90 | 52 | 280 | 161 | 910 | 523 | 1615 | 10.04 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.2 |
| FRWY103 | F | 1770 | 1.10 | 1,530 | 1682 | 90 | 99 | 280 | 308 | 910 | 1001 | 3090 | 10.04 | 0.022 | 0.0002 | 0.5 | 0.0007 | 2.2 |
| FRWY104 | F | 3182 | 1.98 | 1,110 | 2194 | 70 | 138 | 240 | 474 | 890 | 1759 | 4566 | 11.37 | 0.022 | 0.0002 | 0.9 | 0.0008 | 3.7 |
| FRWY105 | F | 1010 | 0.63 | 910 | 571 | 70 | 44 | 230 | 144 | 880 | 552 | 1311 | 12.20 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.1 |
| FRWY106 | F | 1305 | 0.81 | 820 | 665 | 60 | 49 | 220 | 178 | 870 | 705 | 1597 | 12.64 | 0.022 | 0.0002 | 0.4 | 0.0009 | 1.4 |
| FRWY107 | F | 1655 | 1.03 | 660 | 679 | 60 | 62 | 200 | 206 | 840 | 864 | 1809 | 13.42 | 0.022 | 0.0002 | 0.4 | 0.0010 | 1.7 |
| FRWY108 | F | 4341 | 2.70 | 560 | 1510 | 50 | 135 | 190 | 512 | 820 | 2211 | 4369 | 14.06 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.4 |
| FRWY109 | F | 1728 | 1.07 | 520 | 558 | 50 | 54 | 160 | 172 | 800 | 859 | 1642 | 14.29 | 0.022 | 0.0003 | 0.4 | 0.0010 | 1.7 |
| FRWY110 | F | 2788 | 1.73 | 470 | 814 | 50 | 87 | 150 | 260 | 790 | 1368 | 2529 | 14.67 | 0.022 | 0.0003 | 0.7 | 0.0011 | 2.7 |
| FRWY111 | F | 7717 | 4.79 | 460 | 2205 | 50 | 240 | 150 | 719 | 790 | 3787 | 6951 | 14.75 | 0.022 | 0.0003 | 1.8 | 0.0011 | 7.4 |
| FRWY112 | F | 1384 | 0.86 | 450 | 387 | 50 | 43 | 150 | 129 | 790 | 679 | 1238 | 14.84 | 0.022 | 0.0003 | 0.3 | 0.0011 | 1.3 |
| FRWY113 | F | 3380 | 2.10 | 370 | 777 | 40 | 84 | 120 | 252 | 710 | 1491 | 2604 | 15.27 | 0.022 | 0.0003 | 0.7 | 0.0011 | 2.9 |
| FRWY114 | F | 3719 | 2.31 | 370 | 855 | 40 | 92 | 120 | 277 | 710 | 1640 | 2865 | 15.27 | 0.022 | 0.0003 | 0.8 | 0.0011 | 3.2 |
| FRWY129 | F | 4476 | 2.78 | 2,550 | 7090 | 40 | 111 | 160 | 445 | 320 | 890 | 8536 | 4.88 | 0.022 | 0.0001 | 0.7 | 0.0003 | 2.9 |
| FRWY130 | F | 3830 | 2.38 | 3,080 | 7328 | 50 | 119 | 180 | 428 | 340 | 809 | 8684 | 4.62 | 0.022 | 0.0001 | 0.7 | 0.0003 | 2.8 |
| FRWY131 | F | 2967 | 1.84 | 3,390 | 6248 | 60 | 111 | 200 | 369 | 370 | 682 | 7409 | 4.60 | 0.022 | 0.0001 | 0.6 | 0.0003 | 2.4 |
| FRWY132 | F | 1163 | 0.72 | 3,480 | 2514 | 60 | 43 | 210 | 152 | 380 | 275 | 2984 | 4.61 | 0.022 | 0.0001 | 0.2 | 0.0003 | 1.0 |
| FRWY133 | F | 4541 | 2.82 | 3,560 | 10042 | 60 | 169 | 220 | 621 | 390 | 1100 | 11933 | 4.63 | 0.022 | 0.0001 | 1.0 | 0.0003 | 3.9 |
| FRWY167 | F | 1471 | 0.91 | 2,070 | 1892 | 40 | 37 | 150 | 137 | 440 | 402 | 2467 | 6.16 | 0.022 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| FRWY168 | F | 916 | 0.57 | 2,320 | 1320 | 50 | 28 | 190 | 108 | 590 | 336 | 1792 | 6.72 | 0.022 | 0.0001 | 0.2 | 0.0005 | 0.9 |
| FRWY169 | F | 4924 | 3.06 | 1,440 | 4405 | 40 | 122 | 130 | 398 | 600 | 1835 | 6760 | 8.49 | 0.022 | 0.0001 | 1.0 | 0.0006 | 4.1 |
| FRWY171 | F | 2145 | 1.33 | 1,330 | 1772 | 30 | 40 | 120 | 160 | 640 | 853 | 2825 | 9.10 | 0.022 | 0.0002 | 0.5 | 0.0006 | 1.8 |
| FRWY172 | F | 3000 | 1.86 | 1,360 | 2535 | 40 | 75 | 130 | 242 | 650 | 1211 | 4063 | 9.07 | 0.022 | 0.0002 | 0.6 | 0.0006 | 2.6 |
| FRWY173 | F | 2501 | 1.55 | 1,870 | 2905 | 50 | 78 | 150 | 233 | 670 | 1041 | 4257 | 7.88 | 0.022 | 0.0001 | 0.6 | 0.0006 | 2.4 |
| FRWY174 | F | 1135 | 0.71 | 1,720 | 1213 | 50 | 35 | 150 | 106 | 670 | 472 | 1826 | 8.22 | 0.022 | 0.0001 | 0.3 | 0.0006 | 1.1 |
| FRWY175 | F | 1547 | 0.96 | 2,560 | 2460 | 70 | 67 | 200 | 192 | 750 | 721 | 3440 | 7.16 | 0.022 | 0.0001 | 0.4 | 0.0005 | 1.7 |
| FRWY176 | F | 1359 | 0.84 | 2,540 | 2144 | 70 | 59 | 200 | 169 | 750 | 633 | 3005 | 7.19 | 0.022 | 0.0001 | 0.4 | 0.0005 | 1.5 |
| FRWY134 | F | 1385 | 0.86 | 1,050 | 903 | 80 | 69 | 220 | 189 | 870 | 749 | 1910 | 11.49 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.6 |
| FRWY135 | F | 1711 | 1.06 | 1,020 | 1084 | 80 | 85 | 210 | 223 | 860 | 914 | 2306 | 11.56 | 0.022 | 0.0002 | 0.5 | 0.0008 | 1.9 |
| FRWY136 | F | 1038 | 0.64 | 1,010 | 651 | 70 | 45 | 210 | 135 | 850 | 548 | 1380 | 11.58 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY137 | F | 1516 | 0.94 | 880 | 829 | 60 | 57 | 170 | 160 | 780 | 735 | 1780 | 11.82 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.5 |
| FRWY138 | F | 2485 | 1.54 | 810 | 1250 | 60 | 93 | 160 | 247 | 760 | 1173 | 2763 | 12.07 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.4 |
| FRWY139 | F | 1950 | 1.21 | 800 | 969 | 60 | 73 | 160 | 194 | 730 | 884 | 2120 | 11.94 | 0.022 | 0.0002 | 0.4 | 0.0009 | 1.8 |
| FRWY140 | F | 1581 | 0.98 | 860 | 845 | 60 | 59 | 170 | 167 | 730 | 717 | 1787 | 11.62 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.5 |
| FRWY141 | F | 1447 | 0.90 | 850 | 764 | 60 | 54 | 150 | 135 | 670 | 602 | 1555 | 11.26 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.3 |
| FRWY142 | F | 938 | 0.58 | 840 | 489 | 60 | 35 | 150 | 87 | 660 | 385 | 996 | 11.25 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| FRWY143 | F | 2032 | 1.26 | 800 | 1010 | 50 | 63 | 130 | 164 | 580 | 732 | 1969 | 10.90 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.5 |
| FRWY144 | F | 3119 | 1.94 | 690 | 1337 | 40 | 78 | 100 | 194 | 510 | 988 | 2596 | 10.99 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.0 |
| | | | | | | | | | | | | | | | **Totals:** | **149.0** | | **607.0** |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 121 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 121 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 121 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 121 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 121 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 121 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 121 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 121 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 121 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 121 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 121 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 121 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 121 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 121 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 121 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 121 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 121 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 121 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 121 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 121 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 121 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 121 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 121 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 121 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 121 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 121 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 121 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 121 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 121 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 121 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 121 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 121 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 121 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 121 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 121 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 121 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 121 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 121 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 121 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 121 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 121 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 121 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 121 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 121 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 121 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 121 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 121 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 121 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 121 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 121 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 121 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 121 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 121 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 242 |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 242 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 242 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 242 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 242 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 242 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 242 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 121 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 121 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 121 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 121 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 121 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 121 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 121 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 121 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 121 |

**World Logistics Center** **2012**
Project Full Buildout 2012
Freeway to Port
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.3% | 6.9% | 80.5% | 97.8% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 121 | 0 | 0 | 0 | 121 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 136 |
| 229 | 121 | 0 | 0 | 0 | 121 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 85 |
| 228 | 121 | 0 | 0 | 0 | 121 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 38 |
| 227 | 121 | 0 | 0 | 0 | 121 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 61 |
| 226 | 121 | 0 | 0 | 0 | 121 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 157 |
| 225 | 121 | 0 | 0 | 0 | 121 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 76 |
| 224 | 121 | 0 | 0 | 0 | 121 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 200 |
| 223 | 121 | 0 | 0 | 0 | 121 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 87 |
| 222 | 121 | 0 | 0 | 0 | 121 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 91 |
| 221 | 121 | 0 | 0 | 0 | 121 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 85 |
| 220 | 121 | 0 | 0 | 0 | 121 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 107 |
| 219 | 121 | 0 | 0 | 0 | 121 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 181 |
| 218 | 121 | 0 | 0 | 0 | 121 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 198 |
| 217 | 121 | 0 | 0 | 0 | 121 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 227 |
| 216 | 121 | 0 | 0 | 0 | 121 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 184 |
| 215 | 121 | 0 | 0 | 0 | 121 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 106 |
| 214 | 121 | 0 | 0 | 0 | 121 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 115 |
| 213 | 121 | 0 | 0 | 0 | 121 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 180 |
| 212 | 121 | 0 | 0 | 0 | 121 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 173 |
| 211 | 121 | 0 | 0 | 0 | 121 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 130 |
| 210 | 121 | 0 | 0 | 0 | 121 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 276 |
| 209 | 121 | 0 | 0 | 0 | 121 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 146 |
| 263 | 121 | 0 | 0 | 0 | 121 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 151 |
| 264 | 121 | 0 | 0 | 0 | 121 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 73 |
| 265 | 121 | 0 | 0 | 0 | 121 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 53 |
| 266 | 121 | 0 | 0 | 0 | 121 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 50 |
| 267 | 121 | 0 | 0 | 0 | 121 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 48 |
| 268 | 121 | 0 | 0 | 0 | 121 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 74 |
| 269 | 121 | 0 | 0 | 0 | 121 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 142 |
| 270 | 121 | 0 | 0 | 0 | 121 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 132 |
| 271 | 121 | 0 | 0 | 0 | 121 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 78 |
| 272 | 121 | 0 | 0 | 0 | 121 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 50 |
| 273 | 121 | 0 | 0 | 0 | 121 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 18 |
| 274 | 121 | 0 | 0 | 0 | 121 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 127 |
| 275 | 121 | 0 | 0 | 0 | 121 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 130 |
| 276 | 121 | 0 | 0 | 0 | 121 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 131 |
| 277 | 121 | 0 | 0 | 0 | 121 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 77 |
| 278 | 121 | 0 | 0 | 0 | 121 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 130 |
| 279 | 121 | 0 | 0 | 0 | 121 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 136 |
| 280 | 121 | 0 | 0 | 0 | 121 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 111 |
| 281 | 121 | 0 | 0 | 0 | 121 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 157 |
| 282 | 121 | 0 | 0 | 0 | 121 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 84 |
| 283 | 121 | 0 | 0 | 0 | 121 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 108 |
| 284 | 121 | 0 | 0 | 0 | 121 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 109 |
| 285 | 121 | 0 | 0 | 0 | 121 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 132 |
| 286 | 121 | 0 | 0 | 0 | 121 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 117 |
| 287 | 121 | 0 | 0 | 0 | 121 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 92 |
| 288 | 121 | 0 | 0 | 0 | 121 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 108 |
| 289 | 121 | 0 | 0 | 0 | 121 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 168 |
| 290 | 121 | 0 | 0 | 0 | 121 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 348 |
| 291 | 121 | 0 | 0 | 0 | 121 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 218 |
| 292 | 121 | 0 | 0 | 0 | 121 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 397 |
| 293 | 121 | 0 | 0 | 0 | 121 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 113 |
| 262 | 242 | 0 | 0 | 0 | 242 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 249 |
| 261 | 242 | 0 | 0 | 0 | 242 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 126 |
| 260 | 242 | 0 | 0 | 0 | 242 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 196 |
| 259 | 242 | 0 | 0 | 0 | 242 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 372 |
| 258 | 242 | 0 | 0 | 0 | 242 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 330 |
| 257 | 242 | 0 | 0 | 0 | 242 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 288 |
| 256 | 242 | 0 | 0 | 0 | 242 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 237 | 212 |
| 255 | 121 | 0 | 0 | 0 | 121 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 110 |
| 254 | 121 | 0 | 0 | 0 | 121 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 120 |
| 253 | 121 | 0 | 0 | 0 | 121 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 225 |
| 252 | 121 | 0 | 0 | 0 | 121 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 171 |
| 251 | 121 | 0 | 0 | 0 | 121 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 158 |
| 250 | 121 | 0 | 0 | 0 | 121 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 254 |
| 249 | 121 | 0 | 0 | 0 | 121 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 53 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 248 | 121 | 0 | 0 | 0 | 121 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 89 |
| 247 | 121 | 0 | 0 | 0 | 121 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 | 154 |
| | | | | | | | | | | | | | | | | | 10006 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 136 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| 228 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| 227 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 |
| 226 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 157 |
| 225 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| 224 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 |
| 223 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| 222 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 |
| 221 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| 220 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 107 |
| 219 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 |
| 218 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 198 |
| 217 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 227 |
| 216 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 184 |
| 215 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 106 |
| 214 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 |
| 213 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 180 |
| 212 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 |
| 211 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 |
| 210 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 276 |
| 209 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 146 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 151 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| 265 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| 266 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 267 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| 268 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| 269 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 |
| 270 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 |
| 271 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 |
| 272 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 273 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 274 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 127 |
| 275 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 |
| 276 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131 |
| 277 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 136 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 157 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 109 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 168 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 218 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 397 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 262 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 249 |
| 261 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 |
| 260 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 196 |
| 259 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 372 |
| 258 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 330 |
| 257 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 288 |
| 256 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 212 |
| 255 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 |
| 254 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 |
| 253 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225 |
| 252 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 |
| 251 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 158 |
| 250 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 254 |
| 249 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| 248 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 247 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10006** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1873 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5232 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2901 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10006** | **10006** |

**World Logistics Center** **2012**
Project Full Buildout 2012
Freeway to Port
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 121 | 0 | 0 | 0 | 121 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 229 | 121 | 0 | 0 | 0 | 121 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 228 | 121 | 0 | 0 | 0 | 121 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 227 | 121 | 0 | 0 | 0 | 121 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 226 | 121 | 0 | 0 | 0 | 121 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 225 | 121 | 0 | 0 | 0 | 121 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 224 | 121 | 0 | 0 | 0 | 121 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| 223 | 121 | 0 | 0 | 0 | 121 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 222 | 121 | 0 | 0 | 0 | 121 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 221 | 121 | 0 | 0 | 0 | 121 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 220 | 121 | 0 | 0 | 0 | 121 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 219 | 121 | 0 | 0 | 0 | 121 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 218 | 121 | 0 | 0 | 0 | 121 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 217 | 121 | 0 | 0 | 0 | 121 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| 216 | 121 | 0 | 0 | 0 | 121 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 215 | 121 | 0 | 0 | 0 | 121 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 214 | 121 | 0 | 0 | 0 | 121 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 213 | 121 | 0 | 0 | 0 | 121 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 212 | 121 | 0 | 0 | 0 | 121 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 211 | 121 | 0 | 0 | 0 | 121 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 210 | 121 | 0 | 0 | 0 | 121 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 |
| 209 | 121 | 0 | 0 | 0 | 121 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 263 | 121 | 0 | 0 | 0 | 121 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 264 | 121 | 0 | 0 | 0 | 121 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 265 | 121 | 0 | 0 | 0 | 121 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 266 | 121 | 0 | 0 | 0 | 121 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 267 | 121 | 0 | 0 | 0 | 121 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 268 | 121 | 0 | 0 | 0 | 121 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 269 | 121 | 0 | 0 | 0 | 121 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 270 | 121 | 0 | 0 | 0 | 121 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 271 | 121 | 0 | 0 | 0 | 121 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 272 | 121 | 0 | 0 | 0 | 121 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 273 | 121 | 0 | 0 | 0 | 121 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 |
| 274 | 121 | 0 | 0 | 0 | 121 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 275 | 121 | 0 | 0 | 0 | 121 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 276 | 121 | 0 | 0 | 0 | 121 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 277 | 121 | 0 | 0 | 0 | 121 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 278 | 121 | 0 | 0 | 0 | 121 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 279 | 121 | 0 | 0 | 0 | 121 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 280 | 121 | 0 | 0 | 0 | 121 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 281 | 121 | 0 | 0 | 0 | 121 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 282 | 121 | 0 | 0 | 0 | 121 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 283 | 121 | 0 | 0 | 0 | 121 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 284 | 121 | 0 | 0 | 0 | 121 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 285 | 121 | 0 | 0 | 0 | 121 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 286 | 121 | 0 | 0 | 0 | 121 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 287 | 121 | 0 | 0 | 0 | 121 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 288 | 121 | 0 | 0 | 0 | 121 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 289 | 121 | 0 | 0 | 0 | 121 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 290 | 121 | 0 | 0 | 0 | 121 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 8 |
| 291 | 121 | 0 | 0 | 0 | 121 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| 292 | 121 | 0 | 0 | 0 | 121 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 9 |
| 293 | 121 | 0 | 0 | 0 | 121 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 262 | 242 | 0 | 0 | 0 | 242 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 |
| 261 | 242 | 0 | 0 | 0 | 242 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 3 |
| 260 | 242 | 0 | 0 | 0 | 242 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 4 |
| 259 | 242 | 0 | 0 | 0 | 242 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 8 |
| 258 | 242 | 0 | 0 | 0 | 242 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 7 |
| 257 | 242 | 0 | 0 | 0 | 242 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 |
| 256 | 242 | 0 | 0 | 0 | 242 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 |
| 255 | 121 | 0 | 0 | 0 | 121 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 254 | 121 | 0 | 0 | 0 | 121 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 253 | 121 | 0 | 0 | 0 | 121 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| 252 | 121 | 0 | 0 | 0 | 121 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 251 | 121 | 0 | 0 | 0 | 121 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 |
| 250 | 121 | 0 | 0 | 0 | 121 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 |
| 249 | 121 | 0 | 0 | 0 | 121 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 248 | 121 | 0 | 0 | 0 | 121 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 247 | 121 | 0 | 0 | 0 | 121 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| | | | | | | | | | | | | | | | | | 226 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 228 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 227 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 226 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 225 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 224 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 223 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 222 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 220 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 219 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 218 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 217 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 216 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 215 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 214 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 213 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 212 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 211 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 210 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 209 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 265 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 266 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 267 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 268 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 269 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 270 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 271 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 272 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 273 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 275 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 276 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 277 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 262 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 261 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 260 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 259 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 258 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 257 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 256 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 255 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 254 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 253 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 252 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 251 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 250 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 249 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 248 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 247 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **226** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **226** | | **226** |

**World Logistics Center**
**Project Full Buildout 2012**
**Entrained Road Dust**
Freeway to Port

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | F | 1854 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 229 | F | 1159 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 87 | 87 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 228 | F | 520 | 0.32 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 39 | 39 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 227 | F | 833 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 63 | 63 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 226 | F | 2141 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 161 | 161 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 225 | F | 1032 | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 78 | 78 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 224 | F | 2726 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 205 | 205 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 223 | F | 1185 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 89 | 89 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 222 | F | 1233 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 93 | 93 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 221 | F | 1153 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 87 | 87 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 220 | F | 1458 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 110 | 110 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 219 | F | 2467 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 185 | 185 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 218 | F | 2700 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 203 | 203 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 217 | F | 3089 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 232 | 232 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 216 | F | 2502 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 188 | 188 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 215 | F | 1445 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 109 | 109 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 214 | F | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 117 | 117 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 213 | F | 2452 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 184 | 184 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 212 | F | 2347 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 176 | 176 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 211 | F | 1767 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 133 | 133 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 210 | F | 3749 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 282 | 282 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 209 | F | 1985 | 1.23 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 149 | 149 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 263 | F | 2061 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 155 | 155 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 264 | F | 997 | 0.62 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 75 | 75 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 265 | F | 720 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 54 | 54 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 266 | F | 675 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 51 | 51 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 267 | F | 659 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 50 | 50 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 268 | F | 1012 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 76 | 76 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 269 | F | 1929 | 1.20 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 145 | 145 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 270 | F | 1798 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 135 | 135 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 271 | F | 1058 | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 80 | 80 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 272 | F | 676 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 51 | 51 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 273 | F | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 19 | 19 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 274 | F | 1725 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 130 | 130 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 275 | F | 1766 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 133 | 133 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 276 | F | 1776 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 133 | 133 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 277 | F | 1050 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 79 | 79 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 278 | F | 1765 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 133 | 133 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 279 | F | 1851 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 280 | F | 1510 | 0.94 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 114 | 114 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 281 | F | 2140 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 161 | 161 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 282 | F | 1138 | 0.71 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 86 | 86 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 283 | F | 1464 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 110 | 110 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 284 | F | 1480 | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 111 | 111 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 285 | F | 1797 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 135 | 135 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 286 | F | 1596 | 0.99 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 120 | 120 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 287 | F | 1247 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 94 | 94 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 288 | F | 1463 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 110 | 110 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 289 | F | 2284 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 172 | 172 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 290 | F | 4728 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 355 | 355 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 291 | F | 2967 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 223 | 223 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 292 | F | 5404 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 406 | 406 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 293 | F | 1533 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 115 | 115 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 262 | F | 1695 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 255 | 255 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 261 | F | 854 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 128 | 128 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 260 | F | 1330 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 200 | 200 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 259 | F | 2529 | 1.57 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 380 | 380 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 258 | F | 2243 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 337 | 337 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 257 | F | 1956 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 294 | 294 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 256 | F | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 217 | 217 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 255 | F | 1501 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 113 | 113 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 254 | F | 1627 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 122 | 122 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 253 | F | 3060 | 1.90 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 230 | 230 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 252 | F | 2329 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 175 | 175 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 251 | F | 2154 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 162 | 162 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 250 | F | 3452 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 259 | 259 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 249 | F | 722 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 54 | 54 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 248 | F | 1211 | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 91 | 91 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 247 | F | 2097 | 1.30 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 158 | 158 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| | | | | | | | | | | | | | | | **Totals:** | **4.2** | | **17.3** |

**World Logistics Center**
Project Full Buildout 2012
Total Vehicle Miles Traveled

**Segment Vehicle Speed (mph)**

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT |
|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 1 | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| 2 | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| 3 | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| 4 | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| 5 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| 6 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| 7 | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| 8 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 9 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Total VMT per Source**

| | Gas | Diesel | Total |
|---|---|---|---|
| Area | 11662 | 2366 | 14029 |
| Internal | 87275 | 31998 | 119273 |
| Surface | 155471 | 20192 | 175663 |
| Freeways | 371755 | 346641 | 718396 |
| Freeways to Ports | 226 | 10006 | 10232 |
| Total | **626389** | **411204** | **1037593** |

**TOTAL VMT Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 67 | 7 | 26 | 8 | 108 |
| 0 | (miles) | 6396 | 750 | 2228 | 1767 | 324 | 34 | 126 | 38 | 11662 |
| 1 | | 59187 | 6941 | 20614 | 16348 | 3519 | 371 | 2045 | 544 | 109568 |
| 2 | | 30412 | 3566 | 10592 | 8400 | 3109 | 328 | 2859 | 1937 | 61202 |
| 3 | | 22601 | 2650 | 7872 | 6242 | 872 | 92 | 552 | 13 | 40894 |
| 4 | | 144788 | 16979 | 50428 | 39991 | 9023 | 951 | 7996 | 3953 | 274109 |
| 5 | | 918 | 108 | 320 | 254 | 59 | 6 | 39 | 1 | 1703 |
| 6 | | 15717 | 1843 | 5474 | 4341 | 622 | 66 | 387 | 33 | 28482 |
| 7 | | 33799 | 3963 | 11772 | 9335 | 1658 | 175 | 1113 | 128 | 61944 |
| 8 | | 87 | 10 | 30 | 24 | 2 | 0 | 0 | 0 | 155 |
| 9 | | 18813 | 2206 | 6552 | 5196 | 1408 | 148 | 1479 | 867 | 36670 |
| Total | (miles) | **332718** | **39016** | **115883** | **91898** | **20597** | **2171** | **16595** | **7512** | **626389** |

**TOTAL VMT Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 21 | 7 | 108 | 353 | 488 |
| 0 | (miles) | 19 | 1 | 1 | 2 | 100 | 34 | 520 | 1689 | 2366 |
| 1 | | 179 | 9 | 8 | 16 | 1088 | 370 | 8466 | 24094 | 34231 |
| 2 | | 92 | 4 | 4 | 8 | 961 | 327 | 11834 | 85792 | 99023 |
| 3 | | 68 | 3 | 3 | 6 | 270 | 92 | 2286 | 555 | 3284 |
| 4 | | 439 | 21 | 21 | 40 | 2789 | 948 | 33099 | 175098 | 212454 |
| 5 | | 3 | 0 | 0 | 0 | 18 | 6 | 160 | 25 | 212 |
| 6 | | 48 | 2 | 2 | 4 | 192 | 65 | 1601 | 1461 | 3375 |
| 7 | | 102 | 5 | 5 | 9 | 513 | 174 | 4607 | 5670 | 11085 |
| 8 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 9 | | 57 | 3 | 3 | 5 | 435 | 148 | 6123 | 38396 | 45169 |
| Total | (miles) | **1008** | **48** | **48** | **92** | **6366** | **2165** | **68696** | **332781** | **411204** |
| Grand total VMT | | **333725** | **39065** | **115930** | **91990** | **26963** | **4335** | **85292** | **340293** | **1037593** |

**VMT: Area Source, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 67 | 7 | 26 | 8 | 108 |
| 0 | (miles) | 6396 | 750 | 2228 | 1767 | 324 | 34 | 126 | 38 | 11662 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **6396** | **750** | **2228** | **1767** | **324** | **34** | **126** | **38** | **11662** |

**VMT: Area Source, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 21 | 7 | 108 | 353 | 488 |
| 0 | (miles) | 19 | 1 | 1 | 2 | 100 | 34 | 520 | 1689 | 2366 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **19** | **1** | **1** | **2** | **100** | **34** | **520** | **1689** | **2366** |
| Grand total VMT | | **6415** | **751** | **2228** | **1768** | **425** | **68** | **645** | **1727** | **14029** |

**VMT: Internal, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 46829 | 5491 | 16310 | 12934 | 3076 | 324 | 1787 | 523 | 87275 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **46829** | **5491** | **16310** | **12934** | **3076** | **324** | **1787** | **523** | **87275** |

**VMT: Internal, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 142 | 7 | 7 | 13 | 951 | 323 | 7397 | 23159 | 31998 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **142** | **7** | **7** | **13** | **951** | **323** | **7397** | **23159** | **31998** |
| Grand total VMT | | **46971** | **5498** | **16317** | **12947** | **4026** | **647** | **9184** | **23682** | **119273** |

**VMT: Surface, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 12358 | 1449 | 4304 | 3413 | 443 | 47 | 258 | 21 | 22293 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 22601 | 2650 | 7872 | 6242 | 872 | 92 | 552 | 13 | 40894 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 918 | 108 | 320 | 254 | 59 | 6 | 39 | 1 | 1703 |
| 6 | | 15717 | 1843 | 5474 | 4341 | 622 | 66 | 387 | 33 | 28482 |
| 7 | | 33799 | 3963 | 11772 | 9335 | 1658 | 175 | 1113 | 128 | 61944 |
| 8 | | 87 | 10 | 30 | 24 | 2 | 0 | 0 | 0 | 155 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **85479** | **10024** | **29772** | **23610** | **3657** | **385** | **2349** | **195** | **155471** |

**VMT: Surface, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 37 | 2 | 2 | 3 | 137 | 47 | 1069 | 936 | 2233 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 68 | 3 | 3 | 6 | 270 | 92 | 2286 | 555 | 3284 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 3 | 0 | 0 | 0 | 18 | 6 | 160 | 25 | 212 |
| 6 | | 48 | 2 | 2 | 4 | 192 | 65 | 1601 | 1461 | 3375 |
| 7 | | 102 | 5 | 5 | 9 | 513 | 174 | 4607 | 5670 | 11085 |
| 8 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **259** | **12** | **12** | **24** | **1130** | **384** | **9723** | **8647** | **20192** |
| Grand total VMT | | **85738** | **10036** | **29784** | **23633** | **4787** | **770** | **12072** | **8842** | **175663** |

**VMT: Freeways, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 30412 | 3566 | 10592 | 8400 | 3109 | 328 | 2859 | 1894 | 61160 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 144788 | 16979 | 50428 | 39991 | 9023 | 951 | 7996 | 3835 | 273991 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 18813 | 2206 | 6552 | 5196 | 1408 | 148 | 1479 | 801 | 36605 |
| Subtotal | (miles) | **194013** | **22751** | **67573** | **53587** | **13540** | **1427** | **12334** | **6530** | **371755** |

**VMT: Freeways, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 92 | 4 | 4 | 8 | 961 | 327 | 11834 | 83919 | 97150 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 439 | 21 | 21 | 40 | 2789 | 948 | 33099 | 169866 | 207222 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 57 | 3 | 3 | 5 | 435 | 148 | 6123 | 35495 | 42268 |
| Subtotal | (miles) | **588** | **28** | **28** | **54** | **4185** | **1423** | **51056** | **289279** | **346641** |
| Grand total VMT | | **194601** | **22779** | **67601** | **53641** | **17725** | **2850** | **63390** | **295809** | **718396** |

**VMT: Freeways to Ports, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 42 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 118 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 65 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **226** | **226** |

**VMT: Freeways to Ports, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1873 | 1873 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5232 | 5232 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2901 | 2901 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10006** | **10006** |
| Grand total VMT | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10232** | **10232** |

# World Logistics Center

## Project Full Buildout 2012
## Emissions Estimates

**Emissions Summary: Pounds per day**

| Source | ROG | NOx | CO | SOx | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 34 | 177 | 203 | | 4 | | | | 4 | | | | 42635 | | 4 | 0.2 |
| Internal | 101 | 819 | 741 | | 24 | | | | 23 | | | | 212046 | | 8 | 1.4 |
| Surface | 68 | 456 | 787 | | 12 | | | | 11 | | | | 187031 | | 7 | 2.0 |
| Freeways | 451 | 7387 | 3732 | | 237 | | | | 226 | | | | 1550850 | | 34 | 8.3 |
| Freeways to Ports | 11 | 219 | 69 | | 7 | | | | 7 | | | | 37276 | | 1 | 0.1 |
| **Total** | **666** | **9057** | **5531** | | **284** | **171** | **853** | **1308** | **272** | **66** | **209** | **547** | **2029838** | **204** | **53** | **11.9** |

**Emissions Summary: tons per year**

| Source | ROG | NOx | CO | SOx | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 6.28 | 32.22 | 37.03 | | 0.78 | | | | 0.75 | | | | 7781 | 0.00 | 0.75 | 0.03 |
| Internal | 18.41 | 149.46 | 135.17 | | 4.38 | | | | 4.18 | | | | 38698 | 0.00 | 1.41 | 0.25 |
| Surface | 12.45 | 83.30 | 143.71 | | 2.18 | | | | 2.08 | | | | 34133 | 0.00 | 1.22 | 0.37 |
| Freeways | 82.38 | 1348.05 | 681.05 | | 43.20 | | | | 41.32 | | | | 283030 | 0.00 | 6.26 | 1.51 |
| Freeways to Ports | 1.98 | 39.88 | 12.53 | | 1.28 | | | | 1.22 | | | | 6803 | 0.00 | 0.11 | 0.02 |
| **Total** | **121.50** | **1652.90** | **1009.48** | | **51.82** | **31.28** | **155.65** | **238.74** | **49.56** | **12.08** | **38.21** | **99.84** | **370445** | **0.00** | **9.75** | **2.18** |

**World Logistics Center** 2012 **ROG**

**Project Full Buildout 2012**

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 1.4443 | 3.7379 | 1.6319 | 2.2995 | 15.8530 | 16.1151 | 21.8066 | 46.6465 |
| 0 | 0.2885 | 0.9280 | 0.3670 | 0.3930 | 0.9175 | 0.7775 | 1.4070 | 6.1448 |
| 1 | 0.1148 | 0.3770 | 0.1449 | 0.1505 | 0.5400 | 0.4564 | 0.7981 | 3.5235 |
| 2 | 0.0830 | 0.2692 | 0.1026 | 0.1089 | 0.3011 | 0.1146 | 0.4441 | 1.9677 |
| 3 | 0.0916 | 0.3004 | 0.1146 | 0.1195 | 0.3802 | 0.3206 | 0.5525 | 2.4168 |
| 4 | 0.0850 | 0.2678 | 0.1024 | 0.1124 | 0.2631 | 0.2180 | 0.4201 | 1.8513 |
| 5 | 0.1359 | 0.4451 | 0.1718 | 0.1799 | 0.5400 | 0.4564 | 0.7981 | 3.5235 |
| 6 | 0.1009 | 0.3316 | 0.1270 | 0.1317 | 0.3802 | 0.3206 | 0.5525 | 2.4168 |
| 7 | 0.0859 | 0.2803 | 0.1069 | 0.1122 | 0.3345 | 0.2814 | 0.4883 | 2.1389 |
| 8 | 0.1666 | 0.5434 | 0.2111 | 0.2230 | 0.5400 | 0.4564 | 0.7981 | 3.5235 |
| 9 | 0.0826 | 0.2641 | 0.1005 | 0.1087 | 0.2780 | 0.2319 | 0.4206 | 1.8793 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 2.4184 | 4.8949 | 1.3856 | 1.3291 | 3.1731 | 3.1731 | 3.5132 | 6.8008 |
| 0 | 0.2468 | 0.4825 | 0.1114 | 0.1162 | 0.3376 | 0.3333 | 1.9129 | 2.8580 |
| 1 | 0.0886 | 0.2137 | 0.0250 | 0.0336 | 0.1855 | 0.1773 | 0.6589 | 1.0323 |
| 2 | 0.0778 | 0.1969 | 0.0195 | 0.0288 | 0.1161 | 0.1088 | 0.3267 | 0.4869 |
| 3 | 0.0755 | 0.1872 | 0.0199 | 0.0279 | 0.1341 | 0.1267 | 0.4405 | 0.6771 |
| 4 | 0.0928 | 0.2495 | 0.0231 | 0.0355 | 0.1212 | 0.1125 | 0.3148 | 0.4395 |
| 5 | 0.1062 | 0.2437 | 0.0299 | 0.0393 | 0.1855 | 0.1773 | 0.6589 | 1.0323 |
| 6 | 0.0793 | 0.1959 | 0.0220 | 0.0302 | 0.1341 | 0.1267 | 0.4405 | 0.6771 |
| 7 | 0.0747 | 0.1885 | 0.0193 | 0.0277 | 0.1221 | 0.1148 | 0.3722 | 0.5630 |
| 8 | 0.1316 | 0.2916 | 0.0379 | 0.0488 | 0.1855 | 0.1773 | 0.6589 | 1.0323 |
| 9 | 0.0839 | 0.2164 | 0.0202 | 0.0305 | 0.1160 | 0.1082 | 0.3075 | 0.4468 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2.418 | 0.484 | 0.247 | 0.132 | 0.106 | 0.089 | 0.079 | 0.076 | 0.075 | 0.078 | 0.084 | 0.093 |
| LDT1 | DSL | 4.895 | 0.979 | 0.483 | 0.292 | 0.244 | 0.214 | 0.196 | 0.187 | 0.189 | 0.197 | 0.216 | 0.249 |
| LDT2 | DSL | 1.386 | 0.277 | 0.111 | 0.038 | 0.030 | 0.025 | 0.022 | 0.020 | 0.019 | 0.019 | 0.020 | 0.023 |
| LHDT1 | DSL | 3.173 | 0.705 | 0.338 | 0.185 | 0.154 | 0.134 | 0.122 | 0.116 | 0.116 | 0.121 | 0.131 | 0.153 |
| LHDT2 | DSL | 3.173 | 0.702 | 0.333 | 0.177 | 0.147 | 0.127 | 0.115 | 0.109 | 0.108 | 0.113 | 0.122 | 0.140 |
| MDV | DSL | 1.329 | 0.266 | 0.116 | 0.049 | 0.039 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 | 0.031 | 0.035 |
| MH | DSL | 5.680 | 1.136 | 0.450 | 0.148 | 0.121 | 0.100 | 0.085 | 0.076 | 0.071 | 0.072 | 0.078 | 0.091 |
| OBUS | DSL | 6.323 | 5.537 | 2.260 | 0.789 | 0.632 | 0.512 | 0.426 | 0.371 | 0.348 | 0.354 | 0.368 | 0.368 |
| SBUS | DSL | 3.985 | 4.949 | 2.084 | 0.708 | 0.580 | 0.482 | 0.411 | 0.368 | 0.351 | 0.362 | 0.377 | 0.377 |
| T6 | DSL | 3.513 | 4.742 | 1.913 | 0.659 | 0.536 | 0.441 | 0.372 | 0.327 | 0.307 | 0.315 | 0.325 | 0.332 |
| T7 | DSL | 6.801 | 6.995 | 2.858 | 1.032 | 0.832 | 0.677 | 0.563 | 0.487 | 0.447 | 0.440 | 0.449 | 0.450 |
| UBUS | DSL | 29.939 | 5.988 | 2.668 | 0.929 | 0.783 | 0.666 | 0.580 | 0.524 | 0.501 | 0.509 | 0.545 | 0.615 |
| LDA | GAS | 1.444 | 0.289 | 0.138 | 0.076 | 0.061 | 0.050 | 0.044 | 0.041 | 0.041 | 0.042 | 0.045 | 0.050 |
| LDT1 | GAS | 3.738 | 0.748 | 0.384 | 0.217 | 0.173 | 0.144 | 0.128 | 0.119 | 0.117 | 0.121 | 0.128 | 0.142 |
| LDT2 | GAS | 1.632 | 0.326 | 0.159 | 0.086 | 0.068 | 0.056 | 0.049 | 0.045 | 0.045 | 0.046 | 0.049 | 0.054 |
| LHDT1 | GAS | 15.853 | 0.535 | 0.264 | 0.148 | 0.119 | 0.100 | 0.090 | 0.083 | 0.082 | 0.085 | 0.092 | 0.108 |
| LHDT2 | GAS | 16.115 | 0.410 | 0.197 | 0.108 | 0.086 | 0.072 | 0.064 | 0.059 | 0.058 | 0.060 | 0.065 | 0.076 |
| MCY | GAS | 66.389 | 13.278 | 6.205 | 3.547 | 2.890 | 2.474 | 2.223 | 2.097 | 2.075 | 2.156 | 2.349 | 2.685 |
| MDV | GAS | 2.300 | 0.460 | 0.219 | 0.118 | 0.093 | 0.076 | 0.066 | 0.061 | 0.060 | 0.061 | 0.065 | 0.072 |
| MH | GAS | 9.694 | 1.939 | 1.074 | 0.632 | 0.508 | 0.425 | 0.384 | 0.361 | 0.350 | 0.353 | 0.376 | 0.452 |
| OBUS | GAS | 16.414 | 0.848 | 0.354 | 0.187 | 0.149 | 0.125 | 0.110 | 0.101 | 0.099 | 0.103 | 0.111 | 0.124 |
| SBUS | GAS | 16.526 | 3.437 | 1.632 | 0.940 | 0.766 | 0.654 | 0.585 | 0.548 | 0.538 | 0.553 | 0.595 | 0.783 |
| T6 | GAS | 21.807 | 1.816 | 0.839 | 0.457 | 0.365 | 0.309 | 0.275 | 0.255 | 0.250 | 0.265 | 0.287 | 0.335 |
| T7 | GAS | 46.646 | 9.329 | 4.285 | 2.408 | 1.929 | 1.620 | 1.441 | 1.348 | 1.321 | 1.344 | 1.455 | 1.689 |
| UBUS | GAS | 22.860 | 4.572 | 2.171 | 1.332 | 1.061 | 0.882 | 0.788 | 0.733 | 0.728 | 0.741 | 0.816 | 0.963 |
| T7 | NG | 0.314 | 3.913 | 1.800 | 0.800 | 0.624 | 0.490 | 0.389 | 0.315 | 0.263 | 0.230 | 0.219 | 0.219 |
| UBUS | NG | 30.134 | 6.027 | 2.304 | 0.739 | 0.591 | 0.478 | 0.400 | 0.355 | 0.344 | 0.367 | 0.424 | 0.516 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**EMFAC2014 Running Losses Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | GAS | | 0.4521 | 0.1507 | 0.0904 | 0.0754 | 0.0646 | 0.0565 | 0.0502 | 0.0452 | 0.0411 | 0.0377 | 0.0348 |
| LDT1 | GAS | | 1.6317 | 0.5439 | 0.3263 | 0.2719 | 0.2331 | 0.2040 | 0.1813 | 0.1632 | 0.1483 | 0.1360 | 0.1255 |
| LDT2 | GAS | | 0.6231 | 0.2077 | 0.1246 | 0.1038 | 0.0890 | 0.0779 | 0.0692 | 0.0623 | 0.0566 | 0.0519 | 0.0479 |
| LHDT1 | GAS | | 1.9597 | 0.6532 | 0.3919 | 0.3266 | 0.2800 | 0.2450 | 0.2177 | 0.1960 | 0.1782 | 0.1633 | 0.1507 |
| LHDT2 | GAS | | 1.7407 | 0.5802 | 0.3481 | 0.2901 | 0.2487 | 0.2176 | 0.1934 | 0.1741 | 0.1582 | 0.1451 | 0.1339 |
| MCY | GAS | | 0.6203 | 0.2068 | 0.1241 | 0.1034 | 0.0886 | 0.0775 | 0.0689 | 0.0620 | 0.0564 | 0.0517 | 0.0477 |
| MDV | GAS | | 0.5234 | 0.1745 | 0.1047 | 0.0872 | 0.0748 | 0.0654 | 0.0582 | 0.0523 | 0.0476 | 0.0436 | 0.0403 |
| MH | GAS | | 8.2737 | 2.7579 | 1.6547 | 1.3790 | 1.1820 | 1.0342 | 0.9193 | 0.8274 | 0.7522 | 0.6895 | 0.6364 |
| OBUS | GAS | | 0.7482 | 0.2494 | 0.1496 | 0.1247 | 0.1069 | 0.0935 | 0.0831 | 0.0748 | 0.0680 | 0.0623 | 0.0576 |
| SBUS | GAS | | 2.8078 | 0.9359 | 0.5616 | 0.4680 | 0.4011 | 0.3510 | 0.3120 | 0.2808 | 0.2553 | 0.2340 | 0.2160 |
| HHDT | GAS | | 1.7052 | 0.5684 | 0.3410 | 0.2842 | 0.2436 | 0.2132 | 0.1895 | 0.1705 | 0.1550 | 0.1421 | 0.1312 |
| MHDT | GAS | | 5.5790 | 1.8597 | 1.1158 | 0.9298 | 0.7970 | 0.6974 | 0.6199 | 0.5579 | 0.5072 | 0.4649 | 0.4292 |
| UBUS | GAS | | 2.5846 | 0.8615 | 0.5169 | 0.4308 | 0.3692 | 0.3231 | 0.2872 | 0.2585 | 0.2350 | 0.2154 | 0.1988 |

**EMFAC2014 Total Emission Factors (grams/mile)**

| | | idle | 5mph | 15mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2.418 | 0.484 | 0.247 | 0.132 | 0.106 | 0.089 | 0.079 | 0.076 | 0.075 | 0.078 | 0.084 | 0.093 |
| LDT1 | DSL | 4.895 | 0.979 | 0.483 | 0.292 | 0.244 | 0.214 | 0.196 | 0.187 | 0.189 | 0.197 | 0.216 | 0.249 |
| LDT2 | DSL | 1.386 | 0.277 | 0.111 | 0.038 | 0.030 | 0.025 | 0.022 | 0.020 | 0.019 | 0.019 | 0.020 | 0.023 |
| LHDT1 | DSL | 3.173 | 0.705 | 0.338 | 0.185 | 0.154 | 0.134 | 0.122 | 0.116 | 0.116 | 0.121 | 0.131 | 0.153 |
| LHDT2 | DSL | 3.173 | 0.702 | 0.333 | 0.177 | 0.147 | 0.127 | 0.115 | 0.109 | 0.108 | 0.113 | 0.122 | 0.140 |
| MDV | DSL | 1.329 | 0.266 | 0.116 | 0.049 | 0.039 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 | 0.031 | 0.035 |
| MH | DSL | 5.680 | 1.136 | 0.450 | 0.148 | 0.121 | 0.100 | 0.085 | 0.076 | 0.071 | 0.072 | 0.078 | 0.091 |
| OBUS | DSL | 6.323 | 5.537 | 2.260 | 0.789 | 0.632 | 0.512 | 0.426 | 0.371 | 0.348 | 0.354 | 0.368 | 0.368 |
| SBUS | DSL | 3.985 | 4.949 | 2.084 | 0.708 | 0.580 | 0.482 | 0.411 | 0.368 | 0.351 | 0.362 | 0.377 | 0.377 |
| T6 | DSL | 3.513 | 4.742 | 1.913 | 0.659 | 0.536 | 0.441 | 0.372 | 0.327 | 0.307 | 0.315 | 0.325 | 0.332 |
| T7 | DSL | 6.801 | 6.995 | 2.858 | 1.032 | 0.832 | 0.677 | 0.563 | 0.487 | 0.447 | 0.440 | 0.449 | 0.450 |
| UBUS | DSL | 29.939 | 5.988 | 2.668 | 0.929 | 0.783 | 0.666 | 0.580 | 0.524 | 0.501 | 0.509 | 0.545 | 0.615 |
| LDA | GAS | 1.444 | 0.741 | 0.289 | 0.167 | 0.136 | 0.115 | 0.101 | 0.092 | 0.086 | 0.083 | 0.083 | 0.085 |
| LDT1 | GAS | 3.738 | 2.379 | 0.928 | 0.543 | 0.445 | 0.377 | 0.332 | 0.300 | 0.280 | 0.269 | 0.264 | 0.268 |
| LDT2 | GAS | 1.632 | 0.949 | 0.367 | 0.211 | 0.172 | 0.145 | 0.127 | 0.115 | 0.107 | 0.103 | 0.101 | 0.102 |
| LHDT1 | GAS | 15.853 | 2.495 | 0.918 | 0.540 | 0.446 | 0.380 | 0.335 | 0.301 | 0.278 | 0.263 | 0.255 | 0.259 |
| LHDT2 | GAS | 16.115 | 2.150 | 0.777 | 0.456 | 0.376 | 0.321 | 0.281 | 0.252 | 0.232 | 0.218 | 0.210 | 0.210 |
| MCY | GAS | 66.389 | 13.898 | 6.411 | 3.671 | 2.993 | 2.562 | 2.300 | 2.166 | 2.137 | 2.212 | 2.400 | 2.733 |
| MDV | GAS | 2.300 | 0.983 | 0.393 | 0.223 | 0.180 | 0.150 | 0.132 | 0.119 | 0.112 | 0.109 | 0.109 | 0.112 |
| MH | GAS | 9.694 | 10.212 | 3.832 | 2.287 | 1.887 | 1.607 | 1.418 | 1.280 | 1.178 | 1.105 | 1.065 | 1.088 |
| OBUS | GAS | 16.414 | 1.596 | 0.604 | 0.337 | 0.274 | 0.232 | 0.203 | 0.185 | 0.174 | 0.171 | 0.174 | 0.182 |
| SBUS | GAS | 16.526 | 6.245 | 2.568 | 1.502 | 1.234 | 1.055 | 0.936 | 0.860 | 0.818 | 0.808 | 0.829 | 0.999 |
| T6 | GAS | 21.807 | 3.521 | 1.407 | 0.798 | 0.650 | 0.553 | 0.488 | 0.444 | 0.421 | 0.420 | 0.429 | 0.466 |
| T7 | GAS | 46.646 | 14.908 | 6.145 | 3.524 | 2.858 | 2.417 | 2.139 | 1.968 | 1.879 | 1.851 | 1.920 | 2.118 |
| UBUS | GAS | 22.860 | 7.157 | 3.033 | 1.849 | 1.492 | 1.251 | 1.111 | 1.020 | 0.987 | 0.976 | 1.031 | 1.162 |
| T7 | NG | 0.314 | 3.913 | 1.800 | 0.800 | 0.624 | 0.490 | 0.389 | 0.315 | 0.263 | 0.230 | 0.219 | 0.219 |
| UBUS | NG | 30.134 | 6.027 | 2.304 | 0.739 | 0.591 | 0.478 | 0.400 | 0.355 | 0.344 | 0.367 | 0.424 | 0.516 |

# World Logistics Center ROG

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 6 | 11 |
| 0 | 4 | 2 | 2 | 2 | 1 | 0 | 3 | 11 | 23 |
| 1 | 15 | 6 | 7 | 5 | 5 | 1 | 16 | 59 | 113 |
| 2 | 6 | 2 | 2 | 2 | 2 | 0 | 11 | 100 | 126 |
| 3 | 5 | 2 | 2 | 2 | 1 | 0 | 3 | 1 | 15 |
| 4 | 27 | 10 | 11 | 10 | 6 | 1 | 30 | 185 | 281 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 3 | 1 | 2 | 1 | 1 | 0 | 2 | 2 | 13 |
| 7 | 6 | 2 | 3 | 2 | 1 | 0 | 5 | 8 | 28 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 3 | 1 | 1 | 1 | 1 | 0 | 6 | 41 | 55 |
| **Total** | **70** | **26** | **30** | **25** | **20** | **2** | **78** | **414** | **666** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 6 | 11 |
| 0 | 4 | 2 | 2 | 2 | 1 | 0 | 3 | 11 | 23 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4** | **2** | **2** | **2** | **3** | **0** | **5** | **17** | **34** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 12 | 5 | 5 | 4 | 4 | 0 | 14 | 57 | 101 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **12** | **5** | **5** | **4** | **4** | **0** | **14** | **57** | **101** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 12 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 5 | 2 | 2 | 2 | 1 | 0 | 3 | 1 | 15 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 3 | 1 | 2 | 1 | 1 | 0 | 2 | 2 | 13 |
| 7 | 6 | 2 | 3 | 2 | 1 | 0 | 5 | 8 | 28 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **18** | **7** | **8** | **6** | **3** | **0** | **12** | **13** | **68** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 6 | 2 | 2 | 2 | 2 | 0 | 11 | 98 | 124 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 27 | 10 | 11 | 10 | 6 | 1 | 30 | 180 | 275 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 3 | 1 | 1 | 1 | 1 | 0 | 6 | 38 | 52 |
| **Total** | **36** | **13** | **15** | **13** | **9** | **1** | **47** | **316** | **451** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **11** | **11** |

**World Logistics Center** **NOx**

**Project Full Buildout 2012**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 1.2237 | 3.5160 | 2.3219 | 3.1765 | 1.3599 | 1.3835 | 1.8742 | 42.6671 |
| 0 | 0.1943 | 0.5487 | 0.3668 | 0.4936 | 0.6400 | 0.5911 | 2.0789 | 6.9120 |
| 1 | 0.1408 | 0.3844 | 0.2486 | 0.3386 | 0.5537 | 0.5020 | 1.7355 | 6.0139 |
| 2 | 0.1376 | 0.3947 | 0.2418 | 0.3306 | 0.4894 | 0.2342 | 1.4688 | 5.3555 |
| 3 | 0.1344 | 0.3719 | 0.2342 | 0.3206 | 0.5067 | 0.4480 | 1.5522 | 5.5211 |
| 4 | 0.1473 | 0.4402 | 0.2619 | 0.3598 | 0.4986 | 0.4287 | 1.4967 | 5.3991 |
| 5 | 0.1494 | 0.4088 | 0.2675 | 0.3634 | 0.5537 | 0.5020 | 1.7355 | 6.0139 |
| 6 | 0.1362 | 0.3740 | 0.2388 | 0.3258 | 0.5067 | 0.4480 | 1.5522 | 5.5211 |
| 7 | 0.1350 | 0.3793 | 0.2355 | 0.3227 | 0.4961 | 0.4351 | 1.5038 | 5.4034 |
| 8 | 0.1607 | 0.4427 | 0.2925 | 0.3964 | 0.5537 | 0.5020 | 1.7355 | 6.0139 |
| 9 | 0.1416 | 0.4121 | 0.2488 | 0.3420 | 0.4903 | 0.4250 | 1.4621 | 5.3616 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 2.3979 | 4.9779 | 1.0451 | 1.1373 | 75.0510 | 75.0510 | 111.2046 | 73.7556 |
| 0 | 0.5100 | 1.0828 | 0.1704 | 0.1920 | 4.1803 | 3.8833 | 11.5366 | 17.1703 |
| 1 | 0.5414 | 1.2845 | 0.1384 | 0.1746 | 4.5530 | 4.2122 | 8.1763 | 12.1226 |
| 2 | 0.6277 | 1.5149 | 0.1555 | 0.2022 | 5.4410 | 4.9704 | 6.8778 | 9.9929 |
| 3 | 0.5798 | 1.3968 | 0.1426 | 0.1833 | 4.9951 | 4.5814 | 7.3344 | 10.7463 |
| 4 | 0.6606 | 1.6259 | 0.1652 | 0.2213 | 5.9271 | 5.3916 | 6.8506 | 9.7355 |
| 5 | 0.5329 | 1.2364 | 0.1395 | 0.1701 | 4.5530 | 4.2122 | 8.1763 | 12.1226 |
| 6 | 0.5586 | 1.3397 | 0.1407 | 0.1803 | 4.9951 | 4.5814 | 7.3344 | 10.7463 |
| 7 | 0.6024 | 1.4623 | 0.1490 | 0.1922 | 5.2221 | 4.7745 | 7.0799 | 10.2983 |
| 8 | 0.5227 | 1.1876 | 0.1428 | 0.1696 | 4.5530 | 4.2122 | 8.1763 | 12.1226 |
| 9 | 0.6452 | 1.5753 | 0.1576 | 0.2059 | 5.6815 | 5.1813 | 6.7961 | 9.8108 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2.398 | 0.480 | 0.510 | 0.523 | 0.533 | 0.541 | 0.559 | 0.580 | 0.602 | 0.628 | 0.645 |
| LDT1 | DSL | 4.978 | 0.996 | 1.083 | 1.188 | 1.236 | 1.285 | 1.340 | 1.397 | 1.462 | 1.515 | 1.575 |
| LDT2 | DSL | 1.045 | 0.209 | 0.170 | 0.143 | 0.139 | 0.138 | 0.141 | 0.143 | 0.149 | 0.155 | 0.158 |
| LHDT1 | DSL | 75.051 | 3.883 | 4.180 | 4.553 | 4.772 | 4.995 | 5.222 | 5.441 | 5.682 | 5.927 | 6.110 |
| LHDT2 | DSL | 75.051 | 3.581 | 3.883 | 4.212 | 4.397 | 4.581 | 4.775 | 4.970 | 5.181 | 5.392 | 5.578 |
| MDV | DSL | 1.137 | 0.227 | 0.192 | 0.170 | 0.170 | 0.175 | 0.180 | 0.183 | 0.192 | 0.202 | 0.206 |
| MH | DSL | 85.011 | 17.002 | 9.939 | 6.848 | 6.435 | 6.124 | 5.899 | 5.740 | 5.682 | 5.703 | 5.792 |
| OBUS | DSL | 93.585 | 22.965 | 13.577 | 9.719 | 9.224 | 8.851 | 8.581 | 8.403 | 8.313 | 8.306 | 8.327 |
| SBUS | DSL | 109.038 | 24.356 | 14.154 | 10.323 | 9.928 | 9.634 | 9.434 | 9.328 | 9.314 | 9.392 | 9.460 |
| T6 | DSL | 111.205 | 19.181 | 11.537 | 8.176 | 7.701 | 7.334 | 7.080 | 6.878 | 6.796 | 6.851 | 6.865 |
| T7 | DSL | 73.756 | 28.460 | 17.170 | 12.123 | 11.342 | 10.746 | 10.298 | 9.993 | 9.811 | 9.736 | 9.755 |
| UBUS | DSL | 311.876 | 62.375 | 40.268 | 30.493 | 28.732 | 27.364 | 26.441 | 25.852 | 25.699 | 25.919 | 26.461 |
| LDA | GAS | 1.224 | 0.245 | 0.194 | 0.161 | 0.149 | 0.141 | 0.136 | 0.134 | 0.135 | 0.138 | 0.142 |
| LDT1 | GAS | 3.516 | 0.703 | 0.549 | 0.443 | 0.409 | 0.384 | 0.374 | 0.372 | 0.379 | 0.395 | 0.412 |
| LDT2 | GAS | 2.322 | 0.464 | 0.367 | 0.293 | 0.267 | 0.249 | 0.239 | 0.234 | 0.236 | 0.242 | 0.249 |
| LHDT1 | GAS | 1.360 | 0.764 | 0.640 | 0.554 | 0.526 | 0.507 | 0.496 | 0.489 | 0.490 | 0.499 | 0.509 |
| LHDT2 | GAS | 1.383 | 0.715 | 0.591 | 0.502 | 0.471 | 0.448 | 0.435 | 0.426 | 0.425 | 0.429 | 0.438 |
| MCY | GAS | 6.281 | 1.256 | 1.123 | 1.066 | 1.056 | 1.057 | 1.066 | 1.082 | 1.105 | 1.135 | 1.171 |
| MDV | GAS | 3.177 | 0.635 | 0.494 | 0.396 | 0.363 | 0.339 | 0.326 | 0.321 | 0.323 | 0.331 | 0.342 |
| MH | GAS | 7.414 | 1.483 | 1.347 | 1.250 | 1.215 | 1.190 | 1.190 | 1.193 | 1.199 | 1.213 | 1.233 |
| OBUS | GAS | 1.401 | 1.570 | 1.192 | 0.981 | 0.917 | 0.872 | 0.839 | 0.818 | 0.814 | 0.830 | 0.851 |
| SBUS | GAS | 1.394 | 2.318 | 1.803 | 1.515 | 1.427 | 1.367 | 1.330 | 1.313 | 1.317 | 1.340 | 1.383 |
| T6 | GAS | 1.874 | 2.602 | 2.079 | 1.735 | 1.627 | 1.552 | 1.504 | 1.469 | 1.462 | 1.497 | 1.529 |
| T7 | GAS | 42.667 | 8.533 | 6.912 | 6.014 | 5.727 | 5.521 | 5.403 | 5.356 | 5.362 | 5.399 | 5.524 |
| UBUS | GAS | 19.322 | 3.864 | 3.177 | 2.810 | 2.692 | 2.605 | 2.560 | 2.539 | 2.557 | 2.588 | 2.662 |
| T7 | NG | 57.886 | 19.601 | 12.622 | 9.044 | 8.419 | 7.923 | 7.534 | 7.239 | 7.032 | 6.907 | 6.874 |
| UBUS | NG | 150.254 | 30.051 | 16.472 | 11.944 | 11.702 | 11.539 | 11.455 | 11.448 | 11.518 | 11.664 | 11.888 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

| 65 mph |
|---|
| 0.661 |
| 1.626 |
| 0.165 |
| 6.435 |
| 5.812 |
| 0.221 |
| 5.978 |
| 8.327 |
| 9.460 |
| 6.970 |
| 9.729 |
| 27.560 |
| 0.147 |
| 0.440 |
| 0.262 |
| 0.538 |
| 0.464 |
| 1.214 |
| 0.360 |
| 1.313 |
| 0.875 |
| 1.516 |
| 1.603 |
| 5.757 |
| 2.784 |
| 6.874 |
| 12.188 |

# World Logistics Center NOx

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 4 | 1 | 26 | 58 | 89 |
| 0 | 3 | 1 | 2 | 2 | 1 | 0 | 14 | 64 | 87 |
| 1 | 19 | 6 | 11 | 12 | 15 | 4 | 160 | 650 | 877 |
| 2 | 9 | 3 | 6 | 6 | 15 | 4 | 188 | 1909 | 2140 |
| 3 | 7 | 2 | 4 | 4 | 4 | 1 | 39 | 13 | 74 |
| 4 | 48 | 17 | 29 | 32 | 46 | 12 | 525 | 3797 | 4506 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 5 |
| 6 | 5 | 2 | 3 | 3 | 3 | 1 | 27 | 35 | 78 |
| 7 | 10 | 3 | 6 | 7 | 8 | 2 | 75 | 130 | 241 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 6 | 2 | 4 | 4 | 7 | 2 | 96 | 839 | 959 |
| **Total** | **106** | **36** | **65** | **70** | **103** | **27** | **1154** | **7496** | **9057** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 4 | 1 | 26 | 58 | 89 |
| 0 | 3 | 1 | 2 | 2 | 1 | 0 | 14 | 64 | 87 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **1** | **2** | **2** | **5** | **2** | **40** | **122** | **177** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 15 | 5 | 9 | 10 | 13 | 3 | 140 | 625 | 819 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **15** | **5** | **9** | **10** | **13** | **3** | **140** | **625** | **819** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 4 | 1 | 2 | 3 | 2 | 0 | 20 | 25 | 58 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 7 | 2 | 4 | 4 | 4 | 1 | 39 | 13 | 74 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 5 |
| 6 | 5 | 2 | 3 | 3 | 3 | 1 | 27 | 35 | 78 |
| 7 | 10 | 3 | 6 | 7 | 8 | 2 | 75 | 130 | 241 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **26** | **8** | **16** | **17** | **17** | **4** | **165** | **204** | **456** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 9 | 3 | 6 | 6 | 15 | 4 | 188 | 1867 | 2098 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 48 | 17 | 29 | 32 | 46 | 12 | 525 | 3684 | 4392 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 6 | 2 | 4 | 4 | 7 | 2 | 96 | 776 | 896 |
| **Total** | **63** | **22** | **38** | **42** | **68** | **18** | **810** | **6327** | **7387** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 42 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 | 113 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 63 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **219** | **219** |

## World Logistics Center

## N2O

**Project Full Buildout 2012**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 0 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 1 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 2 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 3 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 4 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 5 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 6 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 7 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 8 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 9 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 0 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 1 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 2 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 3 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 4 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 5 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 6 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 7 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 8 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 9 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |

Source: United States Environmental Protection Agency. April 4, 2014. Emission Factors for Greenhouse Gas Inventories. www.epa.gov/climateleadership/documents/emission-factors.pdf. N2O for Gasoline Vehicles is from Table 3; diesel vehicles from Table 4.

# World Logistics Center N2O

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.002 | 0.004 | 0.008 |
| 0 | 0.051 | 0.011 | 0.032 | 0.026 | 0.011 | 0.001 | 0.009 | 0.019 | 0.160 |
| 1 | 0.469 | 0.101 | 0.299 | 0.238 | 0.115 | 0.015 | 0.150 | 0.270 | 1.657 |
| 2 | 0.241 | 0.052 | 0.154 | 0.122 | 0.102 | 0.013 | 0.209 | 0.963 | 1.856 |
| 3 | 0.179 | 0.038 | 0.114 | 0.091 | 0.029 | 0.004 | 0.040 | 0.006 | 0.502 |
| 4 | 1.148 | 0.247 | 0.732 | 0.581 | 0.295 | 0.038 | 0.585 | 1.966 | 5.592 |
| 5 | 0.007 | 0.002 | 0.005 | 0.004 | 0.002 | 0.000 | 0.003 | 0.000 | 0.022 |
| 6 | 0.125 | 0.027 | 0.079 | 0.063 | 0.020 | 0.003 | 0.028 | 0.016 | 0.362 |
| 7 | 0.268 | 0.058 | 0.171 | 0.136 | 0.054 | 0.007 | 0.081 | 0.064 | 0.838 |
| 8 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| 9 | 0.149 | 0.032 | 0.095 | 0.076 | 0.046 | 0.006 | 0.108 | 0.431 | 0.943 |
| **Total** | **2.637** | **0.567** | **1.683** | **1.335** | **0.677** | **0.087** | **1.217** | **3.740** | **11.942** |

**Area Source Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.002 | 0.004 | 0.008 |
| 0 | 0.051 | 0.011 | 0.032 | 0.026 | 0.011 | 0.001 | 0.009 | 0.019 | 0.160 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.051** | **0.011** | **0.032** | **0.026** | **0.013** | **0.002** | **0.011** | **0.023** | **0.168** |

**Internal Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.371 | 0.080 | 0.237 | 0.188 | 0.101 | 0.013 | 0.131 | 0.260 | 1.380 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.371** | **0.080** | **0.237** | **0.188** | **0.101** | **0.013** | **0.131** | **0.260** | **1.380** |

**Surface Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.098 | 0.021 | 0.063 | 0.050 | 0.015 | 0.002 | 0.019 | 0.011 | 0.277 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.179 | 0.038 | 0.114 | 0.091 | 0.029 | 0.004 | 0.040 | 0.006 | 0.502 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.007 | 0.002 | 0.005 | 0.004 | 0.002 | 0.000 | 0.003 | 0.000 | 0.022 |
| 6 | 0.125 | 0.027 | 0.079 | 0.063 | 0.020 | 0.003 | 0.028 | 0.016 | 0.362 |
| 7 | 0.268 | 0.058 | 0.171 | 0.136 | 0.054 | 0.007 | 0.081 | 0.064 | 0.838 |
| 8 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.678** | **0.146** | **0.432** | **0.343** | **0.120** | **0.015** | **0.172** | **0.097** | **2.003** |

**Freeway Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.241 | 0.052 | 0.154 | 0.122 | 0.102 | 0.013 | 0.209 | 0.942 | 1.835 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 1.148 | 0.247 | 0.732 | 0.581 | 0.295 | 0.038 | 0.585 | 1.907 | 5.533 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.149 | 0.032 | 0.095 | 0.076 | 0.046 | 0.006 | 0.108 | 0.398 | 0.911 |
| **Total** | **1.538** | **0.330** | **0.981** | **0.779** | **0.443** | **0.057** | **0.903** | **3.247** | **8.279** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.021 | 0.021 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.059 | 0.059 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.033 | 0.033 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.112** | **0.112** |

**World Logistics Center** **CO**

**Project Full Buildout 2012**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 17.3092 | 50.1435 | 21.3204 | 27.9734 | 132.9483 | 134.4640 | 328.7340 | 772.9642 |
| 0 | 2.6021 | 7.2618 | 3.3708 | 4.2858 | 4.4063 | 3.2571 | 14.0447 | 100.6371 |
| 1 | 1.6632 | 4.2858 | 2.1399 | 2.6995 | 3.1421 | 2.3947 | 10.5666 | 74.4589 |
| 2 | 1.3747 | 3.7427 | 1.7329 | 2.2168 | 2.3194 | 1.8598 | 7.9127 | 55.2254 |
| 3 | 1.4593 | 3.7935 | 1.8598 | 2.3611 | 2.5319 | 1.9325 | 8.7938 | 60.3768 |
| 4 | 1.4059 | 4.0715 | 1.7063 | 2.2250 | 2.4599 | 1.7724 | 8.1336 | 56.0021 |
| 5 | 1.8294 | 4.7639 | 2.3644 | 2.9838 | 3.1421 | 2.3947 | 10.5666 | 74.4589 |
| 6 | 1.5451 | 3.9865 | 1.9820 | 2.5038 | 2.5319 | 1.9325 | 8.7938 | 60.3768 |
| 7 | 1.4032 | 3.7152 | 1.7792 | 2.2686 | 2.3942 | 1.8165 | 8.2952 | 56.9596 |
| 8 | 2.0334 | 5.3865 | 2.6364 | 3.3316 | 3.1421 | 2.3947 | 10.5666 | 74.4589 |
| 9 | 1.3711 | 3.8280 | 1.6927 | 2.1964 | 2.3382 | 1.7238 | 7.8020 | 55.0351 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 16.8592 | 20.9614 | 8.8119 | 15.0193 | 26.3000 | 26.3000 | 28.2879 | 20.1744 |
| 0 | 1.5389 | 2.1693 | 0.7002 | 1.1792 | 1.4443 | 1.3906 | 3.4101 | 6.1729 |
| 1 | 0.5314 | 1.1095 | 0.1585 | 0.2607 | 0.8719 | 0.8192 | 1.9453 | 3.5234 |
| 2 | 0.5721 | 1.3313 | 0.1441 | 0.2330 | 0.6823 | 0.6299 | 1.1303 | 2.0105 |
| 3 | 0.4945 | 1.0947 | 0.1345 | 0.2199 | 0.6957 | 0.6467 | 1.4307 | 2.5650 |
| 4 | 0.8039 | 1.9930 | 0.1946 | 0.3178 | 0.8275 | 0.7582 | 1.0400 | 1.8109 |
| 5 | 0.6076 | 1.2080 | 0.1861 | 0.3040 | 0.8719 | 0.8192 | 1.9453 | 3.5234 |
| 6 | 0.4971 | 1.0747 | 0.1431 | 0.2351 | 0.6957 | 0.6467 | 1.4307 | 2.5650 |
| 7 | 0.5167 | 1.1804 | 0.1357 | 0.2202 | 0.6719 | 0.6218 | 1.2593 | 2.2417 |
| 8 | 0.7279 | 1.3864 | 0.2316 | 0.3777 | 0.8719 | 0.8192 | 1.9453 | 3.5234 |
| 9 | 0.6639 | 1.5881 | 0.1598 | 0.2579 | 0.7320 | 0.6734 | 1.0576 | 1.8691 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 16.8592 | 3.3718 | 1.5389 | 0.7279 | 0.6076 | 0.5314 | 0.4971 | 0.4945 | 0.5167 | 0.5721 | 0.6639 | 0.8039 |
| LDT1 | DSL | 20.9614 | 4.1923 | 2.1693 | 1.3864 | 1.2080 | 1.1095 | 1.0747 | 1.0947 | 1.1804 | 1.3313 | 1.5881 | 1.9930 |
| LDT2 | DSL | 8.8119 | 1.7624 | 0.7002 | 0.2316 | 0.1861 | 0.1585 | 0.1431 | 0.1345 | 0.1357 | 0.1441 | 0.1598 | 0.1946 |
| LHDT1 | DSL | 26.3000 | 2.8717 | 1.4443 | 0.8719 | 0.7588 | 0.6957 | 0.6719 | 0.6823 | 0.7320 | 0.8275 | 0.9773 | 1.2406 |
| LHDT2 | DSL | 26.3000 | 2.7841 | 1.3906 | 0.8192 | 0.7092 | 0.6467 | 0.6218 | 0.6299 | 0.6734 | 0.7582 | 0.8979 | 1.1259 |
| MDV | DSL | 15.0193 | 3.0039 | 1.1792 | 0.3777 | 0.3040 | 0.2607 | 0.2351 | 0.2199 | 0.2202 | 0.2330 | 0.2579 | 0.3178 |
| MH | DSL | 11.5016 | 2.3003 | 1.2931 | 0.7117 | 0.6071 | 0.5231 | 0.4602 | 0.4140 | 0.3863 | 0.3763 | 0.3830 | 0.4099 |
| OBUS | DSL | 29.2465 | 7.3381 | 4.4001 | 2.5344 | 2.1265 | 1.7978 | 1.5423 | 1.3554 | 1.2343 | 1.1769 | 1.1699 | 1.1699 |
| SBUS | DSL | 28.1660 | 5.4319 | 3.6288 | 2.2748 | 1.9150 | 1.6139 | 1.3701 | 1.1828 | 1.0514 | 0.9757 | 0.9577 | 0.9577 |
| T6 | DSL | 28.2879 | 5.8277 | 3.4101 | 1.9453 | 1.6592 | 1.4307 | 1.2593 | 1.1303 | 1.0576 | 1.0400 | 1.0425 | 1.0580 |
| T7 | DSL | 20.1744 | 10.6843 | 6.1729 | 3.5234 | 2.9885 | 2.5650 | 2.2417 | 2.0105 | 1.8691 | 1.8109 | 1.8081 | 1.8135 |
| UBUS | DSL | 96.8566 | 19.3713 | 14.7816 | 10.5748 | 8.9524 | 7.5605 | 6.4419 | 5.5097 | 4.8533 | 4.4087 | 4.1487 | 4.2052 |
| LDA | GAS | 17.3092 | 3.4618 | 2.6021 | 2.0334 | 1.8294 | 1.6632 | 1.5451 | 1.4593 | 1.4032 | 1.3747 | 1.3711 | 1.4059 |
| LDT1 | GAS | 50.1435 | 10.0287 | 7.2618 | 5.3865 | 4.7639 | 4.2858 | 3.9865 | 3.7935 | 3.7152 | 3.7427 | 3.8280 | 4.0715 |
| LDT2 | GAS | 21.3204 | 4.2641 | 3.3708 | 2.6364 | 2.3644 | 2.1399 | 1.9820 | 1.8598 | 1.7792 | 1.7329 | 1.6927 | 1.7063 |
| LHDT1 | GAS | 132.9483 | 6.6477 | 4.4063 | 3.1421 | 2.7796 | 2.5319 | 2.3942 | 2.3194 | 2.3382 | 2.4599 | 2.6947 | 3.2289 |
| LHDT2 | GAS | 134.4640 | 4.6603 | 3.2571 | 2.3947 | 2.1270 | 1.9325 | 1.8165 | 1.7382 | 1.7238 | 1.7724 | 1.8939 | 2.2190 |
| MCY | GAS | 334.0416 | 66.8083 | 38.2682 | 26.4268 | 23.3959 | 21.5529 | 20.6487 | 20.6030 | 21.4602 | 23.4310 | 26.8801 | 32.5564 |
| MDV | GAS | 27.9734 | 5.5947 | 4.2858 | 3.3316 | 2.9838 | 2.6995 | 2.5038 | 2.3611 | 2.2686 | 2.2168 | 2.1964 | 2.2250 |
| MH | GAS | 185.5518 | 37.1104 | 23.5123 | 15.7002 | 13.4330 | 11.9820 | 11.4667 | 11.4222 | 11.7473 | 12.5781 | 14.2463 | 18.3746 |
| OBUS | GAS | 135.7767 | 7.5104 | 5.5445 | 4.4887 | 4.1337 | 3.8486 | 3.5911 | 3.3866 | 3.2439 | 3.1764 | 3.1482 | 3.1151 |
| SBUS | GAS | 133.8322 | 46.0293 | 28.6715 | 20.8384 | 18.6227 | 17.1269 | 16.2092 | 15.8121 | 15.9498 | 16.7153 | 18.3084 | 25.1599 |
| T6 | GAS | 328.7340 | 20.0288 | 14.0447 | 10.5666 | 9.5228 | 8.7938 | 8.2952 | 7.9127 | 7.8020 | 8.1336 | 8.5759 | 9.7381 |
| T7 | GAS | 772.9642 | 154.5928 | 100.6371 | 74.4589 | 66.2370 | 60.3768 | 56.9596 | 55.2254 | 55.0351 | 56.0021 | 60.1774 | 70.0792 |
| UBUS | GAS | 182.8062 | 36.5612 | 23.1374 | 17.6652 | 15.5853 | 14.0989 | 13.2769 | 12.8344 | 12.8755 | 13.0885 | 14.3714 | 16.6083 |
| T7 | NG | 14.2695 | 30.9663 | 17.6004 | 9.3293 | 6.9104 | 5.1280 | 3.8157 | 2.8509 | 2.1432 | 1.6259 | 1.4228 | 1.4228 |
| UBUS | NG | 265.1911 | 53.0382 | 28.6941 | 14.8395 | 12.5838 | 10.7795 | 9.3935 | 8.4099 | 7.8199 | 7.6187 | 7.8166 | 8.4079 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 21 | 3 | 25 | 29 | 78 |
| 0 | 37 | 12 | 17 | 17 | 3 | 0 | 8 | 31 | 125 |
| 1 | 217 | 65 | 97 | 97 | 26 | 3 | 84 | 276 | 865 |
| 2 | 92 | 29 | 40 | 41 | 17 | 2 | 79 | 615 | 916 |
| 3 | 73 | 22 | 32 | 32 | 5 | 1 | 18 | 5 | 188 |
| 4 | 449 | 152 | 189 | 196 | 54 | 5 | 219 | 1185 | 2448 |
| 5 | 4 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 11 |
| 6 | 53 | 16 | 24 | 24 | 4 | 0 | 13 | 13 | 147 |
| 7 | 104 | 32 | 46 | 47 | 9 | 1 | 33 | 44 | 317 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 57 | 19 | 24 | 25 | 8 | 1 | 40 | 263 | 436 |
| **Total** | **1086** | **350** | **472** | **480** | **149** | **15** | **520** | **2460** | **5531** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 21 | 3 | 25 | 29 | 78 |
| 0 | 37 | 12 | 17 | 17 | 3 | 0 | 8 | 31 | 125 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **37** | **12** | **17** | **17** | **24** | **3** | **33** | **61** | **203** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 172 | 52 | 77 | 77 | 23 | 2 | 73 | 265 | 741 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **172** | **52** | **77** | **77** | **23** | **2** | **73** | **265** | **741** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 45 | 14 | 20 | 20 | 3 | 0 | 11 | 11 | 124 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 73 | 22 | 32 | 32 | 5 | 1 | 18 | 5 | 188 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 4 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 11 |
| 6 | 53 | 16 | 24 | 24 | 4 | 0 | 13 | 13 | 147 |
| 7 | 104 | 32 | 46 | 47 | 9 | 1 | 33 | 44 | 317 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **280** | **86** | **124** | **125** | **22** | **2** | **76** | **72** | **787** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 92 | 29 | 40 | 41 | 17 | 2 | 79 | 601 | 902 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 449 | 152 | 189 | 196 | 54 | 5 | 219 | 1149 | 2413 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 57 | 19 | 24 | 25 | 8 | 1 | 40 | 243 | 416 |
| **Total** | **598** | **200** | **254** | **262** | **79** | **8** | **338** | **1993** | **3732** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 35 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **69** | **69** |

**World Logistics Center**

**Project Full Buildout 2012**

# PM10

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0723 | 0.1616 | 0.0689 | 0.0673 | 0.0586 | 0.0490 | 0.0632 | 0.0833 |
| 0 | 0.0065 | 0.0156 | 0.0064 | 0.0062 | 0.0053 | 0.0043 | 0.0058 | 0.0082 |
| 1 | 0.0022 | 0.0055 | 0.0021 | 0.0021 | 0.0028 | 0.0023 | 0.0031 | 0.0048 |
| 2 | 0.0018 | 0.0044 | 0.0017 | 0.0016 | 0.0015 | 0.0017 | 0.0017 | 0.0028 |
| 3 | 0.0018 | 0.0044 | 0.0017 | 0.0017 | 0.0018 | 0.0015 | 0.0021 | 0.0033 |
| 4 | 0.0021 | 0.0051 | 0.0020 | 0.0019 | 0.0015 | 0.0012 | 0.0018 | 0.0027 |
| 5 | 0.0027 | 0.0067 | 0.0026 | 0.0026 | 0.0028 | 0.0023 | 0.0031 | 0.0048 |
| 6 | 0.0019 | 0.0048 | 0.0018 | 0.0018 | 0.0018 | 0.0015 | 0.0021 | 0.0033 |
| 7 | 0.0017 | 0.0043 | 0.0016 | 0.0016 | 0.0016 | 0.0013 | 0.0019 | 0.0029 |
| 8 | 0.0035 | 0.0085 | 0.0034 | 0.0033 | 0.0028 | 0.0023 | 0.0031 | 0.0048 |
| 9 | 0.0019 | 0.0046 | 0.0018 | 0.0017 | 0.0015 | 0.0012 | 0.0017 | 0.0027 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 1.4363 | 3.6295 | 0.2507 | 0.4592 | 0.8486 | 0.8532 | 1.1837 | 1.0693 |
| 0 | 0.1610 | 0.3578 | 0.0289 | 0.0513 | 0.0722 | 0.0720 | 0.5659 | 0.6050 |
| 1 | 0.0646 | 0.1620 | 0.0129 | 0.0226 | 0.0441 | 0.0440 | 0.3203 | 0.3562 |
| 2 | 0.0579 | 0.1497 | 0.0120 | 0.0210 | 0.0281 | 0.0276 | 0.2502 | 0.2845 |
| 3 | 0.0557 | 0.1422 | 0.0112 | 0.0196 | 0.0322 | 0.0318 | 0.2568 | 0.2914 |
| 4 | 0.0691 | 0.1902 | 0.0148 | 0.0262 | 0.0294 | 0.0286 | 0.3032 | 0.3374 |
| 5 | 0.0771 | 0.1841 | 0.0147 | 0.0258 | 0.0441 | 0.0440 | 0.3203 | 0.3562 |
| 6 | 0.0581 | 0.1487 | 0.0119 | 0.0208 | 0.0322 | 0.0318 | 0.2568 | 0.2914 |
| 7 | 0.0553 | 0.1433 | 0.0114 | 0.0199 | 0.0294 | 0.0290 | 0.2471 | 0.2807 |
| 8 | 0.0950 | 0.2196 | 0.0177 | 0.0310 | 0.0441 | 0.0440 | 0.3203 | 0.3562 |
| 9 | 0.0625 | 0.1647 | 0.0127 | 0.0224 | 0.0281 | 0.0275 | 0.2687 | 0.3036 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 1.436 | 0.287 | 0.161 | 0.095 | 0.077 | 0.065 | 0.058 | 0.056 | 0.055 | 0.058 | 0.063 | 0.069 |
| LDT1 | DSL | 3.629 | 0.726 | 0.358 | 0.220 | 0.184 | 0.162 | 0.149 | 0.142 | 0.143 | 0.150 | 0.165 | 0.190 |
| LDT2 | DSL | 0.251 | 0.050 | 0.029 | 0.018 | 0.015 | 0.013 | 0.012 | 0.011 | 0.011 | 0.012 | 0.013 | 0.015 |
| LHDT1 | DSL | 0.849 | 0.139 | 0.072 | 0.044 | 0.037 | 0.032 | 0.029 | 0.028 | 0.028 | 0.029 | 0.032 | 0.037 |
| LHDT2 | DSL | 0.853 | 0.135 | 0.072 | 0.044 | 0.037 | 0.032 | 0.029 | 0.028 | 0.027 | 0.029 | 0.031 | 0.035 |
| MDV | DSL | 0.459 | 0.092 | 0.051 | 0.031 | 0.026 | 0.023 | 0.021 | 0.020 | 0.020 | 0.021 | 0.022 | 0.026 |
| MH | DSL | 2.424 | 0.485 | 0.294 | 0.176 | 0.157 | 0.146 | 0.143 | 0.147 | 0.160 | 0.180 | 0.207 | 0.243 |
| OBUS | DSL | 1.032 | 1.039 | 0.587 | 0.318 | 0.274 | 0.244 | 0.228 | 0.226 | 0.237 | 0.263 | 0.280 | 0.280 |
| SBUS | DSL | 1.317 | 1.312 | 0.743 | 0.402 | 0.344 | 0.301 | 0.273 | 0.260 | 0.262 | 0.280 | 0.294 | 0.294 |
| T6 | DSL | 1.184 | 0.958 | 0.566 | 0.320 | 0.281 | 0.257 | 0.247 | 0.250 | 0.269 | 0.303 | 0.325 | 0.328 |
| T7 | DSL | 1.069 | 1.017 | 0.605 | 0.356 | 0.317 | 0.291 | 0.281 | 0.285 | 0.304 | 0.337 | 0.360 | 0.361 |
| UBUS | DSL | 8.427 | 1.685 | 1.014 | 0.603 | 0.526 | 0.463 | 0.419 | 0.388 | 0.377 | 0.380 | 0.399 | 0.436 |
| LDA | GAS | 0.072 | 0.014 | 0.007 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT1 | GAS | 0.162 | 0.032 | 0.016 | 0.009 | 0.007 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 |
| LDT2 | GAS | 0.069 | 0.014 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LHDT1 | GAS | 0.059 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| LHDT2 | GAS | 0.049 | 0.010 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.039 | 0.008 | 0.004 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| MDV | GAS | 0.067 | 0.013 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MH | GAS | 0.107 | 0.021 | 0.011 | 0.006 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 |
| OBUS | GAS | 0.025 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.125 | 0.025 | 0.012 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.006 |
| T6 | GAS | 0.063 | 0.013 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| T7 | GAS | 0.083 | 0.017 | 0.008 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| UBUS | GAS | 0.072 | 0.014 | 0.007 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 |
| T7 | NG | 0.244 | 0.028 | 0.020 | 0.014 | 0.013 | 0.013 | 0.013 | 0.014 | 0.015 | 0.017 | 0.018 | 0.018 |
| UBUS | NG | 0.285 | 0.057 | 0.030 | 0.014 | 0.012 | 0.010 | 0.009 | 0.009 | 0.009 | 0.011 | 0.013 | 0.016 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| Source | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0370 | 0.0370 | 0.0370 | 0.0760 | 0.0890 | 0.0370 | 0.1300 | 0.0620 |
| Tires | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.012 | 0.02 |
| Total | **0.045** | **0.045** | **0.045** | **0.084** | **0.097** | **0.045** | **0.142** | **0.082** |

| Source | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.037 | 0.037 | 0.037 | 0.076 | 0.089 | 0.037 | 0.130 | 0.062 |
| Tires | 0.008 | 0.008 | 0.008 | 0.012 | 0.012 | 0.008 | 0.012 | 0.036 |
| Total | **0.045** | **0.045** | **0.045** | **0.088** | **0.101** | **0.045** | **0.142** | **0.098** |

**Paved Road Dust Emissions (pounds/day)**

| Source | PM10 |
|---|---|
| Freeways | 607 |
| Freeways to Ports | 17 |
| Internal | 93 |
| Surface | 136 |
| **Total** | **853** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 32.939 | 3.863 | 11.472 | 16.983 | 4.395 | 0.215 | 5.184 | 1.355 | 76.407 |
| Diesel | 0.100 | 0.005 | 0.005 | 0.018 | 1.415 | 0.214 | 21.461 | 71.748 | 94.964 |
| Total | **33.039** | **3.867** | **11.477** | **17.001** | **5.810** | **0.429** | **26.645** | **73.103** | **171.371** |

# World Logistics Center PM10

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 19 | 26 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 54 | 61 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 4 | 1 | 0 | 0 | 0 | 0 | 0 | 22 | 130 | 154 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 6 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 29 |
| **Total** | **2** | **0** | **1** | **0** | **1** | **0** | **44** | **236** | **284** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **3** | **4** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 18 | 24 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **5** | **18** | **24** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 6 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **6** | **6** | **12** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 53 | 59 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 1 | 0 | 0 | 0 | 0 | 0 | 22 | 126 | 150 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 24 | 28 |
| **Total** | **1** | **0** | **0** | **0** | **0** | **0** | **32** | **202** | **237** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **7** | **7** |

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# PM2.5

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0667 | 0.1492 | 0.0635 | 0.0621 | 0.0539 | 0.0451 | 0.0585 | 0.0783 |
| 0 | 0.0060 | 0.0144 | 0.0059 | 0.0057 | 0.0048 | 0.0040 | 0.0054 | 0.0077 |
| 1 | 0.0020 | 0.0051 | 0.0020 | 0.0019 | 0.0026 | 0.0021 | 0.0029 | 0.0045 |
| 2 | 0.0016 | 0.0040 | 0.0016 | 0.0015 | 0.0014 | 0.0016 | 0.0016 | 0.0026 |
| 3 | 0.0016 | 0.0041 | 0.0016 | 0.0015 | 0.0017 | 0.0014 | 0.0020 | 0.0031 |
| 4 | 0.0019 | 0.0047 | 0.0018 | 0.0018 | 0.0014 | 0.0011 | 0.0017 | 0.0026 |
| 5 | 0.0025 | 0.0062 | 0.0024 | 0.0024 | 0.0026 | 0.0021 | 0.0029 | 0.0045 |
| 6 | 0.0018 | 0.0045 | 0.0017 | 0.0017 | 0.0017 | 0.0014 | 0.0020 | 0.0031 |
| 7 | 0.0016 | 0.0040 | 0.0015 | 0.0015 | 0.0015 | 0.0012 | 0.0017 | 0.0028 |
| 8 | 0.0032 | 0.0079 | 0.0031 | 0.0030 | 0.0026 | 0.0021 | 0.0029 | 0.0045 |
| 9 | 0.0017 | 0.0042 | 0.0016 | 0.0016 | 0.0013 | 0.0011 | 0.0016 | 0.0026 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 1.3742 | 3.4725 | 0.2398 | 0.4393 | 0.8119 | 0.8163 | 1.1325 | 1.0230 |
| 0 | 0.1540 | 0.3423 | 0.0277 | 0.0490 | 0.0690 | 0.0688 | 0.5414 | 0.5788 |
| 1 | 0.0618 | 0.1550 | 0.0124 | 0.0216 | 0.0422 | 0.0421 | 0.3064 | 0.3408 |
| 2 | 0.0554 | 0.1432 | 0.0115 | 0.0201 | 0.0269 | 0.0264 | 0.2394 | 0.2722 |
| 3 | 0.0533 | 0.1360 | 0.0107 | 0.0188 | 0.0308 | 0.0305 | 0.2457 | 0.2788 |
| 4 | 0.0661 | 0.1820 | 0.0141 | 0.0251 | 0.0281 | 0.0273 | 0.2901 | 0.3228 |
| 5 | 0.0738 | 0.1761 | 0.0141 | 0.0247 | 0.0422 | 0.0421 | 0.3064 | 0.3408 |
| 6 | 0.0556 | 0.1423 | 0.0114 | 0.0199 | 0.0308 | 0.0305 | 0.2457 | 0.2788 |
| 7 | 0.0529 | 0.1371 | 0.0109 | 0.0190 | 0.0282 | 0.0277 | 0.2364 | 0.2685 |
| 8 | 0.0909 | 0.2101 | 0.0169 | 0.0297 | 0.0422 | 0.0421 | 0.3064 | 0.3408 |
| 9 | 0.0598 | 0.1576 | 0.0121 | 0.0214 | 0.0269 | 0.0263 | 0.2571 | 0.2904 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 1.374 | 0.275 | 0.154 | 0.091 | 0.074 | 0.062 | 0.056 | 0.053 | 0.053 | 0.055 | 0.060 | 0.066 |
| LDT1 | DSL | 3.472 | 0.694 | 0.342 | 0.210 | 0.176 | 0.155 | 0.142 | 0.136 | 0.137 | 0.143 | 0.158 | 0.182 |
| LDT2 | DSL | 0.240 | 0.048 | 0.028 | 0.017 | 0.014 | 0.012 | 0.011 | 0.011 | 0.011 | 0.011 | 0.012 | 0.014 |
| LHDT1 | DSL | 0.812 | 0.133 | 0.069 | 0.042 | 0.035 | 0.031 | 0.028 | 0.027 | 0.027 | 0.028 | 0.030 | 0.035 |
| LHDT2 | DSL | 0.816 | 0.129 | 0.069 | 0.042 | 0.035 | 0.030 | 0.028 | 0.026 | 0.026 | 0.027 | 0.030 | 0.034 |
| MDV | DSL | 0.439 | 0.088 | 0.049 | 0.030 | 0.025 | 0.022 | 0.020 | 0.019 | 0.019 | 0.020 | 0.021 | 0.025 |
| MH | DSL | 2.319 | 0.464 | 0.281 | 0.168 | 0.150 | 0.140 | 0.137 | 0.141 | 0.153 | 0.172 | 0.198 | 0.233 |
| OBUS | DSL | 0.988 | 0.994 | 0.562 | 0.304 | 0.262 | 0.233 | 0.218 | 0.216 | 0.227 | 0.251 | 0.268 | 0.268 |
| SBUS | DSL | 1.260 | 1.255 | 0.711 | 0.384 | 0.329 | 0.288 | 0.262 | 0.249 | 0.251 | 0.268 | 0.281 | 0.281 |
| T6 | DSL | 1.132 | 0.916 | 0.541 | 0.306 | 0.269 | 0.246 | 0.236 | 0.239 | 0.257 | 0.290 | 0.311 | 0.314 |
| T7 | DSL | 1.023 | 0.973 | 0.579 | 0.341 | 0.303 | 0.279 | 0.269 | 0.272 | 0.290 | 0.323 | 0.344 | 0.345 |
| UBUS | DSL | 8.063 | 1.613 | 0.970 | 0.576 | 0.503 | 0.443 | 0.401 | 0.372 | 0.360 | 0.364 | 0.381 | 0.417 |
| LDA | GAS | 0.067 | 0.013 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT1 | GAS | 0.149 | 0.030 | 0.014 | 0.008 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 |
| LDT2 | GAS | 0.064 | 0.013 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LHDT1 | GAS | 0.054 | 0.011 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| LHDT2 | GAS | 0.045 | 0.009 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.037 | 0.007 | 0.004 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| MDV | GAS | 0.062 | 0.012 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 |
| MH | GAS | 0.099 | 0.020 | 0.010 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| OBUS | GAS | 0.023 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.117 | 0.023 | 0.011 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 |
| T6 | GAS | 0.059 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| T7 | GAS | 0.078 | 0.016 | 0.008 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| UBUS | GAS | 0.067 | 0.013 | 0.006 | 0.004 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 |
| T7 | NG | 0.233 | 0.027 | 0.019 | 0.013 | 0.012 | 0.012 | 0.012 | 0.013 | 0.014 | 0.016 | 0.017 | 0.017 |
| UBUS | NG | 0.272 | 0.054 | 0.029 | 0.013 | 0.011 | 0.009 | 0.008 | 0.008 | 0.009 | 0.010 | 0.012 | 0.015 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0050 |
| Total | **0.018** | **0.018** | **0.018** | **0.035** | **0.04** | **0.018** | **0.059** | **0.031** |

| | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0030 | 0.0020 | 0.0030 | 0.0090 |
| Total | **0.018** | **0.018** | **0.018** | **0.036** | **0.041** | **0.018** | **0.059** | **0.035** |

**PM2.5 Paved Road Dust Emissions (pounds/day)**

| Source | PM.5 |
|---|---|
| Freeways | 149.0 |
| Freeways to Ports | 4.2 |
| Internal | 22.9 |
| Surface | 33.3 |
| **Total** | **209.3** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 13.176 | 1.545 | 4.589 | 7.076 | 1.813 | 0.086 | 2.154 | 0.512 | 30.951 |
| Diesel | 0.040 | 0.002 | 0.002 | 0.007 | 0.574 | 0.086 | 8.917 | 25.624 | 35.252 |
| Total | **13.216** | **1.547** | **4.591** | **7.083** | **2.387** | **0.172** | **11.071** | **26.136** | **66.202** |

**Black Carbon Emissions (pounds/day)**

Percent of diesel PM2.5 exhaust

| | |
|---|---|
| LDT1, LDT2, MDT: | 64% |
| LHDT1, LHDT2, MHDT, HHDT: | 77% |

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.03 | 4.40 | 13.91 | 18.41 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 4.80 | 39.56 | 44.42 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.95 | 0.26 | 1.23 |
| 4 | 0.00 | 0.01 | 0.00 | 0.00 | 0.13 | 0.04 | 16.27 | 95.74 | 112.19 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.01 | 0.10 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.67 | 0.69 | 1.37 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 1.84 | 2.58 | 4.46 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 2.67 | 18.89 | 21.59 |
| **Total** | **0.00** | **0.01** | **0.00** | **0.00** | **0.32** | **0.11** | **31.67** | **171.65** | **203.77** |

# World Logistics Center PM2.5

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 | 24 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 51 | 58 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 4 | 1 | 0 | 0 | 0 | 0 | 0 | 21 | 124 | 147 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 6 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 25 | 28 |
| **Total** | **2** | **0** | **0** | **0** | **1** | **0** | **42** | **226** | **272** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **3** | **4** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 17 | 23 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **5** | **17** | **23** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 6 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **5** | **5** | **11** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 50 | 57 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 1 | 0 | 0 | 0 | 0 | 0 | 21 | 121 | 143 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 23 | 26 |
| **Total** | **1** | **0** | **0** | **0** | **0** | **0** | **31** | **194** | **226** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **7** | **7** |

**World Logistics Center**
**Project Full Buildout 2012**

# CO2

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 5319.1961 | 6136.5036 | 7256.9500 | 9244.2540 | 4776.9000 | 5557.1397 | 14401.7859 | 22187.5298 |
| 0 | 607.5152 | 701.0719 | 829.1423 | 1055.1495 | 961.7141 | 1095.7477 | 2330.3918 | 2715.3569 |
| 1 | 309.5400 | 357.0642 | 422.3382 | 538.0372 | 765.3980 | 867.1494 | 1430.7240 | 2063.8941 |
| 2 | 286.0215 | 329.8888 | 390.2846 | 497.1923 | 688.8582 | 376.8430 | 1049.3047 | 1776.4982 |
| 3 | 276.2053 | 318.5955 | 376.8430 | 480.1354 | 694.6470 | 783.7697 | 1213.8580 | 1884.6368 |
| 4 | 343.6996 | 396.3310 | 468.9774 | 597.6051 | 765.3980 | 815.1205 | 954.5206 | 1721.4022 |
| 5 | 346.4836 | 399.7522 | 472.7748 | 602.0741 | 765.3980 | 867.1494 | 1430.7240 | 2063.8941 |
| 6 | 287.0146 | 331.0552 | 391.6022 | 498.9297 | 694.6470 | 783.7697 | 1213.8580 | 1884.6368 |
| 7 | 275.8888 | 318.2109 | 376.4277 | 479.5859 | 692.0363 | 765.8665 | 1129.3159 | 1816.4477 |
| 8 | 402.5424 | 464.4831 | 549.3099 | 699.3214 | 765.3980 | 867.1494 | 1430.7240 | 2063.8941 |
| 9 | 307.7449 | 354.9367 | 419.8948 | 534.9927 | 726.4520 | 779.6246 | 981.5756 | 1754.4365 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 4197.4822 | 5018.8795 | 5021.1699 | 6553.6095 | 4098.0000 | 6512.9698 | 7165.6720 | 8473.7768 |
| 0 | 576.9391 | 698.8706 | 701.8713 | 945.8127 | 716.0030 | 813.7799 | 1764.2117 | 2768.1725 |
| 1 | 309.6060 | 375.8676 | 376.6700 | 519.1123 | 541.2642 | 618.5467 | 1334.1019 | 2123.1967 |
| 2 | 293.4283 | 354.4885 | 355.1770 | 495.3844 | 466.3199 | 516.6270 | 1085.3620 | 1717.3430 |
| 3 | 279.7348 | 338.3149 | 338.9042 | 467.1381 | 491.5264 | 557.8304 | 1182.0310 | 1875.6028 |
| 4 | 357.1575 | 431.4739 | 432.0277 | 601.5954 | 510.8561 | 554.4290 | 1035.2855 | 1626.0798 |
| 5 | 342.9299 | 416.4904 | 417.5786 | 572.7617 | 541.2642 | 618.5467 | 1334.1019 | 2123.1967 |
| 6 | 289.5859 | 350.8793 | 351.5348 | 485.3669 | 491.5264 | 557.8304 | 1182.0310 | 1875.6028 |
| 7 | 280.3890 | 339.1788 | 339.6147 | 469.4422 | 478.0702 | 537.4558 | 1127.3390 | 1786.4242 |
| 8 | 396.2732 | 481.7332 | 483.1845 | 663.7010 | 541.2642 | 618.5467 | 1334.1019 | 2123.1967 |
| 9 | 318.0005 | 384.1361 | 384.6225 | 536.3017 | 488.8741 | 535.6553 | 1054.7054 | 1663.4486 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 4197.5 | 839.5 | 576.9 | 396.3 | 342.9 | 309.6 | 289.6 | 279.7 | 280.4 | 293.4 | 318.0 | 357.2 |
| LDT1 | DSL | 5018.9 | 1003.8 | 698.9 | 481.7 | 416.5 | 375.9 | 350.9 | 338.3 | 339.2 | 354.5 | 384.1 | 431.5 |
| LDT2 | DSL | 5021.2 | 1004.2 | 701.9 | 483.2 | 417.6 | 376.7 | 351.5 | 338.9 | 339.6 | 355.2 | 384.6 | 432.0 |
| LHDT1 | DSL | 4098.0 | 1304.2 | 716.0 | 541.3 | 491.5 | 491.5 | 478.1 | 466.3 | 488.9 | 510.9 | 515.9 | 522.6 |
| LHDT2 | DSL | 6513.0 | 1375.6 | 813.8 | 618.5 | 557.8 | 557.8 | 537.5 | 516.6 | 535.7 | 554.4 | 556.4 | 557.8 |
| MDV | DSL | 6553.6 | 1310.7 | 945.8 | 663.7 | 572.8 | 519.1 | 485.4 | 467.1 | 469.4 | 495.4 | 536.3 | 601.6 |
| MH | DSL | 10595.6 | 2119.1 | 1581.0 | 1163.8 | 1092.2 | 1032.7 | 985.6 | 950.7 | 927.7 | 917.0 | 918.4 | 932.0 |
| OBUS | DSL | 7011.6 | 2830.9 | 2117.3 | 1622.1 | 1517.9 | 1434.2 | 1367.2 | 1314.6 | 1275.0 | 1247.5 | 1237.6 | 1237.6 |
| SBUS | DSL | 6906.0 | 2396.1 | 1787.6 | 1334.7 | 1250.7 | 1182.0 | 1127.3 | 1085.9 | 1057.4 | 1041.5 | 1037.8 | 1037.8 |
| T6 | DSL | 7165.7 | 2361.2 | 1764.2 | 1334.1 | 1250.3 | 1182.0 | 1127.3 | 1085.4 | 1054.7 | 1035.3 | 1029.8 | 1029.4 |
| T7 | DSL | 8473.8 | 3703.7 | 2768.2 | 2123.2 | 1986.1 | 1875.6 | 1786.4 | 1717.3 | 1663.4 | 1626.1 | 1615.2 | 1609.6 |
| UBUS | DSL | 21660.2 | 4332.0 | 3230.4 | 2382.9 | 2233.5 | 2109.0 | 2012.1 | 1937.7 | 1892.4 | 1872.4 | 1873.9 | 1911.1 |
| LDA | GAS | 5319.2 | 1063.8 | 607.5 | 402.5 | 346.5 | 309.5 | 287.0 | 276.2 | 275.9 | 286.0 | 307.7 | 343.7 |
| LDT1 | GAS | 6136.5 | 1227.3 | 701.1 | 464.5 | 399.8 | 357.1 | 331.1 | 318.6 | 318.2 | 329.9 | 354.9 | 396.3 |
| LDT2 | GAS | 7256.9 | 1451.4 | 829.1 | 549.3 | 472.8 | 422.3 | 391.6 | 376.8 | 376.4 | 390.3 | 419.9 | 469.0 |
| LHDT1 | GAS | 4776.9 | 1407.5 | 961.7 | 765.4 | 694.6 | 694.6 | 692.0 | 688.9 | 726.5 | 765.4 | 776.7 | 787.3 |
| LHDT2 | GAS | 5557.1 | 1500.7 | 1095.7 | 867.1 | 783.8 | 783.8 | 765.9 | 747.8 | 779.6 | 815.1 | 823.7 | 831.8 |
| MCY | GAS | 2641.5 | 528.3 | 301.6 | 199.9 | 172.0 | 153.7 | 142.5 | 137.1 | 137.0 | 142.0 | 152.8 | 170.6 |
| MDV | GAS | 9244.3 | 1848.9 | 1055.1 | 699.3 | 602.1 | 538.0 | 498.9 | 480.1 | 479.6 | 497.2 | 535.0 | 597.6 |
| MH | GAS | 19801.7 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| OBUS | GAS | 10101.2 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| SBUS | GAS | 4776.9 | 1872.9 | 1102.1 | 676.6 | 621.8 | 574.0 | 534.1 | 496.2 | 464.2 | 451.4 | 454.2 | 462.6 |
| T6 | GAS | 14401.8 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| T7 | GAS | 22187.5 | 4437.5 | 2715.4 | 2063.9 | 1965.0 | 1884.6 | 1816.4 | 1776.5 | 1754.4 | 1721.4 | 1697.3 | 1692.7 |
| UBUS | GAS | 19801.7 | 3960.3 | 2330.4 | 1430.7 | 1314.8 | 1213.9 | 1129.3 | 1049.3 | 981.6 | 954.5 | 960.5 | 978.3 |
| T7 | NG | 7095.5 | 5857.3 | 4383.4 | 3475.2 | 3263.0 | 3095.0 | 2958.6 | 2846.4 | 2753.6 | 2677.1 | 2644.2 | 2644.2 |
| UBUS | NG | 16028.1 | 3205.6 | 2389.9 | 1759.1 | 1651.2 | 1561.7 | 1490.5 | 1437.6 | 1403.1 | 1387.0 | 1389.3 | 1409.9 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO2

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 893 | 188 | 2519 | 6971 | 10571 |
| 0 | 8573 | 1158 | 4065 | 4104 | 844 | 143 | 2661 | 10516 | 32065 |
| 1 | 40428 | 5459 | 19161 | 19369 | 7220 | 1211 | 31286 | 115016 | 239150 |
| 2 | 19196 | 2592 | 9098 | 9197 | 5697 | 643 | 34857 | 331704 | 412984 |
| 3 | 13776 | 1860 | 6528 | 6600 | 1625 | 271 | 7420 | 2344 | 40424 |
| 4 | 109825 | 14824 | 52049 | 52631 | 18329 | 2862 | 92177 | 641360 | 984057 |
| 5 | 702 | 95 | 333 | 336 | 120 | 20 | 591 | 118 | 2315 |
| 6 | 9954 | 1344 | 4718 | 4770 | 1159 | 193 | 5195 | 6163 | 33496 |
| 7 | 20578 | 2778 | 9752 | 9859 | 3064 | 501 | 14191 | 22795 | 83519 |
| 8 | 78 | 10 | 37 | 37 | 4 | 1 | 1 | 5 | 173 |
| 9 | 12777 | 1725 | 6055 | 6122 | 2718 | 429 | 17402 | 143858 | 191086 |
| **Total** | **235885** | **31846** | **111796** | **113026** | **41674** | **6462** | **208302** | **1280848** | **2029838** |

**Area Source Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 893 | 188 | 2519 | 6971 | 10571 |
| 0 | 8573 | 1158 | 4065 | 4104 | 844 | 143 | 2661 | 10516 | 32065 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **8573** | **1158** | **4065** | **4104** | **1738** | **331** | **5180** | **17486** | **42635** |

**Internal Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 31987 | 4319 | 15160 | 15325 | 6311 | 1058 | 27336 | 110549 | 212046 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **31987** | **4319** | **15160** | **15325** | **6311** | **1058** | **27336** | **110549** | **212046** |

**Surface Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 8441 | 1140 | 4001 | 4044 | 909 | 152 | 3950 | 4467 | 27104 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 13776 | 1860 | 6528 | 6600 | 1625 | 271 | 7420 | 2344 | 40424 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 702 | 95 | 333 | 336 | 120 | 20 | 591 | 118 | 2315 |
| 6 | 9954 | 1344 | 4718 | 4770 | 1159 | 193 | 5195 | 6163 | 33496 |
| 7 | 20578 | 2778 | 9752 | 9859 | 3064 | 501 | 14191 | 22795 | 83519 |
| 8 | 78 | 10 | 37 | 37 | 4 | 1 | 1 | 5 | 173 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **53528** | **7228** | **25369** | **25647** | **6881** | **1138** | **31350** | **35891** | **187031** |

**Freeway Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 19196 | 2592 | 9098 | 9197 | 5697 | 643 | 34857 | 324462 | 405742 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 109825 | 14824 | 52049 | 52631 | 18329 | 2862 | 92177 | 622195 | 964891 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 12777 | 1725 | 6055 | 6122 | 2718 | 429 | 17402 | 132989 | 180217 |
| **Total** | **141798** | **19141** | **67203** | **67950** | **26744** | **3934** | **144436** | **1079646** | **1550850** |

**Freeway to Port Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7242 | 7242 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19165 | 19165 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10869 | 10869 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **37276** | **37276** |

**World Logistics Center**
**Project Full Buildout 2012**

# CH4

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.4219 | 0.9923 | 0.5278 | 0.7795 | 6.3743 | 6.4991 | 7.9848 | 13.2011 |
| 0 | 0.0384 | 0.0972 | 0.0494 | 0.0713 | 0.0997 | 0.0774 | 0.2743 | 1.1366 |
| 1 | 0.0132 | 0.0351 | 0.0167 | 0.0241 | 0.0556 | 0.0424 | 0.1464 | 0.6069 |
| 2 | 0.0104 | 0.0277 | 0.0131 | 0.0189 | 0.0312 | 0.0133 | 0.0789 | 0.3266 |
| 3 | 0.0105 | 0.0282 | 0.0133 | 0.0192 | 0.0376 | 0.0280 | 0.0970 | 0.4017 |
| 4 | 0.0122 | 0.0318 | 0.0152 | 0.0221 | 0.0317 | 0.0232 | 0.0804 | 0.3262 |
| 5 | 0.0161 | 0.0425 | 0.0204 | 0.0296 | 0.0556 | 0.0424 | 0.1464 | 0.6069 |
| 6 | 0.0115 | 0.0308 | 0.0145 | 0.0210 | 0.0376 | 0.0280 | 0.0970 | 0.4017 |
| 7 | 0.0102 | 0.0273 | 0.0128 | 0.0186 | 0.0335 | 0.0249 | 0.0856 | 0.3529 |
| 8 | 0.0205 | 0.0538 | 0.0262 | 0.0379 | 0.0556 | 0.0424 | 0.1464 | 0.6069 |
| 9 | 0.0110 | 0.0289 | 0.0137 | 0.0200 | 0.0306 | 0.0225 | 0.0769 | 0.3178 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1123 | 0.2274 | 0.0644 | 0.0617 | 0.1474 | 0.1474 | 0.1632 | 0.3159 |
| 0 | 0.0115 | 0.0224 | 0.0052 | 0.0054 | 0.0157 | 0.0155 | 0.0888 | 0.1327 |
| 1 | 0.0041 | 0.0099 | 0.0012 | 0.0016 | 0.0086 | 0.0082 | 0.0306 | 0.0479 |
| 2 | 0.0036 | 0.0091 | 0.0009 | 0.0013 | 0.0054 | 0.0051 | 0.0152 | 0.0226 |
| 3 | 0.0035 | 0.0087 | 0.0009 | 0.0013 | 0.0062 | 0.0059 | 0.0205 | 0.0314 |
| 4 | 0.0043 | 0.0116 | 0.0011 | 0.0016 | 0.0056 | 0.0052 | 0.0146 | 0.0204 |
| 5 | 0.0049 | 0.0113 | 0.0014 | 0.0018 | 0.0086 | 0.0082 | 0.0306 | 0.0479 |
| 6 | 0.0037 | 0.0091 | 0.0010 | 0.0014 | 0.0062 | 0.0059 | 0.0205 | 0.0314 |
| 7 | 0.0035 | 0.0088 | 0.0009 | 0.0013 | 0.0057 | 0.0053 | 0.0173 | 0.0262 |
| 8 | 0.0061 | 0.0135 | 0.0018 | 0.0023 | 0.0086 | 0.0082 | 0.0306 | 0.0479 |
| 9 | 0.0039 | 0.0101 | 0.0009 | 0.0014 | 0.0054 | 0.0050 | 0.0143 | 0.0208 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.1123 | 0.0225 | 0.0115 | 0.0061 | 0.0049 | 0.0041 | 0.0037 | 0.0035 | 0.0035 | 0.0036 | 0.0039 | 0.0043 |
| LDT1 | DSL | 0.2274 | 0.0455 | 0.0224 | 0.0135 | 0.0113 | 0.0099 | 0.0091 | 0.0087 | 0.0088 | 0.0091 | 0.0101 | 0.0116 |
| LDT2 | DSL | 0.0644 | 0.0129 | 0.0052 | 0.0018 | 0.0014 | 0.0012 | 0.0010 | 0.0009 | 0.0009 | 0.0009 | 0.0009 | 0.0011 |
| LHDT1 | DSL | 0.1474 | 0.0327 | 0.0157 | 0.0086 | 0.0072 | 0.0062 | 0.0057 | 0.0054 | 0.0054 | 0.0056 | 0.0061 | 0.0071 |
| LHDT2 | DSL | 0.1474 | 0.0326 | 0.0155 | 0.0082 | 0.0068 | 0.0059 | 0.0053 | 0.0051 | 0.0050 | 0.0052 | 0.0057 | 0.0065 |
| MDV | DSL | 0.0617 | 0.0123 | 0.0054 | 0.0023 | 0.0018 | 0.0016 | 0.0014 | 0.0013 | 0.0013 | 0.0013 | 0.0014 | 0.0016 |
| MH | DSL | 0.2638 | 0.0528 | 0.0209 | 0.0069 | 0.0056 | 0.0046 | 0.0040 | 0.0035 | 0.0033 | 0.0034 | 0.0036 | 0.0042 |
| OBUS | DSL | 0.2937 | 0.2572 | 0.1050 | 0.0366 | 0.0294 | 0.0238 | 0.0198 | 0.0172 | 0.0162 | 0.0164 | 0.0171 | 0.0171 |
| SBUS | DSL | 0.1851 | 0.2299 | 0.0968 | 0.0329 | 0.0270 | 0.0224 | 0.0191 | 0.0171 | 0.0163 | 0.0168 | 0.0175 | 0.0175 |
| T6 | DSL | 0.1632 | 0.2203 | 0.0888 | 0.0306 | 0.0249 | 0.0205 | 0.0173 | 0.0152 | 0.0143 | 0.0146 | 0.0151 | 0.0154 |
| T7 | DSL | 0.3159 | 0.3249 | 0.1327 | 0.0479 | 0.0387 | 0.0314 | 0.0262 | 0.0226 | 0.0208 | 0.0204 | 0.0209 | 0.0209 |
| UBUS | DSL | 1.3906 | 0.2781 | 0.1239 | 0.0432 | 0.0364 | 0.0309 | 0.0270 | 0.0243 | 0.0233 | 0.0236 | 0.0253 | 0.0286 |
| LDA | GAS | 0.4219 | 0.0844 | 0.0384 | 0.0205 | 0.0161 | 0.0132 | 0.0115 | 0.0105 | 0.0102 | 0.0104 | 0.0110 | 0.0122 |
| LDT1 | GAS | 0.9923 | 0.1985 | 0.0972 | 0.0538 | 0.0425 | 0.0351 | 0.0308 | 0.0282 | 0.0273 | 0.0277 | 0.0289 | 0.0318 |
| LDT2 | GAS | 0.5278 | 0.1056 | 0.0494 | 0.0262 | 0.0204 | 0.0167 | 0.0145 | 0.0133 | 0.0128 | 0.0131 | 0.0137 | 0.0152 |
| LHDT1 | GAS | 6.3743 | 0.2035 | 0.0997 | 0.0556 | 0.0446 | 0.0376 | 0.0335 | 0.0312 | 0.0306 | 0.0317 | 0.0343 | 0.0404 |
| LHDT2 | GAS | 6.4991 | 0.1613 | 0.0774 | 0.0424 | 0.0336 | 0.0280 | 0.0249 | 0.0230 | 0.0225 | 0.0232 | 0.0251 | 0.0297 |
| MCY | GAS | 9.7562 | 1.9512 | 0.8933 | 0.5027 | 0.4066 | 0.3457 | 0.3091 | 0.2904 | 0.2866 | 0.2968 | 0.3229 | 0.3684 |
| MDV | GAS | 0.7795 | 0.1559 | 0.0713 | 0.0379 | 0.0296 | 0.0241 | 0.0210 | 0.0192 | 0.0186 | 0.0189 | 0.0200 | 0.0221 |
| MH | GAS | 2.3411 | 0.4682 | 0.2437 | 0.1408 | 0.1132 | 0.0952 | 0.0856 | 0.0804 | 0.0783 | 0.0799 | 0.0855 | 0.1016 |
| OBUS | GAS | 6.5142 | 0.3225 | 0.1344 | 0.0702 | 0.0555 | 0.0463 | 0.0405 | 0.0373 | 0.0363 | 0.0376 | 0.0407 | 0.0455 |
| SBUS | GAS | 6.0747 | 0.8405 | 0.3815 | 0.2109 | 0.1685 | 0.1410 | 0.1237 | 0.1136 | 0.1094 | 0.1103 | 0.1167 | 0.1362 |
| T6 | GAS | 7.9848 | 0.6163 | 0.2743 | 0.1464 | 0.1159 | 0.0970 | 0.0856 | 0.0789 | 0.0769 | 0.0804 | 0.0868 | 0.1002 |
| T7 | GAS | 13.2011 | 2.6402 | 1.1366 | 0.6069 | 0.4810 | 0.4017 | 0.3529 | 0.3266 | 0.3178 | 0.3262 | 0.3515 | 0.3990 |
| UBUS | GAS | 8.2849 | 1.6570 | 0.7806 | 0.4722 | 0.3758 | 0.3126 | 0.2791 | 0.2588 | 0.2574 | 0.2642 | 0.2892 | 0.3447 |
| T7 | NG | 2.1483 | 27.6642 | 13.3438 | 6.2059 | 4.7659 | 3.6814 | 2.8715 | 2.2763 | 1.8517 | 1.5654 | 1.4663 | 1.4663 |
| UBUS | NG | 179.0431 | 35.8086 | 13.6583 | 4.3189 | 3.4512 | 2.7903 | 2.3293 | 2.0647 | 1.9948 | 2.1185 | 2.4379 | 2.9519 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CH4

Project Full Buildout 2012

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.949 | 0.104 | 0.495 | 0.477 | 2.024 |
| 0 | 0.540 | 0.160 | 0.242 | 0.277 | 0.075 | 0.007 | 0.177 | 0.589 | 2.068 |
| 1 | 1.715 | 0.536 | 0.757 | 0.868 | 0.451 | 0.041 | 1.229 | 3.268 | 8.865 |
| 2 | 0.695 | 0.217 | 0.305 | 0.349 | 0.225 | 0.013 | 0.891 | 5.660 | 8.354 |
| 3 | 0.525 | 0.165 | 0.230 | 0.264 | 0.076 | 0.007 | 0.221 | 0.050 | 1.536 |
| 4 | 3.899 | 1.188 | 1.690 | 1.946 | 0.664 | 0.060 | 2.480 | 10.700 | 22.627 |
| 5 | 0.032 | 0.010 | 0.014 | 0.016 | 0.008 | 0.001 | 0.023 | 0.003 | 0.108 |
| 6 | 0.397 | 0.125 | 0.175 | 0.200 | 0.054 | 0.005 | 0.155 | 0.130 | 1.240 |
| 7 | 0.759 | 0.238 | 0.332 | 0.382 | 0.129 | 0.012 | 0.385 | 0.426 | 2.663 |
| 8 | 0.004 | 0.001 | 0.002 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.009 |
| 9 | 0.456 | 0.141 | 0.198 | 0.228 | 0.100 | 0.009 | 0.443 | 2.359 | 3.934 |
| **Total** | **9.022** | **2.782** | **3.944** | **4.533** | **2.730** | **0.258** | **6.498** | **23.661** | **53.429** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.949 | 0.104 | 0.495 | 0.477 | 2.024 |
| 0 | 0.540 | 0.160 | 0.242 | 0.277 | 0.075 | 0.007 | 0.177 | 0.589 | 2.068 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.540** | **0.160** | **0.242** | **0.277** | **1.024** | **0.111** | **0.672** | **1.066** | **4.092** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 1.357 | 0.424 | 0.599 | 0.687 | 0.394 | 0.036 | 1.074 | 3.141 | 7.712 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.357** | **0.424** | **0.599** | **0.687** | **0.394** | **0.036** | **1.074** | **3.141** | **7.712** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.358 | 0.112 | 0.158 | 0.181 | 0.057 | 0.005 | 0.155 | 0.127 | 1.153 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.525 | 0.165 | 0.230 | 0.264 | 0.076 | 0.007 | 0.221 | 0.050 | 1.536 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.032 | 0.010 | 0.014 | 0.016 | 0.008 | 0.001 | 0.023 | 0.003 | 0.108 |
| 6 | 0.397 | 0.125 | 0.175 | 0.200 | 0.054 | 0.005 | 0.155 | 0.130 | 1.240 |
| 7 | 0.759 | 0.238 | 0.332 | 0.382 | 0.129 | 0.012 | 0.385 | 0.426 | 2.663 |
| 8 | 0.004 | 0.001 | 0.002 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.009 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **2.075** | **0.651** | **0.911** | **1.047** | **0.323** | **0.029** | **0.939** | **0.736** | **6.710** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.695 | 0.217 | 0.305 | 0.349 | 0.225 | 0.013 | 0.891 | 5.536 | 8.231 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 3.899 | 1.188 | 1.690 | 1.946 | 0.664 | 0.060 | 2.480 | 10.381 | 22.308 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.456 | 0.141 | 0.198 | 0.228 | 0.100 | 0.009 | 0.443 | 2.181 | 3.755 |
| **Total** | **5.050** | **1.546** | **2.193** | **2.523** | **0.989** | **0.082** | **3.814** | **18.098** | **34.294** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.124 | 0.124 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.320 | 0.320 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.178 | 0.178 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.622** | **0.622** |

# E.5 - Mobile Spreadsheets: Phase 1 2022 Unmitigated

# World Logistics Center

## Project Phase 1 (2022)

## Trip and Vehicle Miles Traveled Calculation

**2022**

## World Logistics Center

**Vehicle Fleet Mix**

Project Phase 1 (2022)

**Vehicle VMT for South Coast Air Basin per EMFAC2011 @ All Speeds**

| GAS Vehicle Class | VMT (miles/day) |
|---|---|
| LDA-GAS | 203,834,625 |
| LDT1-GAS | 24,148,511 |
| LDT2-GAS | 73,608,549 |
| MDT-GAS | 56,830,183 |
| LHDT1-GAS | 13,343,229 |
| LHDT2-GAS | 1,398,344 |
| MHDT-GAS | 1,227,001 |
| HHDT-GAS | 231,606 |
| Subtotal | 374,622,049 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 649,368 |
| LDT1-DSL | 34,560 |
| LDT2-DSL | 33,483 |
| MDT-DSL | 58,019 |
| LHDT1-DSL | 4,131,147 |
| LHDT2-DSL | 1,351,476 |
| MHDT-DSL | 5,376,142 |
| HHDT-DSL | 13,501,382 |
| Subtotal | 25,135,578 |
| | |
| Grand Total | 399,757,627 |

| Vehicle Class | | VMT-GAS | VMT-DSL | VMT-Total | % VMT-Total | %GAS | %DSL |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 203834625 | 649368 | 204483993 | 56.93% | 99.7% | 0.32% |
| LDT1 | | 24148511 | 34560 | 24183071 | 6.73% | 99.9% | 0.14% |
| LDT2 | | 73608549 | 33483 | 73642032 | 20.50% | 100.0% | 0.05% |
| MDT | | 56830183 | 58019 | 56888202 | 15.84% | 99.9% | 0.10% |
| Subtotal | | 358421868 | 775431 | 359197299 | 100.00% | 99.8% | 0.22% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 13343229 | 4131147 | 17474377 | 86.40% | 76.4% | 23.64% |
| LHDT2 | | 1398344 | 1351476 | 2749821 | 13.60% | 50.9% | 49.15% |
| Subtotal | | 14741574 | 5482623 | 20224197 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1227001 | 5376142 | 6603143 | 100% | 18.6% | 81.42% |
| HHDT | Heavy Heavy Truck | 231606 | 13501382 | 13732988 | 100% | 1.7% | 98.31% |

**Area Source Assumptions**

| | |
|---|---|
| Onsite truck idle time: | 5 minutes (truck idling only applies to HDT vehicles) |
| Onsite Travel: | 15 mph |
| Facility Operations for Warehouses: | 24 hrs |
| Facility operations for All Others: | 24 hrs |

| Onsite Diesel Truck Travel Links | Location | Diesel Truck Travel Distance (m) |
|---|---|---|
| | High Cube | 330 |
| | Light Logistics | 175 |
| | Utility Service | 100 |
| | Gas Station w/Convenience | 50 |
| | Convenience Store | 50 |
| | Fire Station | 50 |

## World Logistics Center

**Project Phase 1 (2022)**

Area Source Trip Distribution

| | Building Size (sq-ft) | |
|---|---|---|
| High Cube Warehouse | 22,900,000 | Sq-feet |
| Light Logistics | 45,500 | Sq-feet |
| Utilities Service Station | 30,800 | Sq-feet |
| Gas Station w/Convenience Store | 12 | Pumps |
| Convenience Store | 3,000 | Sq-feet |
| Fire Station | 1 | Sq-feet |

**Trip Generation**

| | trips/day (Non-PCE) | Source |
|---|---|---|
| High Cube Warehouse | 38472 | Traffic Impact Analysis Report |
| Light Logistics | 162 | prepared by Parsons Brinckerhoff, Inc. |
| Utilities Service Station | 248 | September 2014 |
| Gas Station w/Convenience Store | 219 | |
| Convenience Store | 354 | |
| Fire Station | 137 | |
| Total | 39592 | |

**Vehicle Fleet for High Cube Warehouse**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 79.6% | 56.93% | 0.32% | 55 | 17378 | 17433 |
| LDT1 | | 6.73% | 0.14% | 3 | 2059 | 2062 |
| LDT2 | | 20.50% | 0.05% | 3 | 6276 | 6278 |
| MDT | | 15.84% | 0.10% | 5 | 4845 | 4850 |
| SubTotal | | 100.00% | 0.22% | 66 | 30558 | 30624 |
| LHDT1 (2 axle truck) | 3.5% | 86.40% | 23.64% | 275 | 888 | 1163 |
| LHDT2 | | 13.60% | 49.15% | 90 | 93 | 183 |
| Subtotal | | 100.0% | | 365 | 981 | 1347 |
| MHDT (3 axle truck) | 4.6% | 100.00% | 81.42% | 1441 | 329 | 1770 |
| HHDT (4+ axle truck) | 12.3% | 100.00% | 98.31% | 4652 | 80 | 4732 |
| Total | 100.0% | | | 6524 | 31948 | 38472 |

**Vehicle Fleet for Light Logistics**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 80.3% | 56.93% | 0.32% | 0 | 74 | 74 |
| LDT1 | | 6.73% | 0.14% | 0 | 9 | 9 |
| LDT2 | | 20.50% | 0.05% | 0 | 27 | 27 |
| MDT | | 15.84% | 0.10% | 0 | 21 | 21 |
| SubTotal | | 100.00% | 0.22% | 0 | 130 | 130 |
| LHDT1 (2 axle truck) | 5.2% | 86.40% | 23.64% | 2 | 6 | 7 |
| LHDT2 | | 13.60% | 49.15% | 1 | 1 | 1 |
| Subtotal | | 100.0% | | 2 | 6 | 8 |
| MHDT (3 axle truck) | 4.5% | 100.0% | 81.42% | 6 | 1 | 7 |
| HHDT (4+ axle truck) | 10.0% | 100.0% | 98.31% | 16 | 0 | 16 |
| Total | 100.0% | | | 24 | 138 | 162 |

**Vehicle Fleet for Utilities Service Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 77.3% | 56.93% | 0.32% | 0.3 | 109 | 109 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 13 | 13 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 39 | 39 |
| MDT | | 15.84% | 0.10% | 0.0 | 30 | 30 |
| SubTotal | | 100.00% | 0.22% | 0.4 | 191 | 192 |
| LHDT1 (2 axle truck) | 11.3% | 86.40% | 23.64% | 6 | 19 | 24 |
| LHDT2 | | 13.60% | 49.15% | 2 | 2 | 4 |
| Subtotal | | 100.00% | | 8 | 20 | 28 |
| MHDT (3 axle truck) | 2.4% | 100.00% | 81.42% | 5 | 1 | 6 |
| HHDT (4+ axle truck) | 8.9% | 100.00% | 98.31% | 22 | 0 | 22 |
| Total | 100.0% | | | 35 | 213 | 248 |

**Vehicle Fleet for Gas Station with Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 50.7% | 56.93% | 0.32% | 0.2 | 63 | 63 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 7 | 7 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 23 | 23 |
| MDT | | 15.84% | 0.10% | 0.0 | 18 | 18 |
| SubTotal | | 100.00% | 0.22% | 0.2 | 111 | 111 |
| LHDT1 (2 axle truck) | 1.8% | 86.40% | 23.64% | 0.8 | 3 | 3 |
| LHDT2 | | 13.60% | 49.15% | 0.3 | 0 | 1 |
| Subtotal | | 100.00% | | 1.1 | 3 | 4 |
| MHDT (3 axle truck) | 7.8% | 100.00% | 81.42% | 13.9 | 3 | 17 |
| HHDT (4+ axle truck) | 39.7% | 100.00% | 98.31% | 85.5 | 1 | 87 |
| Total | 100.0% | | | 100.7 | 118 | 219 |

**Vehicle Fleet for Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 52.0% | 56.93% | 0.32% | 0.5 | 104 | 105 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 12 | 12 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 38 | 38 |
| MDT | | 15.84% | 0.10% | 0.0 | 29 | 29 |
| SubTotal | | 100.00% | 0.22% | 0.6 | 183 | 184 |
| LHDT1 (2 axle truck) | 1.7% | 86.40% | 23.64% | 1.2 | 4 | 5 |
| LHDT2 | | 13.60% | 49.15% | 0.4 | 0 | 1 |
| Subtotal | | 100.00% | | 1.6 | 4 | 6 |
| MHDT (3 axle truck) | 7.9% | 100.00% | 81.42% | 22.8 | 5 | 28 |
| HHDT (4+ axle truck) | 38.4% | 100.00% | 98.31% | 133.6 | 2 | 136 |
| Total | 100.0% | | | 158.7 | 195 | 354 |

**Vehicle Fleet for Fire Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 100.0% | 56.93% | 0.32% | 0.2 | 78 | 78 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 9 | 9 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 28 | 28 |
| MDT | | 15.84% | 0.10% | 0.0 | 22 | 22 |
| SubTotal | | 100.00% | 0.22% | 0.2 | 137 | 137 |
| LHDT1 (2 axle truck) | 0.0% | 86.40% | 23.64% | 0.0 | 0 | 0 |
| LHDT2 | | 13.60% | 49.15% | 0.0 | 0 | 0 |
| Subtotal | | 100.00% | | 0.0 | 0 | 0 |
| MHDT (3 axle truck) | 0.0% | 100.00% | 81.42% | 0.0 | 0 | 0 |
| HHDT (4+ axle truck) | 0.0% | 100.00% | 98.31% | 0.0 | 0 | 0 |
| Total | 100.0% | | | 0.2 | 137 | 137 |

**Vehicle Summary (Phase Summary)**

| Vehicle Class | Daily Diesel Trips | Daily Non Diesel Trips | Total Daily Trips |
|---|---|---|---|
| LDA | 57 | 17806 | 17863 |
| LDT1 | 3 | 2109 | 2113 |
| LDT2 | 3 | 6430 | 6433 |
| MDT | 5 | 4964 | 4969 |
| LHDT1 | 285 | 919 | 1204 |
| LHDT2 | 93 | 96 | 189 |
| MHDT | 1488 | 340 | 1828 |
| HHDT | 4909 | 84 | 4993 |
| Total | 6843 | 32749 | 39592 |

Trip Generation from PB 2014 Traffic Study
Vehicle Fleet Mix taken from EMFAC2011 for the SoCAB in **2022** and the PB 2014 Traffic Study
% Diesel taken from EMAC2011 for the SoCAB in **2022**

# World Logistics Center

Project Phase 1 (2022)
Area Source: Diesel Trip Distribution by Land Use and Building

**Land Use**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 22,900,000 |
| Light Logistics | 45,500 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 55 | 3 | 3 | 5 | 275 | 90 | 1441 | 4652 | 6524 |
| Light Logistics | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 16 | 24 |
| Utilities Service Station | 0 | 0 | 0 | 0 | 6 | 2 | 5 | 22 | 35 |
| Gas Station w/Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 85 | 101 |
| Convenience Store | 1 | 0 | 0 | 0 | 1 | 0 | 23 | 134 | 159 |
| Fire Station | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | |
| Total | 57 | 3 | 3 | 5 | 285 | 93 | 1488 | 4909 | 6843 |

# World Logistics Center

Project Phase 1 (2022)
Area Source: Non-Diesel Trip Distribution by Land Use and Building

**Land Use:**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 22,900,000 |
| Light Logistics | 45,500 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Non-Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 17378 | 2059 | 6276 | 4845 | 888 | 93 | 329 | 80 | 31948 |
| Light Logistics | 74 | 9 | 27 | 21 | 6 | 1 | 1 | 0 | 138 |
| Utilities Service Station | 109 | 13 | 39 | 30 | 19 | 2 | 1 | 0 | 213 |
| Gas Station w/Convenience Store | 63 | 7 | 23 | 18 | 3 | 0 | 3 | 1 | 118 |
| Convenience Store | 104 | 12 | 38 | 29 | 4 | 0 | 5 | 2 | 195 |
| Fire Station | 78 | 9 | 28 | 22 | 0 | 0 | 0 | 0 | 137 |
| | | | | | | | | | |
| Total | 17806 | 2109 | 6430 | 4964 | 919 | 96 | 340 | 84 | 32749 |

# World Logistics Center
## Project Phase 1 (2022)
Area Source Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 55 | 330 | 0.21 | 11.3 |
| | **LDT1** | 15 | 3 | 330 | 0.21 | 0.6 |
| | **LDT2** | 15 | 3 | 330 | 0.21 | 0.6 |
| | **MDT** | 15 | 5 | 330 | 0.21 | 1.0 |
| | **LHDT1** | 15 | 275 | 330 | 0.21 | 56.4 |
| | **LHDT2** | 15 | 90 | 330 | 0.21 | 18.4 |
| | **MHDT** | 15 | 1441 | 330 | 0.21 | 295.4 |
| | **HHDT** | 15 | 4652 | 330 | 0.21 | 953.7 |
| **Travel at Light Logistics** | **LDA** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT1** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT2** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **MDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LHDT1** | 15 | 2 | 175 | 0.11 | 0.2 |
| | **LHDT2** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **MHDT** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **HHDT** | 15 | 16 | 175 | 0.11 | 1.7 |
| **Travel at Utility** | **LDA** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT1** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT2** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **MDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LHDT1** | 15 | 6 | 100 | 0.06 | 0.4 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 5 | 100 | 0.06 | 0.3 |
| | **HHDT** | 15 | 22 | 100 | 0.06 | 1.3 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 14 | 50 | 0.03 | 0.4 |
| | **HHDT** | 15 | 85 | 50 | 0.03 | 2.7 |
| **Travel at Convenience Store** | **LDA** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **HHDT** | 15 | 134 | 50 | 0.03 | 4.2 |
| **Travel at Fire Station** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 11 | 1 | 1 | 1 | 57 | 19 | 297 | 964 | **1350** |

## Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 138 | 688 |
| | **LHDT2** | 5 | 45 | 225 |
| | **MHDT** | 5 | 720 | 3602 |
| | **HHDT** | 5 | 2326 | 11631 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 1 | 4 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 15 |
| | **HHDT** | 5 | 8 | 40 |
| **Idle at Utility** | **LHDT1** | 5 | 3 | 14 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 2 | 12 |
| | **HHDT** | 5 | 11 | 54 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 0 | 2 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 7 | 35 |
| | **HHDT** | 5 | 43 | 214 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 1 | 3 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 11 | 57 |
| | **HHDT** | 5 | 67 | 334 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |

| **Total DSL (hrs)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** | **Total** |
|---|---|---|---|---|---|
| | 11.9 | 3.9 | 62.0 | 204.5 | 282.3 |

# World Logistics Center
## Project Phase 1 (2022)
Area Source Non-Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 17378 | 330 | 0.21 | 3562.5 |
| | **LDT1** | 15 | 2059 | 330 | 0.21 | 422.1 |
| | **LDT2** | 15 | 6276 | 330 | 0.21 | 1286.5 |
| | **MDT** | 15 | 4845 | 330 | 0.21 | 993.2 |
| | **LHDT1** | 15 | 888 | 330 | 0.21 | 182.1 |
| | **LHDT2** | 15 | 93 | 330 | 0.21 | 19.1 |
| | **MHDT** | 15 | 329 | 330 | 0.21 | 67.4 |
| | **HHDT** | 15 | 80 | 330 | 0.21 | 16.4 |
| **Travel at Light Logistics** | **LDA** | 15 | 74 | 175 | 0.11 | 8.0 |
| | **LDT1** | 15 | 9 | 175 | 0.11 | 1.0 |
| | **LDT2** | 15 | 27 | 175 | 0.11 | 2.9 |
| | **MDT** | 15 | 21 | 175 | 0.11 | 2.2 |
| | **LHDT1** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **LHDT2** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **MHDT** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **HHDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| **Travel at Utility** | **LDA** | 15 | 109 | 100 | 0.06 | 6.8 |
| | **LDT1** | 15 | 13 | 100 | 0.06 | 0.8 |
| | **LDT2** | 15 | 39 | 100 | 0.06 | 2.4 |
| | **MDT** | 15 | 30 | 100 | 0.06 | 1.9 |
| | **LHDT1** | 15 | 19 | 100 | 0.06 | 1.2 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 1 | 100 | 0.06 | 0.1 |
| | **HHDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 63 | 50 | 0.03 | 2.0 |
| | **LDT1** | 15 | 7 | 50 | 0.03 | 0.2 |
| | **LDT2** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **MDT** | 15 | 18 | 50 | 0.03 | 0.5 |
| | **LHDT1** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **HHDT** | 15 | 1 | 50 | 0.03 | 0.0 |
| **Travel at Convenience Store** | **LDA** | 15 | 104 | 50 | 0.03 | 3.2 |
| | **LDT1** | 15 | 12 | 50 | 0.03 | 0.4 |
| | **LDT2** | 15 | 38 | 50 | 0.03 | 1.2 |
| | **MDT** | 15 | 29 | 50 | 0.03 | 0.9 |
| | **LHDT1** | 15 | 4 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 5 | 50 | 0.03 | 0.2 |
| | **HHDT** | 15 | 2 | 50 | 0.03 | 0.1 |
| **Travel at Fire Station** | **LDA** | 15 | 78 | 50 | 0.03 | 2.4 |
| | **LDT1** | 15 | 9 | 50 | 0.03 | 0.3 |
| | **LDT2** | 15 | 28 | 50 | 0.03 | 0.9 |
| | **MDT** | 15 | 22 | 50 | 0.03 | 0.7 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 3585 | 425 | 1295 | 999 | 184 | 19 | 68 | 17 | **6591** |

## Non-Diesel Truck Idling

| Building/Location | Truck Type | Idle time: Idling Time (min) | # Idling Vehicles/Day | 5 minutes Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 444 | 2221 |
| | **LHDT2** | 5 | 47 | 233 |
| | **MHDT** | 5 | 164 | 822 |
| | **HHDT** | 5 | 40 | 200 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 3 | 14 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Utility** | **LHDT1** | 5 | 9 | 46 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 1 | 7 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 2 | 8 |
| | **HHDT** | 5 | 1 | 4 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 2 | 10 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 13 |
| | **HHDT** | 5 | 1 | 6 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |
| **Total GAS Idle Time (hours)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** |
| | 38.3 | 4.0 | 14.2 | 3.5 |

| ID | Arterial | From | To | Internal Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 17,546 | 680 | 2,253 | 7,100 |
| 2 | Street A | Eucalyptus Ave | Street F | 18,224 | 1,321 | 2,451 | 7,634 |
| 3 | Street E | west of Street A | | 9,089 | 613 | 1,261 | 3,945 |
| 5 | Street E | Street D | Street A | 4,165 | 151 | 317 | 106 |
| 6 | Street A | Street F | Street C | 7,907 | 434 | 821 | 1,851 |
| 8 | Street D | Street E | Cactus Ave | 7,495 | 318 | 621 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 74 | 8 | 10 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 548 | 142 | 117 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,049 | 146 | 140 | 298 |
| 18 | Street B | east of Street A | Gilman Springs Rd | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 48 | 0 | 0 | 0 |
| 21 | Street C | east of Street A | Street F | 2,797 | 62 | 172 | 214 |
| 24 | Street C | Street F | Street H | 2,790 | 54 | 176 | 219 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 225 | 8 | 26 | 42 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 225 | 8 | 26 | 42 |
| 31 | Gilman Springs Rd | south of Street C | | 2,993 | 62 | 202 | 261 |

**World Logistics Center** **2022**

Project Phase 1 (2022)
Internal Roadway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27579 | 17,546 | 680 | 2,253 | 7,100 | 327 | 0.203 | 32 | 2 | 2 | 3 | 139 | 45 | 1834 | 6980 | 9037 | 1836 |
| 2 | 29630 | 18,224 | 1,321 | 2,451 | 7,634 | 731 | 0.454 | 33 | 2 | 2 | 3 | 270 | 88 | 1996 | 7505 | 9898 | 4495 |
| 3 | 14908 | 9,089 | 613 | 1,261 | 3,945 | 2352 | 1.461 | 16 | 1 | 1 | 1 | 125 | 41 | 1027 | 3878 | 5091 | 7438 |
| 5 | 4739 | 4,165 | 151 | 317 | 106 | 953 | 0.592 | 8 | 0 | 0 | 1 | 31 | 10 | 258 | 104 | 412 | 244 |
| 6 | 11013 | 7,907 | 434 | 821 | 1,851 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 89 | 29 | 668 | 1820 | 2623 | 1791 |
| 8 | 8434 | 7,495 | 318 | 621 | 0 | 1091 | 0.678 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 412 |
| 11 | 92 | 74 | 8 | 10 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 0 | 10 | 8 |
| 12 | 807 | 548 | 142 | 117 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 29 | 9 | 95 | 0 | 135 | 69 |
| 14 | 1633 | 1,049 | 146 | 140 | 298 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 30 | 10 | 114 | 293 | 449 | 451 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 48 | 48 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 3245 | 2,797 | 62 | 172 | 214 | 1258 | 0.781 | 5 | 0 | 0 | 0 | 13 | 4 | 140 | 210 | 373 | 292 |
| 24 | 3239 | 2,790 | 54 | 176 | 219 | 1946 | 1.209 | 5 | 0 | 0 | 0 | 11 | 4 | 143 | 215 | 379 | 458 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 301 | 225 | 8 | 26 | 42 | 675 | 0.419 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 27 |
| 30 | 301 | 225 | 8 | 26 | 42 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 114 |
| 31 | 3518 | 2,993 | 62 | 202 | 261 | 820 | 0.509 | 5 | 0 | 0 | 0 | 13 | 4 | 164 | 257 | 444 | 226 |
| | | | | | | | | | | | | | | | | Total | 17862 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 0 | 0 | 1 | 28 | 9 | 373 | 1418 |
| 2 | 1 | 15 | 1 | 1 | 1 | 123 | 40 | 906 | 3408 |
| 3 | 1 | 24 | 1 | 1 | 2 | 183 | 60 | 1500 | 5667 |
| 5 | 1 | 4 | 0 | 0 | 0 | 18 | 6 | 153 | 62 |
| 6 | 1 | 10 | 1 | 1 | 1 | 61 | 20 | 456 | 1242 |
| 8 | 1 | 9 | 0 | 0 | 1 | 44 | 14 | 343 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 |
| 12 | 1 | 1 | 0 | 0 | 0 | 15 | 5 | 49 | 0 |
| 14 | 1 | 2 | 0 | 0 | 0 | 30 | 10 | 115 | 294 |
| 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1 | 4 | 0 | 0 | 0 | 10 | 3 | 109 | 164 |
| 24 | 1 | 6 | 0 | 0 | 1 | 13 | 4 | 173 | 260 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 17 |
| 30 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 37 | 73 |
| 31 | 1 | 3 | 0 | 0 | 0 | 6 | 2 | 84 | 131 |
| Total | | **85** | **5** | **4** | **8** | **536** | **175** | **4313** | **12737** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 85 | 5 | 4 | 8 | 536 | 175 | 4313 | 12737 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | **85** | **5** | **4** | **8** | **536** | **175** | **4313** | **12737** | **17862** |

**World Logistics Center** **2022**
Project Phase 1 (2022)
Internal Roadway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27579 | 17,546 | 680 | 2,253 | 7,100 | 327 | 0.203 | 9957 | 1180 | 3596 | 2776 | 449 | 47 | 419 | 120 | 18542 | 3767 |
| 2 | 29630 | 18,224 | 1,321 | 2,451 | 7,634 | 731 | 0.454 | 10342 | 1225 | 3735 | 2883 | 872 | 91 | 455 | 129 | 19732 | 8960 |
| 3 | 14908 | 9,089 | 613 | 1,261 | 3,945 | 2352 | 1.461 | 5158 | 611 | 1863 | 1438 | 404 | 42 | 234 | 67 | 9817 | 14344 |
| 5 | 4739 | 4,165 | 151 | 317 | 106 | 953 | 0.592 | 2364 | 280 | 854 | 659 | 100 | 10 | 59 | 2 | 4327 | 2562 |
| 6 | 11013 | 7,907 | 434 | 821 | 1,851 | 1099 | 0.683 | 4487 | 532 | 1620 | 1251 | 286 | 30 | 153 | 31 | 8390 | 5728 |
| 8 | 8434 | 7,495 | 318 | 621 | 0 | 1091 | 0.678 | 4253 | 504 | 1536 | 1186 | 210 | 22 | 115 | 0 | 7826 | 5304 |
| 11 | 92 | 74 | 8 | 10 | 0 | 1201 | 0.746 | 42 | 5 | 15 | 12 | 5 | 1 | 2 | 0 | 82 | 61 |
| 12 | 807 | 548 | 142 | 117 | 0 | 824 | 0.512 | 311 | 37 | 112 | 87 | 94 | 10 | 22 | 0 | 672 | 344 |
| 14 | 1633 | 1,049 | 146 | 140 | 298 | 1618 | 1.005 | 595 | 71 | 215 | 166 | 96 | 10 | 26 | 5 | 1184 | 1190 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 48 | 48 | 0 | 0 | 0 | 2386 | 1.482 | 27 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | 48 | 71 |
| 21 | 3245 | 2,797 | 62 | 172 | 214 | 1258 | 0.781 | 1587 | 188 | 573 | 443 | 41 | 4 | 32 | 4 | 2872 | 2244 |
| 24 | 3239 | 2,790 | 54 | 176 | 219 | 1946 | 1.209 | 1583 | 188 | 572 | 441 | 36 | 4 | 33 | 4 | 2860 | 3457 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 301 | 225 | 8 | 26 | 42 | 675 | 0.419 | 128 | 15 | 46 | 36 | 5 | 1 | 5 | 1 | 236 | 99 |
| 30 | 301 | 225 | 8 | 26 | 42 | 2827 | 1.756 | 128 | 15 | 46 | 36 | 5 | 1 | 5 | 1 | 236 | 414 |
| 31 | 3518 | 2,993 | 62 | 202 | 261 | 820 | 0.509 | 1698 | 201 | 613 | 474 | 41 | 4 | 38 | 4 | 3074 | 1566 |
| | | | | | | | | | | | | | | | | Total | 50110 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2023 | 240 | 730 | 564 | 91 | 10 | 85 | 24 |
| 2 | 1 | 4696 | 556 | 1696 | 1309 | 396 | 41 | 207 | 58 |
| 3 | 1 | 7536 | 893 | 2721 | 2101 | 591 | 62 | 342 | 97 |
| 5 | 1 | 1399 | 166 | 505 | 390 | 59 | 6 | 35 | 1 |
| 6 | 1 | 3063 | 363 | 1106 | 854 | 195 | 20 | 104 | 21 |
| 8 | 1 | 2883 | 342 | 1041 | 804 | 142 | 15 | 78 | 0 |
| 11 | 1 | 31 | 4 | 11 | 9 | 4 | 0 | 1 | 0 |
| 12 | 1 | 159 | 19 | 57 | 44 | 48 | 5 | 11 | 0 |
| 14 | 1 | 598 | 71 | 216 | 167 | 97 | 10 | 26 | 5 |
| 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 40 | 5 | 15 | 11 | 0 | 0 | 0 | 0 |
| 21 | 1 | 1240 | 147 | 448 | 346 | 32 | 3 | 25 | 3 |
| 24 | 1 | 1914 | 227 | 691 | 534 | 43 | 5 | 40 | 4 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 54 | 6 | 19 | 15 | 2 | 0 | 2 | 0 |
| 30 | 1 | 224 | 27 | 81 | 63 | 9 | 1 | 8 | 1 |
| 31 | 1 | 865 | 102 | 312 | 241 | 21 | 2 | 19 | 2 |
| Total | | **26726** | **3166** | **9651** | **7451** | **1731** | **181** | **984** | **218** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 26726 | 3166 | 9651 | 7451 | 1731 | 181 | 984 | 218 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **26726** | **3166** | **9651** | **7451** | **1731** | **181** | **984** | **218** | **50110** |

**World Logistics Center**
**Project Phase 1 (2022)**
**Entrained Road Dust**
Internal Roadways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 17,546 | 3564 | 680 | 138 | 2,253 | 458 | 7,100 | 1442 | 5602 | 8.44 | 0.035 | 0.0002 | 1.3 | 0.0009 | 5.1 |
| 2 | A | 731 | 0.45 | 18,224 | 8276 | 1,321 | 600 | 2,451 | 1113 | 7,634 | 3467 | 13455 | 8.52 | 0.035 | 0.0002 | 3.1 | 0.0009 | 12.5 |
| 3 | A | 2352 | 1.46 | 9,089 | 13280 | 613 | 896 | 1,261 | 1842 | 3,945 | 5764 | 21782 | 8.68 | 0.035 | 0.0002 | 5.0 | 0.0009 | 20.5 |
| 5 | A | 953 | 0.59 | 4,165 | 2466 | 151 | 89 | 317 | 188 | 106 | 63 | 2806 | 3.36 | 0.035 | 0.0001 | 0.2 | 0.0004 | 1.0 |
| 6 | A | 1099 | 0.68 | 7,907 | 5398 | 434 | 296 | 821 | 561 | 1,851 | 1264 | 7519 | 6.53 | 0.035 | 0.0002 | 1.3 | 0.0007 | 5.3 |
| 8 | A | 1091 | 0.68 | 7,495 | 5080 | 318 | 216 | 621 | 421 | 0 | 0 | 5716 | 2.97 | 0.035 | 0.0001 | 0.4 | 0.0003 | 1.8 |
| 11 | A | 1201 | 0.75 | 74 | 55 | 8 | 6 | 10 | 7 | 0 | 0 | 69 | 3.48 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 12 | A | 824 | 0.51 | 548 | 281 | 142 | 73 | 117 | 60 | 0 | 0 | 413 | 4.14 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 14 | A | 1618 | 1.01 | 1,049 | 1054 | 146 | 147 | 140 | 141 | 298 | 300 | 1641 | 7.12 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.3 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 19 | A | 2386 | 1.48 | 48 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 21 | A | 1258 | 0.78 | 2,797 | 2186 | 62 | 48 | 172 | 134 | 214 | 167 | 2536 | 4.10 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 24 | A | 1946 | 1.21 | 2,790 | 3373 | 54 | 65 | 176 | 213 | 219 | 265 | 3916 | 4.14 | 0.035 | 0.0001 | 0.4 | 0.0004 | 1.7 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 29 | A | 675 | 0.42 | 225 | 94 | 8 | 3 | 26 | 11 | 42 | 18 | 126 | 6.00 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 30 | A | 2827 | 1.76 | 225 | 395 | 8 | 14 | 26 | 46 | 42 | 74 | 529 | 6.00 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.3 |
| 31 | A | 820 | 0.51 | 2,993 | 1525 | 62 | 32 | 202 | 103 | 261 | 133 | 1792 | 4.31 | 0.035 | 0.0001 | 0.2 | 0.0005 | 0.8 |
| | | | | | | | | | | | | | | | **Totals:** | **12.7** | | **51.9** |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 4,976 | 198 | 482 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 647 | 29 | 41 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 620 | 13 | 38 | 298 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1,576 | 69 | 92 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 481 | 16 | 29 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 187 | 12 | 31 | 450 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1,116 | 62 | 173 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 478 | 39 | 151 | 382 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 2,191 | 129 | 349 | 4 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,607 | 93 | 285 | 449 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 125 | 5 | 5 | 39 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 176 | 8 | 8 | 116 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 85 | 4 | 3 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 239 | 6 | 13 | 27 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 7,495 | 318 | 621 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 0 | 0 | 0 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 4,474 | 164 | 464 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 434 | 30 | 16 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 42 | 3 | 1 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,122 | 59 | 173 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 83 | 3 | 3 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 0 | 0 | 0 | 186 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 738 | 20 | 64 | 289 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 37 | 5 | 5 | 92 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | |
| 65 | Alessandro Blvd | Nason St | Oliver St | 317 | 8 | 16 | 32 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 401 | 13 | 27 | 32 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 907 | 34 | 57 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 1,333 | 51 | 86 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 4,386 | 161 | 462 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 388 | 7 | 7 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 140 | 4 | 7 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 32 | 1 | 4 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 525 | 10 | 10 | 7 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 693 | 15 | 17 | 8 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,058 | 28 | 53 | 177 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 504 | 14 | 26 | 88 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,379 | 47 | 110 | 251 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 15 | 0 | 1 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 26 | 1 | 1 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 480 | 12 | 37 | 33 |
| 96 | N California Ave | W 6th St | E 8th St | 404 | 9 | 19 | 15 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 57 | 2 | 5 | 6 |
| 98 | N California Ave | W 6th St | I-10 | 38 | 2 | 13 | 11 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 141 | 1 | 4 | 3 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 196 | 5 | 13 | 27 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 563 | 13 | 36 | 65 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 1 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 511 | 12 | 30 | 59 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 113 | 2 | 8 | 34 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 12 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 142 | 3 | 12 | 34 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 0 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 29 | 2 | 7 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 110 | Alessandro Blvd | Day St | Elsworth St | 121 | 3 | 9 | 27 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 133 | 5 | 17 | 55 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 12 | 2 | 7 | 14 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 20 | 2 | 8 | 31 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 130 | 3 | 10 | 35 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 8 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 13 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 140 | 4 | 11 | 39 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 28 | 0 | 2 | 0 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 88 | 5 | 15 | 126 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 146 | 4 | 10 | 31 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 58 | 3 | 10 | 101 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 12 | 0 | 0 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 170 | 5 | 12 | 31 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 188 | 5 | 11 | 29 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 39 | 3 | 10 | 188 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 207 | 5 | 12 | 27 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 49 | 2 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 4 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 59 | 2 | 2 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 36 | 2 | 3 | 5 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 275 | 8 | 16 | 32 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 67 | 2 | 2 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 10 | 1 | 4 | 10 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 168 | 4 | 12 | 12 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 12 | 1 | 2 | 12 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 167 | 3 | 9 | 10 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 13 | 1 | 3 | 4 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 177 | 5 | 14 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 181 | 5 | 15 | 0 |
| 145 | Cactus Ave | Graham St | Heacock St | 208 | 6 | 17 | 0 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 24 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 243 | 8 | 20 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 54 | 2 | 8 | 92 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 307 | 10 | 25 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 340 | 11 | 28 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 28 | 2 | 9 | 184 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 437 | 15 | 30 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,147 | 36 | 77 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 607 | 17 | 44 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,334 | 51 | 86 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 194 | 5 | 15 | 18 |
| 159 | Beaumont Ave | E 6th St | I-10 | 317 | 5 | 15 | 17 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 583 | 31 | 104 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 1,351 | 77 | 259 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 712 | 44 | 152 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 15 | 1 | 3 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 4,320 | 157 | 459 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 648 | 40 | 143 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,787 | 71 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,632 | 67 | 189 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,600 | 98 | 324 | 382 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 328 | 15 | 39 | 63 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,943 | 115 | 364 | 446 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 115 | 4 | 5 | 3 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2,924 | 54 | 187 | 185 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 2,523 | 47 | 171 | 152 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 401 | 7 | 16 | 34 |
| 194 | Crescent Ave | West of Alessandro Rd | | 329 | 20 | 63 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 592 | 31 | 95 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 921 | 50 | 158 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 0 | 0 | 0 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 152 | 6 | 10 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,122 | 59 | 173 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 221 | 12 | 41 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 221 | 12 | 41 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 10 | 0 | 0 | 0 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 197 | 4 | 11 | 20 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 317 | 7 | 19 | 30 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 60 | 1 | 4 | 9 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 11 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 5 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 13 | 0 | 0 | 0 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 36 | 1 | 4 | 9 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 9 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 35 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 66 | 1 | 3 | 6 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 520 | 12 | 45 | 73 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 47 | 1 | 4 | 9 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 13 | 0 | 2 | 2 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 404 | 11 | 45 | 74 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 185 | 4 | 17 | 20 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 197 | 6 | 26 | 51 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 201 | 6 | 26 | 50 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 16 | 1 | 2 | 6 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 8 | 0 | 2 | 8 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 46 | 1 | 7 | 18 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 27 | 1 | 6 | 18 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 190 | 6 | 22 | 41 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 546 | 12 | 46 | 74 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 1 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 205 | 3 | 4 | 6 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 761 | 16 | 51 | 83 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 98 | 4 | 13 | 40 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 209 | 7 | 27 | 72 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 781 | 18 | 57 | 95 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 421 | 11 | 37 | 60 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,049 | 26 | 90 | 147 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 163 | 6 | 26 | 43 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 724 | 17 | 54 | 89 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 448 | 15 | 65 | 169 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 9 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 457 | 16 | 66 | 171 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 7 | 0 | 2 | 2 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 472 | 16 | 69 | 174 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 27 | 3 | 10 | 45 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 463 | 17 | 69 | 185 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 141 | 5 | 19 | 46 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 558 | 19 | 81 | 211 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 16 | 0 | 2 | 7 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 298 | 10 | 41 | 100 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 79 | 8 | 30 | 103 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,139 | 36 | 78 | 244 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 366 | 13 | 33 | 151 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 766 | 24 | 56 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 682 | 22 | 49 | 126 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 206 | 7 | 18 | 8 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 721 | 23 | 52 | 103 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 422 | 16 | 33 | 213 |
| 294 | Via Del Lago | South of Iris Ave | | 55 | 2 | 2 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 397 | 10 | 37 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 411 | 10 | 35 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 23 | 1 | 5 | 182 |
| 304 | Iris Ave | Indian St | Perris Blvd | 28 | 7 | 18 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 503 | 22 | 87 | 180 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 936 | 47 | 165 | 180 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 25 | 0 | 1 | 1 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 1,181 | 20 | 76 | 91 |
| 326 | Ramona Expy | Sanderson Ave | State St | 71 | 1 | 2 | 2 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 1,073 | 19 | 73 | 87 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 15 | 1 | 1 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 2,520 | 47 | 170 | 151 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 34 | 0 | 1 | 1 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 1,855 | 36 | 130 | 93 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,297 | 21 | 80 | 95 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 37 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,316 | 25 | 92 | 50 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 1,103 | 21 | 58 | 58 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 556 | 13 | 35 | 55 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 7 | 0 | 2 | 10 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ram | Mid County Pkwy | 3rd St | | | | |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | | | | |
| 377 | Mid County Pkwy WB Off-Ram | Mid County Pkwy | 3rd St | | | | |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | | | | |
| 379 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | 3rd St | | | | |
| 380 | Mid County Pkwy EB On-Ramp | 3rd St | Mid County Pkwy | | | | |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | | | | |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 2 | 0 | 1 | 2 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 701 | 29 | 109 | 104 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 16 | 0 | 1 | 2 |
| 390 | Ramona Expy | Webster Ave | Indian St | 286 | 11 | 34 | 13 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 189 | 14 | 64 | 25 |
| 393 | Indian St | Ramona Expy | Morgan St | 34 | 6 | 48 | 44 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 668 | 27 | 106 | 91 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 1,162 | 39 | 139 | 40 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 1,136 | 34 | 124 | 12 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,378 | 62 | 181 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 183 | 4 | 8 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 400 | Evans Rd | Ramona Expy | Rider St | 386 | 9 | 14 | 1 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 1 | 1 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 147 | 6 | 4 | 3 |
| 406 | Ironwood Ave | East of Thedore St | | 76 | 8 | 5 | 4 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 1 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 103 | 4 | 7 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 198 | 6 | 8 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 4 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 72 | 2 | 7 | 8 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 998 | 32 | 109 | 27 |
| 416 | Mid County Pkwy WB On-Ram | Mid County Pkwy | Perris Blvd | 388 | 17 | 65 | 10 |
| 417 | Mid County Pkwy WB Off-Ram | Perris Blvd | Mid County Pkwy | 6 | 0 | 0 | 2 |
| 419 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | Perris Blvd | 451 | 13 | 50 | 12 |
| 420 | Mid County Pkwy EB On-Ramp | Perris Blvd | Mid County Pkwy | 0 | 0 | 0 | 2 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 110 | 5 | 14 | 202 |
| 425 | Mid County Pkwy WB On-Ram | West of Evan | | 121 | 1 | 5 | 2 |
| 426 | Mid County Pkwy WB Off-Ram | East of Evan | | 0 | 0 | 0 | 1 |
| 427 | Day St | south of Alessandro Blvd | | 4 | 1 | 5 | 7 |
| 428 | Mid County Pkwy EB Off-Ramp | West of Evan | | 41 | 0 | 1 | 2 |
| 429 | Mid County Pkwy EB On-Ramp | East of Evan | | 1 | 0 | 0 | 0 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 366 | 8 | 23 | 50 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | |
| 433 | Evans Rd | Rider St | Orange Ave | 185 | 3 | 5 | 1 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 17 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 61 | 1 | 2 | 0 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 45 | 1 | 2 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | |
| 453 | Evans Rd | North of San Jancito Ave | | | | | |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | |
| 455 | Evans Rd | South of San Jancito Ave | | | | | |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | |
| 477 | Ellis Ave | West of Evan Rd | | | | | |
| 478 | Evans Rd | North of Ellis Ave | | | | | |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | |
| 482 | Ellis Ave | East of SR-215 | | | | | |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | |
| 488 | Nason St | North of Iris Ave | | 0 | 0 | 0 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 340 | 13 | 25 | 208 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 358 | 14 | 26 | 208 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | |
| 504 | Krameria Ave | west of Perris Blvd | | 151 | 13 | 56 | 0 |

**World Logistics Center** **2022**
Project Phase 1 (2022)
Surface Street Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Daily VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5656 | 4,976 | 198 | 482 | 0 | 1820 | 1.131 | 9 | 0 | 0 | 1 | 40 | 13 | 392 | 0 | 457 | 517 |
| 10 | 717 | 647 | 29 | 41 | 0 | 826 | 0.513 | 1 | 0 | 0 | 0 | 6 | 2 | 33 | 0 | 43 | 22 |
| 13 | 969 | 620 | 13 | 38 | 298 | 345 | 0.214 | 1 | 0 | 0 | 0 | 3 | 1 | 31 | 293 | 329 | 70 |
| 32 | 1737 | 1,576 | 69 | 92 | 0 | 1551 | 0.964 | 3 | 0 | 0 | 0 | 14 | 5 | 75 | 0 | 97 | 93 |
| 33 | 526 | 481 | 16 | 29 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 36 |
| 35 | 680 | 187 | 12 | 31 | 450 | 801 | 0.498 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 442 | 471 | 235 |
| 36 | 1351 | 1,116 | 62 | 173 | 0 | 1627 | 1.011 | 2 | 0 | 0 | 0 | 13 | 4 | 141 | 0 | 160 | 162 |
| 37 | 1050 | 478 | 39 | 151 | 382 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 123 | 376 | 510 | 69 |
| 38 | 2673 | 2,191 | 129 | 349 | 4 | 659 | 0.409 | 4 | 0 | 0 | 0 | 26 | 9 | 284 | 4 | 328 | 134 |
| 42 | 2434 | 1,607 | 93 | 285 | 449 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 19 | 6 | 232 | 441 | 702 | 2328 |
| 43 | 174 | 125 | 5 | 5 | 39 | 2598 | 1.614 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 38 | 44 | 71 |
| 46 | 308 | 176 | 8 | 8 | 116 | 806 | 0.501 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 114 | 123 | 62 |
| 47 | 92 | 85 | 4 | 3 | 0 | 1995 | 1.239 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 5 |
| 48 | 285 | 239 | 6 | 13 | 27 | 795 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 19 |
| 50 | 8434 | 7,495 | 318 | 621 | 0 | 479 | 0.298 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 181 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5102 | 4,474 | 164 | 464 | 0 | 1269 | 0.788 | 8 | 0 | 0 | 1 | 33 | 11 | 378 | 0 | 432 | 340 |
| 53 | 480 | 434 | 30 | 16 | 0 | 795 | 0.494 | 1 | 0 | 0 | 0 | 6 | 2 | 13 | 0 | 22 | 11 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 46 | 42 | 3 | 1 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1354 | 1,122 | 59 | 173 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 24 |
| 58 | 89 | 83 | 3 | 3 | 0 | 172 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 |
| 59 | 186 | 0 | 0 | 0 | 186 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 183 | 89 |
| 60 | 1111 | 738 | 20 | 64 | 289 | 159 | 0.099 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 284 | 343 | 34 |
| 61 | 139 | 37 | 5 | 5 | 92 | 97 | 0.060 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 90 | 96 | 6 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 373 | 317 | 8 | 16 | 32 | 795 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 23 |
| 66 | 473 | 401 | 13 | 27 | 32 | 812 | 0.504 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 31 | 58 | 29 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 998 | 907 | 34 | 57 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 7 | 2 | 46 | 0 | 58 | 29 |
| 70 | 1470 | 1,333 | 51 | 86 | 0 | 795 | 0.494 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5009 | 4,386 | 161 | 462 | 0 | 742 | 0.461 | 8 | 0 | 0 | 1 | 33 | 11 | 376 | 0 | 429 | 198 |
| 74 | 403 | 388 | 7 | 7 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 9 | 9 |
| 75 | 156 | 140 | 4 | 7 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 | 12 | 6 |
| 76 | 37 | 32 | 1 | 4 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 4 |
| 77 | 552 | 525 | 10 | 10 | 7 | 438 | 0.272 | 1 | 0 | 0 | 0 | 2 | 1 | 8 | 7 | 19 | 5 |
| 80 | 733 | 693 | 15 | 17 | 8 | 138 | 0.086 | 1 | 0 | 0 | 0 | 3 | 1 | 14 | 8 | 27 | 2 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1316 | 1,058 | 28 | 53 | 177 | 322 | 0.200 | 2 | 0 | 0 | 0 | 6 | 2 | 43 | 174 | 227 | 45 |
| 83 | 632 | 504 | 14 | 26 | 88 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 87 | 113 | 7 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1787 | 1,379 | 47 | 110 | 251 | 284 | 0.176 | 2 | 0 | 0 | 0 | 10 | 3 | 90 | 247 | 352 | 62 |
| 87 | 16 | 15 | 0 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 88 | 28 | 26 | 1 | 1 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 95 | 562 | 480 | 12 | 37 | 33 | 439 | 0.273 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 32 | 67 | 18 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 447 | 404 | 9 | 19 | 15 | 399 | 0.248 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 15 | 34 | 8 |
| 97 | 70 | 57 | 2 | 5 | 6 | 389 | 0.242 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 11 | 3 |
| 98 | 64 | 38 | 2 | 13 | 11 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 22 | 2 |
| 99 | 149 | 141 | 1 | 4 | 3 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |
| 100 | 241 | 196 | 5 | 13 | 27 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 5 |
| 101 | 677 | 563 | 13 | 36 | 65 | 313 | 0.194 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 64 | 98 | 19 |
| 102 | 1 | 1 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 612 | 511 | 12 | 30 | 59 | 291 | 0.181 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 58 | 87 | 16 |
| 104 | 157 | 113 | 2 | 8 | 34 | 404 | 0.251 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 33 | 41 | 10 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 13 | 12 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 107 | 191 | 142 | 3 | 12 | 34 | 388 | 0.241 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 33 | 44 | 11 |
| 108 | 14 | 12 | 0 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 109 | 38 | 29 | 2 | 7 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 3 |
| 110 | 160 | 121 | 3 | 9 | 27 | 756 | 0.470 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 | 35 | 16 |
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 210 | 133 | 5 | 17 | 55 | 817 | 0.508 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 54 | 70 | 35 |
| 113 | 35 | 12 | 2 | 7 | 14 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 | 20 | 10 |
| 114 | 61 | 20 | 2 | 8 | 31 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 38 | 18 |
| 115 | 178 | 130 | 3 | 10 | 35 | 851 | 0.529 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 34 | 44 | 23 |
| 116 | 9 | 1 | 0 | 0 | 8 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 4 |
| 117 | 13 | 13 | 0 | 0 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 194 | 140 | 4 | 11 | 39 | 765 | 0.475 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 38 | 49 | 23 |
| 119 | 30 | 28 | 0 | 2 | 0 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 120 | 234 | 88 | 5 | 15 | 126 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 124 | 138 | 70 |
| 121 | 191 | 146 | 4 | 10 | 31 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 30 | 40 | 21 |
| 122 | 172 | 58 | 3 | 10 | 101 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 99 | 108 | 53 |
| 123 | 12 | 12 | 0 | 0 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 218 | 170 | 5 | 12 | 31 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 30 | 42 | 21 |
| 125 | 1 | 1 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 233 | 188 | 5 | 11 | 29 | 774 | 0.481 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 29 | 39 | 19 |
| 127 | 240 | 39 | 3 | 10 | 188 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 185 | 194 | 99 |
| 128 | 1 | 1 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 251 | 207 | 5 | 12 | 27 | 823 | 0.511 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 27 | 38 | 19 |
| 130 | 52 | 49 | 2 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 131 | 4 | 4 | 0 | 0 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 63 | 59 | 2 | 2 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 134 | 46 | 36 | 2 | 3 | 5 | 760 | 0.472 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 4 |
| 135 | 331 | 275 | 8 | 16 | 32 | 816 | 0.507 | 0 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 24 |
| 136 | 71 | 67 | 2 | 2 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 137 | 1 | 1 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 25 | 10 | 1 | 4 | 10 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 13 | 2 |
| 139 | 196 | 168 | 4 | 12 | 12 | 504 | 0.313 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 12 | 23 | 7 |
| 140 | 27 | 12 | 1 | 2 | 12 | 527 | 0.327 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 14 | 4 |
| 141 | 189 | 167 | 3 | 9 | 10 | 1001 | 0.622 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 10 | 18 | 11 |
| 142 | 21 | 13 | 1 | 3 | 4 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 1 |
| 143 | 204 | 177 | 5 | 14 | 8 | 845 | 0.525 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 8 | 21 | 11 |
| 144 | 201 | 181 | 5 | 15 | 0 | 783 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 | 7 |
| 145 | 231 | 208 | 6 | 17 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 | 16 | 8 |
| 146 | 25 | 24 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 147 | 271 | 243 | 8 | 20 | 0 | 798 | 0.496 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 19 | 9 |
| 148 | 156 | 54 | 2 | 8 | 92 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 90 | 98 | 44 |
| 149 | 342 | 307 | 10 | 25 | 0 | 808 | 0.502 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 0 | 24 | 12 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 379 | 340 | 11 | 28 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 2 | 1 | 23 | 0 | 27 | 13 |
| 152 | 223 | 28 | 2 | 9 | 184 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 181 | 189 | 92 |
| 153 | 482 | 437 | 15 | 30 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 15 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1260 | 1,147 | 36 | 77 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 7 | 2 | 63 | 0 | 75 | 36 |
| 156 | 668 | 607 | 17 | 44 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 42 | 20 |
| 157 | 1471 | 1,334 | 51 | 86 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 158 | 232 | 194 | 5 | 15 | 18 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 18 | 32 | 20 |
| 159 | 354 | 317 | 5 | 15 | 17 | 170 | 0.106 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 17 | 31 | 3 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 718 | 583 | 31 | 104 | 0 | 784 | 0.487 | 1 | 0 | 0 | 0 | 6 | 2 | 85 | 0 | 94 | 46 |
| 162 | 1687 | 1,351 | 77 | 259 | 0 | 1052 | 0.654 | 2 | 0 | 0 | 0 | 16 | 5 | 211 | 0 | 235 | 153 |
| 163 | 908 | 712 | 44 | 152 | 0 | 350 | 0.217 | 1 | 0 | 0 | 0 | 9 | 3 | 124 | 0 | 137 | 30 |
| 164 | 19 | 15 | 1 | 3 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 165 | 4936 | 4,320 | 157 | 459 | 0 | 1541 | 0.957 | 8 | 0 | 0 | 1 | 32 | 10 | 374 | 0 | 426 | 407 |
| 168 | 831 | 648 | 40 | 143 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 8 | 3 | 116 | 0 | 129 | 61 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3050 | 2,787 | 71 | 192 | 0 | 522 | 0.324 | 5 | 0 | 0 | 0 | 15 | 5 | 156 | 0 | 182 | 59 |
| 172 | 2888 | 2,632 | 67 | 189 | 0 | 993 | 0.617 | 5 | 0 | 0 | 0 | 14 | 4 | 154 | 0 | 178 | 110 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2404 | 1,600 | 98 | 324 | 382 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 20 | 7 | 264 | 376 | 669 | 462 |
| 178 | 445 | 328 | 15 | 39 | 63 | 7132 | 4.430 | 1 | 0 | 0 | 0 | 3 | 1 | 32 | 62 | 98 | 436 |
| 179 | 2868 | 1,943 | 115 | 364 | 446 | 2189 | 1.360 | 4 | 0 | 0 | 0 | 23 | 8 | 296 | 438 | 770 | 1047 |
| 180 | 127 | 115 | 4 | 5 | 3 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 | 8 | 35 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 3350 | 2,924 | 54 | 187 | 185 | 6368 | 3.956 | 5 | 0 | 0 | 0 | 11 | 4 | 152 | 182 | 355 | 1405 |
| 191 | 2893 | 2,523 | 47 | 171 | 152 | 4906 | 3.048 | 5 | 0 | 0 | 0 | 10 | 3 | 139 | 149 | 307 | 935 |
| 192 | 458 | 401 | 7 | 16 | 34 | 4358 | 2.707 | 1 | 0 | 0 | 0 | 1 | 0 | 13 | 33 | 49 | 133 |
| 194 | 412 | 329 | 20 | 63 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 | 57 | 13 |
| 195 | 718 | 592 | 31 | 95 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 6 | 2 | 77 | 0 | 87 | 21 |
| 196 | 1129 | 921 | 50 | 158 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 10 | 3 | 129 | 0 | 144 | 64 |
| 198 | 0 | 0 | 0 | 0 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 168 | 152 | 6 | 10 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 10 | 2 |
| 200 | 1354 | 1,122 | 59 | 173 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 139 |
| 205 | 274 | 221 | 12 | 41 | 0 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 35 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 274 | 221 | 12 | 41 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 60 |
| 215 | 10 | 10 | 0 | 0 | 0 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 232 | 197 | 4 | 11 | 20 | 2000 | 1.242 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 20 | 30 | 37 |
| 217 | 373 | 317 | 7 | 19 | 30 | 663 | 0.412 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | 29 | 48 | 20 |
| 218 | 74 | 60 | 1 | 4 | 9 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 13 | 9 |
| 219 | 12 | 11 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 5 | 5 | 0 | 0 | 0 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 13 | 13 | 0 | 0 | 0 | 359 | 0.223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 50 | 36 | 1 | 4 | 9 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 13 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 9 | 9 | 0 | 0 | 0 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 35 | 35 | 0 | 0 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 76 | 66 | 1 | 3 | 6 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 11 |
| 232 | 650 | 520 | 12 | 45 | 73 | 1719 | 1.068 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 72 | 113 | 120 |
| 233 | 61 | 47 | 1 | 4 | 9 | 976 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 8 |
| 236 | 17 | 13 | 0 | 2 | 2 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 2 |
| 237 | 534 | 404 | 11 | 45 | 74 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 113 | 109 |
| 238 | 226 | 185 | 4 | 17 | 20 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 20 | 35 | 24 |
| 239 | 280 | 197 | 6 | 26 | 51 | 1385 | 0.860 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 50 | 73 | 63 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 283 | 201 | 6 | 26 | 50 | 989 | 0.614 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 49 | 72 | 44 |
| 243 | 25 | 16 | 1 | 2 | 6 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | 0 |
| 244 | 18 | 8 | 0 | 2 | 8 | 173 | 0.107 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 10 | 1 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 245 | 72 | 46 | 1 | 7 | 18 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 | 24 | 3 |
| 246 | 52 | 27 | 1 | 6 | 18 | 273 | 0.170 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 18 | 23 | 4 |
| 247 | 259 | 190 | 6 | 22 | 41 | 87 | 0.054 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 40 | 60 | 3 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 678 | 546 | 12 | 46 | 74 | 1588 | 0.986 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 115 | 113 |
| 254 | 1 | 1 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 218 | 205 | 3 | 4 | 6 | 943 | 0.586 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 6 | 10 | 6 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 911 | 761 | 16 | 51 | 83 | 1783 | 1.108 | 1 | 0 | 0 | 0 | 3 | 1 | 42 | 82 | 129 | 143 |
| 261 | 155 | 98 | 4 | 13 | 40 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 39 | 51 | 38 |
| 262 | 315 | 209 | 7 | 27 | 72 | 860 | 0.534 | 0 | 0 | 0 | 0 | 1 | 0 | 22 | 71 | 95 | 51 |
| 263 | 951 | 781 | 18 | 57 | 95 | 141 | 0.088 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 93 | 146 | 13 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 529 | 421 | 11 | 37 | 60 | 98 | 0.061 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 59 | 93 | 6 |
| 266 | 1312 | 1,049 | 26 | 90 | 147 | 171 | 0.106 | 2 | 0 | 0 | 0 | 5 | 2 | 73 | 145 | 227 | 24 |
| 267 | 238 | 163 | 6 | 26 | 43 | 156 | 0.097 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 42 | 65 | 6 |
| 268 | 884 | 724 | 17 | 54 | 89 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 44 | 87 | 138 | 14 |
| 269 | 697 | 448 | 15 | 65 | 169 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 3 | 1 | 53 | 166 | 224 | 341 |
| 270 | 12 | 9 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 271 | 710 | 457 | 16 | 66 | 171 | 370 | 0.230 | 1 | 0 | 0 | 0 | 3 | 1 | 54 | 168 | 227 | 52 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 11 | 7 | 0 | 2 | 2 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 274 | 731 | 472 | 16 | 69 | 174 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 171 | 233 | 178 |
| 275 | 85 | 27 | 3 | 10 | 45 | 377 | 0.234 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 44 | 53 | 12 |
| 276 | 734 | 463 | 17 | 69 | 185 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 182 | 244 | 24 |
| 277 | 4 | 3 | 0 | 0 | 1 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 211 | 141 | 5 | 19 | 46 | 157 | 0.098 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 45 | 62 | 6 |
| 280 | 869 | 558 | 19 | 81 | 211 | 163 | 0.101 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 207 | 280 | 28 |
| 281 | 25 | 16 | 0 | 2 | 7 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 1 |
| 282 | 449 | 298 | 10 | 41 | 100 | 167 | 0.104 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 98 | 135 | 14 |
| 283 | 220 | 79 | 8 | 30 | 103 | 405 | 0.252 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 101 | 128 | 32 |
| 284 | 1497 | 1,139 | 36 | 78 | 244 | 365 | 0.227 | 2 | 0 | 0 | 0 | 7 | 2 | 64 | 240 | 316 | 72 |
| 285 | 563 | 366 | 13 | 33 | 151 | 230 | 0.143 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 148 | 180 | 26 |
| 286 | 854 | 766 | 24 | 56 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 8 | 62 | 8 |
| 287 | 879 | 682 | 22 | 49 | 126 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 40 | 124 | 171 | 31 |
| 288 | 239 | 206 | 7 | 18 | 8 | 152 | 0.094 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 8 | 25 | 2 |
| 289 | 899 | 721 | 23 | 52 | 103 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 42 | 101 | 151 | 27 |
| 290 | 684 | 422 | 16 | 33 | 213 | 328 | 0.204 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 209 | 242 | 49 |
| 294 | 59 | 55 | 2 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 301 | 444 | 397 | 10 | 37 | 0 | 774 | 0.481 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 0 | 34 | 16 |
| 302 | 456 | 411 | 10 | 35 | 0 | 796 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 0 | 32 | 16 |
| 303 | 211 | 23 | 1 | 5 | 182 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 179 | 183 | 172 |
| 304 | 53 | 28 | 7 | 18 | 0 | 729 | 0.453 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 17 | 8 |
| 306 | 792 | 503 | 22 | 87 | 180 | 818 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 71 | 177 | 255 | 130 |
| 307 | 1328 | 936 | 47 | 165 | 180 | 0 | 0.000 | 2 | 0 | 0 | 0 | 10 | 3 | 134 | 177 | 326 | 0 |
| 324 | 27 | 25 | 0 | 1 | 1 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 |
| 325 | 1368 | 1,181 | 20 | 76 | 91 | 2224 | 1.382 | 2 | 0 | 0 | 0 | 4 | 1 | 62 | 89 | 159 | 220 |
| 326 | 76 | 71 | 1 | 2 | 2 | 3506 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 9 |
| 327 | 1252 | 1,073 | 19 | 73 | 87 | 227 | 0.141 | 2 | 0 | 0 | 0 | 4 | 1 | 59 | 86 | 152 | 21 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 17 | 15 | 1 | 1 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 358 | 2888 | 2,520 | 47 | 170 | 151 | 0 | 0.000 | 5 | 0 | 0 | 0 | 10 | 3 | 138 | 148 | 305 | 0 |
| 359 | 36 | 34 | 0 | 1 | 1 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 360 | 2114 | 1,855 | 36 | 130 | 93 | 247 | 0.153 | 3 | 0 | 0 | 0 | 7 | 2 | 106 | 91 | 211 | 32 |
| 361 | 1493 | 1,297 | 21 | 80 | 95 | 337 | 0.209 | 2 | 0 | 0 | 0 | 4 | 1 | 65 | 93 | 167 | 35 |
| 362 | 39 | 37 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 1483 | 1,316 | 25 | 92 | 50 | 4495 | 2.792 | 2 | 0 | 0 | 0 | 5 | 2 | 75 | 49 | 134 | 373 |
| 364 | 1240 | 1,103 | 21 | 58 | 58 | 286 | 0.178 | 2 | 0 | 0 | 0 | 4 | 1 | 47 | 57 | 112 | 20 |
| 365 | 659 | 556 | 13 | 35 | 55 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 54 | 87 | 87 |
| 366 | 19 | 7 | 0 | 2 | 10 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 11 | 12 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 5 | 2 | 0 | 1 | 2 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 387 | 943 | 701 | 29 | 109 | 104 | 2761 | 1.715 | 1 | 0 | 0 | 0 | 6 | 2 | 89 | 102 | 200 | 344 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 19 | 16 | 0 | 1 | 2 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 |
| 390 | 344 | 286 | 11 | 34 | 13 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 13 | 44 | 33 |
| 392 | 292 | 189 | 14 | 64 | 25 | 436 | 0.271 | 0 | 0 | 0 | 0 | 3 | 1 | 52 | 25 | 81 | 22 |
| 393 | 132 | 34 | 6 | 48 | 44 | 934 | 0.580 | 0 | 0 | 0 | 0 | 1 | 0 | 39 | 43 | 84 | 49 |
| 394 | 892 | 668 | 27 | 106 | 91 | 1292 | 0.803 | 1 | 0 | 0 | 0 | 6 | 2 | 86 | 89 | 185 | 148 |
| 396 | 1380 | 1,162 | 39 | 139 | 40 | 2366 | 1.470 | 2 | 0 | 0 | 0 | 8 | 3 | 113 | 39 | 166 | 243 |
| 397 | 1306 | 1,136 | 34 | 124 | 12 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 101 | 12 | 124 | 123 |
| 398 | 2621 | 2,378 | 62 | 181 | 0 | 560 | 0.348 | 4 | 0 | 0 | 0 | 13 | 4 | 147 | 0 | 169 | 59 |
| 399 | 195 | 183 | 4 | 8 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 17 |
| 400 | 410 | 386 | 9 | 14 | 1 | 1704 | 1.059 | 1 | 0 | 0 | 0 | 2 | 1 | 11 | 1 | 16 | 17 |
| 401 | 3 | 1 | 0 | 1 | 1 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 160 | 147 | 6 | 4 | 3 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 8 | 5 |
| 406 | 93 | 76 | 8 | 5 | 4 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 4 | 10 | 3 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 5 | 0 | 0 | 1 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 409 | 114 | 103 | 4 | 7 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 5 |
| 410 | 212 | 198 | 6 | 8 | 0 | 884 | 0.549 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 | 5 |
| 411 | 4 | 4 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 89 | 72 | 2 | 7 | 8 | 678 | 0.421 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 14 | 6 |
| 414 | 5 | 5 | 0 | 0 | 0 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 1166 | 998 | 32 | 109 | 27 | 855 | 0.531 | 2 | 0 | 0 | 0 | 7 | 2 | 89 | 27 | 126 | 67 |
| 416 | 480 | 388 | 17 | 65 | 10 | 284 | 0.176 | 1 | 0 | 0 | 0 | 3 | 1 | 53 | 10 | 68 | 12 |
| 417 | 8 | 6 | 0 | 0 | 2 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 419 | 526 | 451 | 13 | 50 | 12 | 343 | 0.213 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 12 | 57 | 12 |
| 420 | 2 | 0 | 0 | 0 | 2 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 331 | 110 | 5 | 14 | 202 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 199 | 212 | 109 |
| 425 | 129 | 121 | 1 | 5 | 2 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 7 | 1 |
| 426 | 1 | 0 | 0 | 0 | 1 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 427 | 17 | 4 | 1 | 5 | 7 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 11 | 5 |
| 428 | 44 | 41 | 0 | 1 | 2 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 429 | 1 | 1 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 447 | 366 | 8 | 23 | 50 | 114 | 0.071 | 1 | 0 | 0 | 0 | 2 | 1 | 19 | 49 | 71 | 5 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 194 | 185 | 3 | 5 | 1 | 1802 | 1.119 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 6 | 7 |
| 434 | 17 | 17 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 64 | 61 | 1 | 2 | 0 | 2365 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| 443 | 48 | 45 | 1 | 2 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 586 | 340 | 13 | 25 | 208 | 660 | 0.410 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 204 | 229 | 94 |
| 500 | 606 | 358 | 14 | 26 | 208 | 395 | 0.245 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 204 | 230 | 56 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 220 | 151 | 13 | 56 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 3 | 1 | 46 | 0 | 49 | 11 |
| | | | | | | | | | | | | | | | | | 15969 |

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 10 | 1 | 1 | 1 | 46 | 15 | 444 | 0 |
| 10 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 17 | 0 |
| 13 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 63 |
| 32 | 3 | 3 | 0 | 0 | 0 | 14 | 4 | 72 | 0 |
| 33 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 29 | 0 |
| 35 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 220 |
| 36 | 7 | 2 | 0 | 0 | 0 | 13 | 4 | 142 | 0 |
| 37 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 51 |
| 38 | 7 | 2 | 0 | 0 | 0 | 11 | 4 | 116 | 2 |
| 42 | 7 | 10 | 1 | 0 | 1 | 63 | 21 | 769 | 1464 |
| 43 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 62 |
| 46 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 57 |
| 47 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 48 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 13 |
| 50 | 3 | 4 | 0 | 0 | 0 | 19 | 6 | 150 | 0 |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 3 | 6 | 0 | 0 | 1 | 26 | 9 | 298 | 0 |
| 53 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 6 | 0 |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 0 |
| 58 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 60 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 28 |
| 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 16 |
| 66 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 16 |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 0 |
| 70 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 35 | 0 |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 3 | 4 | 0 | 0 | 0 | 15 | 5 | 173 | 0 |
| 74 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 1 |
| 75 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 76 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 77 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 |
| 80 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 35 |
| 83 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 86 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 44 |
| 87 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 9 |
| 96 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| 97 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 98 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 100 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 101 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 12 |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 10 |
| 104 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 107 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 108 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 109 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 110 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 12 |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 |
| 113 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 15 |
| 115 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 18 |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 117 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 18 |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 120 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 63 |
| 121 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 16 |
| 122 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 48 |
| 123 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 15 |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 14 |
| 127 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 95 |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 14 |
| 130 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 131 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 134 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 135 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 16 |
| 136 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 139 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 140 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 141 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 |
| 142 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 143 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 4 |
| 144 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 145 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 41 |
| 149 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 |
| 152 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 88 |
| 153 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 12 | 0 |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 30 | 0 |
| 156 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 17 | 0 |
| 157 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 35 | 0 |
| 158 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 11 |
| 159 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 0 |
| 162 | 3 | 2 | 0 | 0 | 0 | 10 | 3 | 138 | 0 |
| 163 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 0 |
| 164 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 165 | 1 | 7 | 0 | 0 | 1 | 31 | 10 | 358 | 0 |
| 168 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 55 | 0 |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3 | 2 | 0 | 0 | 0 | 5 | 2 | 51 | 0 |
| 172 | 6 | 3 | 0 | 0 | 0 | 8 | 3 | 95 | 0 |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 7 | 2 | 0 | 0 | 0 | 14 | 5 | 182 | 259 |
| 178 | 7 | 3 | 0 | 0 | 0 | 14 | 4 | 141 | 274 |
| 179 | 7 | 5 | 0 | 0 | 0 | 32 | 10 | 403 | 596 |
| 180 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 17 | 12 |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 7 | 21 | 1 | 1 | 2 | 44 | 14 | 602 | 719 |
| 191 | 7 | 14 | 1 | 1 | 1 | 29 | 10 | 424 | 455 |
| 192 | 7 | 2 | 0 | 0 | 0 | 4 | 1 | 35 | 90 |
| 194 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 |
| 195 | 5 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 0 |
| 196 | 5 | 1 | 0 | 0 | 0 | 5 | 1 | 57 | 0 |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 200 | 6 | 2 | 0 | 0 | 0 | 11 | 3 | 123 | 0 |
| 205 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 31 | 0 |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 0 |
| 215 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 24 |
| 217 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 12 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 |
| 219 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 232 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 39 | 77 |
| 233 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| 236 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 237 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 35 | 70 |
| 238 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 14 |
| 239 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 43 |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 30 |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 245 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 246 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 247 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 72 |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 3 | 2 | 0 | 0 | 0 | 4 | 1 | 46 | 90 |
| 261 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 29 |
| 262 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 38 |
| 263 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 266 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 15 |
| 267 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 268 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| 269 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 81 | 253 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 271 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 39 |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 274 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 43 | 131 |
| 275 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 276 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 |
| 277 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 280 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 21 |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 282 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 25 |
| 284 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 14 | 54 |
| 285 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 21 |
| 286 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 |
| 287 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 22 |
| 288 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 289 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 18 |
| 290 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 43 |
| 294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 301 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 |
| 302 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 |
| 303 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 168 |
| 304 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 306 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 36 | 90 |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 325 | 7 | 3 | 0 | 0 | 0 | 6 | 2 | 85 | 124 |
| 326 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| 327 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 12 |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 359 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 360 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 16 | 14 |
| 361 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 20 |
| 362 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 1 | 7 | 0 | 0 | 1 | 14 | 5 | 209 | 137 |
| 364 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 365 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 54 |
| 366 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 387 | 3 | 2 | 0 | 0 | 0 | 10 | 3 | 152 | 175 |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 9 |
| 392 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 7 |
| 393 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 25 |
| 394 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 69 | 72 |
| 396 | 3 | 3 | 0 | 0 | 0 | 12 | 4 | 166 | 58 |
| 397 | 7 | 2 | 0 | 0 | 0 | 7 | 2 | 100 | 12 |
| 398 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 |
| 399 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 14 | 0 |
| 400 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 1 |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 |
| 406 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 409 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 410 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 47 | 14 |
| 416 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 2 |
| 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 3 |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 102 |
| 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 1 |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 443 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 84 |
| 500 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 50 |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 |
| Total | | **163** | **9** | **8** | **15** | **619** | **203** | **7231** | **7721** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | 1 | 1 | 2 | 80 | 26 | 961 | 1309 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 37 | 2 | 2 | 3 | 156 | 51 | 1647 | 562 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 2 | 0 | 0 | 0 | 10 | 3 | 112 | 49 | |
| 6 | 30 | 2 | 2 | 3 | 115 | 37 | 1254 | 1170 | |
| 7 | 71 | 4 | 4 | 6 | 259 | 85 | 3254 | 4627 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **163** | **9** | **8** | **15** | **619** | **203** | **7231** | **7721** | **15969** |

**World Logistics Center** **2022**
Project Phase 1 (2022)
Surface Street Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5656 | 4,976 | 198 | 482 | 0 | 1820 | 1.131 | 2824 | 335 | 1020 | 787 | 131 | 14 | 90 | 0 | 5199 | 5878 |
| 10 | 717 | 647 | 29 | 41 | 0 | 826 | 0.513 | 367 | 43 | 133 | 102 | 19 | 2 | 8 | 0 | 674 | 346 |
| 13 | 969 | 620 | 13 | 38 | 298 | 345 | 0.214 | 352 | 42 | 127 | 98 | 9 | 1 | 7 | 5 | 640 | 137 |
| 32 | 1737 | 1,576 | 69 | 92 | 0 | 1551 | 0.964 | 894 | 106 | 323 | 249 | 46 | 5 | 17 | 0 | 1640 | 1580 |
| 33 | 526 | 481 | 16 | 29 | 0 | 2006 | 1.246 | 273 | 32 | 99 | 76 | 11 | 1 | 5 | 0 | 497 | 619 |
| 35 | 680 | 187 | 12 | 31 | 450 | 801 | 0.498 | 106 | 13 | 38 | 30 | 8 | 1 | 6 | 8 | 209 | 104 |
| 36 | 1351 | 1,116 | 62 | 173 | 0 | 1627 | 1.011 | 633 | 75 | 229 | 177 | 41 | 4 | 32 | 0 | 1191 | 1204 |
| 37 | 1050 | 478 | 39 | 151 | 382 | 219 | 0.136 | 271 | 32 | 98 | 76 | 26 | 3 | 28 | 6 | 540 | 73 |
| 38 | 2673 | 2,191 | 129 | 349 | 4 | 659 | 0.409 | 1243 | 147 | 449 | 347 | 85 | 9 | 65 | 0 | 2345 | 960 |
| 42 | 2434 | 1,607 | 93 | 285 | 449 | 5338 | 3.316 | 912 | 108 | 329 | 254 | 61 | 6 | 53 | 8 | 1732 | 5743 |
| 43 | 174 | 125 | 5 | 5 | 39 | 2598 | 1.614 | 71 | 8 | 26 | 20 | 3 | 0 | 1 | 1 | 130 | 210 |
| 46 | 308 | 176 | 8 | 8 | 116 | 806 | 0.501 | 100 | 12 | 36 | 28 | 5 | 1 | 1 | 2 | 185 | 93 |
| 47 | 92 | 85 | 4 | 3 | 0 | 1995 | 1.239 | 48 | 6 | 17 | 13 | 3 | 0 | 1 | 0 | 88 | 109 |
| 48 | 285 | 239 | 6 | 13 | 27 | 795 | 0.494 | 136 | 16 | 49 | 38 | 4 | 0 | 2 | 0 | 246 | 121 |
| 50 | 8434 | 7,495 | 318 | 621 | 0 | 479 | 0.298 | 4253 | 504 | 1536 | 1186 | 210 | 22 | 115 | 0 | 7826 | 2329 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5102 | 4,474 | 164 | 464 | 0 | 1269 | 0.788 | 2539 | 301 | 917 | 708 | 108 | 11 | 86 | 0 | 4670 | 3682 |
| 53 | 480 | 434 | 30 | 16 | 0 | 795 | 0.494 | 246 | 29 | 89 | 69 | 20 | 2 | 3 | 0 | 458 | 226 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 46 | 42 | 3 | 1 | 0 | 2042 | 1.269 | 24 | 3 | 9 | 7 | 2 | 0 | 0 | 0 | 44 | 56 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1354 | 1,122 | 59 | 173 | 0 | 246 | 0.153 | 637 | 75 | 230 | 178 | 39 | 4 | 32 | 0 | 1195 | 183 |
| 58 | 89 | 83 | 3 | 3 | 0 | 172 | 0.107 | 47 | 6 | 17 | 13 | 2 | 0 | 1 | 0 | 86 | 9 |
| 59 | 186 | 0 | 0 | 0 | 186 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 60 | 1111 | 738 | 20 | 64 | 289 | 159 | 0.099 | 419 | 50 | 151 | 117 | 13 | 1 | 12 | 5 | 768 | 76 |
| 61 | 139 | 37 | 5 | 5 | 92 | 97 | 0.060 | 21 | 2 | 8 | 6 | 3 | 0 | 1 | 2 | 43 | 3 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 373 | 317 | 8 | 16 | 32 | 795 | 0.494 | 180 | 21 | 65 | 50 | 5 | 1 | 3 | 1 | 326 | 161 |
| 66 | 473 | 401 | 13 | 27 | 32 | 812 | 0.504 | 228 | 27 | 82 | 63 | 9 | 1 | 5 | 1 | 415 | 209 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 69 | 998 | 907 | 34 | 57 | 0 | 819 | 0.509 | 515 | 61 | 186 | 144 | 22 | 2 | 11 | 0 | 940 | 478 |
| 70 | 1470 | 1,333 | 51 | 86 | 0 | 795 | 0.494 | 756 | 90 | 273 | 211 | 34 | 4 | 16 | 0 | 1383 | 683 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5009 | 4,386 | 161 | 462 | 0 | 742 | 0.461 | 2489 | 295 | 899 | 694 | 106 | 11 | 86 | 0 | 4580 | 2111 |
| 74 | 403 | 388 | 7 | 7 | 1 | 1573 | 0.977 | 220 | 26 | 80 | 61 | 5 | 0 | 1 | 0 | 394 | 385 |
| 75 | 156 | 140 | 4 | 7 | 5 | 805 | 0.500 | 79 | 9 | 29 | 22 | 3 | 0 | 1 | 0 | 144 | 72 |
| 76 | 37 | 32 | 1 | 4 | 0 | 1597 | 0.992 | 18 | 2 | 7 | 5 | 1 | 0 | 1 | 0 | 33 | 33 |
| 77 | 552 | 525 | 10 | 10 | 7 | 438 | 0.272 | 298 | 35 | 108 | 83 | 7 | 1 | 2 | 0 | 533 | 145 |
| 80 | 733 | 693 | 15 | 17 | 8 | 138 | 0.086 | 393 | 47 | 142 | 110 | 10 | 1 | 3 | 0 | 706 | 61 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1316 | 1,058 | 28 | 53 | 177 | 322 | 0.200 | 600 | 71 | 217 | 167 | 18 | 2 | 10 | 3 | 1089 | 218 |
| 83 | 632 | 504 | 14 | 26 | 88 | 95 | 0.059 | 286 | 34 | 103 | 80 | 9 | 1 | 5 | 1 | 519 | 31 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1787 | 1,379 | 47 | 110 | 251 | 284 | 0.176 | 783 | 93 | 283 | 218 | 31 | 3 | 20 | 4 | 1435 | 253 |
| 87 | 16 | 15 | 0 | 1 | 0 | 800 | 0.497 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 15 | 8 |
| 88 | 28 | 26 | 1 | 1 | 0 | 809 | 0.503 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 27 | 13 |
| 95 | 562 | 480 | 12 | 37 | 33 | 439 | 0.273 | 272 | 32 | 98 | 76 | 8 | 1 | 7 | 1 | 495 | 135 |
| 96 | 447 | 404 | 9 | 19 | 15 | 399 | 0.248 | 229 | 27 | 83 | 64 | 6 | 1 | 4 | 0 | 413 | 102 |
| 97 | 70 | 57 | 2 | 5 | 6 | 389 | 0.242 | 32 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 59 | 14 |
| 98 | 64 | 38 | 2 | 13 | 11 | 160 | 0.099 | 22 | 3 | 8 | 6 | 1 | 0 | 2 | 0 | 42 | 4 |
| 99 | 149 | 141 | 1 | 4 | 3 | 405 | 0.252 | 80 | 9 | 29 | 22 | 1 | 0 | 1 | 0 | 142 | 36 |
| 100 | 241 | 196 | 5 | 13 | 27 | 227 | 0.141 | 111 | 13 | 40 | 31 | 3 | 0 | 2 | 0 | 202 | 28 |
| 101 | 677 | 563 | 13 | 36 | 65 | 313 | 0.194 | 319 | 38 | 115 | 89 | 9 | 1 | 7 | 1 | 579 | 113 |
| 102 | 1 | 1 | 0 | 0 | 0 | 246 | 0.153 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 103 | 612 | 511 | 12 | 30 | 59 | 291 | 0.181 | 290 | 34 | 105 | 81 | 8 | 1 | 6 | 1 | 525 | 95 |
| 104 | 157 | 113 | 2 | 8 | 34 | 404 | 0.251 | 64 | 8 | 23 | 18 | 1 | 0 | 1 | 1 | 116 | 29 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 13 | 12 | 0 | 1 | 0 | 1803 | 1.120 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 14 |
| 107 | 191 | 142 | 3 | 12 | 34 | 388 | 0.241 | 81 | 10 | 29 | 22 | 2 | 0 | 2 | 1 | 147 | 35 |
| 108 | 14 | 12 | 0 | 2 | 0 | 997 | 0.619 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 8 |
| 109 | 38 | 29 | 2 | 7 | 0 | 787 | 0.489 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | 32 | 15 |
| 110 | 160 | 121 | 3 | 9 | 27 | 756 | 0.470 | 69 | 8 | 25 | 19 | 2 | 0 | 2 | 0 | 125 | 59 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 210 | 133 | 5 | 17 | 55 | 817 | 0.508 | 75 | 9 | 27 | 21 | 3 | 0 | 3 | 1 | 140 | 71 |
| 113 | 35 | 12 | 2 | 7 | 14 | 791 | 0.491 | 7 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 15 | 7 |
| 114 | 61 | 20 | 2 | 8 | 31 | 791 | 0.491 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 1 | 23 | 12 |
| 115 | 178 | 130 | 3 | 10 | 35 | 851 | 0.529 | 74 | 9 | 27 | 21 | 2 | 0 | 2 | 1 | 134 | 71 |
| 116 | 9 | 1 | 0 | 0 | 8 | 819 | 0.509 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 117 | 13 | 13 | 0 | 0 | 0 | 757 | 0.470 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 6 |
| 118 | 194 | 140 | 4 | 11 | 39 | 765 | 0.475 | 79 | 9 | 29 | 22 | 3 | 0 | 2 | 1 | 145 | 69 |
| 119 | 30 | 28 | 0 | 2 | 0 | 782 | 0.486 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | 28 | 14 |
| 120 | 234 | 88 | 5 | 15 | 126 | 814 | 0.506 | 50 | 6 | 18 | 14 | 3 | 0 | 3 | 2 | 96 | 49 |
| 121 | 191 | 146 | 4 | 10 | 31 | 825 | 0.513 | 83 | 10 | 30 | 23 | 3 | 0 | 2 | 1 | 151 | 77 |
| 122 | 172 | 58 | 3 | 10 | 101 | 782 | 0.486 | 33 | 4 | 12 | 9 | 2 | 0 | 2 | 2 | 64 | 31 |
| 123 | 12 | 12 | 0 | 0 | 0 | 791 | 0.491 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 6 |
| 124 | 218 | 170 | 5 | 12 | 31 | 800 | 0.497 | 96 | 11 | 35 | 27 | 3 | 0 | 2 | 1 | 176 | 87 |
| 125 | 1 | 1 | 0 | 0 | 0 | 817 | 0.508 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 126 | 233 | 188 | 5 | 11 | 29 | 774 | 0.481 | 107 | 13 | 39 | 30 | 3 | 0 | 2 | 0 | 194 | 93 |
| 127 | 240 | 39 | 3 | 10 | 188 | 825 | 0.513 | 22 | 3 | 8 | 6 | 2 | 0 | 2 | 3 | 46 | 24 |
| 128 | 1 | 1 | 0 | 0 | 0 | 774 | 0.481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 129 | 251 | 207 | 5 | 12 | 27 | 823 | 0.511 | 117 | 14 | 42 | 33 | 3 | 0 | 2 | 0 | 213 | 109 |
| 130 | 52 | 49 | 2 | 1 | 0 | 800 | 0.497 | 28 | 3 | 10 | 8 | 1 | 0 | 0 | 0 | 51 | 25 |
| 131 | 4 | 4 | 0 | 0 | 0 | 775 | 0.481 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 133 | 63 | 59 | 2 | 2 | 0 | 804 | 0.499 | 33 | 4 | 12 | 9 | 1 | 0 | 0 | 0 | 61 | 30 |
| 134 | 46 | 36 | 2 | 3 | 5 | 760 | 0.472 | 20 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | 38 | 18 |
| 135 | 331 | 275 | 8 | 16 | 32 | 816 | 0.507 | 156 | 18 | 56 | 44 | 5 | 1 | 3 | 1 | 284 | 144 |
| 136 | 71 | 67 | 2 | 2 | 0 | 786 | 0.488 | 38 | 5 | 14 | 11 | 1 | 0 | 0 | 0 | 69 | 34 |
| 137 | 1 | 1 | 0 | 0 | 0 | 790 | 0.491 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 138 | 25 | 10 | 1 | 4 | 10 | 267 | 0.166 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 12 | 2 |
| 139 | 196 | 168 | 4 | 12 | 12 | 504 | 0.313 | 95 | 11 | 34 | 27 | 3 | 0 | 2 | 0 | 173 | 54 |
| 140 | 27 | 12 | 1 | 2 | 12 | 527 | 0.327 | 7 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 13 | 4 |
| 141 | 189 | 167 | 3 | 9 | 10 | 1001 | 0.622 | 95 | 11 | 34 | 26 | 2 | 0 | 2 | 0 | 171 | 106 |
| 142 | 21 | 13 | 1 | 3 | 4 | 291 | 0.181 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 14 | 3 |
| 143 | 204 | 177 | 5 | 14 | 8 | 845 | 0.525 | 100 | 12 | 36 | 28 | 3 | 0 | 3 | 0 | 183 | 96 |
| 144 | 201 | 181 | 5 | 15 | 0 | 783 | 0.486 | 103 | 12 | 37 | 29 | 3 | 0 | 3 | 0 | 187 | 91 |
| 145 | 231 | 208 | 6 | 17 | 0 | 787 | 0.489 | 118 | 14 | 43 | 33 | 4 | 0 | 3 | 0 | 215 | 105 |
| 146 | 25 | 24 | 0 | 1 | 0 | 814 | 0.506 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 12 |
| 147 | 271 | 243 | 8 | 20 | 0 | 798 | 0.496 | 138 | 16 | 50 | 38 | 5 | 1 | 4 | 0 | 252 | 125 |
| 148 | 156 | 54 | 2 | 8 | 92 | 731 | 0.454 | 31 | 4 | 11 | 9 | 1 | 0 | 1 | 2 | 58 | 27 |
| 149 | 342 | 307 | 10 | 25 | 0 | 808 | 0.502 | 174 | 21 | 63 | 49 | 7 | 1 | 5 | 0 | 318 | 160 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 379 | 340 | 11 | 28 | 0 | 787 | 0.489 | 193 | 23 | 70 | 54 | 7 | 1 | 5 | 0 | 352 | 172 |
| 152 | 223 | 28 | 2 | 9 | 184 | 782 | 0.486 | 16 | 2 | 6 | 4 | 1 | 0 | 2 | 3 | 34 | 17 |
| 153 | 482 | 437 | 15 | 30 | 0 | 798 | 0.496 | 248 | 29 | 90 | 69 | 10 | 1 | 6 | 0 | 453 | 224 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1260 | 1,147 | 36 | 77 | 0 | 775 | 0.481 | 651 | 77 | 235 | 181 | 24 | 2 | 14 | 0 | 1185 | 571 |
| 156 | 668 | 607 | 17 | 44 | 0 | 771 | 0.479 | 344 | 41 | 124 | 96 | 11 | 1 | 8 | 0 | 626 | 300 |
| 157 | 1471 | 1,334 | 51 | 86 | 0 | 804 | 0.499 | 757 | 90 | 273 | 211 | 34 | 4 | 16 | 0 | 1384 | 691 |
| 158 | 232 | 194 | 5 | 15 | 18 | 1039 | 0.645 | 110 | 13 | 40 | 31 | 3 | 0 | 3 | 0 | 200 | 129 |
| 159 | 354 | 317 | 5 | 15 | 17 | 170 | 0.106 | 180 | 21 | 65 | 50 | 3 | 0 | 3 | 0 | 323 | 34 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 718 | 583 | 31 | 104 | 0 | 784 | 0.487 | 331 | 39 | 119 | 92 | 20 | 2 | 19 | 0 | 624 | 304 |
| 162 | 1687 | 1,351 | 77 | 259 | 0 | 1052 | 0.654 | 767 | 91 | 277 | 214 | 51 | 5 | 48 | 0 | 1452 | 949 |
| 163 | 908 | 712 | 44 | 152 | 0 | 350 | 0.217 | 404 | 48 | 146 | 113 | 29 | 3 | 28 | 0 | 771 | 168 |
| 164 | 19 | 15 | 1 | 3 | 0 | 473 | 0.294 | 9 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 16 | 5 |
| 165 | 4936 | 4,320 | 157 | 459 | 0 | 1541 | 0.957 | 2451 | 290 | 885 | 683 | 104 | 11 | 85 | 0 | 4510 | 4318 |
| 168 | 831 | 648 | 40 | 143 | 0 | 758 | 0.471 | 368 | 44 | 133 | 103 | 26 | 3 | 27 | 0 | 702 | 331 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3050 | 2,787 | 71 | 192 | 0 | 522 | 0.324 | 1582 | 187 | 571 | 441 | 47 | 5 | 36 | 0 | 2868 | 930 |
| 172 | 2888 | 2,632 | 67 | 189 | 0 | 993 | 0.617 | 1494 | 177 | 539 | 416 | 44 | 5 | 35 | 0 | 2710 | 1672 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2404 | 1,600 | 98 | 324 | 382 | 1110 | 0.690 | 908 | 108 | 328 | 253 | 65 | 7 | 60 | 6 | 1735 | 1196 |
| 178 | 445 | 328 | 15 | 39 | 63 | 7132 | 4.430 | 186 | 22 | 67 | 52 | 10 | 1 | 7 | 1 | 347 | 1535 |
| 179 | 2868 | 1,943 | 115 | 364 | 446 | 2189 | 1.360 | 1103 | 131 | 398 | 307 | 76 | 8 | 68 | 8 | 2098 | 2853 |
| 180 | 127 | 115 | 4 | 5 | 3 | 6725 | 4.178 | 65 | 8 | 24 | 18 | 3 | 0 | 1 | 0 | 119 | 496 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 3350 | 2,924 | 54 | 187 | 185 | 6368 | 3.956 | 1659 | 197 | 599 | 463 | 36 | 4 | 35 | 3 | 2995 | 11848 |
| 191 | 2893 | 2,523 | 47 | 171 | 152 | 4906 | 3.048 | 1432 | 170 | 517 | 399 | 31 | 3 | 32 | 3 | 2586 | 7882 |
| 192 | 458 | 401 | 7 | 16 | 34 | 4358 | 2.707 | 228 | 27 | 82 | 63 | 5 | 0 | 3 | 1 | 409 | 1107 |
| 194 | 412 | 329 | 20 | 63 | 0 | 355 | 0.221 | 187 | 22 | 67 | 52 | 13 | 1 | 12 | 0 | 355 | 78 |
| 195 | 718 | 592 | 31 | 95 | 0 | 397 | 0.247 | 336 | 40 | 121 | 94 | 20 | 2 | 18 | 0 | 631 | 156 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196 | 1129 | 921 | 50 | 158 | 0 | 716 | 0.445 | 523 | 62 | 189 | 146 | 33 | 3 | 29 | 0 | 985 | 438 |
| 198 | 0 | 0 | 0 | 0 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 168 | 152 | 6 | 10 | 0 | 378 | 0.235 | 86 | 10 | 31 | 24 | 4 | 0 | 2 | 0 | 158 | 37 |
| 200 | 1354 | 1,122 | 59 | 173 | 0 | 1403 | 0.872 | 637 | 75 | 230 | 178 | 39 | 4 | 32 | 0 | 1195 | 1041 |
| 205 | 274 | 221 | 12 | 41 | 0 | 1501 | 0.932 | 125 | 15 | 45 | 35 | 8 | 1 | 8 | 0 | 237 | 221 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 274 | 221 | 12 | 41 | 0 | 2611 | 1.622 | 125 | 15 | 45 | 35 | 8 | 1 | 8 | 0 | 237 | 384 |
| 215 | 10 | 10 | 0 | 0 | 0 | 2937 | 1.825 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 18 |
| 216 | 232 | 197 | 4 | 11 | 20 | 2000 | 1.242 | 112 | 13 | 40 | 31 | 3 | 0 | 2 | 0 | 202 | 251 |
| 217 | 373 | 317 | 7 | 19 | 30 | 663 | 0.412 | 180 | 21 | 65 | 50 | 5 | 0 | 4 | 1 | 325 | 134 |
| 218 | 74 | 60 | 1 | 4 | 9 | 1167 | 0.725 | 34 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 61 | 45 |
| 219 | 12 | 11 | 0 | 0 | 1 | 2672 | 1.660 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 18 |
| 221 | 5 | 5 | 0 | 0 | 0 | 2622 | 1.629 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 8 |
| 223 | 13 | 13 | 0 | 0 | 0 | 359 | 0.223 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 3 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 50 | 36 | 1 | 4 | 9 | 1643 | 1.021 | 20 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | 38 | 38 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 9 | 9 | 0 | 0 | 0 | 1122 | 0.697 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 6 |
| 230 | 35 | 35 | 0 | 0 | 0 | 1007 | 0.626 | 20 | 2 | 7 | 6 | 0 | 0 | 0 | 0 | 35 | 22 |
| 231 | 76 | 66 | 1 | 3 | 6 | 1968 | 1.223 | 37 | 4 | 14 | 10 | 1 | 0 | 1 | 0 | 67 | 82 |
| 232 | 650 | 520 | 12 | 45 | 73 | 1719 | 1.068 | 295 | 35 | 107 | 82 | 8 | 1 | 8 | 1 | 537 | 574 |
| 233 | 61 | 47 | 1 | 4 | 9 | 976 | 0.606 | 27 | 3 | 10 | 7 | 1 | 0 | 1 | 0 | 49 | 29 |
| 236 | 17 | 13 | 0 | 2 | 2 | 794 | 0.493 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 7 |
| 237 | 534 | 404 | 11 | 45 | 74 | 1556 | 0.967 | 229 | 27 | 83 | 64 | 7 | 1 | 8 | 1 | 421 | 407 |
| 238 | 226 | 185 | 4 | 17 | 20 | 1120 | 0.696 | 105 | 12 | 38 | 29 | 3 | 0 | 3 | 0 | 191 | 133 |
| 239 | 280 | 197 | 6 | 26 | 51 | 1385 | 0.860 | 112 | 13 | 40 | 31 | 4 | 0 | 5 | 1 | 207 | 178 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 283 | 201 | 6 | 26 | 50 | 989 | 0.614 | 114 | 14 | 41 | 32 | 4 | 0 | 5 | 1 | 211 | 129 |
| 243 | 25 | 16 | 1 | 2 | 6 | 64 | 0.040 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 17 | 1 |
| 244 | 18 | 8 | 0 | 2 | 8 | 173 | 0.107 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 1 |
| 245 | 72 | 46 | 1 | 7 | 18 | 181 | 0.112 | 26 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | 48 | 5 |
| 246 | 52 | 27 | 1 | 6 | 18 | 273 | 0.170 | 15 | 2 | 6 | 4 | 1 | 0 | 1 | 0 | 29 | 5 |
| 247 | 259 | 190 | 6 | 22 | 41 | 87 | 0.054 | 108 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 199 | 11 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 678 | 546 | 12 | 46 | 74 | 1588 | 0.986 | 310 | 37 | 112 | 86 | 8 | 1 | 9 | 1 | 563 | 556 |
| 254 | 1 | 1 | 0 | 0 | 0 | 424 | 0.263 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 256 | 218 | 205 | 3 | 4 | 6 | 943 | 0.586 | 116 | 14 | 42 | 32 | 2 | 0 | 1 | 0 | 208 | 122 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 911 | 761 | 16 | 51 | 83 | 1783 | 1.108 | 432 | 51 | 156 | 120 | 11 | 1 | 9 | 1 | 782 | 866 |
| 261 | 155 | 98 | 4 | 13 | 40 | 1181 | 0.734 | 56 | 7 | 20 | 16 | 3 | 0 | 2 | 1 | 104 | 76 |
| 262 | 315 | 209 | 7 | 27 | 72 | 860 | 0.534 | 119 | 14 | 43 | 33 | 5 | 0 | 5 | 1 | 220 | 117 |
| 263 | 951 | 781 | 18 | 57 | 95 | 141 | 0.088 | 443 | 53 | 160 | 124 | 12 | 1 | 11 | 2 | 805 | 70 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 529 | 421 | 11 | 37 | 60 | 98 | 0.061 | 239 | 28 | 86 | 67 | 7 | 1 | 7 | 1 | 436 | 27 |
| 266 | 1312 | 1,049 | 26 | 90 | 147 | 171 | 0.106 | 595 | 71 | 215 | 166 | 17 | 2 | 17 | 2 | 1085 | 115 |
| 267 | 238 | 163 | 6 | 26 | 43 | 156 | 0.097 | 92 | 11 | 33 | 26 | 4 | 0 | 5 | 1 | 173 | 17 |
| 268 | 884 | 724 | 17 | 54 | 89 | 159 | 0.099 | 411 | 49 | 148 | 115 | 11 | 1 | 10 | 2 | 746 | 74 |
| 269 | 697 | 448 | 15 | 65 | 169 | 2450 | 1.522 | 254 | 30 | 92 | 71 | 10 | 1 | 12 | 3 | 473 | 720 |
| 270 | 12 | 9 | 0 | 1 | 2 | 620 | 0.385 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 4 |
| 271 | 710 | 457 | 16 | 66 | 171 | 370 | 0.230 | 259 | 31 | 94 | 72 | 11 | 1 | 12 | 3 | 483 | 111 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 11 | 7 | 0 | 2 | 2 | 625 | 0.388 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 | 3 |
| 274 | 731 | 472 | 16 | 69 | 174 | 1231 | 0.765 | 268 | 32 | 97 | 75 | 11 | 1 | 13 | 3 | 498 | 381 |
| 275 | 85 | 27 | 3 | 10 | 45 | 377 | 0.234 | 15 | 2 | 6 | 4 | 2 | 0 | 2 | 1 | 32 | 7 |
| 276 | 734 | 463 | 17 | 69 | 185 | 159 | 0.099 | 263 | 31 | 95 | 73 | 11 | 1 | 13 | 3 | 490 | 48 |
| 277 | 4 | 3 | 0 | 0 | 1 | 1074 | 0.667 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 211 | 141 | 5 | 19 | 46 | 157 | 0.098 | 80 | 9 | 29 | 22 | 3 | 0 | 4 | 1 | 149 | 14 |
| 280 | 869 | 558 | 19 | 81 | 211 | 163 | 0.101 | 317 | 38 | 114 | 88 | 13 | 1 | 15 | 4 | 589 | 60 |
| 281 | 25 | 16 | 0 | 2 | 7 | 280 | 0.174 | 9 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 16 | 3 |
| 282 | 449 | 298 | 10 | 41 | 100 | 167 | 0.104 | 169 | 20 | 61 | 47 | 7 | 1 | 8 | 2 | 314 | 33 |
| 283 | 220 | 79 | 8 | 30 | 103 | 405 | 0.252 | 45 | 5 | 16 | 12 | 5 | 1 | 6 | 2 | 92 | 23 |
| 284 | 1497 | 1,139 | 36 | 78 | 244 | 365 | 0.227 | 646 | 77 | 233 | 180 | 24 | 2 | 14 | 4 | 1181 | 268 |
| 285 | 563 | 366 | 13 | 33 | 151 | 230 | 0.143 | 208 | 25 | 75 | 58 | 9 | 1 | 6 | 3 | 383 | 55 |
| 286 | 854 | 766 | 24 | 56 | 8 | 209 | 0.130 | 435 | 51 | 157 | 121 | 16 | 2 | 10 | 0 | 792 | 103 |
| 287 | 879 | 682 | 22 | 49 | 126 | 292 | 0.181 | 387 | 46 | 140 | 108 | 15 | 2 | 9 | 2 | 708 | 128 |
| 288 | 239 | 206 | 7 | 18 | 8 | 152 | 0.094 | 117 | 14 | 42 | 33 | 5 | 0 | 3 | 0 | 214 | 20 |
| 289 | 899 | 721 | 23 | 52 | 103 | 285 | 0.177 | 409 | 48 | 148 | 114 | 15 | 2 | 10 | 2 | 748 | 132 |
| 290 | 684 | 422 | 16 | 33 | 213 | 328 | 0.204 | 239 | 28 | 86 | 67 | 11 | 1 | 6 | 4 | 442 | 90 |
| 294 | 59 | 55 | 2 | 2 | 0 | 824 | 0.512 | 31 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 57 | 29 |
| 301 | 444 | 397 | 10 | 37 | 0 | 774 | 0.481 | 225 | 27 | 81 | 63 | 7 | 1 | 7 | 0 | 410 | 197 |
| 302 | 456 | 411 | 10 | 35 | 0 | 796 | 0.494 | 233 | 28 | 84 | 65 | 7 | 1 | 7 | 0 | 424 | 210 |
| 303 | 211 | 23 | 1 | 5 | 182 | 1514 | 0.941 | 13 | 2 | 5 | 4 | 1 | 0 | 1 | 3 | 28 | 26 |
| 304 | 53 | 28 | 7 | 18 | 0 | 729 | 0.453 | 16 | 2 | 6 | 4 | 5 | 0 | 3 | 0 | 36 | 16 |
| 306 | 792 | 503 | 22 | 87 | 180 | 818 | 0.508 | 285 | 34 | 103 | 80 | 15 | 2 | 16 | 3 | 537 | 273 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 307 | 1328 | 936 | 47 | 165 | 180 | 0 | 0.000 | 531 | 63 | 192 | 148 | 31 | 3 | 31 | 3 | 1002 | 0 |
| 324 | 27 | 25 | 0 | 1 | 1 | 2925 | 1.817 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 25 | 46 |
| 325 | 1368 | 1,181 | 20 | 76 | 91 | 2224 | 1.382 | 670 | 79 | 242 | 187 | 13 | 1 | 14 | 2 | 1209 | 1670 |
| 326 | 76 | 71 | 1 | 2 | 2 | 3506 | 2.178 | 40 | 5 | 15 | 11 | 1 | 0 | 0 | 0 | 72 | 157 |
| 327 | 1252 | 1,073 | 19 | 73 | 87 | 227 | 0.141 | 609 | 72 | 220 | 170 | 13 | 1 | 14 | 1 | 1100 | 155 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 17 | 15 | 1 | 1 | 0 | 0 | 0.000 | 9 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 16 | 0 |
| 358 | 2888 | 2,520 | 47 | 170 | 151 | 0 | 0.000 | 1430 | 169 | 516 | 399 | 31 | 3 | 32 | 3 | 2583 | 0 |
| 359 | 36 | 34 | 0 | 1 | 1 | 339 | 0.211 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 34 | 7 |
| 360 | 2114 | 1,855 | 36 | 130 | 93 | 247 | 0.153 | 1053 | 125 | 380 | 293 | 24 | 2 | 24 | 2 | 1903 | 292 |
| 361 | 1493 | 1,297 | 21 | 80 | 95 | 337 | 0.209 | 736 | 87 | 266 | 205 | 14 | 1 | 15 | 2 | 1326 | 278 |
| 362 | 39 | 37 | 0 | 1 | 1 | 338 | 0.210 | 21 | 2 | 8 | 6 | 0 | 0 | 0 | 0 | 37 | 8 |
| 363 | 1483 | 1,316 | 25 | 92 | 50 | 4495 | 2.792 | 747 | 88 | 270 | 208 | 16 | 2 | 17 | 1 | 1349 | 3768 |
| 364 | 1240 | 1,103 | 21 | 58 | 58 | 286 | 0.178 | 626 | 74 | 226 | 175 | 14 | 1 | 11 | 1 | 1128 | 200 |
| 365 | 659 | 556 | 13 | 35 | 55 | 1602 | 0.995 | 316 | 37 | 114 | 88 | 9 | 1 | 7 | 1 | 572 | 569 |
| 366 | 19 | 7 | 0 | 2 | 10 | 1742 | 1.082 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 8 | 8 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 5 | 2 | 0 | 1 | 2 | 810 | 0.503 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 387 | 943 | 701 | 29 | 109 | 104 | 2761 | 1.715 | 398 | 47 | 144 | 111 | 19 | 2 | 20 | 2 | 743 | 1274 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 19 | 16 | 0 | 1 | 2 | 189 | 0.117 | 9 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 16 | 2 |
| 390 | 344 | 286 | 11 | 34 | 13 | 1189 | 0.739 | 162 | 19 | 59 | 45 | 7 | 1 | 6 | 0 | 300 | 222 |
| 392 | 292 | 189 | 14 | 64 | 25 | 436 | 0.271 | 107 | 13 | 39 | 30 | 9 | 1 | 12 | 0 | 211 | 57 |
| 393 | 132 | 34 | 6 | 48 | 44 | 934 | 0.580 | 19 | 2 | 7 | 5 | 4 | 0 | 9 | 1 | 48 | 28 |
| 394 | 892 | 668 | 27 | 106 | 91 | 1292 | 0.803 | 379 | 45 | 137 | 106 | 18 | 2 | 20 | 2 | 707 | 568 |
| 396 | 1380 | 1,162 | 39 | 139 | 40 | 2366 | 1.470 | 659 | 78 | 238 | 184 | 26 | 3 | 26 | 1 | 1214 | 1785 |
| 397 | 1306 | 1,136 | 34 | 124 | 12 | 1588 | 0.986 | 645 | 76 | 233 | 180 | 22 | 2 | 23 | 0 | 1182 | 1166 |
| 398 | 2621 | 2,378 | 62 | 181 | 0 | 560 | 0.348 | 1349 | 160 | 487 | 376 | 41 | 4 | 34 | 0 | 2452 | 853 |
| 399 | 195 | 183 | 4 | 8 | 0 | 3389 | 2.105 | 104 | 12 | 38 | 29 | 3 | 0 | 1 | 0 | 187 | 394 |
| 400 | 410 | 386 | 9 | 14 | 1 | 1704 | 1.059 | 219 | 26 | 79 | 61 | 6 | 1 | 3 | 0 | 394 | 417 |
| 401 | 3 | 1 | 0 | 1 | 1 | 790 | 0.491 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 160 | 147 | 6 | 4 | 3 | 1010 | 0.627 | 83 | 10 | 30 | 23 | 4 | 0 | 1 | 0 | 152 | 95 |
| 406 | 93 | 76 | 8 | 5 | 4 | 395 | 0.245 | 43 | 5 | 16 | 12 | 5 | 1 | 1 | 0 | 83 | 20 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 5 | 0 | 0 | 1 | 1072 | 0.666 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 3 |
| 409 | 114 | 103 | 4 | 7 | 0 | 1137 | 0.706 | 58 | 7 | 21 | 16 | 3 | 0 | 1 | 0 | 107 | 76 |
| 410 | 212 | 198 | 6 | 8 | 0 | 884 | 0.549 | 112 | 13 | 41 | 31 | 4 | 0 | 1 | 0 | 203 | 112 |
| 411 | 4 | 4 | 0 | 0 | 0 | 2332 | 1.449 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 6 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 89 | 72 | 2 | 7 | 8 | 678 | 0.421 | 41 | 5 | 15 | 11 | 1 | 0 | 1 | 0 | 75 | 31 |
| 414 | 5 | 5 | 0 | 0 | 0 | 895 | 0.556 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 3 |
| 415 | 1166 | 998 | 32 | 109 | 27 | 855 | 0.531 | 566 | 67 | 205 | 158 | 21 | 2 | 20 | 0 | 1040 | 552 |
| 416 | 480 | 388 | 17 | 65 | 10 | 284 | 0.176 | 220 | 26 | 80 | 61 | 11 | 1 | 12 | 0 | 412 | 73 |
| 417 | 8 | 6 | 0 | 0 | 2 | 303 | 0.188 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 6 | 1 |
| 419 | 526 | 451 | 13 | 50 | 12 | 343 | 0.213 | 256 | 30 | 92 | 71 | 9 | 1 | 9 | 0 | 469 | 100 |
| 420 | 2 | 0 | 0 | 0 | 2 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 331 | 110 | 5 | 14 | 202 | 828 | 0.514 | 62 | 7 | 23 | 17 | 3 | 0 | 3 | 3 | 119 | 61 |
| 425 | 129 | 121 | 1 | 5 | 2 | 203 | 0.126 | 69 | 8 | 25 | 19 | 1 | 0 | 1 | 0 | 122 | 15 |
| 426 | 1 | 0 | 0 | 0 | 1 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 17 | 4 | 1 | 5 | 7 | 654 | 0.406 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 6 | 2 |
| 428 | 44 | 41 | 0 | 1 | 2 | 293 | 0.182 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 41 | 7 |
| 429 | 1 | 1 | 0 | 0 | 0 | 219 | 0.136 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 430 | 447 | 366 | 8 | 23 | 50 | 114 | 0.071 | 208 | 25 | 75 | 58 | 5 | 1 | 4 | 1 | 376 | 27 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 194 | 185 | 3 | 5 | 1 | 1802 | 1.119 | 105 | 12 | 38 | 29 | 2 | 0 | 1 | 0 | 188 | 210 |
| 434 | 17 | 17 | 0 | 0 | 0 | 1269 | 0.788 | 10 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 17 | 13 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 64 | 61 | 1 | 2 | 0 | 2365 | 1.469 | 35 | 4 | 13 | 10 | 1 | 0 | 0 | 0 | 62 | 91 |
| 443 | 48 | 45 | 1 | 2 | 0 | 1588 | 0.986 | 26 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | 46 | 45 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 586 | 340 | 13 | 25 | 208 | 660 | 0.410 | 193 | 23 | 70 | 54 | 9 | 1 | 5 | 4 | 357 | 146 |
| 500 | 606 | 358 | 14 | 26 | 208 | 395 | 0.245 | 203 | 24 | 73 | 57 | 9 | 1 | 5 | 4 | 376 | 92 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 220 | 151 | 13 | 56 | 0 | 360 | 0.224 | 86 | 10 | 31 | 24 | 9 | 1 | 10 | 0 | 171 | 38 |

Total 93990

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2-GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) | Road Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 3193 | 378 | 1153 | 890 | 148 | 15 | 101 | 0 | A |
| 10 | 3 | 188 | 22 | 68 | 53 | 10 | 1 | 4 | 0 | A |
| 13 | 6 | 75 | 9 | 27 | 21 | 2 | 0 | 2 | 1 | A |
| 32 | 3 | 862 | 102 | 311 | 240 | 44 | 5 | 16 | 0 | A |
| 33 | 1 | 340 | 40 | 123 | 95 | 13 | 1 | 7 | 0 | M |
| 35 | 7 | 53 | 6 | 19 | 15 | 4 | 0 | 3 | 4 | A |
| 36 | 7 | 640 | 76 | 231 | 178 | 41 | 4 | 32 | 0 | A |
| 37 | 7 | 37 | 4 | 13 | 10 | 4 | 0 | 4 | 1 | A |
| 38 | 7 | 509 | 60 | 184 | 142 | 35 | 4 | 27 | 0 | A |
| 42 | 7 | 3024 | 358 | 1092 | 843 | 203 | 21 | 176 | 25 | A |
| 43 | 7 | 114 | 14 | 41 | 32 | 5 | 1 | 1 | 1 | A |
| 46 | 7 | 50 | 6 | 18 | 14 | 3 | 0 | 1 | 1 | A |
| 47 | 7 | 60 | 7 | 22 | 17 | 3 | 0 | 1 | 0 | A |
| 48 | 6 | 67 | 8 | 24 | 19 | 2 | 0 | 1 | 0 | A |
| 50 | 3 | 1266 | 150 | 457 | 353 | 62 | 7 | 34 | 0 | A |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 52 | 3 | 2001 | 237 | 723 | 558 | 85 | 9 | 68 | 0 | A |
| 53 | 6 | 122 | 14 | 44 | 34 | 10 | 1 | 1 | 0 | A |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 55 | 6 | 30 | 4 | 11 | 8 | 3 | 0 | 0 | 0 | A |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 57 | 7 | 97 | 12 | 35 | 27 | 6 | 1 | 5 | 0 | A |
| 58 | 1 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | M |
| 60 | 1 | 41 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | M |
| 61 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 65 | 3 | 89 | 11 | 32 | 25 | 3 | 0 | 1 | 0 | A |
| 66 | 3 | 115 | 14 | 41 | 32 | 4 | 0 | 3 | 0 | A |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 68 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 69 | 3 | 262 | 31 | 95 | 73 | 11 | 1 | 5 | 0 | A |
| 70 | 3 | 374 | 44 | 135 | 104 | 17 | 2 | 8 | 0 | A |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 73 | 3 | 1147 | 136 | 414 | 320 | 49 | 5 | 40 | 0 | A |
| 74 | 6 | 215 | 25 | 78 | 60 | 5 | 0 | 1 | 0 | A |
| 75 | 1 | 40 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | M |
| 76 | 1 | 18 | 2 | 7 | 5 | 1 | 0 | 1 | 0 | M |
| 77 | 5 | 81 | 10 | 29 | 23 | 2 | 0 | 1 | 0 | A |
| 80 | 5 | 34 | 4 | 12 | 9 | 1 | 0 | 0 | 0 | A |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 82 | 1 | 120 | 14 | 43 | 33 | 4 | 0 | 2 | 1 | M |
| 83 | 5 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | A |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 86 | 1 | 138 | 16 | 50 | 38 | 5 | 1 | 4 | 1 | M |
| 87 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 88 | 1 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 95 | 6 | 74 | 9 | 27 | 21 | 2 | 0 | 2 | 0 | A |
| 96 | 8 | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | A |
| 97 | 5 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 98 | 5 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 99 | 5 | 20 | 2 | 7 | 6 | 0 | 0 | 0 | 0 | A |
| 100 | 1 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | M |
| 101 | 1 | 62 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | M |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 103 | 1 | 52 | 6 | 19 | 15 | 1 | 0 | 1 | 0 | M |
| 104 | 1 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | M |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 106 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 107 | 1 | 19 | 2 | 7 | 5 | 0 | 0 | 1 | 0 | M |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 1 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 109 | 5 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | A |
| 110 | 6 | 32 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | A |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 112 | 6 | 38 | 5 | 14 | 11 | 2 | 0 | 2 | 0 | A |
| 113 | 5 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | A |
| 114 | 1 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | M |
| 115 | 6 | 39 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 117 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 118 | 6 | 38 | 4 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 119 | 6 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 120 | 1 | 25 | 3 | 9 | 7 | 2 | 0 | 1 | 1 | M |
| 121 | 6 | 42 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | A |
| 122 | 3 | 16 | 2 | 6 | 4 | 1 | 0 | 1 | 1 | A |
| 123 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 124 | 6 | 48 | 6 | 17 | 13 | 2 | 0 | 1 | 0 | A |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 126 | 6 | 51 | 6 | 19 | 14 | 2 | 0 | 1 | 0 | A |
| 127 | 1 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 2 | M |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 129 | 6 | 60 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | A |
| 130 | 6 | 14 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 131 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 133 | 3 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | A |
| 134 | 1 | 10 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 135 | 3 | 79 | 9 | 29 | 22 | 3 | 0 | 2 | 0 | A |
| 136 | 6 | 19 | 2 | 7 | 5 | 1 | 0 | 0 | 0 | A |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 139 | 1 | 30 | 4 | 11 | 8 | 1 | 0 | 1 | 0 | M |
| 140 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 141 | 1 | 59 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | M |
| 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 143 | 3 | 53 | 6 | 19 | 15 | 2 | 0 | 1 | 0 | A |
| 144 | 3 | 50 | 6 | 18 | 14 | 2 | 0 | 1 | 0 | A |
| 145 | 3 | 58 | 7 | 21 | 16 | 2 | 0 | 2 | 0 | A |
| 146 | 6 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 147 | 6 | 68 | 8 | 25 | 19 | 3 | 0 | 2 | 0 | A |
| 148 | 3 | 14 | 2 | 5 | 4 | 1 | 0 | 1 | 1 | A |
| 149 | 6 | 87 | 10 | 32 | 24 | 3 | 0 | 2 | 0 | A |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 151 | 1 | 94 | 11 | 34 | 26 | 4 | 0 | 3 | 0 | M |
| 152 | 1 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 2 | M |
| 153 | 1 | 123 | 15 | 44 | 34 | 5 | 1 | 3 | 0 | M |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 155 | 3 | 313 | 37 | 113 | 87 | 11 | 1 | 7 | 0 | A |
| 156 | 3 | 165 | 20 | 60 | 46 | 5 | 1 | 4 | 0 | A |
| 157 | 3 | 378 | 45 | 137 | 105 | 17 | 2 | 8 | 0 | A |
| 158 | 6 | 71 | 8 | 26 | 20 | 2 | 0 | 2 | 0 | A |
| 159 | 6 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | A |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 161 | 3 | 161 | 19 | 58 | 45 | 10 | 1 | 9 | 0 | A |
| 162 | 3 | 501 | 59 | 181 | 140 | 33 | 3 | 31 | 0 | A |
| 163 | 3 | 88 | 10 | 32 | 24 | 6 | 1 | 6 | 0 | A |
| 164 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 165 | 1 | 2347 | 278 | 847 | 654 | 99 | 10 | 82 | 0 | M |
| 168 | 1 | 173 | 21 | 63 | 48 | 12 | 1 | 13 | 0 | M |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 171 | 3 | 513 | 61 | 185 | 143 | 15 | 2 | 12 | 0 | A |
| 172 | 6 | 921 | 109 | 333 | 257 | 27 | 3 | 22 | 0 | A |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 177 | 7 | 626 | 74 | 226 | 175 | 45 | 5 | 42 | 4 | A |
| 178 | 7 | 825 | 98 | 298 | 230 | 44 | 5 | 32 | 5 | A |
| 179 | 7 | 1499 | 178 | 541 | 418 | 103 | 11 | 92 | 10 | A |
| 180 | 7 | 273 | 32 | 98 | 76 | 11 | 1 | 4 | 0 | A |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 190 | 7 | 6564 | 778 | 2370 | 1830 | 141 | 15 | 137 | 12 | A |
| 191 | 7 | 4363 | 517 | 1576 | 1217 | 95 | 10 | 97 | 8 | A |
| 192 | 7 | 616 | 73 | 222 | 172 | 13 | 1 | 8 | 2 | A |
| 194 | 5 | 41 | 5 | 15 | 11 | 3 | 0 | 3 | 0 | A |
| 195 | 5 | 83 | 10 | 30 | 23 | 5 | 1 | 4 | 0 | A |
| 196 | 5 | 232 | 28 | 84 | 65 | 15 | 2 | 13 | 0 | A |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 199 | 5 | 20 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | A |
| 200 | 6 | 555 | 66 | 200 | 155 | 34 | 4 | 28 | 0 | A |
| 205 | 6 | 117 | 14 | 42 | 33 | 7 | 1 | 7 | 0 | A |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 207 | 6 | 203 | 24 | 73 | 57 | 13 | 1 | 12 | 0 | A |
| 215 | 3 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 216 | 6 | 139 | 16 | 50 | 39 | 3 | 0 | 3 | 0 | A |
| 217 | 3 | 74 | 9 | 27 | 21 | 2 | 0 | 1 | 0 | A |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 7 | 25 | 3 | 9 | 7 | 0 | 0 | 1 | 0 | A |
| 219 | 6 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 221 | 6 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 223 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 226 | 7 | 21 | 2 | 8 | 6 | 1 | 0 | 1 | 0 | A |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 229 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 230 | 6 | 12 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 231 | 6 | 46 | 5 | 17 | 13 | 1 | 0 | 1 | 0 | A |
| 232 | 7 | 315 | 37 | 114 | 88 | 8 | 1 | 9 | 1 | A |
| 233 | 7 | 16 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | A |
| 236 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 237 | 7 | 222 | 26 | 80 | 62 | 7 | 1 | 8 | 1 | A |
| 238 | 6 | 73 | 9 | 26 | 20 | 2 | 0 | 2 | 0 | A |
| 239 | 6 | 96 | 11 | 35 | 27 | 3 | 0 | 4 | 1 | A |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 242 | 1 | 70 | 8 | 25 | 20 | 2 | 0 | 3 | 1 | M |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 245 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 246 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 247 | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 252 | 6 | 306 | 36 | 110 | 85 | 8 | 1 | 8 | 1 | A |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 256 | 6 | 68 | 8 | 25 | 19 | 1 | 0 | 0 | 0 | A |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 260 | 3 | 478 | 57 | 173 | 133 | 12 | 1 | 10 | 2 | A |
| 261 | 5 | 41 | 5 | 15 | 11 | 2 | 0 | 2 | 0 | A |
| 262 | 1 | 63 | 8 | 23 | 18 | 2 | 0 | 3 | 1 | M |
| 263 | 1 | 39 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | M |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 265 | 1 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| 266 | 1 | 63 | 7 | 23 | 18 | 2 | 0 | 2 | 0 | M |
| 267 | 1 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 268 | 1 | 41 | 5 | 15 | 11 | 1 | 0 | 1 | 0 | M |
| 269 | 6 | 387 | 46 | 140 | 108 | 15 | 2 | 18 | 4 | A |
| 270 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 271 | 6 | 60 | 7 | 22 | 17 | 2 | 0 | 3 | 1 | A |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 273 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| 274 | 6 | 205 | 24 | 74 | 57 | 8 | 1 | 10 | 2 | A |
| 275 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 276 | 6 | 26 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 277 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 279 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 280 | 1 | 32 | 4 | 12 | 9 | 1 | 0 | 2 | 0 | M |
| 281 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| 282 | 1 | 18 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | M |
| 283 | 1 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | M |
| 284 | 1 | 147 | 17 | 53 | 41 | 5 | 1 | 3 | 1 | M |
| 285 | 1 | 30 | 4 | 11 | 8 | 1 | 0 | 1 | 0 | M |
| 286 | 1 | 56 | 7 | 20 | 16 | 2 | 0 | 1 | 0 | M |
| 287 | 1 | 70 | 8 | 25 | 20 | 3 | 0 | 2 | 0 | M |
| 288 | 1 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |
| 289 | 1 | 72 | 9 | 26 | 20 | 3 | 0 | 2 | 0 | M |
| 290 | 1 | 49 | 6 | 18 | 14 | 2 | 0 | 1 | 1 | M |
| 294 | 7 | 16 | 2 | 6 | 4 | 1 | 0 | 0 | 0 | A |
| 301 | 6 | 108 | 13 | 39 | 30 | 3 | 0 | 3 | 0 | A |
| 302 | 6 | 115 | 14 | 42 | 32 | 3 | 0 | 3 | 0 | A |
| 303 | 6 | 12 | 1 | 4 | 3 | 1 | 0 | 1 | 3 | A |
| 304 | 6 | 7 | 1 | 3 | 2 | 2 | 0 | 2 | 0 | A |
| 306 | 6 | 145 | 17 | 52 | 40 | 7 | 1 | 8 | 2 | A |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 324 | 7 | 26 | 3 | 9 | 7 | 0 | 0 | 0 | 0 | A |
| 325 | 7 | 926 | 110 | 334 | 258 | 18 | 2 | 20 | 2 | A |
| 326 | 7 | 88 | 10 | 32 | 24 | 1 | 0 | 1 | 0 | A |
| 327 | 7 | 86 | 10 | 31 | 24 | 2 | 0 | 2 | 0 | A |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 359 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 360 | 1 | 162 | 19 | 58 | 45 | 4 | 0 | 4 | 0 | M |
| 361 | 1 | 154 | 18 | 56 | 43 | 3 | 0 | 3 | 0 | M |
| 362 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 363 | 1 | 2085 | 247 | 753 | 581 | 46 | 5 | 48 | 2 | M |
| 364 | 1 | 111 | 13 | 40 | 31 | 2 | 0 | 2 | 0 | M |
| 365 | 6 | 314 | 37 | 113 | 88 | 9 | 1 | 6 | 1 | A |
| 366 | 6 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 386 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 387 | 3 | 682 | 81 | 246 | 190 | 33 | 3 | 35 | 3 | A |
| | 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 389 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 390 | 7 | 120 | 14 | 43 | 33 | 5 | 1 | 5 | 0 | A |
| | 392 | 7 | 29 | 3 | 10 | 8 | 3 | 0 | 3 | 0 | A |
| | 393 | 7 | 11 | 1 | 4 | 3 | 2 | 0 | 5 | 0 | A |
| | 394 | 3 | 304 | 36 | 110 | 85 | 14 | 1 | 16 | 1 | A |
| | 396 | 3 | 969 | 115 | 350 | 270 | 38 | 4 | 38 | 1 | A |
| | 397 | 7 | 636 | 75 | 230 | 177 | 22 | 2 | 23 | 0 | A |
| | 398 | 6 | 469 | 56 | 170 | 131 | 14 | 1 | 12 | 0 | A |
| | 399 | 7 | 219 | 26 | 79 | 61 | 6 | 1 | 3 | 0 | A |
| | 400 | 6 | 232 | 27 | 84 | 65 | 6 | 1 | 3 | 0 | A |
| | 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 405 | 1 | 52 | 6 | 19 | 15 | 2 | 0 | 0 | 0 | M |
| | 406 | 7 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| | 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 408 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 409 | 7 | 41 | 5 | 15 | 12 | 2 | 0 | 1 | 0 | A |
| | 410 | 6 | 62 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | A |
| | 411 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 413 | 6 | 17 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | A |
| | 414 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| | 415 | 3 | 301 | 36 | 109 | 84 | 11 | 1 | 11 | 0 | A |
| | 416 | 1 | 39 | 5 | 14 | 11 | 2 | 0 | 2 | 0 | M |
| | 417 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 419 | 1 | 55 | 6 | 20 | 15 | 2 | 0 | 2 | 0 | M |
| | 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 424 | 1 | 32 | 4 | 12 | 9 | 2 | 0 | 1 | 2 | M |
| | 425 | 1 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| | 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 427 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 428 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| | 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 430 | 1 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| | 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 433 | 6 | 118 | 14 | 42 | 33 | 2 | 0 | 1 | 0 | A |
| | 434 | 6 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| | 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 442 | 6 | 51 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | A |
| | 443 | 6 | 25 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | A |
| | 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 499 | 1 | 79 | 9 | 29 | 22 | 4 | 0 | 2 | 1 | M |
| | 500 | 1 | 50 | 6 | 18 | 14 | 2 | 0 | 1 | 1 | M |
| | 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 504 | 1 | 19 | 2 | 7 | 5 | 2 | 0 | 2 | 0 | M |
| Total | | **1177** | **51181** | **6063** | **18482** | **14270** | **2001** | **210** | **1650** | **132** | |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7485 | 887 | 2703 | 2087 | 260 | 27 | 219 | 22 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 11531 | 1366 | 4164 | 3215 | 504 | 53 | 376 | 10 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 592 | 70 | 214 | 165 | 31 | 3 | 26 | 1 | |
| 6 | 9359 | 1109 | 3380 | 2609 | 370 | 39 | 286 | 20 | |
| 7 | 22158 | 2625 | 8002 | 6178 | 835 | 88 | 743 | 79 | |
| 8 | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **51181** | **6063** | **18482** | **14270** | **2001** | **210** | **1650** | **132** | **93990** |

**World Logistics Center**
**Project Phase 1 (2022)**
**Entrained Road Dust**
Surface Streets

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1820 | 1.13 | 4,976 | 5626 | 198 | 224 | 482 | 545 | 0 | 0 | 6395 | 3.07 | 0.035 | 0.0001 | 0.5 | 0.0003 | 2.1 |
| 10 | A | 826 | 0.51 | 647 | 332 | 29 | 15 | 41 | 21 | 0 | 0 | 368 | 2.82 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 13 | A | 345 | 0.21 | 620 | 133 | 13 | 3 | 38 | 8 | 298 | 64 | 208 | 9.05 | 0.035 | 0.0002 | 0.1 | 0.0010 | 0.2 |
| 32 | A | 1551 | 0.96 | 1,576 | 1518 | 69 | 66 | 92 | 89 | 0 | 0 | 1674 | 2.78 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 33 | M | 2006 | 1.25 | 481 | 599 | 16 | 20 | 29 | 36 | 0 | 0 | 655 | 2.77 | 0.32 | 0.0005 | 0.4 | 0.0022 | 1.4 |
| 35 | A | 801 | 0.50 | 187 | 93 | 12 | 6 | 31 | 15 | 450 | 224 | 338 | 16.61 | 0.035 | 0.0004 | 0.2 | 0.0018 | 0.6 |
| 36 | A | 1627 | 1.01 | 1,116 | 1128 | 62 | 63 | 173 | 175 | 0 | 0 | 1365 | 3.52 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 37 | A | 219 | 0.14 | 478 | 65 | 39 | 5 | 151 | 21 | 382 | 52 | 143 | 11.33 | 0.035 | 0.0003 | 0.0 | 0.0012 | 0.2 |
| 38 | A | 659 | 0.41 | 2,191 | 897 | 129 | 53 | 349 | 143 | 4 | 2 | 1094 | 3.59 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 42 | A | 5338 | 3.32 | 1,607 | 5329 | 93 | 308 | 285 | 945 | 449 | 1489 | 8071 | 7.29 | 0.035 | 0.0002 | 1.6 | 0.0008 | 6.4 |
| 43 | A | 2598 | 1.61 | 125 | 202 | 5 | 8 | 5 | 8 | 39 | 63 | 281 | 7.24 | 0.035 | 0.0002 | 0.1 | 0.0008 | 0.2 |
| 46 | A | 806 | 0.50 | 176 | 88 | 8 | 4 | 8 | 4 | 116 | 58 | 154 | 10.43 | 0.035 | 0.0003 | 0.0 | 0.0011 | 0.2 |
| 47 | A | 1995 | 1.24 | 85 | 105 | 4 | 5 | 3 | 4 | 0 | 0 | 114 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 48 | A | 795 | 0.49 | 239 | 118 | 6 | 3 | 13 | 6 | 27 | 13 | 141 | 4.64 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 50 | A | 479 | 0.30 | 7,495 | 2230 | 318 | 95 | 621 | 185 | 0 | 0 | 2510 | 2.97 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.8 |
| 51 | A | 975 | 0.61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 52 | A | 1269 | 0.79 | 4,474 | 3527 | 164 | 129 | 464 | 366 | 0 | 0 | 4022 | 3.12 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 53 | A | 795 | 0.49 | 434 | 214 | 30 | 15 | 16 | 8 | 0 | 0 | 237 | 2.67 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 54 | A | 325 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 55 | A | 2042 | 1.27 | 42 | 53 | 3 | 4 | 1 | 1 | 0 | 0 | 58 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 56 | A | 1152 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 57 | A | 246 | 0.15 | 1,122 | 171 | 59 | 9 | 173 | 26 | 0 | 0 | 207 | 3.51 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 58 | M | 172 | 0.11 | 83 | 9 | 3 | 0 | 3 | 0 | 0 | 0 | 10 | 2.57 | 0.32 | 0.0005 | 0.0 | 0.0020 | 0.0 |
| 59 | M | 786 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | 91 | 91 | 23.25 | 0.32 | 0.0047 | 0.4 | 0.0193 | 1.8 |
| 60 | M | 159 | 0.10 | 738 | 73 | 20 | 2 | 64 | 6 | 289 | 29 | 110 | 8.24 | 0.32 | 0.0016 | 0.2 | 0.0067 | 0.7 |
| 61 | M | 97 | 0.06 | 37 | 2 | 5 | 0 | 5 | 0 | 92 | 6 | 8 | 16.58 | 0.32 | 0.0034 | 0.0 | 0.0137 | 0.1 |
| 62 | M | 781 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 65 | A | 795 | 0.49 | 317 | 157 | 8 | 4 | 16 | 8 | 32 | 16 | 184 | 4.43 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 66 | A | 812 | 0.50 | 401 | 202 | 13 | 7 | 27 | 14 | 32 | 16 | 239 | 4.20 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 67 | M | 778 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 68 | A | 814 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 69 | A | 819 | 0.51 | 907 | 461 | 34 | 17 | 57 | 29 | 0 | 0 | 508 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 70 | A | 795 | 0.49 | 1,333 | 658 | 51 | 25 | 86 | 42 | 0 | 0 | 726 | 2.81 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 71 | M | 803 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 72 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 73 | A | 742 | 0.46 | 4,386 | 2022 | 161 | 74 | 462 | 213 | 0 | 0 | 2309 | 3.13 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.8 |
| 74 | A | 1573 | 0.98 | 388 | 379 | 7 | 7 | 7 | 7 | 1 | 1 | 394 | 2.41 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 75 | M | 805 | 0.50 | 140 | 70 | 4 | 2 | 7 | 4 | 5 | 3 | 78 | 3.33 | 0.32 | 0.0007 | 0.1 | 0.0027 | 0.2 |
| 76 | M | 1597 | 0.99 | 32 | 32 | 1 | 1 | 4 | 4 | 0 | 0 | 37 | 3.26 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.1 |
| 77 | A | 438 | 0.27 | 525 | 143 | 10 | 3 | 10 | 3 | 7 | 2 | 150 | 2.64 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 80 | A | 138 | 0.09 | 693 | 59 | 15 | 1 | 17 | 1 | 8 | 1 | 63 | 2.66 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 81 | M | 407 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 82 | M | 322 | 0.20 | 1,058 | 212 | 28 | 6 | 53 | 11 | 177 | 35 | 263 | 5.43 | 0.32 | 0.0011 | 0.3 | 0.0044 | 1.2 |
| 83 | A | 95 | 0.06 | 504 | 30 | 14 | 1 | 26 | 2 | 88 | 5 | 37 | 5.54 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 85 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 86 | M | 284 | 0.18 | 1,379 | 243 | 47 | 8 | 110 | 19 | 251 | 44 | 315 | 5.78 | 0.32 | 0.0011 | 0.4 | 0.0047 | 1.5 |
| 87 | M | 800 | 0.50 | 15 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 8 | 2.73 | 0.32 | 0.0005 | 0.0 | 0.0022 | 0.0 |
| 88 | M | 809 | 0.50 | 26 | 13 | 1 | 1 | 1 | 1 | 0 | 0 | 14 | 2.60 | 0.32 | 0.0005 | 0.0 | 0.0021 | 0.0 |
| 95 | A | 439 | 0.27 | 480 | 131 | 12 | 3 | 37 | 10 | 33 | 9 | 153 | 4.08 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 96 | A | 399 | 0.25 | 404 | 100 | 9 | 2 | 19 | 5 | 15 | 4 | 111 | 3.32 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 97 | A | 389 | 0.24 | 57 | 14 | 2 | 0 | 5 | 1 | 6 | 1 | 17 | 4.73 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 98 | A | 160 | 0.10 | 38 | 4 | 2 | 0 | 13 | 1 | 11 | 1 | 6 | 7.82 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 99 | A | 405 | 0.25 | 141 | 35 | 1 | 0 | 4 | 1 | 3 | 1 | 37 | 2.84 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 100 | M | 227 | 0.14 | 196 | 28 | 5 | 1 | 13 | 2 | 27 | 4 | 34 | 5.09 | 0.32 | 0.0010 | 0.0 | 0.0041 | 0.1 |
| 101 | M | 313 | 0.19 | 563 | 109 | 13 | 3 | 36 | 7 | 65 | 13 | 132 | 4.74 | 0.32 | 0.0009 | 0.1 | 0.0038 | 0.5 |
| 102 | M | 246 | 0.15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 103 | M | 291 | 0.18 | 511 | 92 | 12 | 2 | 30 | 5 | 59 | 11 | 111 | 4.71 | 0.32 | 0.0009 | 0.1 | 0.0038 | 0.4 |
| 104 | M | 404 | 0.25 | 113 | 28 | 2 | 1 | 8 | 2 | 34 | 9 | 39 | 7.24 | 0.32 | 0.0014 | 0.1 | 0.0059 | 0.2 |
| 105 | M | 195 | 0.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 106 | M | 1803 | 1.12 | 12 | 13 | 0 | 0 | 1 | 1 | 0 | 0 | 15 | 2.87 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 107 | M | 388 | 0.24 | 142 | 34 | 3 | 1 | 12 | 3 | 34 | 8 | 46 | 6.55 | 0.32 | 0.0013 | 0.1 | 0.0053 | 0.2 |
| 108 | M | 997 | 0.62 | 12 | 7 | 0 | 0 | 2 | 1 | 0 | 0 | 9 | 3.50 | 0.32 | 0.0007 | 0.0 | 0.0028 | 0.0 |
| 109 | A | 787 | 0.49 | 29 | 14 | 2 | 1 | 7 | 3 | 0 | 0 | 19 | 4.09 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 110 | A | 756 | 0.47 | 121 | 57 | 3 | 1 | 9 | 4 | 27 | 13 | 75 | 6.30 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 111 | A | 800 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 112 | A | 817 | 0.51 | 133 | 68 | 5 | 3 | 17 | 9 | 55 | 28 | 107 | 8.52 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 113 | A | 791 | 0.49 | 12 | 6 | 2 | 1 | 7 | 3 | 14 | 7 | 17 | 12.70 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 114 | M | 791 | 0.49 | 20 | 10 | 2 | 1 | 8 | 4 | 31 | 15 | 30 | 14.24 | 0.32 | 0.0029 | 0.1 | 0.0117 | 0.4 |
| 115 | A | 851 | 0.53 | 130 | 69 | 3 | 2 | 10 | 5 | 35 | 19 | 94 | 6.88 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 116 | M | 819 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 8 | 4 | 5 | 20.90 | 0.32 | 0.0043 | 0.0 | 0.0173 | 0.1 |
| 117 | A | 757 | 0.47 | 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 118 | A | 765 | 0.48 | 140 | 67 | 4 | 2 | 11 | 5 | 39 | 19 | 92 | 6.99 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 119 | A | 782 | 0.49 | 28 | 14 | 0 | 0 | 2 | 1 | 0 | 0 | 15 | 2.77 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 120 | M | 814 | 0.51 | 88 | 44 | 5 | 3 | 15 | 8 | 126 | 64 | 118 | 14.19 | 0.32 | 0.0029 | 0.3 | 0.0117 | 1.4 |
| 121 | A | 825 | 0.51 | 146 | 75 | 4 | 2 | 10 | 5 | 31 | 16 | 98 | 6.13 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 122 | A | 782 | 0.49 | 58 | 28 | 3 | 1 | 10 | 5 | 101 | 49 | 84 | 15.15 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 123 | M | 791 | 0.49 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 124 | A | 800 | 0.50 | 170 | 84 | 5 | 2 | 12 | 6 | 31 | 15 | 108 | 5.74 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 125 | A | 817 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 126 | A | 774 | 0.48 | 188 | 90 | 5 | 2 | 11 | 5 | 29 | 14 | 112 | 5.29 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 127 | M | 825 | 0.51 | 39 | 20 | 3 | 2 | 10 | 5 | 188 | 96 | 123 | 19.12 | 0.32 | 0.0039 | 0.5 | 0.0158 | 1.9 |
| 128 | A | 774 | 0.48 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 129 | A | 823 | 0.51 | 207 | 106 | 5 | 3 | 12 | 6 | 27 | 14 | 128 | 4.93 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 130 | A | 800 | 0.50 | 49 | 24 | 2 | 1 | 1 | 0 | 0 | 0 | 26 | 2.45 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 131 | A | 775 | 0.48 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 133 | A | 804 | 0.50 | 59 | 29 | 2 | 1 | 2 | 1 | 0 | 0 | 31 | 2.55 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 134 | M | 760 | 0.47 | 36 | 17 | 2 | 1 | 3 | 1 | 5 | 2 | 22 | 5.21 | 0.32 | 0.0010 | 0.0 | 0.0042 | 0.1 |
| 135 | A | 816 | 0.51 | 275 | 139 | 8 | 4 | 16 | 8 | 32 | 16 | 168 | 4.72 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 136 | A | 786 | 0.49 | 67 | 33 | 2 | 1 | 2 | 1 | 0 | 0 | 35 | 2.50 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 137 | A | 790 | 0.49 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 138 | M | 267 | 0.17 | 10 | 2 | 1 | 0 | 4 | 1 | 10 | 2 | 4 | 12.26 | 0.32 | 0.0025 | 0.0 | 0.0101 | 0.0 |
| 139 | M | 504 | 0.31 | 168 | 53 | 4 | 1 | 12 | 4 | 12 | 4 | 61 | 4.08 | 0.32 | 0.0008 | 0.0 | 0.0033 | 0.2 |
| 140 | M | 527 | 0.33 | 12 | 4 | 1 | 0 | 2 | 1 | 12 | 4 | 9 | 12.36 | 0.32 | 0.0025 | 0.0 | 0.0101 | 0.1 |
| 141 | M | 1001 | 0.62 | 167 | 104 | 3 | 2 | 9 | 6 | 10 | 6 | 118 | 3.76 | 0.32 | 0.0007 | 0.1 | 0.0030 | 0.4 |
| 142 | M | 291 | 0.18 | 13 | 2 | 1 | 0 | 3 | 1 | 4 | 1 | 4 | 7.69 | 0.32 | 0.0015 | 0.0 | 0.0063 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 143 | A | 845 | 0.52 | 177 | 93 | 5 | 3 | 14 | 7 | 8 | 4 | 107 | 3.70 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 144 | A | 783 | 0.49 | 181 | 88 | 5 | 2 | 15 | 7 | 0 | 0 | 98 | 2.93 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 145 | A | 787 | 0.49 | 208 | 102 | 6 | 3 | 17 | 8 | 0 | 0 | 113 | 2.93 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 146 | A | 814 | 0.51 | 24 | 12 | 0 | 0 | 1 | 1 | 0 | 0 | 13 | 2.51 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 147 | A | 798 | 0.50 | 243 | 120 | 8 | 4 | 20 | 10 | 0 | 0 | 134 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 148 | A | 731 | 0.45 | 54 | 25 | 2 | 1 | 8 | 4 | 92 | 42 | 71 | 15.12 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 149 | A | 808 | 0.50 | 307 | 154 | 10 | 5 | 25 | 13 | 0 | 0 | 172 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 150 | A | 793 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 151 | M | 787 | 0.49 | 340 | 166 | 11 | 5 | 28 | 14 | 0 | 0 | 185 | 2.94 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.4 |
| 152 | M | 782 | 0.49 | 28 | 14 | 2 | 1 | 9 | 4 | 184 | 89 | 108 | 19.98 | 0.32 | 0.0041 | 0.4 | 0.0165 | 1.8 |
| 153 | M | 798 | 0.50 | 437 | 217 | 15 | 7 | 30 | 15 | 0 | 0 | 239 | 2.84 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.5 |
| 154 | A | 901 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 155 | A | 775 | 0.48 | 1,147 | 552 | 36 | 17 | 77 | 37 | 0 | 0 | 607 | 2.82 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 156 | A | 771 | 0.48 | 607 | 291 | 17 | 8 | 44 | 21 | 0 | 0 | 320 | 2.85 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 157 | A | 804 | 0.50 | 1,334 | 666 | 51 | 25 | 86 | 43 | 0 | 0 | 735 | 2.81 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 158 | A | 1039 | 0.65 | 194 | 125 | 5 | 3 | 15 | 10 | 18 | 12 | 150 | 4.47 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 159 | A | 170 | 0.11 | 317 | 33 | 5 | 1 | 15 | 2 | 17 | 2 | 37 | 3.60 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 160 | A | 717 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 161 | A | 784 | 0.49 | 583 | 284 | 31 | 15 | 104 | 51 | 0 | 0 | 350 | 3.67 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 162 | A | 1052 | 0.65 | 1,351 | 883 | 77 | 50 | 259 | 169 | 0 | 0 | 1102 | 3.77 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 163 | A | 350 | 0.22 | 712 | 155 | 44 | 10 | 152 | 33 | 0 | 0 | 197 | 3.91 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 164 | A | 473 | 0.29 | 15 | 4 | 1 | 0 | 3 | 1 | 0 | 0 | 6 | 3.83 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 165 | M | 1541 | 0.96 | 4,320 | 4135 | 157 | 150 | 459 | 439 | 0 | 0 | 4725 | 3.14 | 0.32 | 0.0006 | 2.9 | 0.0025 | 11.8 |
| 168 | M | 758 | 0.47 | 648 | 305 | 40 | 19 | 143 | 67 | 0 | 0 | 391 | 3.95 | 0.32 | 0.0008 | 0.3 | 0.0032 | 1.2 |
| 169 | A | 931 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 170 | A | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 171 | A | 522 | 0.32 | 2,787 | 904 | 71 | 23 | 192 | 62 | 0 | 0 | 989 | 2.82 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 172 | A | 993 | 0.62 | 2,632 | 1624 | 67 | 41 | 189 | 117 | 0 | 0 | 1782 | 2.84 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 173 | A | 1615 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 174 | A | 330 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 177 | A | 1110 | 0.69 | 1,600 | 1103 | 98 | 68 | 324 | 223 | 382 | 263 | 1658 | 6.93 | 0.035 | 0.0002 | 0.3 | 0.0007 | 1.2 |
| 178 | A | 7132 | 4.43 | 328 | 1453 | 15 | 66 | 39 | 173 | 63 | 279 | 1972 | 6.08 | 0.035 | 0.0002 | 0.3 | 0.0007 | 1.3 |
| 179 | A | 2189 | 1.36 | 1,943 | 2642 | 115 | 156 | 364 | 495 | 446 | 606 | 3900 | 6.78 | 0.035 | 0.0002 | 0.7 | 0.0007 | 2.9 |
| 180 | A | 6725 | 4.18 | 115 | 480 | 4 | 17 | 5 | 21 | 3 | 13 | 531 | 3.12 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 181 | M | 625 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 182 | M | 349 | 0.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 183 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 184 | M | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 185 | M | 287 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 186 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 190 | A | 6368 | 3.96 | 2,924 | 11567 | 54 | 214 | 187 | 740 | 185 | 732 | 13252 | 3.89 | 0.035 | 0.0001 | 1.4 | 0.0004 | 5.5 |
| 191 | A | 4906 | 3.05 | 2,523 | 7689 | 47 | 143 | 171 | 521 | 152 | 463 | 8817 | 3.87 | 0.035 | 0.0001 | 0.9 | 0.0004 | 3.6 |
| 192 | A | 4358 | 2.71 | 401 | 1086 | 7 | 19 | 16 | 43 | 34 | 92 | 1240 | 4.09 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 194 | A | 355 | 0.22 | 329 | 73 | 20 | 4 | 63 | 14 | 0 | 0 | 91 | 3.77 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 195 | A | 397 | 0.25 | 592 | 146 | 31 | 8 | 95 | 23 | 0 | 0 | 177 | 3.55 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 196 | A | 716 | 0.44 | 921 | 410 | 50 | 22 | 158 | 70 | 0 | 0 | 502 | 3.63 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 198 | A | 1009 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 199 | A | 378 | 0.23 | 152 | 36 | 6 | 1 | 10 | 2 | 0 | 0 | 39 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 200 | A | 1403 | 0.87 | 1,122 | 978 | 59 | 51 | 173 | 151 | 0 | 0 | 1180 | 3.51 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 205 | A | 1501 | 0.93 | 221 | 206 | 12 | 11 | 41 | 38 | 0 | 0 | 255 | 3.72 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 206 | A | 2658 | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 207 | A | 2611 | 1.62 | 221 | 358 | 12 | 19 | 41 | 67 | 0 | 0 | 444 | 3.72 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 215 | A | 2937 | 1.82 | 10 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 216 | A | 2000 | 1.24 | 197 | 245 | 4 | 5 | 11 | 14 | 20 | 25 | 288 | 4.47 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 217 | A | 663 | 0.41 | 317 | 131 | 7 | 3 | 19 | 8 | 30 | 12 | 154 | 4.38 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 218 | A | 1167 | 0.72 | 60 | 43 | 1 | 1 | 4 | 3 | 9 | 7 | 54 | 5.27 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 219 | A | 2672 | 1.66 | 11 | 18 | 0 | 0 | 0 | 0 | 1 | 2 | 20 | 3.89 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 221 | A | 2622 | 1.63 | 5 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 223 | A | 359 | 0.22 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 225 | M | 1243 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 226 | A | 1643 | 1.02 | 36 | 37 | 1 | 1 | 4 | 4 | 9 | 9 | 51 | 6.77 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 227 | M | 1154 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 229 | A | 1122 | 0.70 | 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 230 | A | 1007 | 0.63 | 35 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 231 | A | 1968 | 1.22 | 66 | 81 | 1 | 1 | 3 | 4 | 6 | 7 | 93 | 4.22 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 232 | A | 1719 | 1.07 | 520 | 555 | 12 | 13 | 45 | 48 | 73 | 78 | 694 | 5.23 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.4 |
| 233 | A | 976 | 0.61 | 47 | 28 | 1 | 1 | 4 | 2 | 9 | 5 | 37 | 5.93 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.0 |
| 236 | A | 794 | 0.49 | 13 | 6 | 0 | 0 | 2 | 1 | 2 | 1 | 8 | 5.75 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.0 |
| 237 | A | 1556 | 0.97 | 404 | 391 | 11 | 11 | 45 | 43 | 74 | 72 | 516 | 5.94 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.3 |
| 238 | A | 1120 | 0.70 | 185 | 129 | 4 | 3 | 17 | 12 | 20 | 14 | 157 | 4.78 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 239 | A | 1385 | 0.86 | 197 | 169 | 6 | 5 | 26 | 22 | 51 | 44 | 241 | 6.95 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.2 |
| 240 | A | 240 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 241 | A | 843 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 242 | M | 989 | 0.61 | 201 | 123 | 6 | 4 | 26 | 16 | 50 | 31 | 174 | 6.82 | 0.32 | 0.0014 | 0.2 | 0.0055 | 1.0 |
| 243 | M | 64 | 0.04 | 16 | 1 | 1 | 0 | 2 | 0 | 6 | 0 | 1 | 8.11 | 0.32 | 0.0016 | 0.0 | 0.0066 | 0.0 |
| 244 | M | 173 | 0.11 | 8 | 1 | 0 | 0 | 2 | 0 | 8 | 1 | 2 | 12.59 | 0.32 | 0.0025 | 0.0 | 0.0103 | 0.0 |
| 245 | M | 181 | 0.11 | 46 | 5 | 1 | 0 | 7 | 1 | 18 | 2 | 8 | 8.39 | 0.32 | 0.0017 | 0.0 | 0.0068 | 0.1 |
| 246 | M | 273 | 0.17 | 27 | 5 | 1 | 0 | 6 | 1 | 18 | 3 | 9 | 10.62 | 0.32 | 0.0021 | 0.0 | 0.0087 | 0.1 |
| 247 | M | 87 | 0.05 | 190 | 10 | 6 | 0 | 22 | 1 | 41 | 2 | 14 | 6.37 | 0.32 | 0.0013 | 0.0 | 0.0052 | 0.1 |
| 250 | A | 1366 | 0.85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 252 | A | 1588 | 0.99 | 546 | 539 | 12 | 12 | 46 | 45 | 74 | 73 | 669 | 5.15 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.4 |
| 254 | A | 424 | 0.26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 256 | A | 943 | 0.59 | 205 | 120 | 3 | 2 | 4 | 2 | 6 | 4 | 128 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 258 | A | 472 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 260 | A | 1783 | 1.11 | 761 | 843 | 16 | 18 | 51 | 56 | 83 | 92 | 1009 | 4.65 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 261 | A | 1181 | 0.73 | 98 | 72 | 4 | 3 | 13 | 10 | 40 | 29 | 114 | 8.48 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 262 | M | 860 | 0.53 | 209 | 112 | 7 | 4 | 27 | 14 | 72 | 38 | 168 | 7.86 | 0.32 | 0.0016 | 0.3 | 0.0064 | 1.1 |
| 263 | M | 141 | 0.09 | 781 | 68 | 18 | 2 | 57 | 5 | 95 | 8 | 83 | 4.88 | 0.32 | 0.0010 | 0.1 | 0.0039 | 0.3 |
| 264 | M | 224 | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 265 | M | 98 | 0.06 | 421 | 26 | 11 | 1 | 37 | 2 | 60 | 4 | 32 | 5.27 | 0.32 | 0.0010 | 0.0 | 0.0043 | 0.1 |
| 266 | M | 171 | 0.11 | 1,049 | 111 | 26 | 3 | 90 | 10 | 147 | 16 | 139 | 5.23 | 0.32 | 0.0010 | 0.1 | 0.0042 | 0.6 |
| 267 | M | 156 | 0.10 | 163 | 16 | 6 | 1 | 26 | 3 | 43 | 4 | 23 | 7.08 | 0.32 | 0.0014 | 0.0 | 0.0057 | 0.1 |
| 268 | M | 159 | 0.10 | 724 | 72 | 17 | 2 | 54 | 5 | 89 | 9 | 87 | 4.91 | 0.32 | 0.0010 | 0.1 | 0.0040 | 0.3 |
| 269 | A | 2450 | 1.52 | 448 | 682 | 15 | 23 | 65 | 99 | 169 | 257 | 1061 | 8.22 | 0.035 | 0.0002 | 0.2 | 0.0009 | 0.9 |
| 270 | A | 620 | 0.39 | 9 | 3 | 0 | 0 | 1 | 0 | 2 | 1 | 5 | 6.45 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 271 | A | 370 | 0.23 | 457 | 105 | 16 | 4 | 66 | 15 | 171 | 39 | 163 | 8.19 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 272 | A | 1246 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 273 | M | 625 | 0.39 | 7 | 3 | 0 | 0 | 2 | 1 | 2 | 1 | 4 | 7.72 | 0.32 | 0.0015 | 0.0 | 0.0063 | 0.0 |
| 274 | A | 1231 | 0.76 | 472 | 361 | 16 | 12 | 69 | 53 | 174 | 133 | 559 | 8.14 | 0.035 | 0.0002 | 0.1 | 0.0009 | 0.5 |
| 275 | M | 377 | 0.23 | 27 | 6 | 3 | 1 | 10 | 2 | 45 | 11 | 20 | 14.57 | 0.32 | 0.0029 | 0.1 | 0.0120 | 0.2 |
| 276 | A | 159 | 0.10 | 463 | 46 | 17 | 2 | 69 | 7 | 185 | 18 | 72 | 8.44 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 277 | M | 1074 | 0.67 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 7.41 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.0 |
| 278 | M | 239 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 279 | M | 157 | 0.10 | 141 | 14 | 5 | 0 | 19 | 2 | 46 | 4 | 21 | 7.68 | 0.32 | 0.0015 | 0.0 | 0.0062 | 0.1 |
| 280 | M | 163 | 0.10 | 558 | 57 | 19 | 2 | 81 | 8 | 211 | 21 | 88 | 8.23 | 0.32 | 0.0016 | 0.1 | 0.0067 | 0.6 |
| 281 | M | 280 | 0.17 | 16 | 3 | 0 | 0 | 2 | 0 | 7 | 1 | 4 | 8.81 | 0.32 | 0.0018 | 0.0 | 0.0072 | 0.0 |
| 282 | M | 167 | 0.10 | 298 | 31 | 10 | 1 | 41 | 4 | 100 | 10 | 47 | 7.79 | 0.32 | 0.0016 | 0.1 | 0.0063 | 0.3 |
| 283 | M | 405 | 0.25 | 79 | 20 | 8 | 2 | 30 | 8 | 103 | 26 | 55 | 13.46 | 0.32 | 0.0027 | 0.2 | 0.0111 | 0.6 |
| 284 | M | 365 | 0.23 | 1,139 | 258 | 36 | 8 | 78 | 18 | 244 | 55 | 339 | 6.16 | 0.32 | 0.0012 | 0.4 | 0.0050 | 1.7 |
| 285 | M | 230 | 0.14 | 366 | 52 | 13 | 2 | 33 | 5 | 151 | 22 | 80 | 8.44 | 0.32 | 0.0017 | 0.1 | 0.0069 | 0.6 |
| 286 | M | 209 | 0.13 | 766 | 99 | 24 | 3 | 56 | 7 | 8 | 1 | 111 | 3.06 | 0.32 | 0.0006 | 0.1 | 0.0024 | 0.3 |
| 287 | M | 292 | 0.18 | 682 | 124 | 22 | 4 | 49 | 9 | 126 | 23 | 159 | 5.78 | 0.32 | 0.0011 | 0.2 | 0.0047 | 0.7 |
| 288 | M | 152 | 0.09 | 206 | 19 | 7 | 1 | 18 | 2 | 8 | 1 | 23 | 3.66 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.1 |
| 289 | M | 285 | 0.18 | 721 | 128 | 23 | 4 | 52 | 9 | 103 | 18 | 159 | 5.20 | 0.32 | 0.0010 | 0.2 | 0.0042 | 0.7 |
| 290 | M | 328 | 0.20 | 422 | 86 | 16 | 3 | 33 | 7 | 213 | 43 | 139 | 9.25 | 0.32 | 0.0019 | 0.3 | 0.0075 | 1.1 |
| 294 | A | 824 | 0.51 | 55 | 28 | 2 | 1 | 2 | 1 | 0 | 0 | 30 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 301 | A | 774 | 0.48 | 397 | 191 | 10 | 5 | 37 | 18 | 0 | 0 | 213 | 3.01 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 302 | A | 796 | 0.49 | 411 | 203 | 10 | 5 | 35 | 17 | 0 | 0 | 225 | 2.95 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 303 | A | 1514 | 0.94 | 23 | 22 | 1 | 1 | 5 | 5 | 182 | 171 | 198 | 20.59 | 0.035 | 0.0006 | 0.1 | 0.0023 | 0.5 |
| 304 | A | 729 | 0.45 | 28 | 13 | 7 | 3 | 18 | 8 | 0 | 0 | 24 | 5.86 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.0 |
| 306 | A | 818 | 0.51 | 503 | 256 | 22 | 11 | 87 | 44 | 180 | 91 | 402 | 8.08 | 0.035 | 0.0002 | 0.1 | 0.0009 | 0.4 |
| 307 | M | 0 | 0.00 | 936 | 0 | 47 | 0 | 165 | 0 | 180 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 324 | A | 2925 | 1.82 | 25 | 45 | 0 | 0 | 1 | 2 | 1 | 2 | 49 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 325 | A | 2224 | 1.38 | 1,181 | 1632 | 20 | 28 | 76 | 105 | 91 | 126 | 1890 | 4.12 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.8 |
| 326 | A | 3506 | 2.18 | 71 | 155 | 1 | 2 | 2 | 4 | 2 | 4 | 166 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 327 | A | 227 | 0.14 | 1,073 | 151 | 19 | 3 | 73 | 10 | 87 | 12 | 177 | 4.21 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 340 | A | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 351 | A | 0 | 0.00 | 15 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 358 | A | 0 | 0.00 | 2,520 | 0 | 47 | 0 | 170 | 0 | 151 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 359 | M | 339 | 0.21 | 34 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 2.98 | 0.32 | 0.0006 | 0.0 | 0.0024 | 0.0 |
| 360 | M | 247 | 0.15 | 1,855 | 285 | 36 | 6 | 130 | 20 | 93 | 14 | 324 | 3.71 | 0.32 | 0.0007 | 0.2 | 0.0030 | 1.0 |
| 361 | M | 337 | 0.21 | 1,297 | 272 | 21 | 4 | 80 | 17 | 95 | 20 | 313 | 4.04 | 0.32 | 0.0008 | 0.2 | 0.0032 | 1.0 |
| 362 | M | 338 | 0.21 | 37 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 2.92 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 363 | M | 4495 | 2.79 | 1,316 | 3675 | 25 | 70 | 92 | 257 | 50 | 140 | 4141 | 3.50 | 0.32 | 0.0007 | 2.8 | 0.0028 | 11.6 |
| 364 | M | 286 | 0.18 | 1,103 | 196 | 21 | 4 | 58 | 10 | 58 | 10 | 220 | 3.63 | 0.32 | 0.0007 | 0.2 | 0.0029 | 0.6 |
| 365 | A | 1602 | 1.00 | 556 | 553 | 13 | 13 | 35 | 35 | 55 | 55 | 656 | 4.47 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 366 | A | 1742 | 1.08 | 7 | 8 | 0 | 0 | 2 | 2 | 10 | 11 | 21 | 14.26 | 0.035 | 0.0004 | 0.0 | 0.0016 | 0.0 |
| 367 | A | 1054 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 375 | M | 388 | 0.24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 376 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 377 | M | 339 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 378 | M | 212 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 379 | M | 331 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 380 | M | 283 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 381 | M | 469 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 386 | A | 810 | 0.50 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 3 | 12.50 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 387 | A | 2761 | 1.72 | 701 | 1202 | 29 | 50 | 109 | 187 | 104 | 178 | 1617 | 5.68 | 0.035 | 0.0002 | 0.2 | 0.0006 | 1.0 |
| 388 | A | 175 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 389 | A | 189 | 0.12 | 16 | 2 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 4.86 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 390 | A | 1189 | 0.74 | 286 | 211 | 11 | 8 | 34 | 25 | 13 | 10 | 254 | 3.99 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 392 | A | 436 | 0.27 | 189 | 51 | 14 | 4 | 64 | 17 | 25 | 7 | 79 | 6.21 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 393 | A | 934 | 0.58 | 34 | 20 | 6 | 3 | 48 | 28 | 44 | 26 | 77 | 12.83 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.1 |
| 394 | A | 1292 | 0.80 | 668 | 536 | 27 | 22 | 106 | 85 | 91 | 73 | 716 | 5.53 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.4 |
| 396 | A | 2366 | 1.47 | 1,162 | 1708 | 39 | 57 | 139 | 204 | 40 | 59 | 2028 | 3.81 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.8 |
| 397 | A | 1588 | 0.99 | 1,136 | 1121 | 34 | 34 | 124 | 122 | 12 | 12 | 1288 | 3.33 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 398 | A | 560 | 0.35 | 2,378 | 827 | 62 | 22 | 181 | 63 | 0 | 0 | 912 | 2.88 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 399 | A | 3389 | 2.11 | 183 | 385 | 4 | 8 | 8 | 17 | 0 | 0 | 411 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 400 | A | 1704 | 1.06 | 386 | 409 | 9 | 10 | 14 | 15 | 1 | 1 | 434 | 2.59 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 401 | M | 790 | 0.49 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 12.38 | 0.32 | 0.0025 | 0.0 | 0.0102 | 0.0 |
| 402 | M | 1199 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 404 | M | 768 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 405 | M | 1010 | 0.63 | 147 | 92 | 6 | 4 | 4 | 3 | 3 | 2 | 100 | 2.90 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.2 |
| 406 | A | 395 | 0.25 | 76 | 19 | 8 | 2 | 5 | 1 | 4 | 1 | 23 | 3.86 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 407 | A | 756 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 408 | A | 1072 | 0.67 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 5.65 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 409 | A | 1137 | 0.71 | 103 | 73 | 4 | 3 | 7 | 5 | 0 | 0 | 81 | 2.84 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 410 | A | 884 | 0.55 | 198 | 109 | 6 | 3 | 8 | 4 | 0 | 0 | 116 | 2.59 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 411 | A | 2332 | 1.45 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 412 | A | 141 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 413 | A | 678 | 0.42 | 72 | 30 | 2 | 1 | 7 | 3 | 8 | 3 | 37 | 4.86 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 414 | A | 895 | 0.56 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 415 | A | 855 | 0.53 | 998 | 530 | 32 | 17 | 109 | 58 | 27 | 14 | 619 | 3.61 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.2 |
| 416 | M | 284 | 0.18 | 388 | 68 | 17 | 3 | 65 | 11 | 10 | 2 | 85 | 4.00 | 0.32 | 0.0008 | 0.1 | 0.0032 | 0.3 |
| 417 | M | 303 | 0.19 | 6 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 7.41 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.0 |
| 419 | M | 343 | 0.21 | 451 | 96 | 13 | 3 | 50 | 11 | 12 | 3 | 112 | 3.61 | 0.32 | 0.0007 | 0.1 | 0.0029 | 0.3 |
| 420 | M | 300 | 0.19 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 421 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 424 | M | 828 | 0.51 | 110 | 57 | 5 | 3 | 14 | 7 | 202 | 104 | 170 | 15.48 | 0.32 | 0.0031 | 0.5 | 0.0128 | 2.2 |
| 425 | M | 203 | 0.13 | 121 | 15 | 1 | 0 | 5 | 1 | 2 | 0 | 16 | 2.86 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 426 | M | 276 | 0.17 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 427 | A | 654 | 0.41 | 4 | 2 | 1 | 0 | 5 | 2 | 7 | 3 | 7 | 13.86 | 0.035 | 0.0004 | 0.0 | 0.0015 | 0.0 |
| 428 | M | 293 | 0.18 | 41 | 7 | 0 | 0 | 1 | 0 | 2 | 0 | 8 | 3.31 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 429 | M | 219 | 0.14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 430 | M | 114 | 0.07 | 366 | 26 | 8 | 1 | 23 | 2 | 50 | 4 | 32 | 5.05 | 0.32 | 0.0010 | 0.0 | 0.0041 | 0.1 |
| 431 | M | 524 | 0.33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 432 | M | 629 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 433 | A | 1802 | 1.12 | 185 | 207 | 3 | 3 | 5 | 6 | 1 | 1 | 217 | 2.54 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 434 | A | 1269 | 0.79 | 17 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 435 | A | 1537 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 436 | M | 178 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 441 | A | 1192 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 442 | A | 2365 | 1.47 | 61 | 90 | 1 | 1 | 2 | 3 | 0 | 0 | 94 | 2.49 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 443 | A | 1588 | 0.99 | 45 | 44 | 1 | 1 | 2 | 2 | 0 | 0 | 47 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 444 | A | 905 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 452 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 453 | A | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 454 | M | 661 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 455 | A | 366 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 458 | M | 237 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 464 | A | 702 | 0.44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 477 | M | 750 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 478 | M | 253 | 0.16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 479 | M | 461 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 480 | A | 500 | 0.31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 481 | M | 377 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 482 | A | 1353 | 0.84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 483 | M | 589 | 0.37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 484 | M | 684 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 485 | M | 319 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 488 | A | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 494 | A | 1039 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 498 | M | 792 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 499 | M | 660 | 0.41 | 340 | 139 | 13 | 5 | 25 | 10 | 208 | 85 | 240 | 10.11 | 0.32 | 0.0020 | 0.5 | 0.0083 | 2.0 |
| 500 | M | 395 | 0.25 | 358 | 88 | 14 | 3 | 26 | 6 | 208 | 51 | 149 | 9.87 | 0.32 | 0.0020 | 0.3 | 0.0081 | 1.2 |
| 502 | A | 855 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 503 | A | 820 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 504 | M | 360 | 0.22 | 151 | 34 | 13 | 3 | 56 | 13 | 0 | 0 | 49 | 4.79 | 0.32 | 0.0009 | 0.0 | 0.0039 | 0.2 |
| | | | | **117829** | **90191** | **4132** | **3032** | **11652** | **8881** | **11176** | **7854** | **109959** | | **Totals:** | | **26.0** | | **105.9** |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 530 | 50 | 150 | 1,580 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 450 | 50 | 150 | 1,600 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 470 | 60 | 160 | 1,610 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 510 | 60 | 170 | 1,640 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 550 | 60 | 180 | 1,670 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 580 | 60 | 180 | 1,690 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 610 | 60 | 190 | 1,710 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 630 | 60 | 190 | 1,730 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 680 | 70 | 210 | 1,840 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 700 | 70 | 220 | 1,850 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 730 | 70 | 230 | 1,870 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,080 | 90 | 290 | 2,090 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,160 | 90 | 310 | 2,170 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,190 | 100 | 330 | 2,230 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,190 | 100 | 330 | 2,240 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,280 | 100 | 330 | 2,250 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 1,490 | 110 | 350 | 2,300 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 1,690 | 110 | 370 | 2,320 |
| FRWY19 | SR60 | Market St to Main St | 1,840 | 120 | 400 | 2,400 |
| FRWY20 | SR60 | Main St to SR-91 | 2,220 | 150 | 480 | 2,690 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 3,970 | 230 | 790 | 4,140 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 4,030 | 240 | 830 | 4,220 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 4,080 | 240 | 850 | 4,260 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 4,480 | 260 | 910 | 4,400 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 5,070 | 280 | 970 | 4,510 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 5,390 | 280 | 960 | 4,460 |
| FRWY27 | SR60 | I-215 to Day St | 6,600 | 330 | 1,120 | 5,130 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 6,370 | 340 | 1,150 | 5,130 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 6,570 | 350 | 1,190 | 5,170 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 7,480 | 380 | 1,240 | 5,300 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 8,670 | 430 | 1,340 | 5,490 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 9,240 | 450 | 1,360 | 5,490 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 11,580 | 460 | 1,560 | 6,340 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,500 | 470 | 1,560 | 6,490 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 3,360 | 120 | 380 | 850 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 3,040 | 120 | 320 | 740 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 3,010 | 110 | 300 | 720 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 127 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 127 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 127 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 127 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 127 |
| FRWY75 | SR91 | I-15 to McKinley St | 730 | 50 | 190 | 1,090 |
| FRWY76 | SR91 | McKinley St to Pierce St | 850 | 50 | 210 | 1,120 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 850 | 50 | 210 | 1,120 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 920 | 60 | 220 | 1,140 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,020 | 60 | 230 | 1,150 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,120 | 60 | 240 | 1,170 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,210 | 60 | 250 | 1,190 |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY82 | SR91 | Adam St to Madison St | 1,270 | 70 | 260 | 1,210 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,300 | 70 | 270 | 1,220 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,360 | 70 | 270 | 1,230 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,340 | 70 | 270 | 1,220 |
| FRWY86 | SR91 | 14th St to University Ave | 1,330 | 60 | 240 | 1,110 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,370 | 60 | 240 | 1,120 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 1,660 | 60 | 190 | 590 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 1,200 | 50 | 160 | 570 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 1,200 | 50 | 160 | 570 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 900 | 40 | 140 | 550 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 730 | 40 | 130 | 540 |
| FRWY106 | I-10 | 22nd St to S 8th St | 670 | 40 | 130 | 540 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 550 | 30 | 120 | 520 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 470 | 30 | 110 | 510 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 450 | 30 | 90 | 490 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 410 | 30 | 90 | 490 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 400 | 30 | 90 | 490 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 400 | 30 | 80 | 490 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 340 | 20 | 70 | 430 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 340 | 20 | 70 | 430 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 910 | 20 | 90 | 210 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,080 | 20 | 100 | 220 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,220 | 30 | 110 | 230 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,270 | 30 | 110 | 240 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,290 | 30 | 120 | 240 |
| FRWY167 | I-215 | Redlands Ave to D St | 840 | 20 | 90 | 270 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 1,020 | 30 | 110 | 360 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 990 | 30 | 100 | 360 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 580 | 20 | 60 | 410 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 590 | 20 | 80 | 480 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 710 | 20 | 80 | 490 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 700 | 20 | 90 | 490 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 1,060 | 40 | 110 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 1,100 | 40 | 120 | 550 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 580 | 30 | 90 | 470 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 570 | 30 | 80 | 450 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 560 | 30 | 80 | 440 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 490 | 20 | 60 | 410 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 460 | 20 | 60 | 400 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 570 | 20 | 70 | 390 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 620 | 30 | 90 | 400 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 610 | 30 | 70 | 370 |
| FRWY142 | SR-215 | Mill St to 2rd St | 600 | 30 | 70 | 360 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 590 | 20 | 70 | 330 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 540 | 20 | 50 | 290 |

**World Logistics Center** **2022**
Project Phase 1 (2022)
Freeway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2310 | 530 | 50 | 150 | 1,580 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1553 | 1690 | 1653 |
| FRWY2 | 2250 | 450 | 50 | 150 | 1,600 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1573 | 1710 | 2287 |
| FRWY3 | 2300 | 470 | 60 | 160 | 1,610 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 12 | 4 | 130 | 1583 | 1730 | 1867 |
| FRWY4 | 2380 | 510 | 60 | 170 | 1,640 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 12 | 4 | 138 | 1612 | 1768 | 2029 |
| FRWY5 | 2460 | 550 | 60 | 180 | 1,670 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1642 | 1806 | 1595 |
| FRWY6 | 2510 | 580 | 60 | 180 | 1,690 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1661 | 1826 | 2367 |
| FRWY7 | 2570 | 610 | 60 | 190 | 1,710 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1681 | 1853 | 1900 |
| FRWY8 | 2610 | 630 | 60 | 190 | 1,730 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1701 | 1873 | 1788 |
| FRWY9 | 2800 | 680 | 70 | 210 | 1,840 | 1792 | 1.113 | 1 | 0 | 0 | 0 | 14 | 5 | 171 | 1809 | 2000 | 2227 |
| FRWY10 | 2840 | 700 | 70 | 220 | 1,850 | 1665 | 1.034 | 1 | 0 | 0 | 0 | 14 | 5 | 179 | 1819 | 2018 | 2088 |
| FRWY11 | 2900 | 730 | 70 | 230 | 1,870 | 849 | 0.527 | 1 | 0 | 0 | 0 | 14 | 5 | 187 | 1838 | 2046 | 1079 |
| FRWY12 | 3550 | 1,080 | 90 | 290 | 2,090 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 18 | 6 | 236 | 2055 | 2318 | 3310 |
| FRWY13 | 3730 | 1,160 | 90 | 310 | 2,170 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 18 | 6 | 252 | 2133 | 2413 | 2531 |
| FRWY14 | 3850 | 1,190 | 100 | 330 | 2,230 | 2444 | 1.518 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2192 | 2491 | 3782 |
| FRWY15 | 3860 | 1,190 | 100 | 330 | 2,240 | 1608 | 0.999 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2202 | 2501 | 2498 |
| FRWY16 | 3960 | 1,280 | 100 | 330 | 2,250 | 2722 | 1.691 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2212 | 2511 | 4245 |
| FRWY17 | 4250 | 1,490 | 110 | 350 | 2,300 | 3198 | 1.987 | 3 | 0 | 0 | 0 | 22 | 7 | 285 | 2261 | 2579 | 5124 |
| FRWY18 | 4490 | 1,690 | 110 | 370 | 2,320 | 2509 | 1.559 | 3 | 0 | 0 | 0 | 22 | 7 | 301 | 2281 | 2616 | 4077 |
| FRWY19 | 4760 | 1,840 | 120 | 400 | 2,400 | 910 | 0.565 | 3 | 0 | 0 | 0 | 25 | 8 | 326 | 2360 | 2722 | 1539 |
| FRWY20 | 5540 | 2,220 | 150 | 480 | 2,690 | 774 | 0.481 | 4 | 0 | 0 | 0 | 31 | 10 | 391 | 2645 | 3081 | 1481 |
| FRWY21 | 9130 | 3,970 | 230 | 790 | 4,140 | 1798 | 1.117 | 7 | 0 | 0 | 1 | 47 | 15 | 643 | 4070 | 4784 | 5344 |
| FRWY22 | 9320 | 4,030 | 240 | 830 | 4,220 | 1035 | 0.643 | 7 | 0 | 0 | 1 | 49 | 16 | 676 | 4149 | 4898 | 3149 |
| FRWY23 | 9430 | 4,080 | 240 | 850 | 4,260 | 1042 | 0.647 | 7 | 0 | 0 | 1 | 49 | 16 | 692 | 4188 | 4954 | 3207 |
| FRWY24 | 10050 | 4,480 | 260 | 910 | 4,400 | 2260 | 1.404 | 8 | 0 | 0 | 1 | 53 | 17 | 741 | 4326 | 5147 | 7226 |
| FRWY25 | 10830 | 5,070 | 280 | 970 | 4,510 | 1305 | 0.811 | 9 | 0 | 0 | 1 | 57 | 19 | 790 | 4434 | 5311 | 4305 |
| FRWY26 | 11090 | 5,390 | 280 | 960 | 4,460 | 977 | 0.607 | 10 | 1 | 1 | 1 | 57 | 19 | 782 | 4385 | 5254 | 3189 |
| FRWY27 | 13180 | 6,600 | 330 | 1,120 | 5,130 | 1186 | 0.737 | 12 | 1 | 1 | 1 | 67 | 22 | 912 | 5043 | 6059 | 4464 |
| FRWY28 | 12990 | 6,370 | 340 | 1,150 | 5,130 | 1642 | 1.020 | 12 | 1 | 1 | 1 | 69 | 23 | 936 | 5043 | 6086 | 6208 |
| FRWY29 | 13280 | 6,570 | 350 | 1,190 | 5,170 | 1636 | 1.016 | 12 | 1 | 1 | 1 | 71 | 23 | 969 | 5083 | 6161 | 6261 |
| FRWY30 | 14400 | 7,480 | 380 | 1,240 | 5,300 | 1555 | 0.966 | 14 | 1 | 1 | 1 | 78 | 25 | 1010 | 5211 | 6339 | 6124 |
| FRWY31 | 15930 | 8,670 | 430 | 1,340 | 5,490 | 3384 | 2.102 | 16 | 1 | 1 | 1 | 88 | 29 | 1091 | 5397 | 6624 | 13924 |
| FRWY32 | 16540 | 9,240 | 450 | 1,360 | 5,490 | 1112 | 0.691 | 17 | 1 | 1 | 1 | 92 | 30 | 1107 | 5397 | 6647 | 4591 |
| FRWY33 | 19940 | 11,580 | 460 | 1,560 | 6,340 | 1935 | 1.202 | 21 | 1 | 1 | 2 | 94 | 31 | 1270 | 6233 | 7653 | 9199 |
| FRWY34 | 21020 | 12,500 | 470 | 1,560 | 6,490 | 1675 | 1.041 | 23 | 1 | 1 | 2 | 96 | 31 | 1270 | 6381 | 7805 | 8121 |
| FRWY35 | 4710 | 3,360 | 120 | 380 | 850 | 1143 | 0.710 | 6 | 0 | 0 | 1 | 25 | 8 | 309 | 836 | 1185 | 841 |
| FRWY36 | 4220 | 3,040 | 120 | 320 | 740 | 9120 | 5.665 | 5 | 0 | 0 | 0 | 25 | 8 | 261 | 728 | 1027 | 5819 |
| FRWY37 | 4140 | 3,010 | 110 | 300 | 720 | 3802 | 2.362 | 5 | 0 | 0 | 0 | 22 | 7 | 244 | 708 | 988 | 2335 |
| FRWY294 | 127 | 0 | 0 | 0 | 127 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 227 |
| FRWY295 | 127 | 0 | 0 | 0 | 127 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| FRWY296 | 127 | 0 | 0 | 0 | 127 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 140 |
| FRWY297 | 127 | 0 | 0 | 0 | 127 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| FRWY299 | 127 | 0 | 0 | 0 | 127 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 128 |
| FRWY75 | 2060 | 730 | 50 | 190 | 1,090 | 2861 | 1.777 | 1 | 0 | 0 | 0 | 10 | 3 | 155 | 1072 | 1241 | 2206 |
| FRWY76 | 2230 | 850 | 50 | 210 | 1,120 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 1999 |
| FRWY77 | 2230 | 850 | 50 | 210 | 1,120 | 450 | 0.280 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 360 |
| FRWY78 | 2340 | 920 | 60 | 220 | 1,140 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 12 | 4 | 179 | 1121 | 1318 | 1133 |
| FRWY79 | 2460 | 1,020 | 60 | 230 | 1,150 | 1713 | 1.064 | 2 | 0 | 0 | 0 | 12 | 4 | 187 | 1131 | 1336 | 1422 |
| FRWY80 | 2590 | 1,120 | 60 | 240 | 1,170 | 1703 | 1.058 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1150 | 1364 | 1443 |
| FRWY81 | 2710 | 1,210 | 60 | 250 | 1,190 | 2512 | 1.560 | 2 | 0 | 0 | 0 | 12 | 4 | 204 | 1170 | 1392 | 2173 |
| FRWY82 | 2810 | 1,270 | 70 | 260 | 1,210 | 1674 | 1.040 | 2 | 0 | 0 | 0 | 14 | 5 | 212 | 1190 | 1423 | 1480 |
| FRWY83 | 2860 | 1,300 | 70 | 270 | 1,220 | 1819 | 1.130 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 1628 |
| FRWY84 | 2930 | 1,360 | 70 | 270 | 1,230 | 1182 | 0.734 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1209 | 1451 | 1065 |
| FRWY85 | 2900 | 1,340 | 70 | 270 | 1,220 | 2360 | 1.466 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 2113 |
| FRWY86 | 2740 | 1,330 | 60 | 240 | 1,110 | 783 | 0.486 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1091 | 1306 | 635 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY87 | 2790 | 1,370 | 60 | 240 | 1,120 | 1370 | 0.851 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1101 | 1316 | 1120 |
| FRWY101 | 2500 | 1,660 | 60 | 190 | 590 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 580 | 755 | 798 |
| FRWY102 | 1980 | 1,200 | 50 | 160 | 570 | 925 | 0.575 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 406 |
| FRWY103 | 1980 | 1,200 | 50 | 160 | 570 | 1770 | 1.100 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 777 |
| FRWY104 | 1630 | 900 | 40 | 140 | 550 | 3182 | 1.977 | 2 | 0 | 0 | 0 | 8 | 3 | 114 | 541 | 667 | 1319 |
| FRWY105 | 1440 | 730 | 40 | 130 | 540 | 1010 | 0.627 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 407 |
| FRWY106 | 1380 | 670 | 40 | 130 | 540 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 526 |
| FRWY107 | 1220 | 550 | 30 | 120 | 520 | 1655 | 1.028 | 1 | 0 | 0 | 0 | 6 | 2 | 98 | 511 | 618 | 636 |
| FRWY108 | 1120 | 470 | 30 | 110 | 510 | 4341 | 2.697 | 1 | 0 | 0 | 0 | 6 | 2 | 90 | 501 | 600 | 1618 |
| FRWY109 | 1060 | 450 | 30 | 90 | 490 | 1728 | 1.073 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 606 |
| FRWY110 | 1020 | 410 | 30 | 90 | 490 | 2788 | 1.732 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 977 |
| FRWY111 | 1010 | 400 | 30 | 90 | 490 | 7717 | 4.794 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 2704 |
| FRWY112 | 1000 | 400 | 30 | 80 | 490 | 1384 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 482 | 556 | 478 |
| FRWY113 | 860 | 340 | 20 | 70 | 430 | 3380 | 2.100 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1020 |
| FRWY114 | 860 | 340 | 20 | 70 | 430 | 3719 | 2.310 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1123 |
| FRWY129 | 1230 | 910 | 20 | 90 | 210 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 206 | 287 | 798 |
| FRWY130 | 1420 | 1,080 | 20 | 100 | 220 | 3830 | 2.379 | 2 | 0 | 0 | 0 | 4 | 1 | 81 | 216 | 305 | 727 |
| FRWY131 | 1590 | 1,220 | 30 | 110 | 230 | 2967 | 1.843 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 226 | 326 | 602 |
| FRWY132 | 1650 | 1,270 | 30 | 110 | 240 | 1163 | 0.722 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 236 | 336 | 243 |
| FRWY133 | 1680 | 1,290 | 30 | 120 | 240 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 236 | 345 | 972 |
| FRWY167 | 1220 | 840 | 20 | 90 | 270 | 1471 | 0.914 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 265 | 346 | 316 |
| FRWY168 | 1520 | 1,020 | 30 | 110 | 360 | 916 | 0.569 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 354 | 454 | 258 |
| FRWY169 | 1480 | 990 | 30 | 100 | 360 | 4924 | 3.059 | 2 | 0 | 0 | 0 | 6 | 2 | 81 | 354 | 446 | 1363 |
| FRWY171 | 1070 | 580 | 20 | 60 | 410 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 459 | 611 |
| FRWY172 | 1170 | 590 | 20 | 80 | 480 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 472 | 544 | 1013 |
| FRWY173 | 1300 | 710 | 20 | 80 | 490 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 482 | 554 | 860 |
| FRWY174 | 1300 | 700 | 20 | 90 | 490 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 482 | 562 | 396 |
| FRWY175 | 1750 | 1,060 | 40 | 110 | 540 | 1547 | 0.961 | 2 | 0 | 0 | 0 | 8 | 3 | 90 | 531 | 634 | 609 |
| FRWY176 | 1810 | 1,100 | 40 | 120 | 550 | 1359 | 0.844 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 541 | 652 | 550 |
| FRWY134 | 1170 | 580 | 30 | 90 | 470 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 462 | 545 | 469 |
| FRWY135 | 1130 | 570 | 30 | 80 | 450 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 442 | 517 | 549 |
| FRWY136 | 1110 | 560 | 30 | 80 | 440 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 433 | 507 | 327 |
| FRWY137 | 980 | 490 | 20 | 60 | 410 | 1516 | 0.942 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 458 | 432 |
| FRWY138 | 940 | 460 | 20 | 60 | 400 | 2485 | 1.544 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 393 | 449 | 692 |
| FRWY139 | 1050 | 570 | 20 | 70 | 390 | 1950 | 1.211 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 383 | 447 | 542 |
| FRWY140 | 1140 | 620 | 30 | 90 | 400 | 1581 | 0.982 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 393 | 476 | 467 |
| FRWY141 | 1080 | 610 | 30 | 70 | 370 | 1447 | 0.899 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 364 | 430 | 387 |
| FRWY142 | 1060 | 600 | 30 | 70 | 360 | 938 | 0.583 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 354 | 420 | 245 |
| FRWY143 | 1010 | 590 | 20 | 70 | 330 | 2032 | 1.262 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 324 | 388 | 490 |
| FRWY144 | 900 | 540 | 20 | 50 | 290 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 4 | 1 | 41 | 285 | 332 | 644 |
| | | | | | | | | | | | | | | | | | **191204** |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3 | 1 | 0 | 0 | 0 | 10 | 3 | 119 | 1519 |
| FRWY2 | 3 | 1 | 0 | 0 | 0 | 14 | 4 | 163 | 2104 |
| FRWY3 | 3 | 1 | 0 | 0 | 0 | 13 | 4 | 141 | 1708 |
| FRWY4 | 3 | 1 | 0 | 0 | 0 | 14 | 5 | 159 | 1850 |
| FRWY5 | 3 | 1 | 0 | 0 | 0 | 11 | 4 | 129 | 1450 |
| FRWY6 | 3 | 1 | 0 | 0 | 0 | 16 | 5 | 190 | 2154 |
| FRWY7 | 3 | 1 | 0 | 0 | 0 | 13 | 4 | 159 | 1723 |
| FRWY8 | 3 | 1 | 0 | 0 | 0 | 12 | 4 | 148 | 1624 |
| FRWY9 | 3 | 1 | 0 | 0 | 0 | 16 | 5 | 190 | 2014 |
| FRWY10 | 3 | 1 | 0 | 0 | 0 | 15 | 5 | 185 | 1881 |
| FRWY11 | 3 | 1 | 0 | 0 | 0 | 8 | 2 | 99 | 970 |
| FRWY12 | 2 | 3 | 0 | 0 | 0 | 26 | 9 | 337 | 2935 |
| FRWY13 | 2 | 2 | 0 | 0 | 0 | 19 | 6 | 265 | 2238 |
| FRWY14 | 2 | 3 | 0 | 0 | 0 | 31 | 10 | 408 | 3329 |
| FRWY15 | 2 | 2 | 0 | 0 | 0 | 20 | 7 | 268 | 2200 |
| FRWY16 | 2 | 4 | 0 | 0 | 0 | 35 | 11 | 454 | 3740 |
| FRWY17 | 2 | 5 | 0 | 0 | 0 | 45 | 15 | 566 | 4492 |
| FRWY18 | 2 | 5 | 0 | 0 | 0 | 35 | 11 | 470 | 3555 |
| FRWY19 | 2 | 2 | 0 | 0 | 0 | 14 | 5 | 184 | 1334 |
| FRWY20 | 2 | 2 | 0 | 0 | 0 | 15 | 5 | 188 | 1272 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY21 | 3 | 8 | 0 | 0 | 1 | 52 | 17 | 718 | 4546 |
| FRWY22 | 3 | 5 | 0 | 0 | 0 | 32 | 10 | 434 | 2668 |
| FRWY23 | 3 | 5 | 0 | 0 | 0 | 32 | 10 | 448 | 2711 |
| FRWY24 | 3 | 11 | 1 | 1 | 1 | 75 | 24 | 1040 | 6073 |
| FRWY25 | 3 | 7 | 0 | 0 | 1 | 46 | 15 | 640 | 3595 |
| FRWY26 | 3 | 6 | 0 | 0 | 1 | 35 | 11 | 474 | 2661 |
| FRWY27 | 2 | 9 | 0 | 0 | 1 | 50 | 16 | 672 | 3716 |
| FRWY28 | 2 | 12 | 1 | 1 | 1 | 71 | 23 | 955 | 5145 |
| FRWY29 | 2 | 12 | 1 | 1 | 1 | 73 | 24 | 985 | 5166 |
| FRWY30 | 2 | 13 | 1 | 1 | 1 | 75 | 25 | 975 | 5033 |
| FRWY31 | 2 | 33 | 2 | 2 | 3 | 185 | 60 | 2293 | 11346 |
| FRWY32 | 2 | 12 | 1 | 1 | 1 | 63 | 21 | 765 | 3728 |
| FRWY33 | 2 | 25 | 1 | 1 | 2 | 113 | 37 | 1527 | 7492 |
| FRWY34 | 2 | 24 | 1 | 1 | 2 | 100 | 33 | 1322 | 6639 |
| FRWY35 | 2 | 4 | 0 | 0 | 0 | 17 | 6 | 220 | 593 |
| FRWY36 | 2 | 31 | 2 | 2 | 3 | 139 | 45 | 1476 | 4122 |
| FRWY37 | 2 | 13 | 1 | 1 | 1 | 53 | 17 | 577 | 1672 |
| FRWY294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 227 |
| FRWY295 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| FRWY296 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 140 |
| FRWY297 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 |
| FRWY299 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 128 |
| FRWY75 | 7 | 2 | 0 | 0 | 0 | 18 | 6 | 275 | 1905 |
| FRWY76 | 7 | 2 | 0 | 0 | 0 | 16 | 5 | 266 | 1710 |
| FRWY77 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 48 | 308 |
| FRWY78 | 7 | 1 | 0 | 0 | 0 | 11 | 3 | 154 | 964 |
| FRWY79 | 7 | 2 | 0 | 0 | 0 | 13 | 4 | 199 | 1203 |
| FRWY80 | 7 | 2 | 0 | 0 | 0 | 13 | 4 | 207 | 1217 |
| FRWY81 | 7 | 3 | 0 | 0 | 0 | 19 | 6 | 318 | 1826 |
| FRWY82 | 7 | 2 | 0 | 0 | 0 | 15 | 5 | 220 | 1237 |
| FRWY83 | 7 | 3 | 0 | 0 | 0 | 16 | 5 | 248 | 1355 |
| FRWY84 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 161 | 888 |
| FRWY85 | 7 | 4 | 0 | 0 | 0 | 21 | 7 | 322 | 1758 |
| FRWY86 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 95 | 531 |
| FRWY87 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 166 | 937 |
| FRWY101 | 2 | 3 | 0 | 0 | 0 | 13 | 4 | 164 | 614 |
| FRWY102 | 2 | 1 | 0 | 0 | 0 | 6 | 2 | 75 | 322 |
| FRWY103 | 2 | 2 | 0 | 0 | 0 | 11 | 4 | 143 | 616 |
| FRWY104 | 2 | 3 | 0 | 0 | 0 | 16 | 5 | 225 | 1069 |
| FRWY105 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 333 |
| FRWY106 | 2 | 1 | 0 | 0 | 0 | 7 | 2 | 86 | 430 |
| FRWY107 | 2 | 1 | 0 | 0 | 0 | 6 | 2 | 100 | 526 |
| FRWY108 | 2 | 2 | 0 | 0 | 0 | 17 | 5 | 242 | 1352 |
| FRWY109 | 2 | 1 | 0 | 0 | 0 | 7 | 2 | 79 | 517 |
| FRWY110 | 2 | 1 | 0 | 0 | 0 | 11 | 3 | 127 | 834 |
| FRWY111 | 2 | 3 | 0 | 0 | 0 | 29 | 10 | 351 | 2309 |
| FRWY112 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 414 |
| FRWY113 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 120 | 888 |
| FRWY114 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 132 | 977 |
| FRWY129 | 2 | 5 | 0 | 0 | 0 | 11 | 4 | 204 | 574 |
| FRWY130 | 2 | 5 | 0 | 0 | 0 | 10 | 3 | 194 | 515 |
| FRWY131 | 2 | 4 | 0 | 0 | 0 | 11 | 4 | 165 | 417 |
| FRWY132 | 2 | 2 | 0 | 0 | 0 | 4 | 1 | 65 | 170 |
| FRWY133 | 2 | 7 | 0 | 0 | 1 | 17 | 6 | 276 | 666 |
| FRWY167 | 2 | 1 | 0 | 0 | 0 | 4 | 1 | 67 | 243 |
| FRWY168 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 51 | 201 |
| FRWY169 | 2 | 5 | 0 | 0 | 0 | 19 | 6 | 249 | 1083 |
| FRWY171 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 537 |
| FRWY172 | 2 | 2 | 0 | 0 | 0 | 8 | 2 | 121 | 879 |
| FRWY173 | 2 | 2 | 0 | 0 | 0 | 6 | 2 | 101 | 748 |
| FRWY174 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 52 | 340 |
| FRWY175 | 2 | 2 | 0 | 0 | 0 | 8 | 3 | 86 | 510 |
| FRWY176 | 2 | 2 | 0 | 0 | 0 | 7 | 2 | 82 | 456 |
| FRWY134 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 398 |
| FRWY135 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 69 | 470 |
| FRWY136 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 42 | 279 |
| FRWY137 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 380 |
| FRWY138 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 75 | 607 |
| FRWY139 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 69 | 464 |
| FRWY140 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 72 | 386 |
| FRWY141 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 51 | 327 |
| FRWY142 | 7 | 1 | 0 | 0 | 0 | 4 | 1 | 33 | 206 |
| FRWY143 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 72 | 410 |
| FRWY144 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 79 | 552 |
| **Total** | | **372** | **20** | **19** | **33** | **2088** | **683** | **27439** | **160550** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2_DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 279 | 15 | 14 | 25 | 1446 | 473 | 18650 | 98288 | |
| 3 | 60 | 3 | 3 | 5 | 442 | 145 | 5803 | 43848 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 34 | 2 | 2 | 3 | 200 | 65 | 2987 | 18414 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **372** | **20** | **19** | **33** | **2088** | **683** | **27439** | **160550** | **191204** |

**World Logistics Center** **2022**
Project Phase 1 (2022)
Freeway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2310 | 530 | 50 | 150 | 1,580 | 1574 | 0.978 | 301 | 36 | 109 | 84 | 33 | 3 | 28 | 27 | 620 | 606 |
| FRWY2 | 2250 | 450 | 50 | 150 | 1,600 | 2153 | 1.337 | 255 | 30 | 92 | 71 | 33 | 3 | 28 | 27 | 540 | 723 |
| FRWY3 | 2300 | 470 | 60 | 160 | 1,610 | 1737 | 1.079 | 267 | 32 | 96 | 74 | 40 | 4 | 30 | 27 | 570 | 615 |
| FRWY4 | 2380 | 510 | 60 | 170 | 1,640 | 1847 | 1.147 | 289 | 34 | 105 | 81 | 40 | 4 | 32 | 28 | 612 | 702 |
| FRWY5 | 2460 | 550 | 60 | 180 | 1,670 | 1422 | 0.883 | 312 | 37 | 113 | 87 | 40 | 4 | 33 | 28 | 654 | 578 |
| FRWY6 | 2510 | 580 | 60 | 180 | 1,690 | 2087 | 1.296 | 329 | 39 | 119 | 92 | 40 | 4 | 33 | 29 | 684 | 887 |
| FRWY7 | 2570 | 610 | 60 | 190 | 1,710 | 1650 | 1.025 | 346 | 41 | 125 | 97 | 40 | 4 | 35 | 29 | 717 | 734 |
| FRWY8 | 2610 | 630 | 60 | 190 | 1,730 | 1537 | 0.955 | 358 | 42 | 129 | 100 | 40 | 4 | 35 | 29 | 737 | 704 |
| FRWY9 | 2800 | 680 | 70 | 210 | 1,840 | 1792 | 1.113 | 386 | 46 | 139 | 108 | 46 | 5 | 39 | 31 | 800 | 890 |
| FRWY10 | 2840 | 700 | 70 | 220 | 1,850 | 1665 | 1.034 | 397 | 47 | 143 | 111 | 46 | 5 | 41 | 31 | 822 | 850 |
| FRWY11 | 2900 | 730 | 70 | 230 | 1,870 | 849 | 0.527 | 414 | 49 | 150 | 115 | 46 | 5 | 43 | 32 | 854 | 450 |
| FRWY12 | 3550 | 1,080 | 90 | 290 | 2,090 | 2299 | 1.428 | 613 | 73 | 221 | 171 | 59 | 6 | 54 | 35 | 1232 | 1760 |
| FRWY13 | 3730 | 1,160 | 90 | 310 | 2,170 | 1689 | 1.049 | 658 | 78 | 238 | 184 | 59 | 6 | 58 | 37 | 1317 | 1382 |
| FRWY14 | 3850 | 1,190 | 100 | 330 | 2,230 | 2444 | 1.518 | 675 | 80 | 244 | 188 | 66 | 7 | 61 | 38 | 1359 | 2064 |
| FRWY15 | 3860 | 1,190 | 100 | 330 | 2,240 | 1608 | 0.999 | 675 | 80 | 244 | 188 | 66 | 7 | 61 | 38 | 1359 | 1358 |
| FRWY16 | 3960 | 1,280 | 100 | 330 | 2,250 | 2722 | 1.691 | 726 | 86 | 262 | 203 | 66 | 7 | 61 | 38 | 1449 | 2451 |
| FRWY17 | 4250 | 1,490 | 110 | 350 | 2,300 | 3198 | 1.987 | 846 | 100 | 305 | 236 | 73 | 8 | 65 | 39 | 1671 | 3319 |
| FRWY18 | 4490 | 1,690 | 110 | 370 | 2,320 | 2509 | 1.559 | 959 | 114 | 346 | 267 | 73 | 8 | 69 | 39 | 1874 | 2921 |
| FRWY19 | 4760 | 1,840 | 120 | 400 | 2,400 | 910 | 0.565 | 1044 | 124 | 377 | 291 | 79 | 8 | 74 | 40 | 2038 | 1152 |
| FRWY20 | 5540 | 2,220 | 150 | 480 | 2,690 | 774 | 0.481 | 1260 | 149 | 455 | 351 | 99 | 10 | 89 | 45 | 2459 | 1182 |
| FRWY21 | 9130 | 3,970 | 230 | 790 | 4,140 | 1798 | 1.117 | 2253 | 267 | 814 | 628 | 152 | 16 | 147 | 70 | 4346 | 4854 |
| FRWY22 | 9320 | 4,030 | 240 | 830 | 4,220 | 1035 | 0.643 | 2287 | 271 | 826 | 638 | 158 | 17 | 154 | 71 | 4422 | 2843 |
| FRWY23 | 9430 | 4,080 | 240 | 850 | 4,260 | 1042 | 0.647 | 2315 | 274 | 836 | 646 | 158 | 17 | 158 | 72 | 4476 | 2897 |
| FRWY24 | 10050 | 4,480 | 260 | 910 | 4,400 | 2260 | 1.404 | 2542 | 301 | 918 | 709 | 172 | 18 | 169 | 74 | 4903 | 6884 |
| FRWY25 | 10830 | 5,070 | 280 | 970 | 4,510 | 1305 | 0.811 | 2877 | 341 | 1039 | 802 | 185 | 19 | 180 | 76 | 5519 | 4475 |
| FRWY26 | 11090 | 5,390 | 280 | 960 | 4,460 | 977 | 0.607 | 3059 | 362 | 1105 | 853 | 185 | 19 | 178 | 75 | 5836 | 3542 |
| FRWY27 | 13180 | 6,600 | 330 | 1,120 | 5,130 | 1186 | 0.737 | 3745 | 444 | 1353 | 1044 | 218 | 23 | 208 | 87 | 7121 | 5246 |
| FRWY28 | 12990 | 6,370 | 340 | 1,150 | 5,130 | 1642 | 1.020 | 3615 | 428 | 1305 | 1008 | 224 | 24 | 214 | 87 | 6904 | 7043 |
| FRWY29 | 13280 | 6,570 | 350 | 1,190 | 5,170 | 1636 | 1.016 | 3728 | 442 | 1346 | 1039 | 231 | 24 | 221 | 87 | 7119 | 7235 |
| FRWY30 | 14400 | 7,480 | 380 | 1,240 | 5,300 | 1555 | 0.966 | 4245 | 503 | 1533 | 1183 | 251 | 26 | 230 | 89 | 8061 | 7786 |
| FRWY31 | 15930 | 8,670 | 430 | 1,340 | 5,490 | 3384 | 2.102 | 4920 | 583 | 1777 | 1372 | 284 | 30 | 249 | 93 | 9306 | 19564 |
| FRWY32 | 16540 | 9,240 | 450 | 1,360 | 5,490 | 1112 | 0.691 | 5243 | 621 | 1894 | 1462 | 297 | 31 | 253 | 93 | 9893 | 6834 |
| FRWY33 | 19940 | 11,580 | 460 | 1,560 | 6,340 | 1935 | 1.202 | 6571 | 779 | 2373 | 1832 | 303 | 32 | 290 | 107 | 12287 | 14770 |
| FRWY34 | 21020 | 12,500 | 470 | 1,560 | 6,490 | 1675 | 1.041 | 7093 | 840 | 2562 | 1978 | 310 | 32 | 290 | 109 | 13215 | 13751 |
| FRWY35 | 4710 | 3,360 | 120 | 380 | 850 | 1143 | 0.710 | 1907 | 226 | 689 | 532 | 79 | 8 | 71 | 14 | 3525 | 2503 |
| FRWY36 | 4220 | 3,040 | 120 | 320 | 740 | 9120 | 5.665 | 1725 | 204 | 623 | 481 | 79 | 8 | 59 | 12 | 3193 | 18089 |
| FRWY37 | 4140 | 3,010 | 110 | 300 | 720 | 3802 | 2.362 | 1708 | 202 | 617 | 476 | 73 | 8 | 56 | 12 | 3152 | 7444 |
| FRWY294 | 127 | 0 | 0 | 0 | 127 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| FRWY295 | 127 | 0 | 0 | 0 | 127 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| FRWY296 | 127 | 0 | 0 | 0 | 127 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY297 | 127 | 0 | 0 | 0 | 127 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY299 | 127 | 0 | 0 | 0 | 127 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY75 | 2060 | 730 | 50 | 190 | 1,090 | 2861 | 1.777 | 414 | 49 | 150 | 115 | 33 | 3 | 35 | 18 | 819 | 1455 |
| FRWY76 | 2230 | 850 | 50 | 210 | 1,120 | 2500 | 1.553 | 482 | 57 | 174 | 134 | 33 | 3 | 39 | 19 | 943 | 1464 |
| FRWY77 | 2230 | 850 | 50 | 210 | 1,120 | 450 | 0.280 | 482 | 57 | 174 | 134 | 33 | 3 | 39 | 19 | 943 | 263 |
| FRWY78 | 2340 | 920 | 60 | 220 | 1,140 | 1384 | 0.860 | 522 | 62 | 189 | 146 | 40 | 4 | 41 | 19 | 1022 | 879 |
| FRWY79 | 2460 | 1,020 | 60 | 230 | 1,150 | 1713 | 1.064 | 579 | 69 | 209 | 161 | 40 | 4 | 43 | 19 | 1124 | 1196 |
| FRWY80 | 2590 | 1,120 | 60 | 240 | 1,170 | 1703 | 1.058 | 636 | 75 | 230 | 177 | 40 | 4 | 45 | 20 | 1226 | 1297 |
| FRWY81 | 2710 | 1,210 | 60 | 250 | 1,190 | 2512 | 1.560 | 687 | 81 | 248 | 191 | 40 | 4 | 46 | 20 | 1318 | 2056 |
| FRWY82 | 2810 | 1,270 | 70 | 260 | 1,210 | 1674 | 1.040 | 721 | 85 | 260 | 201 | 46 | 5 | 48 | 20 | 1387 | 1442 |
| FRWY83 | 2860 | 1,300 | 70 | 270 | 1,220 | 1819 | 1.130 | 738 | 87 | 266 | 206 | 46 | 5 | 50 | 21 | 1419 | 1603 |
| FRWY84 | 2930 | 1,360 | 70 | 270 | 1,230 | 1182 | 0.734 | 772 | 91 | 279 | 215 | 46 | 5 | 50 | 21 | 1479 | 1086 |
| FRWY85 | 2900 | 1,340 | 70 | 270 | 1,220 | 2360 | 1.466 | 760 | 90 | 275 | 212 | 46 | 5 | 50 | 21 | 1459 | 2139 |
| FRWY86 | 2740 | 1,330 | 60 | 240 | 1,110 | 783 | 0.486 | 755 | 89 | 273 | 210 | 40 | 4 | 45 | 19 | 1434 | 698 |
| FRWY87 | 2790 | 1,370 | 60 | 240 | 1,120 | 1370 | 0.851 | 777 | 92 | 281 | 217 | 40 | 4 | 45 | 19 | 1474 | 1255 |
| FRWY101 | 2500 | 1,660 | 60 | 190 | 590 | 1703 | 1.058 | 942 | 112 | 340 | 263 | 40 | 4 | 35 | 10 | 1745 | 1847 |
| FRWY102 | 1980 | 1,200 | 50 | 160 | 570 | 925 | 0.575 | 681 | 81 | 246 | 190 | 33 | 3 | 30 | 10 | 1273 | 732 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 1980 | 1,200 | 50 | 160 | 570 | 1770 | 1.100 | 681 | 81 | 246 | 190 | 33 | 3 | 30 | 10 | 1273 | 1400 |
| FRWY104 | 1630 | 900 | 40 | 140 | 550 | 3182 | 1.977 | 511 | 61 | 184 | 142 | 26 | 3 | 26 | 9 | 963 | 1903 |
| FRWY105 | 1440 | 730 | 40 | 130 | 540 | 1010 | 0.627 | 414 | 49 | 150 | 115 | 26 | 3 | 24 | 9 | 791 | 496 |
| FRWY106 | 1380 | 670 | 40 | 130 | 540 | 1305 | 0.811 | 380 | 45 | 137 | 106 | 26 | 3 | 24 | 9 | 731 | 593 |
| FRWY107 | 1220 | 550 | 30 | 120 | 520 | 1655 | 1.028 | 312 | 37 | 113 | 87 | 20 | 2 | 22 | 9 | 602 | 619 |
| FRWY108 | 1120 | 470 | 30 | 110 | 510 | 4341 | 2.697 | 267 | 32 | 96 | 74 | 20 | 2 | 20 | 9 | 520 | 1402 |
| FRWY109 | 1060 | 450 | 30 | 90 | 490 | 1728 | 1.073 | 255 | 30 | 92 | 71 | 20 | 2 | 17 | 8 | 496 | 532 |
| FRWY110 | 1020 | 410 | 30 | 90 | 490 | 2788 | 1.732 | 233 | 28 | 84 | 65 | 20 | 2 | 17 | 8 | 456 | 790 |
| FRWY111 | 1010 | 400 | 30 | 90 | 490 | 7717 | 4.794 | 227 | 27 | 82 | 63 | 20 | 2 | 17 | 8 | 446 | 2138 |
| FRWY112 | 1000 | 400 | 30 | 80 | 490 | 1384 | 0.860 | 227 | 27 | 82 | 63 | 20 | 2 | 15 | 8 | 444 | 382 |
| FRWY113 | 860 | 340 | 20 | 70 | 430 | 3380 | 2.100 | 193 | 23 | 70 | 54 | 13 | 1 | 13 | 7 | 374 | 786 |
| FRWY114 | 860 | 340 | 20 | 70 | 430 | 3719 | 2.310 | 193 | 23 | 70 | 54 | 13 | 1 | 13 | 7 | 374 | 864 |
| FRWY129 | 1230 | 910 | 20 | 90 | 210 | 4476 | 2.781 | 516 | 61 | 186 | 144 | 13 | 1 | 17 | 4 | 943 | 2622 |
| FRWY130 | 1420 | 1,080 | 20 | 100 | 220 | 3830 | 2.379 | 613 | 73 | 221 | 171 | 13 | 1 | 19 | 4 | 1115 | 2652 |
| FRWY131 | 1590 | 1,220 | 30 | 110 | 230 | 2967 | 1.843 | 692 | 82 | 250 | 193 | 20 | 2 | 20 | 4 | 1264 | 2329 |
| FRWY132 | 1650 | 1,270 | 30 | 110 | 240 | 1163 | 0.722 | 721 | 85 | 260 | 201 | 20 | 2 | 20 | 4 | 1314 | 949 |
| FRWY133 | 1680 | 1,290 | 30 | 120 | 240 | 4541 | 2.821 | 732 | 87 | 264 | 204 | 20 | 2 | 22 | 4 | 1335 | 3767 |
| FRWY167 | 1220 | 840 | 20 | 90 | 270 | 1471 | 0.914 | 477 | 56 | 172 | 133 | 13 | 1 | 17 | 5 | 874 | 799 |
| FRWY168 | 1520 | 1,020 | 30 | 110 | 360 | 916 | 0.569 | 579 | 69 | 209 | 161 | 20 | 2 | 20 | 6 | 1066 | 607 |
| FRWY169 | 1480 | 990 | 30 | 100 | 360 | 4924 | 3.059 | 562 | 67 | 203 | 157 | 20 | 2 | 19 | 6 | 1034 | 3164 |
| FRWY171 | 1070 | 580 | 20 | 60 | 410 | 2145 | 1.333 | 329 | 39 | 119 | 92 | 13 | 1 | 11 | 7 | 611 | 815 |
| FRWY172 | 1170 | 590 | 20 | 80 | 480 | 3000 | 1.864 | 335 | 40 | 121 | 93 | 13 | 1 | 15 | 8 | 626 | 1167 |
| FRWY173 | 1300 | 710 | 20 | 80 | 490 | 2501 | 1.554 | 403 | 48 | 145 | 112 | 13 | 1 | 15 | 8 | 746 | 1159 |
| FRWY174 | 1300 | 700 | 20 | 90 | 490 | 1135 | 0.705 | 397 | 47 | 143 | 111 | 13 | 1 | 17 | 8 | 738 | 520 |
| FRWY175 | 1750 | 1,060 | 40 | 110 | 540 | 1547 | 0.961 | 602 | 71 | 217 | 168 | 26 | 3 | 20 | 9 | 1116 | 1073 |
| FRWY176 | 1810 | 1,100 | 40 | 120 | 550 | 1359 | 0.844 | 624 | 74 | 225 | 174 | 26 | 3 | 22 | 9 | 1158 | 978 |
| FRWY134 | 1170 | 580 | 30 | 90 | 470 | 1385 | 0.860 | 329 | 39 | 119 | 92 | 20 | 2 | 17 | 8 | 625 | 538 |
| FRWY135 | 1130 | 570 | 30 | 80 | 450 | 1711 | 1.063 | 323 | 38 | 117 | 90 | 20 | 2 | 15 | 8 | 613 | 652 |
| FRWY136 | 1110 | 560 | 30 | 80 | 440 | 1038 | 0.645 | 318 | 38 | 115 | 89 | 20 | 2 | 15 | 7 | 603 | 389 |
| FRWY137 | 980 | 490 | 20 | 60 | 410 | 1516 | 0.942 | 278 | 33 | 100 | 78 | 13 | 1 | 11 | 7 | 522 | 491 |
| FRWY138 | 940 | 460 | 20 | 60 | 400 | 2485 | 1.544 | 261 | 31 | 94 | 73 | 13 | 1 | 11 | 7 | 491 | 759 |
| FRWY139 | 1050 | 570 | 20 | 70 | 390 | 1950 | 1.211 | 323 | 38 | 117 | 90 | 13 | 1 | 13 | 7 | 603 | 730 |
| FRWY140 | 1140 | 620 | 30 | 90 | 400 | 1581 | 0.982 | 352 | 42 | 127 | 98 | 20 | 2 | 17 | 7 | 664 | 652 |
| FRWY141 | 1080 | 610 | 30 | 70 | 370 | 1447 | 0.899 | 346 | 41 | 125 | 97 | 20 | 2 | 13 | 6 | 650 | 584 |
| FRWY142 | 1060 | 600 | 30 | 70 | 360 | 938 | 0.583 | 340 | 40 | 123 | 95 | 20 | 2 | 13 | 6 | 640 | 373 |
| FRWY143 | 1010 | 590 | 20 | 70 | 330 | 2032 | 1.262 | 335 | 40 | 121 | 93 | 13 | 1 | 13 | 6 | 622 | 785 |
| FRWY144 | 900 | 540 | 20 | 50 | 290 | 3119 | 1.938 | 306 | 36 | 111 | 85 | 13 | 1 | 9 | 5 | 568 | 1100 |
| | | | | | | | | | | | | | | | | | 222066 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3 | 294 | 35 | 106 | 82 | 32 | 3 | 27 | 26 |
| FRWY2 | 3 | 342 | 40 | 123 | 95 | 44 | 5 | 37 | 36 |
| FRWY3 | 3 | 288 | 34 | 104 | 80 | 43 | 4 | 32 | 29 |
| FRWY4 | 3 | 332 | 39 | 120 | 93 | 45 | 5 | 36 | 32 |
| FRWY5 | 3 | 276 | 33 | 100 | 77 | 35 | 4 | 30 | 25 |
| FRWY6 | 3 | 427 | 51 | 154 | 119 | 51 | 5 | 43 | 37 |
| FRWY7 | 3 | 355 | 42 | 128 | 99 | 41 | 4 | 36 | 30 |
| FRWY8 | 3 | 341 | 40 | 123 | 95 | 38 | 4 | 34 | 28 |
| FRWY9 | 3 | 430 | 51 | 155 | 120 | 51 | 5 | 43 | 35 |
| FRWY10 | 3 | 411 | 49 | 148 | 115 | 48 | 5 | 42 | 32 |
| FRWY11 | 3 | 218 | 26 | 79 | 61 | 24 | 3 | 23 | 17 |
| FRWY12 | 2 | 875 | 104 | 316 | 244 | 85 | 9 | 77 | 50 |
| FRWY13 | 2 | 691 | 82 | 249 | 193 | 62 | 7 | 60 | 38 |
| FRWY14 | 2 | 1025 | 121 | 370 | 286 | 100 | 10 | 93 | 57 |
| FRWY15 | 2 | 675 | 80 | 244 | 188 | 66 | 7 | 61 | 38 |
| FRWY16 | 2 | 1228 | 146 | 444 | 342 | 112 | 12 | 104 | 64 |
| FRWY17 | 2 | 1680 | 199 | 607 | 468 | 144 | 15 | 129 | 77 |
| FRWY18 | 2 | 1495 | 177 | 540 | 417 | 113 | 12 | 107 | 61 |
| FRWY19 | 2 | 590 | 70 | 213 | 165 | 45 | 5 | 42 | 23 |
| FRWY20 | 2 | 606 | 72 | 219 | 169 | 48 | 5 | 43 | 22 |
| FRWY21 | 3 | 2516 | 298 | 909 | 702 | 169 | 18 | 164 | 78 |
| FRWY22 | 3 | 1470 | 174 | 531 | 410 | 102 | 11 | 99 | 46 |
| FRWY23 | 3 | 1499 | 178 | 541 | 418 | 102 | 11 | 102 | 47 |
| FRWY24 | 3 | 3569 | 423 | 1289 | 995 | 241 | 25 | 237 | 104 |
| FRWY25 | 3 | 2332 | 276 | 842 | 650 | 150 | 16 | 146 | 62 |
| FRWY26 | 3 | 1856 | 220 | 670 | 518 | 112 | 12 | 108 | 46 |
| FRWY27 | 2 | 2759 | 327 | 996 | 769 | 160 | 17 | 153 | 64 |
| FRWY28 | 2 | 3687 | 437 | 1332 | 1028 | 229 | 24 | 218 | 88 |
| FRWY29 | 2 | 3789 | 449 | 1368 | 1056 | 235 | 25 | 225 | 89 |
| FRWY30 | 2 | 4100 | 486 | 1481 | 1143 | 242 | 25 | 223 | 86 |
| FRWY31 | 2 | 10343 | 1225 | 3735 | 2884 | 596 | 63 | 523 | 195 |
| FRWY32 | 2 | 3622 | 429 | 1308 | 1010 | 205 | 21 | 175 | 64 |
| FRWY33 | 2 | 7899 | 936 | 2852 | 2202 | 365 | 38 | 348 | 129 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY34 | 2 | 7381 | 874 | 2665 | 2058 | 323 | 34 | 302 | 114 |
| FRWY35 | 2 | 1354 | 160 | 489 | 377 | 56 | 6 | 50 | 10 |
| FRWY36 | 2 | 9774 | 1158 | 3529 | 2725 | 449 | 47 | 337 | 71 |
| FRWY37 | 2 | 4034 | 478 | 1457 | 1125 | 171 | 18 | 132 | 29 |
| FRWY294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| FRWY295 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FRWY296 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY297 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY299 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY75 | 7 | 736 | 87 | 266 | 205 | 59 | 6 | 63 | 33 |
| FRWY76 | 7 | 749 | 89 | 271 | 209 | 51 | 5 | 61 | 29 |
| FRWY77 | 7 | 135 | 16 | 49 | 38 | 9 | 1 | 11 | 5 |
| FRWY78 | 7 | 449 | 53 | 162 | 125 | 34 | 4 | 35 | 17 |
| FRWY79 | 7 | 616 | 73 | 222 | 172 | 42 | 4 | 45 | 21 |
| FRWY80 | 7 | 672 | 80 | 243 | 187 | 42 | 4 | 47 | 21 |
| FRWY81 | 7 | 1071 | 127 | 387 | 299 | 62 | 6 | 72 | 31 |
| FRWY82 | 7 | 749 | 89 | 271 | 209 | 48 | 5 | 50 | 21 |
| FRWY83 | 7 | 834 | 99 | 301 | 232 | 52 | 5 | 57 | 23 |
| FRWY84 | 7 | 567 | 67 | 205 | 158 | 34 | 4 | 37 | 15 |
| FRWY85 | 7 | 1115 | 132 | 403 | 311 | 68 | 7 | 74 | 30 |
| FRWY86 | 7 | 367 | 43 | 133 | 102 | 19 | 2 | 22 | 9 |
| FRWY87 | 7 | 662 | 78 | 239 | 184 | 34 | 4 | 38 | 16 |
| FRWY101 | 2 | 997 | 118 | 360 | 278 | 42 | 4 | 37 | 11 |
| FRWY102 | 2 | 391 | 46 | 141 | 109 | 19 | 2 | 17 | 6 |
| FRWY103 | 2 | 749 | 89 | 270 | 209 | 36 | 4 | 33 | 11 |
| FRWY104 | 2 | 1010 | 120 | 365 | 281 | 52 | 5 | 51 | 18 |
| FRWY105 | 2 | 260 | 31 | 94 | 72 | 17 | 2 | 15 | 6 |
| FRWY106 | 2 | 308 | 37 | 111 | 86 | 21 | 2 | 20 | 7 |
| FRWY107 | 2 | 321 | 38 | 116 | 89 | 20 | 2 | 23 | 9 |
| FRWY108 | 2 | 719 | 85 | 260 | 201 | 53 | 6 | 55 | 23 |
| FRWY109 | 2 | 274 | 32 | 99 | 76 | 21 | 2 | 18 | 9 |
| FRWY110 | 2 | 403 | 48 | 146 | 112 | 34 | 4 | 29 | 14 |
| FRWY111 | 2 | 1088 | 129 | 393 | 303 | 95 | 10 | 80 | 40 |
| FRWY112 | 2 | 195 | 23 | 70 | 54 | 17 | 2 | 13 | 7 |
| FRWY113 | 2 | 405 | 48 | 146 | 113 | 28 | 3 | 27 | 15 |
| FRWY114 | 2 | 446 | 53 | 161 | 124 | 30 | 3 | 30 | 17 |
| FRWY129 | 2 | 1436 | 170 | 519 | 400 | 37 | 4 | 47 | 10 |
| FRWY130 | 2 | 1458 | 173 | 527 | 407 | 31 | 3 | 44 | 9 |
| FRWY131 | 2 | 1276 | 151 | 461 | 356 | 36 | 4 | 38 | 7 |
| FRWY132 | 2 | 521 | 62 | 188 | 145 | 14 | 1 | 15 | 3 |
| FRWY133 | 2 | 2065 | 245 | 746 | 576 | 56 | 6 | 63 | 11 |
| FRWY167 | 2 | 436 | 52 | 157 | 121 | 12 | 1 | 15 | 4 |
| FRWY168 | 2 | 329 | 39 | 119 | 92 | 11 | 1 | 12 | 3 |
| FRWY169 | 2 | 1718 | 204 | 621 | 479 | 61 | 6 | 57 | 19 |
| FRWY171 | 2 | 439 | 52 | 158 | 122 | 18 | 2 | 15 | 9 |
| FRWY172 | 2 | 624 | 74 | 225 | 174 | 25 | 3 | 28 | 15 |
| FRWY173 | 2 | 626 | 74 | 226 | 175 | 21 | 2 | 23 | 13 |
| FRWY174 | 2 | 280 | 33 | 101 | 78 | 9 | 1 | 12 | 6 |
| FRWY175 | 2 | 578 | 68 | 209 | 161 | 25 | 3 | 20 | 9 |
| FRWY176 | 2 | 527 | 62 | 190 | 147 | 22 | 2 | 19 | 8 |
| FRWY134 | 3 | 283 | 34 | 102 | 79 | 17 | 2 | 14 | 7 |
| FRWY135 | 3 | 344 | 41 | 124 | 96 | 21 | 2 | 16 | 8 |
| FRWY136 | 3 | 205 | 24 | 74 | 57 | 13 | 1 | 10 | 5 |
| FRWY137 | 3 | 262 | 31 | 95 | 73 | 12 | 1 | 10 | 7 |
| FRWY138 | 3 | 403 | 48 | 146 | 112 | 20 | 2 | 17 | 10 |
| FRWY139 | 3 | 392 | 46 | 141 | 109 | 16 | 2 | 16 | 8 |
| FRWY140 | 7 | 346 | 41 | 125 | 96 | 19 | 2 | 16 | 7 |
| FRWY141 | 7 | 311 | 37 | 112 | 87 | 18 | 2 | 12 | 6 |
| FRWY142 | 7 | 198 | 24 | 72 | 55 | 12 | 1 | 8 | 4 |
| FRWY143 | 7 | 423 | 50 | 153 | 118 | 17 | 2 | 16 | 7 |
| FRWY144 | 7 | 594 | 70 | 214 | 166 | 26 | 3 | 18 | 9 |
| **Total** | | **116924** | **13852** | **42223** | **32599** | **6744** | **707** | **6262** | **2754** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 87485 | 10365 | 31593 | 24391 | 4670 | 489 | 4256 | 1686 | |
| 3 | 18845 | 2233 | 6805 | 5254 | 1429 | 150 | 1324 | 752 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 10594 | 1255 | 3826 | 2954 | 645 | 68 | 682 | 316 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **116924** | **13852** | **42223** | **32599** | **6744** | **707** | **6262** | **2754** | **222066** |

**World Logistics Center**
**Project Phase 1 (2022)**
**Entrained Road Dust**
Freeways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | F | 1574 | 0.98 | 530 | 518 | 50 | 49 | 150 | 147 | 1,580 | 1545 | 2259 | 17.28 | 0.022 | 0.0003 | 0.7 | 0.0012 | 2.8 |
| FRWY2 | F | 2153 | 1.34 | 450 | 602 | 50 | 67 | 150 | 201 | 1,600 | 2140 | 3009 | 17.87 | 0.022 | 0.0003 | 1.0 | 0.0013 | 3.9 |
| FRWY3 | F | 1737 | 1.08 | 470 | 507 | 60 | 65 | 160 | 173 | 1,610 | 1737 | 2482 | 17.67 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.2 |
| FRWY4 | F | 1847 | 1.15 | 510 | 585 | 60 | 69 | 170 | 195 | 1,640 | 1882 | 2731 | 17.46 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.4 |
| FRWY5 | F | 1422 | 0.88 | 550 | 486 | 60 | 53 | 180 | 159 | 1,670 | 1475 | 2173 | 17.26 | 0.022 | 0.0003 | 0.7 | 0.0012 | 2.7 |
| FRWY6 | F | 2087 | 1.30 | 580 | 752 | 60 | 78 | 180 | 233 | 1,690 | 2191 | 3254 | 17.12 | 0.022 | 0.0003 | 1.0 | 0.0012 | 4.0 |
| FRWY7 | F | 1650 | 1.03 | 610 | 625 | 60 | 62 | 190 | 195 | 1,710 | 1753 | 2634 | 16.98 | 0.022 | 0.0003 | 0.8 | 0.0012 | 3.2 |
| FRWY8 | F | 1537 | 0.95 | 630 | 602 | 60 | 57 | 190 | 181 | 1,730 | 1652 | 2492 | 16.91 | 0.022 | 0.0003 | 0.7 | 0.0012 | 3.0 |
| FRWY9 | F | 1792 | 1.11 | 680 | 757 | 70 | 78 | 210 | 234 | 1,840 | 2048 | 3117 | 16.82 | 0.022 | 0.0003 | 0.9 | 0.0012 | 3.8 |
| FRWY10 | F | 1665 | 1.03 | 700 | 724 | 70 | 72 | 220 | 228 | 1,850 | 1913 | 2937 | 16.72 | 0.022 | 0.0003 | 0.9 | 0.0012 | 3.5 |
| FRWY11 | F | 849 | 0.53 | 730 | 385 | 70 | 37 | 230 | 121 | 1,870 | 986 | 1529 | 16.60 | 0.022 | 0.0003 | 0.4 | 0.0012 | 1.8 |
| FRWY12 | F | 2299 | 1.43 | 1,080 | 1542 | 90 | 129 | 290 | 414 | 2,090 | 2985 | 5070 | 15.44 | 0.022 | 0.0003 | 1.4 | 0.0011 | 5.6 |
| FRWY13 | F | 1689 | 1.05 | 1,160 | 1217 | 90 | 94 | 310 | 325 | 2,170 | 2277 | 3914 | 15.30 | 0.022 | 0.0003 | 1.1 | 0.0011 | 4.3 |
| FRWY14 | F | 2444 | 1.52 | 1,190 | 1807 | 100 | 152 | 330 | 501 | 2,230 | 3386 | 5845 | 15.28 | 0.022 | 0.0003 | 1.6 | 0.0011 | 6.4 |
| FRWY15 | F | 1608 | 1.00 | 1,190 | 1189 | 100 | 100 | 330 | 330 | 2,240 | 2238 | 3856 | 15.30 | 0.022 | 0.0003 | 1.0 | 0.0011 | 4.3 |
| FRWY16 | F | 2722 | 1.69 | 1,280 | 2164 | 100 | 169 | 330 | 558 | 2,250 | 3805 | 6696 | 15.02 | 0.022 | 0.0003 | 1.8 | 0.0011 | 7.2 |
| FRWY17 | F | 3198 | 1.99 | 1,490 | 2960 | 110 | 219 | 350 | 695 | 2,300 | 4569 | 8443 | 14.44 | 0.022 | 0.0003 | 2.2 | 0.0010 | 8.8 |
| FRWY18 | F | 2509 | 1.56 | 1,690 | 2634 | 110 | 171 | 370 | 577 | 2,320 | 3616 | 6998 | 13.92 | 0.022 | 0.0002 | 1.7 | 0.0010 | 7.0 |
| FRWY19 | F | 910 | 0.57 | 1,840 | 1040 | 120 | 68 | 400 | 226 | 2,400 | 1357 | 2691 | 13.68 | 0.022 | 0.0002 | 0.6 | 0.0010 | 2.6 |
| FRWY20 | F | 774 | 0.48 | 2,220 | 1067 | 150 | 72 | 480 | 231 | 2,690 | 1293 | 2664 | 13.31 | 0.022 | 0.0002 | 0.6 | 0.0010 | 2.5 |
| FRWY21 | F | 1798 | 1.12 | 3,970 | 4434 | 230 | 257 | 790 | 882 | 4,140 | 4624 | 10198 | 12.63 | 0.022 | 0.0002 | 2.3 | 0.0009 | 9.2 |
| FRWY22 | F | 1035 | 0.64 | 4,030 | 2591 | 240 | 154 | 830 | 534 | 4,220 | 2713 | 5992 | 12.64 | 0.022 | 0.0002 | 1.3 | 0.0009 | 5.4 |
| FRWY23 | F | 1042 | 0.65 | 4,080 | 2641 | 240 | 155 | 850 | 550 | 4,260 | 2758 | 6104 | 12.63 | 0.022 | 0.0002 | 1.4 | 0.0009 | 5.5 |
| FRWY24 | F | 2260 | 1.40 | 4,480 | 6290 | 260 | 365 | 910 | 1278 | 4,400 | 6177 | 14110 | 12.34 | 0.022 | 0.0002 | 3.1 | 0.0009 | 12.5 |
| FRWY25 | F | 1305 | 0.81 | 5,070 | 4110 | 280 | 227 | 970 | 786 | 4,510 | 3656 | 8780 | 11.88 | 0.022 | 0.0002 | 1.8 | 0.0009 | 7.5 |
| FRWY26 | F | 977 | 0.61 | 5,390 | 3271 | 280 | 170 | 960 | 583 | 4,460 | 2707 | 6731 | 11.54 | 0.022 | 0.0002 | 1.4 | 0.0008 | 5.6 |
| FRWY27 | F | 1186 | 0.74 | 6,600 | 4863 | 330 | 243 | 1,120 | 825 | 5,130 | 3780 | 9710 | 11.26 | 0.022 | 0.0002 | 1.9 | 0.0008 | 7.8 |
| FRWY28 | F | 1642 | 1.02 | 6,370 | 6498 | 340 | 347 | 1,150 | 1173 | 5,130 | 5233 | 13250 | 11.41 | 0.022 | 0.0002 | 2.7 | 0.0008 | 10.8 |
| FRWY29 | F | 1636 | 1.02 | 6,570 | 6677 | 350 | 356 | 1,190 | 1209 | 5,170 | 5254 | 13497 | 11.31 | 0.022 | 0.0002 | 2.7 | 0.0008 | 10.9 |
| FRWY30 | F | 1555 | 0.97 | 7,480 | 7226 | 380 | 367 | 1,240 | 1198 | 5,300 | 5120 | 13910 | 10.82 | 0.022 | 0.0002 | 2.6 | 0.0008 | 10.8 |
| FRWY31 | F | 3384 | 2.10 | 8,670 | 18226 | 430 | 904 | 1,340 | 2817 | 5,490 | 11541 | 33488 | 10.31 | 0.022 | 0.0002 | 6.1 | 0.0007 | 24.7 |
| FRWY32 | F | 1112 | 0.69 | 9,240 | 6383 | 450 | 311 | 1,360 | 939 | 5,490 | 3792 | 11426 | 10.03 | 0.022 | 0.0002 | 2.0 | 0.0007 | 8.2 |
| FRWY33 | F | 1935 | 1.20 | 11,580 | 13920 | 460 | 553 | 1,560 | 1875 | 6,340 | 7621 | 23969 | 9.68 | 0.022 | 0.0002 | 4.1 | 0.0007 | 16.6 |
| FRWY34 | F | 1675 | 1.04 | 12,500 | 13007 | 470 | 489 | 1,560 | 1623 | 6,490 | 6753 | 21872 | 9.44 | 0.022 | 0.0002 | 3.6 | 0.0007 | 14.7 |
| FRWY35 | F | 1143 | 0.71 | 3,360 | 2386 | 120 | 85 | 380 | 270 | 850 | 604 | 3344 | 6.81 | 0.022 | 0.0001 | 0.4 | 0.0005 | 1.6 |
| FRWY36 | F | 9120 | 5.67 | 3,040 | 17223 | 120 | 680 | 320 | 1813 | 740 | 4192 | 23908 | 6.66 | 0.022 | 0.0001 | 2.8 | 0.0005 | 11.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY37 | F | 3802 | 2.36 | 3,010 | 7109 | 110 | 260 | 300 | 709 | 720 | 1701 | 9778 | 6.59 | 0.022 | 0.0001 | 1.1 | 0.0005 | 4.6 |
| FRWY294 | F | 2926 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 231 | 231 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| FRWY295 | F | 1049 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 83 | 83 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY296 | F | 1811 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 143 | 143 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| FRWY297 | F | 1505 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 119 | 119 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| FRWY299 | F | 1654 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 130 | 130 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| FRWY75 | F | 2861 | 1.78 | 730 | 1297 | 50 | 89 | 190 | 338 | 1,090 | 1937 | 3661 | 14.28 | 0.022 | 0.0003 | 0.9 | 0.0010 | 3.8 |
| FRWY76 | F | 2500 | 1.55 | 850 | 1320 | 50 | 78 | 210 | 326 | 1,120 | 1739 | 3463 | 13.72 | 0.022 | 0.0002 | 0.8 | 0.0010 | 3.4 |
| FRWY77 | F | 450 | 0.28 | 850 | 238 | 50 | 14 | 210 | 59 | 1,120 | 313 | 623 | 13.72 | 0.022 | 0.0002 | 0.2 | 0.0010 | 0.6 |
| FRWY78 | F | 1384 | 0.86 | 920 | 791 | 60 | 52 | 220 | 189 | 1,140 | 980 | 2012 | 13.41 | 0.022 | 0.0002 | 0.5 | 0.0010 | 1.9 |
| FRWY79 | F | 1713 | 1.06 | 1,020 | 1085 | 60 | 64 | 230 | 245 | 1,150 | 1224 | 2618 | 12.99 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.4 |
| FRWY80 | F | 1703 | 1.06 | 1,120 | 1185 | 60 | 63 | 240 | 254 | 1,170 | 1238 | 2740 | 12.64 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.5 |
| FRWY81 | F | 2512 | 1.56 | 1,210 | 1888 | 60 | 94 | 250 | 390 | 1,190 | 1857 | 4229 | 12.37 | 0.022 | 0.0002 | 0.9 | 0.0009 | 3.8 |
| FRWY82 | F | 1674 | 1.04 | 1,270 | 1321 | 70 | 73 | 260 | 270 | 1,210 | 1258 | 2922 | 12.20 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.6 |
| FRWY83 | F | 1819 | 1.13 | 1,300 | 1469 | 70 | 79 | 270 | 305 | 1,220 | 1379 | 3232 | 12.13 | 0.022 | 0.0002 | 0.7 | 0.0009 | 2.8 |
| FRWY84 | F | 1182 | 0.73 | 1,360 | 999 | 70 | 51 | 270 | 198 | 1,230 | 903 | 2151 | 11.97 | 0.022 | 0.0002 | 0.5 | 0.0009 | 1.8 |
| FRWY85 | F | 2360 | 1.47 | 1,340 | 1965 | 70 | 103 | 270 | 396 | 1,220 | 1789 | 4252 | 12.00 | 0.022 | 0.0002 | 0.9 | 0.0009 | 3.7 |
| FRWY86 | F | 783 | 0.49 | 1,330 | 647 | 60 | 29 | 240 | 117 | 1,110 | 540 | 1333 | 11.61 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY87 | F | 1370 | 0.85 | 1,370 | 1166 | 60 | 51 | 240 | 204 | 1,120 | 953 | 2374 | 11.51 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.0 |
| FRWY101 | F | 1703 | 1.06 | 1,660 | 1756 | 60 | 63 | 190 | 201 | 590 | 624 | 2645 | 7.93 | 0.022 | 0.0001 | 0.4 | 0.0006 | 1.5 |
| FRWY102 | F | 925 | 0.57 | 1,200 | 690 | 50 | 29 | 160 | 92 | 570 | 328 | 1138 | 9.08 | 0.022 | 0.0002 | 0.2 | 0.0006 | 0.7 |
| FRWY103 | F | 1770 | 1.10 | 1,200 | 1319 | 50 | 55 | 160 | 176 | 570 | 627 | 2177 | 9.08 | 0.022 | 0.0002 | 0.3 | 0.0006 | 1.4 |
| FRWY104 | F | 3182 | 1.98 | 900 | 1779 | 40 | 79 | 140 | 277 | 550 | 1087 | 3222 | 10.17 | 0.022 | 0.0002 | 0.6 | 0.0007 | 2.3 |
| FRWY105 | F | 1010 | 0.63 | 730 | 458 | 40 | 25 | 130 | 82 | 540 | 339 | 903 | 11.02 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.7 |
| FRWY106 | F | 1305 | 0.81 | 670 | 543 | 40 | 32 | 130 | 105 | 540 | 438 | 1119 | 11.40 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.9 |
| FRWY107 | F | 1655 | 1.03 | 550 | 565 | 30 | 31 | 120 | 123 | 520 | 535 | 1254 | 12.16 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.1 |
| FRWY108 | F | 4341 | 2.70 | 470 | 1267 | 30 | 81 | 110 | 297 | 510 | 1375 | 3020 | 12.79 | 0.022 | 0.0002 | 0.7 | 0.0009 | 2.8 |
| FRWY109 | F | 1728 | 1.07 | 450 | 483 | 30 | 32 | 90 | 97 | 490 | 526 | 1138 | 12.81 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.0 |
| FRWY110 | F | 2788 | 1.73 | 410 | 710 | 30 | 52 | 90 | 156 | 490 | 849 | 1767 | 13.23 | 0.022 | 0.0002 | 0.4 | 0.0010 | 1.7 |
| FRWY111 | F | 7717 | 4.79 | 400 | 1918 | 30 | 144 | 90 | 431 | 490 | 2349 | 4842 | 13.34 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.6 |
| FRWY112 | F | 1384 | 0.86 | 400 | 344 | 30 | 26 | 80 | 69 | 490 | 421 | 860 | 13.35 | 0.022 | 0.0002 | 0.2 | 0.0010 | 0.8 |
| FRWY113 | F | 3380 | 2.10 | 340 | 714 | 20 | 42 | 70 | 147 | 430 | 903 | 1806 | 13.55 | 0.022 | 0.0002 | 0.4 | 0.0010 | 1.8 |
| FRWY114 | F | 3719 | 2.31 | 340 | 785 | 20 | 46 | 70 | 162 | 430 | 993 | 1987 | 13.55 | 0.022 | 0.0002 | 0.5 | 0.0010 | 1.9 |
| FRWY129 | F | 4476 | 2.78 | 910 | 2530 | 20 | 56 | 90 | 250 | 210 | 584 | 3420 | 6.50 | 0.022 | 0.0001 | 0.4 | 0.0005 | 1.6 |
| FRWY130 | F | 3830 | 2.38 | 1,080 | 2570 | 20 | 48 | 100 | 238 | 220 | 523 | 3379 | 6.13 | 0.022 | 0.0001 | 0.4 | 0.0004 | 1.5 |
| FRWY131 | F | 2967 | 1.84 | 1,220 | 2249 | 30 | 55 | 110 | 203 | 230 | 424 | 2931 | 5.92 | 0.022 | 0.0001 | 0.3 | 0.0004 | 1.2 |
| FRWY132 | F | 1163 | 0.72 | 1,270 | 918 | 30 | 22 | 110 | 79 | 240 | 173 | 1192 | 5.91 | 0.022 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| FRWY133 | F | 4541 | 2.82 | 1,290 | 3639 | 30 | 85 | 120 | 339 | 240 | 677 | 4739 | 5.90 | 0.022 | 0.0001 | 0.5 | 0.0004 | 2.0 |
| FRWY167 | F | 1471 | 0.91 | 840 | 768 | 20 | 18 | 90 | 82 | 270 | 247 | 1115 | 7.57 | 0.022 | 0.0001 | 0.1 | 0.0005 | 0.6 |
| FRWY168 | F | 916 | 0.57 | 1,020 | 580 | 30 | 17 | 110 | 63 | 360 | 205 | 865 | 7.90 | 0.022 | 0.0001 | 0.1 | 0.0006 | 0.5 |
| FRWY169 | F | 4924 | 3.06 | 990 | 3028 | 30 | 92 | 100 | 306 | 360 | 1101 | 4527 | 7.99 | 0.022 | 0.0001 | 0.6 | 0.0006 | 2.6 |
| FRWY171 | F | 2145 | 1.33 | 580 | 773 | 20 | 27 | 60 | 80 | 410 | 546 | 1426 | 10.83 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY172 | F | 3000 | 1.86 | 590 | 1100 | 20 | 37 | 80 | 149 | 480 | 895 | 2180 | 11.51 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.8 |
| FRWY173 | F | 2501 | 1.55 | 710 | 1103 | 20 | 31 | 80 | 124 | 490 | 761 | 2020 | 10.74 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.6 |
| FRWY174 | F | 1135 | 0.71 | 700 | 494 | 20 | 14 | 90 | 63 | 490 | 345 | 917 | 10.81 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.7 |
| FRWY175 | F | 1547 | 0.96 | 1,060 | 1019 | 40 | 38 | 110 | 106 | 540 | 519 | 1682 | 9.33 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.1 |
| FRWY176 | F | 1359 | 0.84 | 1,100 | 929 | 40 | 34 | 120 | 101 | 550 | 464 | 1528 | 9.26 | 0.022 | 0.0002 | 0.2 | 0.0007 | 1.0 |
| FRWY134 | F | 1385 | 0.86 | 580 | 499 | 30 | 26 | 90 | 77 | 470 | 404 | 1007 | 11.44 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| FRWY135 | F | 1711 | 1.06 | 570 | 606 | 30 | 32 | 80 | 85 | 450 | 478 | 1201 | 11.31 | 0.022 | 0.0002 | 0.2 | 0.0008 | 1.0 |
| FRWY136 | F | 1038 | 0.64 | 560 | 361 | 30 | 19 | 80 | 52 | 440 | 284 | 716 | 11.29 | 0.022 | 0.0002 | 0.1 | 0.0008 | 0.6 |
| FRWY137 | F | 1516 | 0.94 | 490 | 461 | 20 | 19 | 60 | 57 | 410 | 386 | 923 | 11.63 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| FRWY138 | F | 2485 | 1.54 | 460 | 710 | 20 | 31 | 60 | 93 | 400 | 617 | 1451 | 11.81 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.2 |
| FRWY139 | F | 1950 | 1.21 | 570 | 690 | 20 | 24 | 70 | 85 | 390 | 472 | 1272 | 10.68 | 0.022 | 0.0002 | 0.2 | 0.0008 | 1.0 |
| FRWY140 | F | 1581 | 0.98 | 620 | 609 | 30 | 29 | 90 | 88 | 400 | 393 | 1120 | 10.39 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.8 |
| FRWY141 | F | 1447 | 0.90 | 610 | 548 | 30 | 27 | 70 | 63 | 370 | 333 | 971 | 10.09 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.7 |
| FRWY142 | F | 938 | 0.58 | 600 | 350 | 30 | 17 | 70 | 41 | 360 | 210 | 618 | 10.04 | 0.022 | 0.0002 | 0.1 | 0.0007 | 0.4 |
| FRWY143 | F | 2032 | 1.26 | 590 | 745 | 20 | 25 | 70 | 88 | 330 | 417 | 1275 | 9.77 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.9 |
| FRWY144 | F | 3119 | 1.94 | 540 | 1046 | 20 | 39 | 50 | 97 | 290 | 562 | 1744 | 9.55 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.2 |
| | | | | | | | | | | | | | | | **Totals:** | **82.5** | | **336.1** |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 127 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 127 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 127 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 127 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 127 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 127 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 127 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 127 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 127 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 127 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 127 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 127 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 127 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 127 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 127 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 127 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 127 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 127 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 127 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 127 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 127 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 127 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 127 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 127 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 127 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 127 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 127 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 127 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 127 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 127 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 127 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 127 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 127 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 127 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 127 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 127 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 127 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 127 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 127 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 127 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 127 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 127 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 127 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 127 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 127 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 127 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 127 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 127 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 127 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 127 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 127 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 127 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 127 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 254 |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 254 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 254 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 254 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 254 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 254 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 254 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 127 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 127 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 127 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 127 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 127 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 127 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 127 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 127 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 127 |

**World Logistics Center** **2022**
Project Phase 1 (2022)
Freeway to Port
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.4% | 6.7% | 81.4% | 98.3% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 127 | 0 | 0 | 0 | 127 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 229 | 127 | 0 | 0 | 0 | 127 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 90 |
| 228 | 127 | 0 | 0 | 0 | 127 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 40 |
| 227 | 127 | 0 | 0 | 0 | 127 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 65 |
| 226 | 127 | 0 | 0 | 0 | 127 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 225 | 127 | 0 | 0 | 0 | 127 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 80 |
| 224 | 127 | 0 | 0 | 0 | 127 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 211 |
| 223 | 127 | 0 | 0 | 0 | 127 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 92 |
| 222 | 127 | 0 | 0 | 0 | 127 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 96 |
| 221 | 127 | 0 | 0 | 0 | 127 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 89 |
| 220 | 127 | 0 | 0 | 0 | 127 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 219 | 127 | 0 | 0 | 0 | 127 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 191 |
| 218 | 127 | 0 | 0 | 0 | 127 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 209 |
| 217 | 127 | 0 | 0 | 0 | 127 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 240 |
| 216 | 127 | 0 | 0 | 0 | 127 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 194 |
| 215 | 127 | 0 | 0 | 0 | 127 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 112 |
| 214 | 127 | 0 | 0 | 0 | 127 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 121 |
| 213 | 127 | 0 | 0 | 0 | 127 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 190 |
| 212 | 127 | 0 | 0 | 0 | 127 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 182 |
| 211 | 127 | 0 | 0 | 0 | 127 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 210 | 127 | 0 | 0 | 0 | 127 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 291 |
| 209 | 127 | 0 | 0 | 0 | 127 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 154 |
| 263 | 127 | 0 | 0 | 0 | 127 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 160 |
| 264 | 127 | 0 | 0 | 0 | 127 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 77 |
| 265 | 127 | 0 | 0 | 0 | 127 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 266 | 127 | 0 | 0 | 0 | 127 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 267 | 127 | 0 | 0 | 0 | 127 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 51 |
| 268 | 127 | 0 | 0 | 0 | 127 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 78 |
| 269 | 127 | 0 | 0 | 0 | 127 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 150 |
| 270 | 127 | 0 | 0 | 0 | 127 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 271 | 127 | 0 | 0 | 0 | 127 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 82 |
| 272 | 127 | 0 | 0 | 0 | 127 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 273 | 127 | 0 | 0 | 0 | 127 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 19 |
| 274 | 127 | 0 | 0 | 0 | 127 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 134 |
| 275 | 127 | 0 | 0 | 0 | 127 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 276 | 127 | 0 | 0 | 0 | 127 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 138 |
| 277 | 127 | 0 | 0 | 0 | 127 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| 278 | 127 | 0 | 0 | 0 | 127 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 279 | 127 | 0 | 0 | 0 | 127 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 280 | 127 | 0 | 0 | 0 | 127 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| 281 | 127 | 0 | 0 | 0 | 127 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 282 | 127 | 0 | 0 | 0 | 127 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 88 |
| 283 | 127 | 0 | 0 | 0 | 127 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 114 |
| 284 | 127 | 0 | 0 | 0 | 127 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 115 |
| 285 | 127 | 0 | 0 | 0 | 127 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 286 | 127 | 0 | 0 | 0 | 127 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 124 |
| 287 | 127 | 0 | 0 | 0 | 127 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 97 |
| 288 | 127 | 0 | 0 | 0 | 127 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 289 | 127 | 0 | 0 | 0 | 127 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 177 |
| 290 | 127 | 0 | 0 | 0 | 127 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 367 |
| 291 | 127 | 0 | 0 | 0 | 127 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 230 |
| 292 | 127 | 0 | 0 | 0 | 127 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 419 |
| 293 | 127 | 0 | 0 | 0 | 127 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 119 |
| 262 | 254 | 0 | 0 | 0 | 254 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 263 |
| 261 | 254 | 0 | 0 | 0 | 254 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 132 |
| 260 | 254 | 0 | 0 | 0 | 254 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 206 |
| 259 | 254 | 0 | 0 | 0 | 254 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 392 |
| 258 | 254 | 0 | 0 | 0 | 254 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 348 |
| 257 | 254 | 0 | 0 | 0 | 254 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 303 |
| 256 | 254 | 0 | 0 | 0 | 254 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 224 |
| 255 | 127 | 0 | 0 | 0 | 127 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 116 |
| 254 | 127 | 0 | 0 | 0 | 127 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 126 |
| 253 | 127 | 0 | 0 | 0 | 127 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 237 |
| 252 | 127 | 0 | 0 | 0 | 127 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 181 |
| 251 | 127 | 0 | 0 | 0 | 127 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 167 |
| 250 | 127 | 0 | 0 | 0 | 127 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 268 |
| 249 | 127 | 0 | 0 | 0 | 127 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 248 | 127 | 0 | 0 | 0 | 127 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 94 |
| 247 | 127 | 0 | 0 | 0 | 127 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 163 |
| | | | | | | | | | | | | | | | | | 10558 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 229 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| 228 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 227 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 166 |
| 225 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| 224 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 211 |
| 223 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 |
| 222 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| 221 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 220 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 219 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 191 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 |
| 217 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 240 |
| 216 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 194 |
| 215 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| 214 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 |
| 213 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 190 |
| 212 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 182 |
| 211 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 210 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 291 |
| 209 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154 |
| 263 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 |
| 264 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 265 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 266 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 267 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 268 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 |
| 269 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| 270 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 139 |
| 271 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 |
| 272 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 274 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 |
| 275 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 276 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 138 |
| 277 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| 278 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 279 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 280 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 |
| 281 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 166 |
| 282 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| 283 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 |
| 284 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 |
| 285 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 139 |
| 286 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 124 |
| 287 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 |
| 288 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 289 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 177 |
| 290 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 367 |
| 291 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 230 |
| 292 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 419 |
| 293 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 119 |
| 262 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 263 |
| 261 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 |
| 260 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 206 |
| 259 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 392 |
| 258 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 257 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 303 |
| 256 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 224 |
| 255 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 |
| 254 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 |
| 253 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 |
| 252 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 |
| 251 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 167 |
| 250 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 268 |
| 249 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 248 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| 247 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10558** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3748 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6811 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10558** | **10558** |

**World Logistics Center** 2022
Project Phase 1 (2022)
Freeway to Port
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 127 | 0 | 0 | 0 | 127 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 229 | 127 | 0 | 0 | 0 | 127 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 228 | 127 | 0 | 0 | 0 | 127 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 227 | 127 | 0 | 0 | 0 | 127 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 226 | 127 | 0 | 0 | 0 | 127 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 225 | 127 | 0 | 0 | 0 | 127 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 224 | 127 | 0 | 0 | 0 | 127 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 223 | 127 | 0 | 0 | 0 | 127 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 222 | 127 | 0 | 0 | 0 | 127 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 221 | 127 | 0 | 0 | 0 | 127 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 220 | 127 | 0 | 0 | 0 | 127 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 219 | 127 | 0 | 0 | 0 | 127 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 218 | 127 | 0 | 0 | 0 | 127 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 217 | 127 | 0 | 0 | 0 | 127 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 216 | 127 | 0 | 0 | 0 | 127 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 215 | 127 | 0 | 0 | 0 | 127 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 214 | 127 | 0 | 0 | 0 | 127 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 213 | 127 | 0 | 0 | 0 | 127 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 212 | 127 | 0 | 0 | 0 | 127 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 211 | 127 | 0 | 0 | 0 | 127 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 210 | 127 | 0 | 0 | 0 | 127 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| 209 | 127 | 0 | 0 | 0 | 127 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 263 | 127 | 0 | 0 | 0 | 127 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 264 | 127 | 0 | 0 | 0 | 127 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 265 | 127 | 0 | 0 | 0 | 127 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 266 | 127 | 0 | 0 | 0 | 127 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 267 | 127 | 0 | 0 | 0 | 127 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 268 | 127 | 0 | 0 | 0 | 127 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 269 | 127 | 0 | 0 | 0 | 127 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 270 | 127 | 0 | 0 | 0 | 127 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 271 | 127 | 0 | 0 | 0 | 127 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 272 | 127 | 0 | 0 | 0 | 127 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 273 | 127 | 0 | 0 | 0 | 127 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 274 | 127 | 0 | 0 | 0 | 127 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 275 | 127 | 0 | 0 | 0 | 127 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 276 | 127 | 0 | 0 | 0 | 127 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 277 | 127 | 0 | 0 | 0 | 127 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 278 | 127 | 0 | 0 | 0 | 127 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 279 | 127 | 0 | 0 | 0 | 127 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 280 | 127 | 0 | 0 | 0 | 127 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 281 | 127 | 0 | 0 | 0 | 127 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 282 | 127 | 0 | 0 | 0 | 127 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 283 | 127 | 0 | 0 | 0 | 127 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 284 | 127 | 0 | 0 | 0 | 127 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 285 | 127 | 0 | 0 | 0 | 127 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 286 | 127 | 0 | 0 | 0 | 127 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 287 | 127 | 0 | 0 | 0 | 127 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 288 | 127 | 0 | 0 | 0 | 127 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 289 | 127 | 0 | 0 | 0 | 127 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 290 | 127 | 0 | 0 | 0 | 127 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 6 |
| 291 | 127 | 0 | 0 | 0 | 127 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 292 | 127 | 0 | 0 | 0 | 127 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 7 |
| 293 | 127 | 0 | 0 | 0 | 127 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 262 | 254 | 0 | 0 | 0 | 254 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 5 |
| 261 | 254 | 0 | 0 | 0 | 254 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 |
| 260 | 254 | 0 | 0 | 0 | 254 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 |
| 259 | 254 | 0 | 0 | 0 | 254 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 7 |
| 258 | 254 | 0 | 0 | 0 | 254 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 6 |
| 257 | 254 | 0 | 0 | 0 | 254 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 5 |
| 256 | 254 | 0 | 0 | 0 | 254 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 |
| 255 | 127 | 0 | 0 | 0 | 127 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 254 | 127 | 0 | 0 | 0 | 127 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 253 | 127 | 0 | 0 | 0 | 127 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 252 | 127 | 0 | 0 | 0 | 127 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 251 | 127 | 0 | 0 | 0 | 127 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 250 | 127 | 0 | 0 | 0 | 127 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| 249 | 127 | 0 | 0 | 0 | 127 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 248 | 127 | 0 | 0 | 0 | 127 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 247 | 127 | 0 | 0 | 0 | 127 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| | | | | | | | | | | | | | | | | | 181 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 229 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 228 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 227 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 225 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 224 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 223 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 222 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 220 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 219 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 217 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 216 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 215 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 214 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 213 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 212 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 211 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 210 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 209 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 263 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 264 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 265 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 266 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 267 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 268 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 269 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 270 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 271 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 272 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 275 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 276 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 277 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 278 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 279 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 280 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 281 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 282 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 283 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 284 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 285 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 286 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 287 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 288 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 289 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 290 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 291 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 292 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 293 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 262 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 261 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 260 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 259 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 258 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 257 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 256 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 255 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 254 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 253 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 252 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 251 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 250 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 249 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 248 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 247 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **181** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **181** | **181** |

**World Logistics Center**
**Project Phase 1 (2022)**
**Entrained Road Dust**
Freeway to Port

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | F | 1854 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 146 | 146 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 229 | F | 1159 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 91 | 91 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 228 | F | 520 | 0.32 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 41 | 41 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 227 | F | 833 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 66 | 66 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 226 | F | 2141 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 169 | 169 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 225 | F | 1032 | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 81 | 81 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 224 | F | 2726 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 215 | 215 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 223 | F | 1185 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 93 | 93 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 222 | F | 1233 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 97 | 97 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 221 | F | 1153 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 91 | 91 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 220 | F | 1458 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 115 | 115 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 219 | F | 2467 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 195 | 195 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 218 | F | 2700 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 213 | 213 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 217 | F | 3089 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 244 | 244 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 216 | F | 2502 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 197 | 197 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 215 | F | 1445 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 114 | 114 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 214 | F | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 123 | 123 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 213 | F | 2452 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 193 | 193 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 212 | F | 2347 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 185 | 185 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 211 | F | 1767 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 210 | F | 3749 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 296 | 296 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 209 | F | 1985 | 1.23 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 157 | 157 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 263 | F | 2061 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 163 | 163 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 264 | F | 997 | 0.62 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 79 | 79 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 265 | F | 720 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 57 | 57 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 266 | F | 675 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 53 | 53 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 267 | F | 659 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 52 | 52 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 268 | F | 1012 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 80 | 80 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 269 | F | 1929 | 1.20 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 152 | 152 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 270 | F | 1798 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 142 | 142 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 271 | F | 1058 | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 83 | 83 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 272 | F | 676 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 53 | 53 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 273 | F | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 20 | 20 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 274 | F | 1725 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 136 | 136 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 275 | F | 1766 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 276 | F | 1776 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 140 | 140 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 277 | F | 1050 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 83 | 83 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 278 | F | 1765 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 279 | F | 1851 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 146 | 146 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 280 | F | 1510 | 0.94 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 119 | 119 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 281 | F | 2140 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 169 | 169 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 282 | F | 1138 | 0.71 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 90 | 90 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 283 | F | 1464 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 116 | 116 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 284 | F | 1480 | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 117 | 117 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 285 | F | 1797 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 142 | 142 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 286 | F | 1596 | 0.99 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 126 | 126 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 287 | F | 1247 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 98 | 98 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 288 | F | 1463 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 115 | 115 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 289 | F | 2284 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 180 | 180 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 290 | F | 4728 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 373 | 373 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 291 | F | 2967 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 234 | 234 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 292 | F | 5404 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 426 | 426 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 293 | F | 1533 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 121 | 121 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 262 | F | 1695 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 267 | 267 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 261 | F | 854 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 135 | 135 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 260 | F | 1330 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 210 | 210 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 259 | F | 2529 | 1.57 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 399 | 399 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 258 | F | 2243 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 354 | 354 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 257 | F | 1956 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 309 | 309 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 256 | F | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 227 | 227 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 255 | F | 1501 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 118 | 118 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 254 | F | 1627 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 128 | 128 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 253 | F | 3060 | 1.90 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 241 | 241 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 252 | F | 2329 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 184 | 184 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 251 | F | 2154 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 170 | 170 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 250 | F | 3452 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 272 | 272 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 249 | F | 722 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 57 | 57 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 248 | F | 1211 | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 96 | 96 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 247 | F | 2097 | 1.30 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| | | | | | | | | | | | | | | | **Totals:** | **4.5** | | **18.1** |

**World Logistics Center**
Project Phase 1 (2022)
Total Vehicle Miles Traveled

**Segment Vehicle Speed (mph)**

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT |
|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 1 | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| 2 | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| 3 | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| 4 | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| 5 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| 6 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| 7 | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| 8 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 9 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Total VMT per Source**

| | Gas | Diesel | Total |
|---|---|---|---|
| Area | 6591 | 1350 | 7942 |
| Internal | 50110 | 17862 | 67972 |
| Surface | 93990 | 15969 | 109959 |
| Freeways | 222066 | 191204 | 413270 |
| Freeways to Ports | 181 | 10558 | 10740 |
| Total | **372938** | **236944** | **609883** |

**TOTAL VMT Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 38 | 4 | 14 | 4 | 60 |
| 0 | (miles) | 3585 | 425 | 1295 | 999 | 184 | 19 | 68 | 17 | 6591 |
| 1 | | 34212 | 4053 | 12354 | 9538 | 1990 | 209 | 1204 | 241 | 63801 |
| 2 | | 87485 | 10365 | 31593 | 24391 | 4670 | 489 | 4256 | 1686 | 164936 |
| 3 | | 30376 | 3599 | 10969 | 8469 | 1933 | 203 | 1700 | 826 | 58074 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 592 | 70 | 214 | 165 | 31 | 3 | 26 | 1 | 1101 |
| 6 | | 9359 | 1109 | 3380 | 2609 | 370 | 39 | 286 | 20 | 17171 |
| 7 | | 32752 | 3880 | 11827 | 9131 | 1480 | 155 | 1424 | 512 | 61162 |
| 8 | | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | 102 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | (miles) | **198417** | **23507** | **71652** | **55320** | **10659** | **1117** | **8965** | **3303** | **372938** |

**TOTAL VMT Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 12 | 4 | 62 | 205 | 282 |
| 0 | (miles) | 11 | 1 | 1 | 1 | 57 | 19 | 297 | 964 | 1350 |
| 1 | | 109 | 6 | 6 | 10 | 616 | 202 | 5273 | 14046 | 20267 |
| 2 | | 279 | 15 | 14 | 25 | 1446 | 473 | 18650 | 98288 | 119189 |
| 3 | | 97 | 5 | 5 | 9 | 598 | 196 | 7449 | 48158 | 56517 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 2 | 0 | 0 | 0 | 10 | 3 | 112 | 49 | 176 |
| 6 | | 30 | 2 | 2 | 3 | 115 | 37 | 1254 | 1170 | 2612 |
| 7 | | 104 | 6 | 5 | 9 | 458 | 150 | 6241 | 29851 | 36824 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | (miles) | **632** | **34** | **33** | **56** | **3300** | **1080** | **39280** | **192530** | **236944** |
| Grand total VMT | | **199049** | **23540** | **71685** | **55376** | **13959** | **2197** | **48245** | **195832** | **609883** |

**VMT: Area Source, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 38 | 4 | 14 | 4 | 60 |
| 0 | (miles) | 3585 | 425 | 1295 | 999 | 184 | 19 | 68 | 17 | 6591 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **3585** | **425** | **1295** | **999** | **184** | **19** | **68** | **17** | **6591** |

**VMT: Area Source, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 12 | 4 | 62 | 205 | 282 |
| 0 | (miles) | 11 | 1 | 1 | 1 | 57 | 19 | 297 | 964 | 1350 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **11** | **1** | **1** | **1** | **57** | **19** | **297** | **964** | **1350** |
| Grand total VMT | | **3596** | **425** | **1295** | **1001** | **241** | **38** | **365** | **980** | **7942** |

**VMT: Internal, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 26726 | 3166 | 9651 | 7451 | 1731 | 181 | 984 | 218 | 50110 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **26726** | **3166** | **9651** | **7451** | **1731** | **181** | **984** | **218** | **50110** |

**VMT: Internal, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 85 | 5 | 4 | 8 | 536 | 175 | 4313 | 12737 | 17862 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **85** | **5** | **4** | **8** | **536** | **175** | **4313** | **12737** | **17862** |
| Grand total VMT | | **26812** | **3171** | **9656** | **7459** | **2266** | **357** | **5297** | **12955** | **67972** |

**VMT: Surface, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 7485 | 887 | 2703 | 2087 | 260 | 27 | 219 | 22 | 13691 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 11531 | 1366 | 4164 | 3215 | 504 | 53 | 376 | 10 | 21217 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 592 | 70 | 214 | 165 | 31 | 3 | 26 | 1 | 1101 |
| 6 | | 9359 | 1109 | 3380 | 2609 | 370 | 39 | 286 | 20 | 17171 |
| 7 | | 22158 | 2625 | 8002 | 6178 | 835 | 88 | 743 | 79 | 40707 |
| 8 | | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | 102 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **51181** | **6063** | **18482** | **14270** | **2001** | **210** | **1650** | **132** | **93990** |

**VMT: Surface, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 24 | 1 | 1 | 2 | 80 | 26 | 961 | 1309 | 2405 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 37 | 2 | 2 | 3 | 156 | 51 | 1647 | 562 | 2460 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | 2 | 0 | 0 | 0 | 10 | 3 | 112 | 49 | 176 |
| 6 | | 30 | 2 | 2 | 3 | 115 | 37 | 1254 | 1170 | 2612 |
| 7 | | 71 | 4 | 4 | 6 | 259 | 85 | 3254 | 4627 | 8308 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **163** | **9** | **8** | **15** | **619** | **203** | **7231** | **7721** | **15969** |
| Grand total VMT | | **51344** | **6072** | **18491** | **14284** | **2620** | **412** | **8881** | **7854** | **109959** |

**VMT: Freeways, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 87485 | 10365 | 31593 | 24391 | 4670 | 489 | 4256 | 1686 | 164936 |
| 3 | | 18845 | 2233 | 6805 | 5254 | 1429 | 150 | 1324 | 752 | 36792 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 10594 | 1255 | 3826 | 2954 | 645 | 68 | 682 | 316 | 20338 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **116924** | **13852** | **42223** | **32599** | **6744** | **707** | **6262** | **2754** | **222066** |

**VMT: Freeways, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 279 | 15 | 14 | 25 | 1446 | 473 | 18650 | 98288 | 119189 |
| 3 | | 60 | 3 | 3 | 5 | 442 | 145 | 5803 | 43848 | 50310 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 34 | 2 | 2 | 3 | 200 | 65 | 2987 | 18414 | 21705 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **372** | **20** | **19** | **33** | **2088** | **683** | **27439** | **160550** | **191204** |
| Grand total VMT | | **117297** | **13872** | **42243** | **32632** | **8832** | **1390** | **33701** | **163304** | **413270** |

**VMT: Freeways to Ports, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 64 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 117 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **181** | **181** |

**VMT: Freeways to Ports, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3748 | 3748 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6811 | 6811 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10558** | **10558** |
| Grand total VMT | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10740** | **10740** |

# World Logistics Center

## Project Phase 1 (2022)

## Emissions Estimates

**Emissions Summary: Pounds per day**

| Source | ROG | NOx | CO | SOx | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 6 | 46 | 51 | | 0 | | | | 0.17 | | | | 19856 | | 1 | 0.1 |
| Internal | 17 | 174 | 149 | | 1 | | | | 0.79 | | | | 102702 | | 1 | 0.8 |
| Surface | 15 | 98 | 174 | | 1 | | | | 0.66 | | | | 109036 | | 1 | 1.3 |
| Freeways | 65 | 1196 | 669 | | 6 | | | | 6.13 | | | | 778816 | | 5 | 4.7 |
| Freeways to Ports | 3 | 77 | 25 | | 0 | | | | 0.35 | | | | 37963 | | 0 | 0.1 |
| **Total** | **106** | **1591** | **1068** | | **9** | **100** | **512** | **620** | **8.10** | **39** | **126** | **172** | **1048372** | **5** | **9** | **7.0** |

**Emissions Summary: tons per year**

| Source | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 1.14 | 8.32 | 9.35 | | 0.03 | | | | 0.03 | | | | 3624 | | 0.22 | 0.02 |
| Internal | 3.15 | 31.84 | 27.20 | | 0.15 | | | | 0.14 | | | | 18743 | | 0.23 | 0.14 |
| Surface | 2.70 | 17.92 | 31.75 | | 0.13 | | | | 0.12 | | | | 19899 | | 0.24 | 0.23 |
| Freeways | 11.87 | 218.36 | 122.12 | | 1.17 | | | | 1.12 | | | | 142134 | | 0.91 | 0.86 |
| Freeways to Ports | 0.55 | 13.99 | 4.55 | | 0.07 | | | | 0.06 | | | | 6928 | | 0.03 | 0.02 |
| **Total** | **19.42** | **290.43** | **194.96** | | **1.55** | **18.21** | **93.45** | **113.21** | **1.48** | **7.04** | **22.94** | **31.45** | **191328** | **0.97** | **1.63** | **1.27** |

**World Logistics Center** 2022 **ROG**

**Project Phase 1 (2022)**

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.3493 | 0.8257 | 0.4487 | 0.8436 | 14.0679 | 13.7664 | 20.7522 | 11.6142 |
| 0 | 0.0948 | 0.3541 | 0.1421 | 0.2212 | 0.8079 | 0.3701 | 0.3927 | 1.1471 |
| 1 | 0.0375 | 0.1451 | 0.0571 | 0.0885 | 0.4793 | 0.2192 | 0.2241 | 0.6030 |
| 2 | 0.0253 | 0.0961 | 0.0382 | 0.0603 | 0.2666 | 0.0446 | 0.1217 | 0.3142 |
| 3 | 0.0294 | 0.1135 | 0.0446 | 0.0694 | 0.3397 | 0.1552 | 0.1548 | 0.3954 |
| 4 | 0.0241 | 0.0874 | 0.0357 | 0.0580 | 0.2254 | 0.1016 | 0.1064 | 0.3038 |
| 5 | 0.0444 | 0.1708 | 0.0673 | 0.1043 | 0.4793 | 0.2192 | 0.2241 | 0.6030 |
| 6 | 0.0328 | 0.1270 | 0.0499 | 0.0774 | 0.3397 | 0.1552 | 0.1548 | 0.3954 |
| 7 | 0.0269 | 0.1033 | 0.0408 | 0.0638 | 0.2981 | 0.1360 | 0.1354 | 0.3444 |
| 8 | 0.0544 | 0.2076 | 0.0821 | 0.1274 | 0.4793 | 0.2192 | 0.2241 | 0.6030 |
| 9 | 0.0244 | 0.0908 | 0.0365 | 0.0582 | 0.2427 | 0.1101 | 0.1122 | 0.3012 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.9969 | 3.1877 | 1.2954 | 0.9279 | 3.1731 | 3.1731 | 0.2561 | 0.8478 |
| 0 | 0.0809 | 0.3132 | 0.0958 | 0.0700 | 0.3005 | 0.2803 | 0.1736 | 0.5227 |
| 1 | 0.0175 | 0.1194 | 0.0143 | 0.0117 | 0.1078 | 0.0859 | 0.0914 | 0.2736 |
| 2 | 0.0128 | 0.1075 | 0.0081 | 0.0073 | 0.0625 | 0.0452 | 0.0273 | 0.0819 |
| 3 | 0.0139 | 0.1034 | 0.0102 | 0.0087 | 0.0753 | 0.0572 | 0.0499 | 0.1492 |
| 4 | 0.0141 | 0.1311 | 0.0079 | 0.0077 | 0.0599 | 0.0412 | 0.0152 | 0.0456 |
| 5 | 0.0216 | 0.1400 | 0.0179 | 0.0145 | 0.1078 | 0.0859 | 0.0914 | 0.2736 |
| 6 | 0.0152 | 0.1086 | 0.0119 | 0.0099 | 0.0753 | 0.0572 | 0.0499 | 0.1492 |
| 7 | 0.0130 | 0.1024 | 0.0090 | 0.0078 | 0.0673 | 0.0500 | 0.0369 | 0.1104 |
| 8 | 0.0278 | 0.1711 | 0.0235 | 0.0188 | 0.1078 | 0.0859 | 0.0914 | 0.2736 |
| 9 | 0.0133 | 0.1165 | 0.0078 | 0.0073 | 0.0612 | 0.0431 | 0.0203 | 0.0609 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.997 | 0.199 | 0.081 | 0.028 | 0.022 | 0.017 | 0.015 | 0.014 | 0.013 | 0.013 | 0.013 | 0.014 |
| LDT1 | DSL | 3.188 | 0.638 | 0.313 | 0.171 | 0.140 | 0.119 | 0.109 | 0.103 | 0.102 | 0.108 | 0.116 | 0.131 |
| LDT2 | DSL | 1.295 | 0.259 | 0.096 | 0.024 | 0.018 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 |
| LHDT1 | DSL | 3.173 | 0.748 | 0.301 | 0.108 | 0.088 | 0.075 | 0.067 | 0.062 | 0.061 | 0.060 | 0.064 | 0.075 |
| LHDT2 | DSL | 3.173 | 0.726 | 0.280 | 0.086 | 0.068 | 0.057 | 0.050 | 0.045 | 0.043 | 0.041 | 0.043 | 0.049 |
| MDV | DSL | 0.928 | 0.186 | 0.070 | 0.019 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.007 | 0.007 | 0.008 |
| MH | DSL | 5.109 | 1.022 | 0.389 | 0.118 | 0.096 | 0.079 | 0.067 | 0.059 | 0.054 | 0.053 | 0.056 | 0.062 |
| OBUS | DSL | 0.935 | 0.627 | 0.355 | 0.187 | 0.138 | 0.102 | 0.075 | 0.056 | 0.041 | 0.031 | 0.026 | 0.026 |
| SBUS | DSL | 0.387 | 0.695 | 0.307 | 0.125 | 0.096 | 0.074 | 0.058 | 0.047 | 0.041 | 0.039 | 0.040 | 0.040 |
| T6 | DSL | 0.256 | 0.309 | 0.174 | 0.091 | 0.067 | 0.050 | 0.037 | 0.027 | 0.020 | 0.015 | 0.013 | 0.013 |
| T7 | DSL | 0.848 | 0.928 | 0.523 | 0.274 | 0.202 | 0.149 | 0.110 | 0.082 | 0.061 | 0.046 | 0.040 | 0.039 |
| UBUS | DSL | 29.993 | 5.999 | 2.558 | 0.859 | 0.710 | 0.595 | 0.512 | 0.462 | 0.446 | 0.463 | 0.512 | 0.595 |
| LDA | GAS | 0.349 | 0.070 | 0.031 | 0.016 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 | 0.008 | 0.009 |
| LDT1 | GAS | 0.826 | 0.165 | 0.079 | 0.042 | 0.033 | 0.027 | 0.024 | 0.022 | 0.021 | 0.021 | 0.022 | 0.024 |
| LDT2 | GAS | 0.449 | 0.090 | 0.039 | 0.020 | 0.016 | 0.013 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 |
| LHDT1 | GAS | 14.068 | 0.239 | 0.113 | 0.063 | 0.050 | 0.042 | 0.038 | 0.035 | 0.034 | 0.036 | 0.039 | 0.045 |
| LHDT2 | GAS | 13.766 | 0.094 | 0.043 | 0.023 | 0.018 | 0.015 | 0.013 | 0.012 | 0.012 | 0.012 | 0.013 | 0.015 |
| MCY | GAS | 62.772 | 12.554 | 5.615 | 3.096 | 2.484 | 2.097 | 1.862 | 1.740 | 1.708 | 1.764 | 1.913 | 2.181 |
| MDV | GAS | 0.844 | 0.169 | 0.074 | 0.039 | 0.031 | 0.026 | 0.022 | 0.020 | 0.020 | 0.020 | 0.021 | 0.024 |
| MH | GAS | 2.220 | 0.444 | 0.205 | 0.116 | 0.094 | 0.080 | 0.072 | 0.067 | 0.067 | 0.069 | 0.075 | 0.086 |
| OBUS | GAS | 15.721 | 0.203 | 0.086 | 0.045 | 0.035 | 0.029 | 0.025 | 0.023 | 0.023 | 0.023 | 0.025 | 0.028 |
| SBUS | GAS | 15.517 | 0.334 | 0.140 | 0.072 | 0.056 | 0.046 | 0.040 | 0.037 | 0.035 | 0.036 | 0.039 | 0.044 |
| T6 | GAS | 20.752 | 0.348 | 0.149 | 0.078 | 0.061 | 0.050 | 0.044 | 0.040 | 0.039 | 0.040 | 0.043 | 0.049 |
| T7 | GAS | 11.614 | 2.323 | 0.990 | 0.509 | 0.398 | 0.328 | 0.286 | 0.262 | 0.254 | 0.261 | 0.282 | 0.317 |
| UBUS | GAS | 7.575 | 1.515 | 0.704 | 0.401 | 0.326 | 0.279 | 0.250 | 0.236 | 0.233 | 0.242 | 0.263 | 0.301 |
| T7 | NG | 0.063 | 0.864 | 0.421 | 0.198 | 0.152 | 0.117 | 0.091 | 0.072 | 0.058 | 0.049 | 0.045 | 0.045 |
| UBUS | NG | 11.685 | 2.337 | 0.892 | 0.287 | 0.231 | 0.188 | 0.158 | 0.140 | 0.134 | 0.141 | 0.160 | 0.192 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**EMFAC2014 Running Losses Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | GAS | 0 | 0.193 | 0.064 | 0.039 | 0.032 | 0.028 | 0.024 | 0.021 | 0.019 | 0.018 | 0.016 | 0.015 |
| LDT1 | GAS | 0 | 0.826 | 0.275 | 0.165 | 0.138 | 0.118 | 0.103 | 0.092 | 0.083 | 0.075 | 0.069 | 0.064 |
| LDT2 | GAS | 0 | 0.308 | 0.103 | 0.062 | 0.051 | 0.044 | 0.039 | 0.034 | 0.031 | 0.028 | 0.026 | 0.024 |
| LHDT1 | GAS | 0 | 2.083 | 0.694 | 0.417 | 0.347 | 0.298 | 0.260 | 0.231 | 0.208 | 0.189 | 0.174 | 0.160 |
| LHDT2 | GAS | 0 | 0.983 | 0.328 | 0.197 | 0.164 | 0.140 | 0.123 | 0.109 | 0.098 | 0.089 | 0.082 | 0.076 |
| MCY | GAS | 0 | 0.383 | 0.128 | 0.077 | 0.064 | 0.055 | 0.048 | 0.043 | 0.038 | 0.035 | 0.032 | 0.029 |
| MDV | GAS | 0 | 0.441 | 0.147 | 0.088 | 0.073 | 0.063 | 0.055 | 0.049 | 0.044 | 0.040 | 0.037 | 0.034 |
| MH | GAS | 0 | 5.855 | 1.952 | 1.171 | 0.976 | 0.836 | 0.732 | 0.651 | 0.585 | 0.532 | 0.488 | 0.450 |
| OBUS | GAS | 0 | 0.556 | 0.185 | 0.111 | 0.093 | 0.079 | 0.069 | 0.062 | 0.056 | 0.051 | 0.046 | 0.043 |
| SBUS | GAS | 0 | 0.617 | 0.206 | 0.123 | 0.103 | 0.088 | 0.077 | 0.069 | 0.062 | 0.056 | 0.051 | 0.047 |
| HHDT | GAS | 0 | 0.731 | 0.244 | 0.146 | 0.122 | 0.104 | 0.091 | 0.081 | 0.073 | 0.066 | 0.061 | 0.056 |
| MHDT | GAS | 0 | 0.471 | 0.157 | 0.094 | 0.078 | 0.067 | 0.059 | 0.052 | 0.047 | 0.043 | 0.039 | 0.036 |
| UBUS | GAS | 0 | 1.497 | 0.499 | 0.299 | 0.250 | 0.214 | 0.187 | 0.166 | 0.150 | 0.136 | 0.125 | 0.115 |

**EMFAC2014 Total Emission Factors (grams/mile)**

| | | idle | 5mph | 15mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.997 | 0.199 | 0.081 | 0.028 | 0.022 | 0.017 | 0.015 | 0.014 | 0.013 | 0.013 | 0.013 | 0.014 |
| LDT1 | DSL | 3.188 | 0.638 | 0.313 | 0.171 | 0.140 | 0.119 | 0.109 | 0.103 | 0.102 | 0.108 | 0.116 | 0.131 |
| LDT2 | DSL | 1.295 | 0.259 | 0.096 | 0.024 | 0.018 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 |
| LHDT1 | DSL | 3.173 | 0.748 | 0.301 | 0.108 | 0.088 | 0.075 | 0.067 | 0.062 | 0.061 | 0.060 | 0.064 | 0.075 |
| LHDT2 | DSL | 3.173 | 0.726 | 0.280 | 0.086 | 0.068 | 0.057 | 0.050 | 0.045 | 0.043 | 0.041 | 0.043 | 0.049 |
| MDV | DSL | 0.928 | 0.186 | 0.070 | 0.019 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.007 | 0.007 | 0.008 |
| MH | DSL | 5.109 | 1.022 | 0.389 | 0.118 | 0.096 | 0.079 | 0.067 | 0.059 | 0.054 | 0.053 | 0.056 | 0.062 |
| OBUS | DSL | 0.935 | 0.627 | 0.355 | 0.187 | 0.138 | 0.102 | 0.075 | 0.056 | 0.041 | 0.031 | 0.026 | 0.026 |
| SBUS | DSL | 0.387 | 0.695 | 0.307 | 0.125 | 0.096 | 0.074 | 0.058 | 0.047 | 0.041 | 0.039 | 0.040 | 0.040 |
| T6 | DSL | 0.256 | 0.309 | 0.174 | 0.091 | 0.067 | 0.050 | 0.037 | 0.027 | 0.020 | 0.015 | 0.013 | 0.013 |
| T7 | DSL | 0.848 | 0.928 | 0.523 | 0.274 | 0.202 | 0.149 | 0.110 | 0.082 | 0.061 | 0.046 | 0.040 | 0.039 |
| UBUS | DSL | 29.993 | 5.999 | 2.558 | 0.859 | 0.710 | 0.595 | 0.512 | 0.462 | 0.446 | 0.463 | 0.512 | 0.595 |
| LDA | GAS | 0.349 | 0.262 | 0.095 | 0.054 | 0.044 | 0.038 | 0.033 | 0.029 | 0.027 | 0.025 | 0.024 | 0.024 |
| LDT1 | GAS | 0.826 | 0.991 | 0.354 | 0.208 | 0.171 | 0.145 | 0.127 | 0.113 | 0.103 | 0.096 | 0.091 | 0.087 |
| LDT2 | GAS | 0.449 | 0.398 | 0.142 | 0.082 | 0.067 | 0.057 | 0.050 | 0.045 | 0.041 | 0.038 | 0.036 | 0.036 |
| LHDT1 | GAS | 14.068 | 2.323 | 0.808 | 0.479 | 0.397 | 0.340 | 0.298 | 0.267 | 0.243 | 0.225 | 0.212 | 0.205 |
| LHDT2 | GAS | 13.766 | 1.077 | 0.370 | 0.219 | 0.182 | 0.155 | 0.136 | 0.121 | 0.110 | 0.102 | 0.095 | 0.091 |
| MCY | GAS | 62.772 | 12.938 | 5.743 | 3.172 | 2.548 | 2.152 | 1.910 | 1.782 | 1.747 | 1.798 | 1.945 | 2.211 |
| MDV | GAS | 0.844 | 0.609 | 0.221 | 0.127 | 0.104 | 0.089 | 0.077 | 0.069 | 0.064 | 0.060 | 0.058 | 0.058 |
| MH | GAS | 2.220 | 6.299 | 2.156 | 1.287 | 1.070 | 0.916 | 0.804 | 0.718 | 0.652 | 0.601 | 0.563 | 0.536 |
| OBUS | GAS | 15.721 | 0.759 | 0.271 | 0.156 | 0.128 | 0.109 | 0.095 | 0.085 | 0.078 | 0.074 | 0.071 | 0.071 |
| SBUS | GAS | 15.517 | 0.952 | 0.345 | 0.196 | 0.159 | 0.134 | 0.117 | 0.105 | 0.097 | 0.092 | 0.090 | 0.091 |
| T6 | GAS | 20.752 | 1.079 | 0.393 | 0.224 | 0.183 | 0.155 | 0.135 | 0.122 | 0.112 | 0.106 | 0.104 | 0.105 |
| T7 | GAS | 11.614 | 2.794 | 1.147 | 0.603 | 0.477 | 0.395 | 0.344 | 0.314 | 0.301 | 0.304 | 0.321 | 0.353 |
| UBUS | GAS | 7.575 | 3.012 | 1.203 | 0.700 | 0.576 | 0.492 | 0.437 | 0.402 | 0.383 | 0.378 | 0.388 | 0.416 |
| T7 | NG | 0.063 | 0.864 | 0.421 | 0.198 | 0.152 | 0.117 | 0.091 | 0.072 | 0.058 | 0.049 | 0.045 | 0.045 |
| UBUS | NG | 11.685 | 2.337 | 0.892 | 0.287 | 0.231 | 0.188 | 0.158 | 0.140 | 0.134 | 0.141 | 0.160 | 0.192 |

# World Logistics Center ROG

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 0.15 | 0.68 | 0.47 | 2.57 |
| 0 | 0.75 | 0.33 | 0.40 | 0.49 | 0.36 | 0.03 | 0.17 | 1.15 | 3.69 |
| 1 | 2.83 | 1.30 | 1.55 | 1.86 | 2.24 | 0.14 | 1.65 | 8.78 | 20.35 |
| 2 | 4.88 | 2.20 | 2.65 | 3.23 | 2.94 | 0.10 | 2.26 | 18.87 | 37.13 |
| 3 | 1.97 | 0.90 | 1.08 | 1.29 | 1.54 | 0.09 | 1.40 | 16.52 | 24.79 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.06 | 0.03 | 0.03 | 0.04 | 0.03 | 0.00 | 0.04 | 0.03 | 0.26 |
| 6 | 0.68 | 0.31 | 0.37 | 0.44 | 0.30 | 0.02 | 0.24 | 0.40 | 2.75 |
| 7 | 1.94 | 0.88 | 1.06 | 1.28 | 1.04 | 0.06 | 0.93 | 7.64 | 14.84 |
| 8 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **13.11** | **5.94** | **7.15** | **8.64** | **9.73** | **0.59** | **7.37** | **53.87** | **106.39** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 0.15 | 0.68 | 0.47 | 2.57 |
| 0 | 0.75 | 0.33 | 0.40 | 0.49 | 0.36 | 0.03 | 0.17 | 1.15 | 3.69 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.75** | **0.33** | **0.40** | **0.49** | **1.63** | **0.18** | **0.85** | **1.62** | **6.25** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 2.21 | 1.01 | 1.21 | 1.45 | 1.95 | 0.12 | 1.35 | 7.96 | 17.27 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **2.21** | **1.01** | **1.21** | **1.45** | **1.95** | **0.12** | **1.35** | **7.96** | **17.27** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.62 | 0.28 | 0.34 | 0.41 | 0.29 | 0.02 | 0.30 | 0.82 | 3.08 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.75 | 0.34 | 0.41 | 0.49 | 0.40 | 0.02 | 0.31 | 0.19 | 2.92 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.06 | 0.03 | 0.03 | 0.04 | 0.03 | 0.00 | 0.04 | 0.03 | 0.26 |
| 6 | 0.68 | 0.31 | 0.37 | 0.44 | 0.30 | 0.02 | 0.24 | 0.40 | 2.75 |
| 7 | 1.31 | 0.60 | 0.72 | 0.87 | 0.59 | 0.04 | 0.49 | 1.18 | 5.79 |
| 8 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **3.42** | **1.56** | **1.87** | **2.25** | **1.61** | **0.10** | **1.37** | **2.63** | **14.81** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 4.88 | 2.20 | 2.65 | 3.23 | 2.94 | 0.10 | 2.26 | 18.87 | 37.13 |
| 3 | 1.22 | 0.56 | 0.67 | 0.80 | 1.14 | 0.07 | 1.09 | 15.04 | 20.59 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.63 | 0.29 | 0.34 | 0.41 | 0.45 | 0.03 | 0.45 | 4.71 | 7.31 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **6.73** | **3.04** | **3.66** | **4.45** | **4.53** | **0.19** | **3.79** | **38.63** | **65.03** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.29 | 1.29 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.74 | 1.74 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **3.03** | **3.03** |

**World Logistics Center** **NOx**

**Project Phase 1 (2022)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.4185 | 1.1950 | 0.6247 | 1.1590 | 1.1987 | 1.1727 | 1.8087 | 24.5582 |
| 0 | 0.0650 | 0.1824 | 0.0970 | 0.1771 | 0.3655 | 0.1988 | 0.5149 | 3.8063 |
| 1 | 0.0448 | 0.1188 | 0.0663 | 0.1251 | 0.3104 | 0.1645 | 0.4234 | 3.1044 |
| 2 | 0.0420 | 0.1179 | 0.0625 | 0.1208 | 0.2712 | 0.0621 | 0.3470 | 2.5309 |
| 3 | 0.0420 | 0.1131 | 0.0621 | 0.1181 | 0.2818 | 0.1457 | 0.3708 | 2.7150 |
| 4 | 0.0443 | 0.1298 | 0.0665 | 0.1316 | 0.2764 | 0.1378 | 0.3444 | 2.5240 |
| 5 | 0.0481 | 0.1285 | 0.0711 | 0.1324 | 0.3104 | 0.1645 | 0.4234 | 3.1044 |
| 6 | 0.0430 | 0.1147 | 0.0636 | 0.1207 | 0.2818 | 0.1457 | 0.3708 | 2.7150 |
| 7 | 0.0414 | 0.1129 | 0.0613 | 0.1180 | 0.2751 | 0.1406 | 0.3561 | 2.6013 |
| 8 | 0.0524 | 0.1416 | 0.0775 | 0.1429 | 0.3104 | 0.1645 | 0.4234 | 3.1044 |
| 9 | 0.0429 | 0.1226 | 0.0639 | 0.1245 | 0.2717 | 0.1365 | 0.3424 | 2.5050 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.7245 | 3.1291 | 0.7470 | 0.6243 | 64.9760 | 60.9283 | 28.0459 | 27.4296 |
| 0 | 0.1064 | 0.6777 | 0.0883 | 0.0761 | 1.4238 | 0.8911 | 4.5343 | 10.3559 |
| 1 | 0.0731 | 0.7281 | 0.0386 | 0.0376 | 1.4383 | 0.8416 | 1.9165 | 5.1260 |
| 2 | 0.0755 | 0.8527 | 0.0317 | 0.0334 | 1.8343 | 1.0280 | 0.8593 | 2.8275 |
| 3 | 0.0738 | 0.7897 | 0.0341 | 0.0345 | 1.6422 | 0.9330 | 1.1595 | 3.5158 |
| 4 | 0.0764 | 0.8864 | 0.0314 | 0.0341 | 1.9664 | 1.1003 | 0.7110 | 2.4498 |
| 5 | 0.0767 | 0.7206 | 0.0431 | 0.0406 | 1.4383 | 0.8416 | 1.9165 | 5.1260 |
| 6 | 0.0728 | 0.7568 | 0.0359 | 0.0357 | 1.6422 | 0.9330 | 1.1595 | 3.5158 |
| 7 | 0.0738 | 0.8138 | 0.0325 | 0.0337 | 1.7429 | 0.9825 | 0.9818 | 3.1129 |
| 8 | 0.0811 | 0.7073 | 0.0496 | 0.0455 | 1.4383 | 0.8416 | 1.9165 | 5.1260 |
| 9 | 0.0768 | 0.8774 | 0.0314 | 0.0335 | 1.9646 | 1.0995 | 0.7737 | 2.6088 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.724 | 0.145 | 0.106 | 0.081 | 0.077 | 0.073 | 0.073 | 0.074 | 0.074 | 0.075 | 0.077 | 0.076 |
| LDT1 | DSL | 3.129 | 0.626 | 0.678 | 0.707 | 0.721 | 0.728 | 0.757 | 0.790 | 0.814 | 0.853 | 0.877 | 0.886 |
| LDT2 | DSL | 0.747 | 0.149 | 0.088 | 0.050 | 0.043 | 0.039 | 0.036 | 0.034 | 0.033 | 0.032 | 0.031 | 0.031 |
| LHDT1 | DSL | 64.976 | 1.542 | 1.424 | 1.438 | 1.538 | 1.642 | 1.743 | 1.834 | 1.965 | 1.966 | 2.056 | 2.283 |
| LHDT2 | DSL | 60.928 | 1.045 | 0.891 | 0.842 | 0.884 | 0.933 | 0.982 | 1.028 | 1.100 | 1.100 | 1.143 | 1.276 |
| MDV | DSL | 0.624 | 0.125 | 0.076 | 0.045 | 0.041 | 0.038 | 0.036 | 0.034 | 0.034 | 0.033 | 0.033 | 0.034 |
| MH | DSL | 68.554 | 13.711 | 7.979 | 5.014 | 4.560 | 4.230 | 3.988 | 3.817 | 3.707 | 3.652 | 3.670 | 3.753 |
| OBUS | DSL | 35.703 | 12.614 | 6.876 | 3.522 | 2.886 | 2.496 | 2.233 | 2.044 | 1.901 | 1.789 | 1.741 | 1.741 |
| SBUS | DSL | 75.655 | 15.565 | 8.612 | 5.612 | 5.236 | 4.987 | 4.822 | 4.720 | 4.671 | 4.671 | 4.685 | 4.685 |
| T6 | DSL | 28.046 | 9.025 | 4.534 | 1.917 | 1.437 | 1.159 | 0.982 | 0.859 | 0.774 | 0.711 | 0.685 | 0.688 |
| T7 | DSL | 27.430 | 19.346 | 10.356 | 5.126 | 4.125 | 3.516 | 3.113 | 2.827 | 2.609 | 2.450 | 2.384 | 2.365 |
| UBUS | DSL | 289.747 | 57.949 | 35.855 | 26.817 | 25.596 | 24.665 | 24.024 | 23.671 | 23.605 | 23.827 | 24.337 | 25.135 |
| LDA | GAS | 0.418 | 0.084 | 0.065 | 0.052 | 0.048 | 0.045 | 0.043 | 0.042 | 0.041 | 0.042 | 0.043 | 0.044 |
| LDT1 | GAS | 1.195 | 0.239 | 0.182 | 0.142 | 0.129 | 0.119 | 0.115 | 0.113 | 0.113 | 0.118 | 0.123 | 0.130 |
| LDT2 | GAS | 0.625 | 0.125 | 0.097 | 0.078 | 0.071 | 0.066 | 0.064 | 0.062 | 0.061 | 0.062 | 0.064 | 0.066 |
| LHDT1 | GAS | 1.199 | 0.451 | 0.366 | 0.310 | 0.294 | 0.282 | 0.275 | 0.271 | 0.272 | 0.276 | 0.282 | 0.295 |
| LHDT2 | GAS | 1.173 | 0.252 | 0.199 | 0.164 | 0.154 | 0.146 | 0.141 | 0.138 | 0.136 | 0.138 | 0.141 | 0.146 |
| MCY | GAS | 7.295 | 1.459 | 1.216 | 1.083 | 1.045 | 1.022 | 1.010 | 1.010 | 1.019 | 1.038 | 1.067 | 1.106 |
| MDV | GAS | 1.159 | 0.232 | 0.177 | 0.143 | 0.132 | 0.125 | 0.121 | 0.118 | 0.118 | 0.121 | 0.124 | 0.132 |
| MH | GAS | 3.308 | 0.662 | 0.544 | 0.478 | 0.459 | 0.446 | 0.439 | 0.437 | 0.440 | 0.448 | 0.460 | 0.476 |
| OBUS | GAS | 1.344 | 0.399 | 0.308 | 0.254 | 0.236 | 0.223 | 0.214 | 0.208 | 0.206 | 0.207 | 0.212 | 0.219 |
| SBUS | GAS | 1.324 | 0.678 | 0.520 | 0.425 | 0.394 | 0.371 | 0.355 | 0.345 | 0.341 | 0.342 | 0.349 | 0.361 |
| T6 | GAS | 1.809 | 0.661 | 0.515 | 0.423 | 0.393 | 0.371 | 0.356 | 0.347 | 0.342 | 0.344 | 0.350 | 0.364 |
| T7 | GAS | 24.558 | 4.912 | 3.806 | 3.104 | 2.882 | 2.715 | 2.601 | 2.531 | 2.505 | 2.524 | 2.579 | 2.664 |
| UBUS | GAS | 8.902 | 1.780 | 1.430 | 1.228 | 1.165 | 1.122 | 1.095 | 1.083 | 1.084 | 1.098 | 1.125 | 1.166 |
| T7 | NG | 23.764 | 4.544 | 2.868 | 1.953 | 1.772 | 1.638 | 1.536 | 1.459 | 1.403 | 1.365 | 1.353 | 1.353 |
| UBUS | NG | 57.849 | 11.570 | 6.389 | 4.522 | 4.384 | 4.289 | 4.231 | 4.207 | 4.216 | 4.256 | 4.330 | 4.438 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center NOx

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 13 | 19 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 22 | 27 |
| 1 | 3 | 1 | 2 | 3 | 3 | 0 | 23 | 160 | 196 |
| 2 | 8 | 3 | 4 | 6 | 9 | 1 | 39 | 621 | 691 |
| 3 | 3 | 1 | 1 | 2 | 3 | 0 | 20 | 377 | 409 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 6 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 9 | 16 |
| 7 | 3 | 1 | 2 | 2 | 3 | 0 | 15 | 207 | 233 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **19** | **6** | **10** | **15** | **21** | **3** | **108** | **1410** | **1591** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 13 | 19 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 22 | 27 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1** | **0** | **0** | **0** | **2** | **1** | **7** | **35** | **46** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 3 | 1 | 1 | 2 | 3 | 0 | 19 | 145 | 174 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **1** | **1** | **2** | **3** | **0** | **19** | **145** | **174** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 15 | 22 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 1 | 1 | 1 | 0 | 5 | 4 | 13 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 6 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 9 | 16 |
| 7 | 2 | 1 | 1 | 2 | 1 | 0 | 8 | 32 | 47 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **5** | **2** | **3** | **4** | **4** | **0** | **20** | **61** | **98** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 8 | 3 | 4 | 6 | 9 | 1 | 39 | 621 | 691 |
| 3 | 2 | 1 | 1 | 1 | 2 | 0 | 16 | 344 | 367 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 0 | 1 | 1 | 1 | 0 | 7 | 128 | 139 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **11** | **4** | **6** | **9** | **12** | **2** | **61** | **1092** | **1196** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 29 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 47 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **77** | **77** |

## World Logistics Center

**Project Phase 1 (2022)**

# N2O

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 0 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 1 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 2 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 3 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 4 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 5 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 6 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 7 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 8 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 9 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 0 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 1 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 2 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 3 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 4 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 5 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 6 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 7 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 8 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 9 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |

Source: United States Environmental Protection Agency. April 4, 2014. Emission Factors for Greenhouse Gas Inventories. www.epa.gov/climateleadership/documents/emission-factors.pdf. N2O for Gasoline Vehicles is from Table 3; diesel vehicles from Table 4.

# World Logistics Center N2O

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.005 |
| 0 | 0.028 | 0.006 | 0.019 | 0.015 | 0.006 | 0.001 | 0.005 | 0.011 | 0.091 |
| 1 | 0.271 | 0.059 | 0.179 | 0.139 | 0.065 | 0.008 | 0.091 | 0.155 | 0.968 |
| 2 | 0.693 | 0.151 | 0.459 | 0.354 | 0.153 | 0.019 | 0.322 | 1.088 | 3.240 |
| 3 | 0.241 | 0.052 | 0.159 | 0.123 | 0.063 | 0.008 | 0.129 | 0.533 | 1.308 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.005 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.002 | 0.001 | 0.015 |
| 6 | 0.074 | 0.016 | 0.049 | 0.038 | 0.012 | 0.002 | 0.022 | 0.013 | 0.226 |
| 7 | 0.260 | 0.056 | 0.172 | 0.133 | 0.048 | 0.006 | 0.108 | 0.330 | 1.113 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.573** | **0.341** | **1.040** | **0.804** | **0.350** | **0.044** | **0.680** | **2.133** | **6.966** |

**Area Source Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.005 |
| 0 | 0.028 | 0.006 | 0.019 | 0.015 | 0.006 | 0.001 | 0.005 | 0.011 | 0.091 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.028** | **0.006** | **0.019** | **0.015** | **0.007** | **0.001** | **0.006** | **0.013** | **0.095** |

**Internal Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.212 | 0.046 | 0.140 | 0.108 | 0.057 | 0.007 | 0.075 | 0.141 | 0.786 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.212** | **0.046** | **0.140** | **0.108** | **0.057** | **0.007** | **0.075** | **0.141** | **0.786** |

**Surface Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.059 | 0.013 | 0.039 | 0.030 | 0.009 | 0.001 | 0.017 | 0.014 | 0.182 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.091 | 0.020 | 0.060 | 0.047 | 0.016 | 0.002 | 0.028 | 0.006 | 0.272 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.005 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.002 | 0.001 | 0.015 |
| 6 | 0.074 | 0.016 | 0.049 | 0.038 | 0.012 | 0.002 | 0.022 | 0.013 | 0.226 |
| 7 | 0.176 | 0.038 | 0.116 | 0.090 | 0.027 | 0.003 | 0.056 | 0.051 | 0.558 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.406** | **0.088** | **0.268** | **0.207** | **0.066** | **0.008** | **0.125** | **0.085** | **1.254** |

**Freeway Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.693 | 0.151 | 0.459 | 0.354 | 0.153 | 0.019 | 0.322 | 1.088 | 3.240 |
| 3 | 0.149 | 0.032 | 0.099 | 0.076 | 0.047 | 0.006 | 0.100 | 0.485 | 0.995 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.084 | 0.018 | 0.056 | 0.043 | 0.021 | 0.003 | 0.052 | 0.204 | 0.480 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.927** | **0.201** | **0.613** | **0.474** | **0.221** | **0.028** | **0.474** | **1.777** | **4.715** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.041 | 0.041 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.075 | 0.075 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.117** | **0.117** |

**World Logistics Center**
**Project Phase 1 (2022)**

# CO

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 5.4594 | 13.9614 | 6.6651 | 11.3361 | 125.6735 | 128.7862 | 322.2897 | 266.9530 |
| 0 | 0.9057 | 2.2262 | 1.1074 | 1.8053 | 1.8748 | 0.6578 | 2.2864 | 44.5208 |
| 1 | 0.6204 | 1.4034 | 0.7611 | 1.2385 | 1.3659 | 0.5061 | 1.8713 | 37.1574 |
| 2 | 0.4686 | 1.1105 | 0.5757 | 0.9680 | 1.0157 | 0.6555 | 1.3716 | 27.1813 |
| 3 | 0.5345 | 1.2193 | 0.6555 | 1.0749 | 1.1104 | 0.4185 | 1.5779 | 31.5623 |
| 4 | 0.4154 | 1.0375 | 0.5110 | 0.9038 | 1.0573 | 0.3614 | 1.2291 | 23.7925 |
| 5 | 0.6794 | 1.5564 | 0.8313 | 1.3423 | 1.3659 | 0.5061 | 1.8713 | 37.1574 |
| 6 | 0.5743 | 1.3022 | 0.7049 | 1.1515 | 1.1104 | 0.4185 | 1.5779 | 31.5623 |
| 7 | 0.4975 | 1.1458 | 0.6101 | 1.0133 | 1.0524 | 0.3930 | 1.4667 | 29.2526 |
| 8 | 0.7457 | 1.7382 | 0.9108 | 1.4673 | 1.3659 | 0.5061 | 1.8713 | 37.1574 |
| 9 | 0.4409 | 1.0671 | 0.5410 | 0.9276 | 1.0089 | 0.3599 | 1.2889 | 25.3520 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 15.9514 | 17.1205 | 11.8631 | 17.3076 | 26.3000 | 26.3000 | 1.9476 | 3.2738 |
| 0 | 1.1957 | 1.6572 | 0.8747 | 1.2736 | 1.2515 | 1.1301 | 0.7728 | 2.3129 |
| 1 | 0.2015 | 0.6699 | 0.1276 | 0.1879 | 0.4879 | 0.3725 | 0.4104 | 1.2256 |
| 2 | 0.1373 | 0.7661 | 0.0729 | 0.1087 | 0.3453 | 0.2339 | 0.1228 | 0.3686 |
| 3 | 0.1542 | 0.6450 | 0.0914 | 0.1350 | 0.3713 | 0.2669 | 0.2241 | 0.6692 |
| 4 | 0.1553 | 1.0967 | 0.0732 | 0.1112 | 0.3844 | 0.2461 | 0.0680 | 0.2063 |
| 5 | 0.2477 | 0.7542 | 0.1598 | 0.2343 | 0.4879 | 0.3725 | 0.4104 | 1.2256 |
| 6 | 0.1726 | 0.6397 | 0.1063 | 0.1568 | 0.3713 | 0.2669 | 0.2241 | 0.6692 |
| 7 | 0.1421 | 0.6792 | 0.0805 | 0.1195 | 0.3498 | 0.2442 | 0.1657 | 0.4961 |
| 8 | 0.3202 | 0.8900 | 0.2105 | 0.3078 | 0.4879 | 0.3725 | 0.4104 | 1.2256 |
| 9 | 0.1425 | 0.8976 | 0.0709 | 0.1063 | 0.3643 | 0.2392 | 0.0912 | 0.2746 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 15.9514 | 3.1903 | 1.1957 | 0.3202 | 0.2477 | 0.2015 | 0.1726 | 0.1542 | 0.1421 | 0.1373 | 0.1425 | 0.1553 |
| LDT1 | DSL | 17.1205 | 3.4241 | 1.6572 | 0.8900 | 0.7542 | 0.6699 | 0.6397 | 0.6450 | 0.6792 | 0.7661 | 0.8976 | 1.0967 |
| LDT2 | DSL | 11.8631 | 2.3726 | 0.8747 | 0.2105 | 0.1598 | 0.1276 | 0.1063 | 0.0914 | 0.0805 | 0.0729 | 0.0709 | 0.0732 |
| LHDT1 | DSL | 26.3000 | 3.0529 | 1.2515 | 0.4879 | 0.4139 | 0.3713 | 0.3498 | 0.3453 | 0.3643 | 0.3844 | 0.4478 | 0.5826 |
| LHDT2 | DSL | 26.3000 | 2.8886 | 1.1301 | 0.3725 | 0.3064 | 0.2669 | 0.2442 | 0.2339 | 0.2392 | 0.2461 | 0.2785 | 0.3557 |
| MDV | DSL | 17.3076 | 3.4615 | 1.2736 | 0.3078 | 0.2343 | 0.1879 | 0.1568 | 0.1350 | 0.1195 | 0.1087 | 0.1063 | 0.1112 |
| MH | DSL | 11.6334 | 2.3267 | 1.1023 | 0.4952 | 0.4222 | 0.3671 | 0.3263 | 0.2980 | 0.2814 | 0.2759 | 0.2827 | 0.3011 |
| OBUS | DSL | 3.9647 | 2.4637 | 1.4021 | 0.7431 | 0.5490 | 0.4060 | 0.3007 | 0.2232 | 0.1662 | 0.1244 | 0.1079 | 0.1079 |
| SBUS | DSL | 3.4649 | 1.3437 | 0.7767 | 0.4217 | 0.3314 | 0.2625 | 0.2108 | 0.1731 | 0.1470 | 0.1308 | 0.1259 | 0.1259 |
| T6 | DSL | 1.9476 | 1.3593 | 0.7728 | 0.4104 | 0.3031 | 0.2241 | 0.1657 | 0.1228 | 0.0912 | 0.0680 | 0.0589 | 0.0590 |
| T7 | DSL | 3.2738 | 4.0532 | 2.3129 | 1.2256 | 0.9053 | 0.6692 | 0.4961 | 0.3686 | 0.2746 | 0.2063 | 0.1789 | 0.1788 |
| UBUS | DSL | 85.9565 | 17.1913 | 12.4708 | 8.4663 | 7.1928 | 6.1061 | 5.2042 | 4.4862 | 3.9515 | 3.6000 | 3.4322 | 3.4478 |
| LDA | GAS | 5.4594 | 1.0919 | 0.9057 | 0.7457 | 0.6794 | 0.6204 | 0.5743 | 0.5345 | 0.4975 | 0.4686 | 0.4409 | 0.4154 |
| LDT1 | GAS | 13.9614 | 2.7923 | 2.2262 | 1.7382 | 1.5564 | 1.4034 | 1.3022 | 1.2193 | 1.1458 | 1.1105 | 1.0671 | 1.0375 |
| LDT2 | GAS | 6.6651 | 1.3330 | 1.1074 | 0.9108 | 0.8313 | 0.7611 | 0.7049 | 0.6555 | 0.6101 | 0.5757 | 0.5410 | 0.5110 |
| LHDT1 | GAS | 125.6735 | 2.7999 | 1.8748 | 1.3659 | 1.2161 | 1.1104 | 1.0524 | 1.0157 | 1.0089 | 1.0573 | 1.1271 | 1.3072 |
| LHDT2 | GAS | 128.7862 | 0.8915 | 0.6578 | 0.5061 | 0.4570 | 0.4185 | 0.3930 | 0.3726 | 0.3599 | 0.3614 | 0.3665 | 0.3987 |
| MCY | GAS | 234.0772 | 46.8154 | 28.5672 | 20.5828 | 18.3854 | 16.9389 | 16.0949 | 15.7977 | 16.0708 | 17.0253 | 18.8923 | 22.0927 |
| MDV | GAS | 11.3361 | 2.2672 | 1.8053 | 1.4673 | 1.3423 | 1.2385 | 1.1515 | 1.0749 | 1.0133 | 0.9680 | 0.9276 | 0.9038 |
| MH | GAS | 35.1923 | 7.0385 | 4.2423 | 3.0328 | 2.7045 | 2.4914 | 2.3708 | 2.3340 | 2.3849 | 2.5408 | 2.8377 | 3.3412 |
| OBUS | GAS | 131.1737 | 1.5956 | 1.2533 | 1.0292 | 0.9435 | 0.8707 | 0.8089 | 0.7568 | 0.7140 | 0.6807 | 0.6579 | 0.6483 |
| SBUS | GAS | 130.0778 | 2.5264 | 2.1011 | 1.7663 | 1.6260 | 1.5009 | 1.3892 | 1.2893 | 1.1998 | 1.1196 | 1.0475 | 0.9827 |
| T6 | GAS | 322.2897 | 2.8691 | 2.2864 | 1.8713 | 1.7135 | 1.5779 | 1.4667 | 1.3716 | 1.2889 | 1.2291 | 1.1815 | 1.1666 |
| T7 | GAS | 266.9530 | 53.3906 | 44.5208 | 37.1574 | 34.2109 | 31.5623 | 29.2526 | 27.1813 | 25.3520 | 23.7925 | 22.3607 | 21.0778 |
| UBUS | GAS | 48.4762 | 9.6952 | 6.7232 | 5.2083 | 4.7220 | 4.3546 | 4.0844 | 3.9018 | 3.8080 | 3.8155 | 3.9528 | 4.2730 |
| T7 | NG | 4.2116 | 42.6052 | 24.2905 | 12.8774 | 9.4957 | 7.0038 | 5.1676 | 3.8149 | 2.8186 | 2.0851 | 1.7946 | 1.7946 |
| UBUS | NG | 228.6390 | 45.7278 | 20.0805 | 7.7082 | 6.3726 | 5.3976 | 4.6824 | 4.1783 | 3.8589 | 3.7091 | 3.7607 | 3.9958 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 11 | 1 | 10 | 4 | 26 |
| 0 | 7 | 2 | 3 | 4 | 1 | 0 | 1 | 7 | 25 |
| 1 | 47 | 13 | 21 | 26 | 7 | 0 | 10 | 58 | 180 |
| 2 | 90 | 25 | 40 | 52 | 12 | 1 | 18 | 181 | 418 |
| 3 | 36 | 10 | 16 | 20 | 5 | 0 | 10 | 128 | 225 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 6 | 12 | 3 | 5 | 7 | 1 | 0 | 2 | 3 | 33 |
| 7 | 36 | 10 | 16 | 20 | 4 | 0 | 7 | 66 | 158 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **229** | **63** | **101** | **129** | **40** | **3** | **57** | **445** | **1068** |

**Area Source Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 11 | 1 | 10 | 4 | 26 |
| 0 | 7 | 2 | 3 | 4 | 1 | 0 | 1 | 7 | 25 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **7** | **2** | **3** | **4** | **12** | **1** | **11** | **10** | **51** |

**Internal Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 37 | 10 | 16 | 20 | 6 | 0 | 8 | 52 | 149 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **37** | **10** | **16** | **20** | **6** | **0** | **8** | **52** | **149** |

**Surface Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 10 | 3 | 5 | 6 | 1 | 0 | 2 | 5 | 31 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 14 | 4 | 6 | 8 | 1 | 0 | 2 | 1 | 36 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 6 | 12 | 3 | 5 | 7 | 1 | 0 | 2 | 3 | 33 |
| 7 | 24 | 7 | 11 | 14 | 2 | 0 | 4 | 10 | 71 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **61** | **16** | **27** | **34** | **5** | **0** | **9** | **20** | **174** |

**Freeway Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 90 | 25 | 40 | 52 | 12 | 1 | 18 | 181 | 418 |
| 3 | 22 | 6 | 10 | 12 | 4 | 0 | 7 | 117 | 179 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 12 | 3 | 5 | 7 | 2 | 0 | 3 | 40 | 72 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **124** | **35** | **55** | **71** | **17** | **1** | **29** | **338** | **669** |

**Freeway to Port Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **25** | **25** |

**World Logistics Center**
**Project Phase 1 (2022)**

# PM10

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0590 | 0.0835 | 0.0585 | 0.0598 | 0.0419 | 0.0330 | 0.0323 | 0.0293 |
| 0 | 0.0050 | 0.0075 | 0.0050 | 0.0051 | 0.0036 | 0.0028 | 0.0027 | 0.0024 |
| 1 | 0.0017 | 0.0025 | 0.0016 | 0.0017 | 0.0019 | 0.0014 | 0.0014 | 0.0013 |
| 2 | 0.0013 | 0.0020 | 0.0013 | 0.0013 | 0.0010 | 0.0013 | 0.0007 | 0.0006 |
| 3 | 0.0013 | 0.0020 | 0.0013 | 0.0014 | 0.0012 | 0.0009 | 0.0009 | 0.0008 |
| 4 | 0.0016 | 0.0023 | 0.0016 | 0.0016 | 0.0010 | 0.0007 | 0.0007 | 0.0006 |
| 5 | 0.0020 | 0.0031 | 0.0020 | 0.0021 | 0.0019 | 0.0014 | 0.0014 | 0.0013 |
| 6 | 0.0014 | 0.0022 | 0.0014 | 0.0015 | 0.0012 | 0.0009 | 0.0009 | 0.0008 |
| 7 | 0.0013 | 0.0019 | 0.0013 | 0.0013 | 0.0011 | 0.0008 | 0.0008 | 0.0007 |
| 8 | 0.0026 | 0.0040 | 0.0026 | 0.0027 | 0.0019 | 0.0014 | 0.0014 | 0.0013 |
| 9 | 0.0014 | 0.0021 | 0.0014 | 0.0014 | 0.0010 | 0.0007 | 0.0007 | 0.0006 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.2117 | 1.9979 | 0.0643 | 0.0856 | 0.7384 | 0.7285 | 0.0133 | 0.0171 |
| 0 | 0.0248 | 0.2101 | 0.0093 | 0.0112 | 0.0346 | 0.0264 | 0.0089 | 0.0248 |
| 1 | 0.0104 | 0.0893 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0070 | 0.0194 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0052 | 0.0146 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0059 | 0.0165 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0048 | 0.0134 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0070 | 0.0194 |
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0059 | 0.0165 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0056 | 0.0154 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0070 | 0.0194 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0050 | 0.0139 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.212 | 0.042 | 0.025 | 0.015 | 0.012 | 0.010 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 |
| LDT1 | DSL | 1.998 | 0.400 | 0.210 | 0.126 | 0.104 | 0.089 | 0.082 | 0.078 | 0.078 | 0.082 | 0.089 | 0.101 |
| LDT2 | DSL | 0.064 | 0.013 | 0.009 | 0.006 | 0.006 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| LHDT1 | DSL | 0.738 | 0.062 | 0.035 | 0.022 | 0.020 | 0.018 | 0.016 | 0.016 | 0.015 | 0.015 | 0.016 | 0.019 |
| LHDT2 | DSL | 0.728 | 0.043 | 0.026 | 0.018 | 0.016 | 0.014 | 0.013 | 0.012 | 0.012 | 0.012 | 0.012 | 0.013 |
| MDV | DSL | 0.086 | 0.017 | 0.011 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| MH | DSL | 1.383 | 0.277 | 0.176 | 0.111 | 0.101 | 0.096 | 0.096 | 0.101 | 0.110 | 0.123 | 0.142 | 0.165 |
| OBUS | DSL | 0.008 | 0.025 | 0.019 | 0.015 | 0.014 | 0.013 | 0.012 | 0.012 | 0.011 | 0.010 | 0.010 | 0.010 |
| SBUS | DSL | 0.077 | 0.111 | 0.062 | 0.033 | 0.028 | 0.025 | 0.023 | 0.023 | 0.024 | 0.027 | 0.029 | 0.029 |
| T6 | DSL | 0.013 | 0.012 | 0.009 | 0.007 | 0.006 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| T7 | DSL | 0.017 | 0.033 | 0.025 | 0.019 | 0.018 | 0.016 | 0.015 | 0.015 | 0.014 | 0.013 | 0.013 | 0.013 |
| UBUS | DSL | 8.448 | 1.690 | 0.965 | 0.528 | 0.451 | 0.393 | 0.351 | 0.328 | 0.321 | 0.332 | 0.360 | 0.406 |
| LDA | GAS | 0.059 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| LDT1 | GAS | 0.084 | 0.017 | 0.007 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT2 | GAS | 0.058 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| LHDT1 | GAS | 0.042 | 0.008 | 0.004 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.033 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.057 | 0.011 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MDV | GAS | 0.060 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| MH | GAS | 0.047 | 0.009 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.031 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.026 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.032 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.029 | 0.006 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.039 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.044 | 0.009 | 0.006 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 | 0.005 |
| UBUS | NG | 0.106 | 0.021 | 0.012 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 | 0.006 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| Source | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0370 | 0.0370 | 0.0370 | 0.0760 | 0.0890 | 0.0370 | 0.1300 | 0.0620 |
| Tires | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.012 | 0.02 |
| Total | **0.045** | **0.045** | **0.045** | **0.084** | **0.097** | **0.045** | **0.142** | **0.082** |

| Source | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.037 | 0.037 | 0.037 | 0.076 | 0.089 | 0.037 | 0.130 | 0.062 |
| Tires | 0.008 | 0.008 | 0.008 | 0.012 | 0.012 | 0.008 | 0.012 | 0.036 |
| Total | **0.045** | **0.045** | **0.045** | **0.088** | **0.101** | **0.045** | **0.142** | **0.098** |

**Paved Road Dust Emissions (pounds/day)**

| Source | PM10 |
|---|---|
| Freeways | 336 |
| Freeways to Ports | 18 |
| Internal | 52 |
| Surface | 106 |
| **Total** | **512** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 19.643 | 2.327 | 7.094 | 10.223 | 2.275 | 0.111 | 2.801 | 0.596 | 45.069 |
| Diesel | 0.063 | 0.003 | 0.003 | 0.011 | 0.733 | 0.107 | 12.271 | 41.509 | 54.701 |
| Total | **19.706** | **2.330** | **7.097** | **10.234** | **3.008** | **0.217** | **15.072** | **42.105** | **99.769** |

# World Logistics Center PM10

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.023 | 0.007 | 0.003 | 0.008 | 0.040 |
| 0 | 0.040 | 0.007 | 0.014 | 0.011 | 0.006 | 0.001 | 0.006 | 0.053 | 0.138 |
| 1 | 0.127 | 0.024 | 0.045 | 0.036 | 0.039 | 0.009 | 0.085 | 0.600 | 0.963 |
| 2 | 0.254 | 0.048 | 0.089 | 0.072 | 0.060 | 0.014 | 0.222 | 3.155 | 3.914 |
| 3 | 0.090 | 0.017 | 0.032 | 0.025 | 0.028 | 0.006 | 0.101 | 1.744 | 2.044 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.000 | 0.002 | 0.002 | 0.010 |
| 6 | 0.030 | 0.006 | 0.011 | 0.009 | 0.005 | 0.001 | 0.017 | 0.042 | 0.121 |
| 7 | 0.094 | 0.017 | 0.033 | 0.026 | 0.020 | 0.005 | 0.079 | 1.013 | 1.287 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.638** | **0.119** | **0.224** | **0.181** | **0.182** | **0.043** | **0.513** | **6.617** | **8.517** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.023 | 0.007 | 0.003 | 0.008 | 0.040 |
| 0 | 0.040 | 0.007 | 0.014 | 0.011 | 0.006 | 0.001 | 0.006 | 0.053 | 0.138 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.040** | **0.007** | **0.014** | **0.011** | **0.029** | **0.008** | **0.009** | **0.061** | **0.178** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.100 | 0.019 | 0.035 | 0.028 | 0.034 | 0.007 | 0.069 | 0.544 | 0.835 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.100** | **0.019** | **0.035** | **0.028** | **0.034** | **0.007** | **0.069** | **0.544** | **0.835** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.028 | 0.005 | 0.010 | 0.008 | 0.005 | 0.001 | 0.015 | 0.056 | 0.128 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.034 | 0.006 | 0.012 | 0.010 | 0.007 | 0.002 | 0.022 | 0.020 | 0.114 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.000 | 0.002 | 0.002 | 0.010 |
| 6 | 0.030 | 0.006 | 0.011 | 0.009 | 0.005 | 0.001 | 0.017 | 0.042 | 0.121 |
| 7 | 0.063 | 0.012 | 0.022 | 0.018 | 0.011 | 0.003 | 0.041 | 0.157 | 0.327 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.159** | **0.030** | **0.056** | **0.045** | **0.030** | **0.007** | **0.097** | **0.278** | **0.701** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.254 | 0.048 | 0.089 | 0.072 | 0.060 | 0.014 | 0.222 | 3.155 | 3.914 |
| 3 | 0.056 | 0.010 | 0.020 | 0.016 | 0.021 | 0.005 | 0.078 | 1.588 | 1.794 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.030 | 0.006 | 0.011 | 0.009 | 0.009 | 0.002 | 0.038 | 0.625 | 0.728 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.340** | **0.064** | **0.120** | **0.096** | **0.089** | **0.021** | **0.338** | **5.368** | **6.436** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.136 | 0.136 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.231 | 0.231 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.367** | **0.367** |

**World Logistics Center**
**Project Phase 1 (2022)**

## PM2.5

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0542 | 0.0768 | 0.0538 | 0.0550 | 0.0385 | 0.0303 | 0.0297 | 0.0269 |
| 0 | 0.0046 | 0.0069 | 0.0046 | 0.0047 | 0.0033 | 0.0026 | 0.0025 | 0.0022 |
| 1 | 0.0015 | 0.0023 | 0.0015 | 0.0016 | 0.0018 | 0.0013 | 0.0013 | 0.0012 |
| 2 | 0.0012 | 0.0018 | 0.0012 | 0.0012 | 0.0009 | 0.0012 | 0.0007 | 0.0006 |
| 3 | 0.0012 | 0.0019 | 0.0012 | 0.0013 | 0.0011 | 0.0009 | 0.0008 | 0.0007 |
| 4 | 0.0014 | 0.0021 | 0.0014 | 0.0015 | 0.0009 | 0.0007 | 0.0007 | 0.0006 |
| 5 | 0.0019 | 0.0028 | 0.0018 | 0.0019 | 0.0018 | 0.0013 | 0.0013 | 0.0012 |
| 6 | 0.0013 | 0.0020 | 0.0013 | 0.0014 | 0.0011 | 0.0009 | 0.0008 | 0.0007 |
| 7 | 0.0012 | 0.0018 | 0.0012 | 0.0012 | 0.0010 | 0.0007 | 0.0007 | 0.0006 |
| 8 | 0.0024 | 0.0036 | 0.0024 | 0.0025 | 0.0018 | 0.0013 | 0.0013 | 0.0012 |
| 9 | 0.0013 | 0.0019 | 0.0013 | 0.0013 | 0.0009 | 0.0007 | 0.0006 | 0.0006 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.2026 | 1.9114 | 0.0615 | 0.0819 | 0.7064 | 0.6969 | 0.0127 | 0.0164 |
| 0 | 0.0237 | 0.2010 | 0.0089 | 0.0107 | 0.0331 | 0.0252 | 0.0085 | 0.0237 |
| 1 | 0.0100 | 0.0855 | 0.0048 | 0.0054 | 0.0215 | 0.0170 | 0.0067 | 0.0185 |
| 2 | 0.0086 | 0.0785 | 0.0037 | 0.0044 | 0.0149 | 0.0117 | 0.0050 | 0.0139 |
| 3 | 0.0087 | 0.0748 | 0.0041 | 0.0046 | 0.0169 | 0.0134 | 0.0057 | 0.0157 |
| 4 | 0.0096 | 0.0964 | 0.0038 | 0.0048 | 0.0146 | 0.0111 | 0.0046 | 0.0128 |
| 5 | 0.0119 | 0.0995 | 0.0053 | 0.0061 | 0.0215 | 0.0170 | 0.0067 | 0.0185 |
| 6 | 0.0091 | 0.0782 | 0.0044 | 0.0049 | 0.0169 | 0.0134 | 0.0057 | 0.0157 |
| 7 | 0.0083 | 0.0745 | 0.0039 | 0.0044 | 0.0156 | 0.0124 | 0.0053 | 0.0147 |
| 8 | 0.0145 | 0.1207 | 0.0062 | 0.0071 | 0.0215 | 0.0170 | 0.0067 | 0.0185 |
| 9 | 0.0090 | 0.0853 | 0.0037 | 0.0045 | 0.0147 | 0.0114 | 0.0048 | 0.0133 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.203 | 0.041 | 0.024 | 0.015 | 0.012 | 0.010 | 0.009 | 0.009 | 0.008 | 0.009 | 0.009 | 0.010 |
| LDT1 | DSL | 1.911 | 0.382 | 0.201 | 0.121 | 0.100 | 0.085 | 0.078 | 0.075 | 0.075 | 0.079 | 0.085 | 0.096 |
| LDT2 | DSL | 0.061 | 0.012 | 0.009 | 0.006 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| LHDT1 | DSL | 0.706 | 0.059 | 0.033 | 0.022 | 0.019 | 0.017 | 0.016 | 0.015 | 0.015 | 0.015 | 0.015 | 0.018 |
| LHDT2 | DSL | 0.697 | 0.041 | 0.025 | 0.017 | 0.015 | 0.013 | 0.012 | 0.012 | 0.011 | 0.011 | 0.012 | 0.013 |
| MDV | DSL | 0.082 | 0.016 | 0.011 | 0.007 | 0.006 | 0.005 | 0.005 | 0.005 | 0.004 | 0.004 | 0.005 | 0.005 |
| MH | DSL | 1.323 | 0.265 | 0.168 | 0.106 | 0.097 | 0.092 | 0.092 | 0.096 | 0.105 | 0.118 | 0.136 | 0.158 |
| OBUS | DSL | 0.008 | 0.023 | 0.018 | 0.015 | 0.014 | 0.013 | 0.012 | 0.011 | 0.011 | 0.010 | 0.010 | 0.010 |
| SBUS | DSL | 0.074 | 0.107 | 0.059 | 0.032 | 0.027 | 0.024 | 0.022 | 0.022 | 0.023 | 0.026 | 0.028 | 0.028 |
| T6 | DSL | 0.013 | 0.011 | 0.008 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| T7 | DSL | 0.016 | 0.032 | 0.024 | 0.019 | 0.017 | 0.016 | 0.015 | 0.014 | 0.013 | 0.013 | 0.013 | 0.013 |
| UBUS | DSL | 8.083 | 1.617 | 0.924 | 0.505 | 0.432 | 0.376 | 0.336 | 0.313 | 0.307 | 0.317 | 0.345 | 0.388 |
| LDA | GAS | 0.054 | 0.011 | 0.005 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | GAS | 0.077 | 0.015 | 0.007 | 0.004 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT2 | GAS | 0.054 | 0.011 | 0.005 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT1 | GAS | 0.039 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.030 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.053 | 0.011 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| MDV | GAS | 0.055 | 0.011 | 0.005 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | GAS | 0.043 | 0.009 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.029 | 0.006 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.024 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.030 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.027 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.036 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.042 | 0.008 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 |
| UBUS | NG | 0.101 | 0.020 | 0.011 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.006 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0050 |
| Total | **0.018** | **0.018** | **0.018** | **0.035** | **0.04** | **0.018** | **0.059** | **0.031** |

| | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0030 | 0.0020 | 0.0030 | 0.0090 |
| Total | **0.018** | **0.018** | **0.018** | **0.036** | **0.041** | **0.018** | **0.059** | **0.035** |

**PM2.5 Paved Road Dust Emissions (pounds/day)**

| Source | PM.5 |
|---|---|
| Freeways | 82.5 |
| Freeways to Ports | 4.5 |
| Internal | 12.7 |
| Surface | 26.0 |
| **Total** | **125.7** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 7.857 | 0.931 | 2.837 | 4.260 | 0.938 | 0.044 | 1.164 | 0.225 | 18.256 |
| Diesel | 0.025 | 0.001 | 0.001 | 0.004 | 0.298 | 0.043 | 5.099 | 14.825 | 20.296 |
| Total | **7.882** | **0.932** | **2.839** | **4.264** | **1.236** | **0.087** | **6.262** | **15.050** | **38.552** |

**Black Carbon Emissions (pounds/day)**

Percent of diesel PM2.5 exhaust

| | |
|---|---|
| LDT1, LDT2, MDT: | 64% |
| LHDT1, LHDT2, MHDT, HHDT: | 77% |

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.06 | 0.44 | 0.53 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.16 | 2.32 | 2.53 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.07 | 1.28 | 1.38 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.05 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.06 | 0.75 | 0.82 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.09** | **0.02** | **0.36** | **4.83** | **5.30** |

# World Logistics Center PM2.5

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.00 | 0.01 | 0.04 |
| 0 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.05 | 0.13 |
| 1 | 0.12 | 0.02 | 0.04 | 0.03 | 0.04 | 0.01 | 0.08 | 0.57 | 0.91 |
| 2 | 0.23 | 0.04 | 0.08 | 0.07 | 0.06 | 0.01 | 0.21 | 3.02 | 3.73 |
| 3 | 0.08 | 0.02 | 0.03 | 0.02 | 0.03 | 0.01 | 0.10 | 1.67 | 1.95 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.04 | 0.11 |
| 7 | 0.09 | 0.02 | 0.03 | 0.02 | 0.02 | 0.00 | 0.08 | 0.97 | 1.22 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.59** | **0.11** | **0.21** | **0.17** | **0.17** | **0.04** | **0.49** | **6.33** | **8.10** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.00 | 0.01 | 0.04 |
| 0 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.05 | 0.13 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.04** | **0.01** | **0.01** | **0.01** | **0.03** | **0.01** | **0.01** | **0.06** | **0.17** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.09 | 0.02 | 0.03 | 0.03 | 0.03 | 0.01 | 0.07 | 0.52 | 0.79 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.09** | **0.02** | **0.03** | **0.03** | **0.03** | **0.01** | **0.07** | **0.52** | **0.79** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.03 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.05 | 0.12 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.02 | 0.11 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.04 | 0.11 |
| 7 | 0.06 | 0.01 | 0.02 | 0.02 | 0.01 | 0.00 | 0.04 | 0.15 | 0.31 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.15** | **0.03** | **0.05** | **0.04** | **0.03** | **0.01** | **0.09** | **0.27** | **0.66** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.23 | 0.04 | 0.08 | 0.07 | 0.06 | 0.01 | 0.21 | 3.02 | 3.73 |
| 3 | 0.05 | 0.01 | 0.02 | 0.01 | 0.02 | 0.00 | 0.07 | 1.52 | 1.71 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.04 | 0.60 | 0.69 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.31** | **0.06** | **0.11** | **0.09** | **0.08** | **0.02** | **0.32** | **5.14** | **6.13** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.22 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.35** | **0.35** |

**World Logistics Center**
**Project Phase 1 (2022)**

# CO2

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 4174.6549 | 4941.0049 | 5542.9344 | 7499.6819 | 4724.1123 | 5417.0913 | 13952.2616 | 20014.6855 |
| 0 | 478.0428 | 566.2576 | 634.2593 | 855.8843 | 939.8963 | 1053.8213 | 2230.8276 | 2456.6922 |
| 1 | 242.7073 | 287.3835 | 322.3595 | 437.8889 | 747.9768 | 833.8809 | 1370.1180 | 1864.6855 |
| 2 | 224.3757 | 265.7151 | 297.8223 | 405.2351 | 673.6834 | 287.6419 | 1005.1126 | 1605.8157 |
| 3 | 216.5995 | 256.4689 | 287.6419 | 390.7964 | 679.1975 | 753.9141 | 1162.7248 | 1702.9430 |
| 4 | 269.3015 | 318.8239 | 357.4716 | 487.9214 | 748.7757 | 784.1416 | 913.6201 | 1558.1131 |
| 5 | 271.9865 | 322.0665 | 361.1521 | 489.1356 | 747.9768 | 833.8809 | 1370.1180 | 1864.6855 |
| 6 | 225.0585 | 266.4996 | 298.8816 | 406.2331 | 679.1975 | 753.9141 | 1162.7248 | 1702.9430 |
| 7 | 216.2912 | 256.0555 | 287.1565 | 390.7204 | 676.6898 | 736.7295 | 1081.6366 | 1641.8162 |
| 8 | 316.3035 | 374.5532 | 419.8612 | 567.4907 | 747.9768 | 833.8809 | 1370.1180 | 1864.6855 |
| 9 | 241.3080 | 285.6990 | 320.3259 | 436.0177 | 710.7312 | 750.0915 | 940.0641 | 1586.3387 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 3134.0566 | 4327.5582 | 4054.8831 | 4972.5593 | 3940.4917 | 6246.3631 | 6802.8299 | 6227.9536 |
| 0 | 429.6177 | 610.6158 | 566.8100 | 716.1691 | 667.8984 | 749.2676 | 1639.5077 | 2310.1822 |
| 1 | 231.0509 | 323.0173 | 303.7949 | 393.7796 | 504.9094 | 569.4881 | 1320.4358 | 1854.4833 |
| 2 | 219.2286 | 304.6317 | 286.1671 | 375.7527 | 436.5211 | 476.7528 | 1098.0195 | 1517.7261 |
| 3 | 208.8806 | 290.7669 | 273.3703 | 354.4420 | 459.5420 | 514.3364 | 1187.4435 | 1653.1841 |
| 4 | 267.1773 | 367.9205 | 347.7014 | 456.6177 | 478.0618 | 511.6164 | 1033.6179 | 1422.4056 |
| 5 | 255.6968 | 360.0808 | 337.0392 | 434.2252 | 504.9094 | 569.4881 | 1320.4358 | 1854.4833 |
| 6 | 216.2310 | 301.4289 | 283.4798 | 368.2619 | 459.5420 | 514.3364 | 1187.4435 | 1653.1841 |
| 7 | 209.4938 | 290.5456 | 273.6708 | 356.1321 | 447.2959 | 495.8081 | 1138.9546 | 1579.6876 |
| 8 | 295.3242 | 418.2898 | 390.1308 | 502.9294 | 504.9094 | 569.4881 | 1320.4358 | 1854.4833 |
| 9 | 237.6786 | 329.2203 | 309.9175 | 406.8970 | 458.0618 | 494.6991 | 1062.8186 | 1463.9599 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 3134.1 | 626.8 | 429.6 | 295.3 | 255.7 | 231.1 | 216.2 | 208.9 | 209.5 | 219.2 | 237.7 | 267.2 |
| LDT1 | DSL | 4327.6 | 865.5 | 610.6 | 418.3 | 360.1 | 323.0 | 301.4 | 290.8 | 290.5 | 304.6 | 329.2 | 367.9 |
| LDT2 | DSL | 4054.9 | 811.0 | 566.8 | 390.1 | 337.0 | 303.8 | 283.5 | 273.4 | 273.7 | 286.2 | 309.9 | 347.7 |
| LHDT1 | DSL | 3940.5 | 1219.2 | 667.9 | 504.9 | 459.1 | 459.5 | 447.3 | 436.5 | 458.1 | 478.1 | 483.0 | 490.3 |
| LHDT2 | DSL | 6246.4 | 1268.4 | 749.3 | 569.5 | 514.0 | 514.3 | 495.8 | 476.8 | 494.7 | 511.6 | 513.5 | 515.7 |
| MDV | DSL | 4972.6 | 994.5 | 716.2 | 502.9 | 434.2 | 393.8 | 368.3 | 354.4 | 356.1 | 375.8 | 406.9 | 456.6 |
| MH | DSL | 10376.1 | 2075.2 | 1547.2 | 1138.8 | 1069.0 | 1011.0 | 964.9 | 930.7 | 908.4 | 897.9 | 899.4 | 912.7 |
| OBUS | DSL | 6705.2 | 2586.9 | 1931.3 | 1554.1 | 1465.0 | 1394.8 | 1337.4 | 1289.2 | 1247.8 | 1211.9 | 1195.6 | 1195.6 |
| SBUS | DSL | 7059.4 | 2284.2 | 1703.6 | 1323.1 | 1244.6 | 1181.6 | 1130.8 | 1090.2 | 1058.6 | 1035.2 | 1026.2 | 1026.2 |
| T6 | DSL | 6802.8 | 2202.0 | 1639.5 | 1320.4 | 1246.3 | 1187.4 | 1139.0 | 1098.0 | 1062.8 | 1033.6 | 1020.4 | 1020.4 |
| T7 | DSL | 6228.0 | 3096.4 | 2310.2 | 1854.5 | 1742.3 | 1653.2 | 1579.7 | 1517.7 | 1464.0 | 1422.4 | 1404.5 | 1402.6 |
| UBUS | DSL | 20879.6 | 4175.9 | 3113.4 | 2291.6 | 2151.0 | 2034.4 | 1941.6 | 1872.8 | 1827.9 | 1806.9 | 1809.8 | 1836.6 |
| LDA | GAS | 4174.7 | 834.9 | 478.0 | 316.3 | 272.0 | 242.7 | 225.1 | 216.6 | 216.3 | 224.4 | 241.3 | 269.3 |
| LDT1 | GAS | 4941.0 | 988.2 | 566.3 | 374.6 | 322.1 | 287.4 | 266.5 | 256.5 | 256.1 | 265.7 | 285.7 | 318.8 |
| LDT2 | GAS | 5542.9 | 1108.6 | 634.3 | 419.9 | 361.2 | 322.4 | 298.9 | 287.6 | 287.2 | 297.8 | 320.3 | 357.5 |
| LHDT1 | GAS | 4724.1 | 1375.8 | 939.9 | 748.0 | 679.0 | 679.2 | 676.7 | 673.7 | 710.7 | 748.8 | 760.0 | 770.2 |
| LHDT2 | GAS | 5417.1 | 1443.0 | 1053.8 | 833.9 | 753.8 | 753.9 | 736.7 | 719.4 | 750.1 | 784.1 | 792.5 | 800.0 |
| MCY | GAS | 2795.2 | 559.0 | 319.2 | 211.5 | 182.1 | 162.6 | 150.8 | 145.1 | 145.0 | 150.3 | 161.7 | 180.6 |
| MDV | GAS | 7499.7 | 1499.9 | 855.9 | 567.5 | 489.1 | 437.9 | 406.2 | 390.8 | 390.7 | 405.2 | 436.0 | 487.9 |
| MH | GAS | 19265.5 | 3853.1 | 2267.3 | 1392.0 | 1279.2 | 1181.0 | 1098.7 | 1020.9 | 955.0 | 928.7 | 934.4 | 951.8 |
| OBUS | GAS | 9705.9 | 3765.1 | 2215.5 | 1360.2 | 1249.9 | 1154.0 | 1073.6 | 997.6 | 933.2 | 907.5 | 913.1 | 930.0 |
| SBUS | GAS | 4627.6 | 1814.3 | 1067.6 | 655.5 | 602.3 | 556.1 | 517.4 | 480.7 | 449.7 | 437.3 | 440.0 | 448.2 |
| T6 | GAS | 13952.3 | 3794.0 | 2230.8 | 1370.1 | 1259.2 | 1162.7 | 1081.6 | 1005.1 | 940.1 | 913.6 | 919.2 | 936.0 |
| T7 | GAS | 20014.7 | 4002.9 | 2456.7 | 1864.7 | 1775.8 | 1702.9 | 1641.8 | 1605.8 | 1586.3 | 1558.1 | 1536.7 | 1531.6 |
| UBUS | GAS | 19074.9 | 3815.0 | 2244.9 | 1378.2 | 1266.5 | 1169.3 | 1087.9 | 1010.8 | 945.5 | 919.5 | 925.2 | 942.3 |
| T7 | NG | 6002.2 | 5200.9 | 3874.4 | 3113.6 | 2942.5 | 2807.1 | 2696.2 | 2603.1 | 2523.7 | 2455.1 | 2424.2 | 2424.2 |
| UBUS | NG | 15190.6 | 3038.1 | 2265.1 | 1667.2 | 1564.9 | 1480.1 | 1412.6 | 1362.5 | 1329.8 | 1314.5 | 1316.7 | 1336.2 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO2

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 501 | 101 | 1363 | 2957 | 4922 |
| 0 | 3781 | 530 | 1807 | 1884 | 464 | 75 | 1406 | 4987 | 14934 |
| 1 | 18323 | 2567 | 8765 | 9197 | 3960 | 635 | 18947 | 58293 | 120687 |
| 2 | 43320 | 6069 | 20709 | 21766 | 8311 | 806 | 54463 | 334139 | 489582 |
| 3 | 14519 | 2034 | 6944 | 7288 | 3493 | 557 | 23809 | 178248 | 236892 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 355 | 50 | 170 | 178 | 61 | 10 | 403 | 205 | 1431 |
| 6 | 4648 | 651 | 2223 | 2334 | 668 | 107 | 4007 | 4332 | 18970 |
| 7 | 15633 | 2189 | 7475 | 7856 | 2654 | 415 | 19026 | 105590 | 160838 |
| 8 | 40 | 6 | 19 | 20 | 3 | 0 | 14 | 15 | 116 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **100618** | **14095** | **48113** | **50523** | **20114** | **2707** | **123437** | **688765** | **1048372** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 501 | 101 | 1363 | 2957 | 4922 |
| 0 | 3781 | 530 | 1807 | 1884 | 464 | 75 | 1406 | 4987 | 14934 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3781** | **530** | **1807** | **1884** | **965** | **177** | **2769** | **7944** | **19856** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 14314 | 2005 | 6848 | 7185 | 3443 | 552 | 15495 | 52860 | 102702 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **14314** | **2005** | **6848** | **7185** | **3443** | **552** | **15495** | **52860** | **102702** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 4009 | 562 | 1918 | 2012 | 517 | 83 | 3452 | 5433 | 17985 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 5511 | 772 | 2636 | 2766 | 910 | 145 | 5263 | 2082 | 20086 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 355 | 50 | 170 | 178 | 61 | 10 | 403 | 205 | 1431 |
| 6 | 4648 | 651 | 2223 | 2334 | 668 | 107 | 4007 | 4332 | 18970 |
| 7 | 10576 | 1481 | 5057 | 5315 | 1497 | 234 | 9920 | 16365 | 50447 |
| 8 | 40 | 6 | 19 | 20 | 3 | 0 | 14 | 15 | 116 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **25139** | **3521** | **12023** | **12626** | **3657** | **579** | **23059** | **28431** | **109036** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 43320 | 6069 | 20709 | 21766 | 8311 | 806 | 54463 | 334139 | 489582 |
| 3 | 9008 | 1262 | 4308 | 4521 | 2582 | 412 | 18546 | 162294 | 202934 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 5056 | 708 | 2418 | 2541 | 1156 | 181 | 9106 | 65134 | 86300 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **57384** | **8039** | **27435** | **28829** | **12049** | **1399** | **82115** | **561568** | **778816** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13872 | 13872 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24091 | 24091 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **37963** | **37963** |

**World Logistics Center**
**Project Phase 1 (2022)**

# CH4

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1409 | 0.3324 | 0.1811 | 0.3389 | 5.6846 | 5.5627 | 8.3855 | 4.6931 |
| 0 | 0.0123 | 0.0317 | 0.0159 | 0.0298 | 0.0458 | 0.0172 | 0.0602 | 0.4001 |
| 1 | 0.0040 | 0.0109 | 0.0053 | 0.0102 | 0.0253 | 0.0092 | 0.0315 | 0.2056 |
| 2 | 0.0031 | 0.0085 | 0.0041 | 0.0081 | 0.0142 | 0.0042 | 0.0163 | 0.1058 |
| 3 | 0.0032 | 0.0087 | 0.0042 | 0.0082 | 0.0170 | 0.0060 | 0.0203 | 0.1326 |
| 4 | 0.0037 | 0.0096 | 0.0048 | 0.0097 | 0.0145 | 0.0050 | 0.0161 | 0.1055 |
| 5 | 0.0050 | 0.0133 | 0.0064 | 0.0124 | 0.0253 | 0.0092 | 0.0315 | 0.2056 |
| 6 | 0.0035 | 0.0095 | 0.0046 | 0.0090 | 0.0170 | 0.0060 | 0.0203 | 0.1326 |
| 7 | 0.0031 | 0.0083 | 0.0040 | 0.0079 | 0.0152 | 0.0053 | 0.0178 | 0.1154 |
| 8 | 0.0064 | 0.0170 | 0.0083 | 0.0158 | 0.0253 | 0.0092 | 0.0315 | 0.2056 |
| 9 | 0.0033 | 0.0088 | 0.0043 | 0.0086 | 0.0139 | 0.0048 | 0.0158 | 0.1027 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0463 | 0.1481 | 0.0602 | 0.0431 | 0.1474 | 0.1474 | 0.0119 | 0.0394 |
| 0 | 0.0038 | 0.0145 | 0.0044 | 0.0033 | 0.0140 | 0.0130 | 0.0081 | 0.0243 |
| 1 | 0.0008 | 0.0055 | 0.0007 | 0.0005 | 0.0050 | 0.0040 | 0.0042 | 0.0127 |
| 2 | 0.0006 | 0.0050 | 0.0004 | 0.0003 | 0.0029 | 0.0021 | 0.0013 | 0.0038 |
| 3 | 0.0006 | 0.0048 | 0.0005 | 0.0004 | 0.0035 | 0.0027 | 0.0023 | 0.0069 |
| 4 | 0.0007 | 0.0061 | 0.0004 | 0.0004 | 0.0028 | 0.0019 | 0.0007 | 0.0021 |
| 5 | 0.0010 | 0.0065 | 0.0008 | 0.0007 | 0.0050 | 0.0040 | 0.0042 | 0.0127 |
| 6 | 0.0007 | 0.0050 | 0.0006 | 0.0005 | 0.0035 | 0.0027 | 0.0023 | 0.0069 |
| 7 | 0.0006 | 0.0048 | 0.0004 | 0.0004 | 0.0031 | 0.0023 | 0.0017 | 0.0051 |
| 8 | 0.0013 | 0.0079 | 0.0011 | 0.0009 | 0.0050 | 0.0040 | 0.0042 | 0.0127 |
| 9 | 0.0006 | 0.0054 | 0.0004 | 0.0003 | 0.0028 | 0.0020 | 0.0009 | 0.0028 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.0463 | 0.0093 | 0.0038 | 0.0013 | 0.0010 | 0.0008 | 0.0007 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0007 |
| LDT1 | DSL | 0.1481 | 0.0296 | 0.0145 | 0.0079 | 0.0065 | 0.0055 | 0.0050 | 0.0048 | 0.0048 | 0.0050 | 0.0054 | 0.0061 |
| LDT2 | DSL | 0.0602 | 0.0120 | 0.0044 | 0.0011 | 0.0008 | 0.0007 | 0.0006 | 0.0005 | 0.0004 | 0.0004 | 0.0004 | 0.0004 |
| LHDT1 | DSL | 0.1474 | 0.0347 | 0.0140 | 0.0050 | 0.0041 | 0.0035 | 0.0031 | 0.0029 | 0.0028 | 0.0028 | 0.0030 | 0.0035 |
| LHDT2 | DSL | 0.1474 | 0.0337 | 0.0130 | 0.0040 | 0.0032 | 0.0027 | 0.0023 | 0.0021 | 0.0020 | 0.0019 | 0.0020 | 0.0023 |
| MDV | DSL | 0.0431 | 0.0086 | 0.0033 | 0.0009 | 0.0007 | 0.0005 | 0.0005 | 0.0004 | 0.0004 | 0.0003 | 0.0003 | 0.0004 |
| MH | DSL | 0.2373 | 0.0475 | 0.0180 | 0.0055 | 0.0044 | 0.0037 | 0.0031 | 0.0027 | 0.0025 | 0.0025 | 0.0026 | 0.0029 |
| OBUS | DSL | 0.0434 | 0.0291 | 0.0165 | 0.0087 | 0.0064 | 0.0047 | 0.0035 | 0.0026 | 0.0019 | 0.0014 | 0.0012 | 0.0012 |
| SBUS | DSL | 0.0180 | 0.0323 | 0.0143 | 0.0058 | 0.0044 | 0.0034 | 0.0027 | 0.0022 | 0.0019 | 0.0018 | 0.0018 | 0.0018 |
| T6 | DSL | 0.0119 | 0.0143 | 0.0081 | 0.0042 | 0.0031 | 0.0023 | 0.0017 | 0.0013 | 0.0009 | 0.0007 | 0.0006 | 0.0006 |
| T7 | DSL | 0.0394 | 0.0431 | 0.0243 | 0.0127 | 0.0094 | 0.0069 | 0.0051 | 0.0038 | 0.0028 | 0.0021 | 0.0018 | 0.0018 |
| UBUS | DSL | 1.3931 | 0.2786 | 0.1188 | 0.0399 | 0.0330 | 0.0276 | 0.0238 | 0.0215 | 0.0207 | 0.0215 | 0.0238 | 0.0276 |
| LDA | GAS | 0.1409 | 0.0282 | 0.0123 | 0.0064 | 0.0050 | 0.0040 | 0.0035 | 0.0032 | 0.0031 | 0.0031 | 0.0033 | 0.0037 |
| LDT1 | GAS | 0.3324 | 0.0665 | 0.0317 | 0.0170 | 0.0133 | 0.0109 | 0.0095 | 0.0087 | 0.0083 | 0.0085 | 0.0088 | 0.0096 |
| LDT2 | GAS | 0.1811 | 0.0362 | 0.0159 | 0.0083 | 0.0064 | 0.0053 | 0.0046 | 0.0042 | 0.0040 | 0.0041 | 0.0043 | 0.0048 |
| LHDT1 | GAS | 5.6846 | 0.0967 | 0.0458 | 0.0253 | 0.0202 | 0.0170 | 0.0152 | 0.0142 | 0.0139 | 0.0145 | 0.0156 | 0.0182 |
| LHDT2 | GAS | 5.5627 | 0.0381 | 0.0172 | 0.0092 | 0.0072 | 0.0060 | 0.0053 | 0.0049 | 0.0048 | 0.0050 | 0.0053 | 0.0062 |
| MCY | GAS | 12.8963 | 2.5793 | 1.1443 | 0.6265 | 0.5011 | 0.4219 | 0.3738 | 0.3485 | 0.3416 | 0.3522 | 0.3818 | 0.4350 |
| MDV | GAS | 0.3389 | 0.0678 | 0.0298 | 0.0158 | 0.0124 | 0.0102 | 0.0090 | 0.0082 | 0.0079 | 0.0081 | 0.0086 | 0.0097 |
| MH | GAS | 0.8972 | 0.1794 | 0.0827 | 0.0468 | 0.0379 | 0.0323 | 0.0290 | 0.0272 | 0.0269 | 0.0279 | 0.0304 | 0.0347 |
| OBUS | GAS | 6.3527 | 0.0819 | 0.0347 | 0.0182 | 0.0143 | 0.0118 | 0.0103 | 0.0095 | 0.0092 | 0.0094 | 0.0101 | 0.0115 |
| SBUS | GAS | 6.2703 | 0.1351 | 0.0564 | 0.0292 | 0.0228 | 0.0187 | 0.0162 | 0.0148 | 0.0143 | 0.0146 | 0.0157 | 0.0178 |
| T6 | GAS | 8.3855 | 0.1404 | 0.0602 | 0.0315 | 0.0247 | 0.0203 | 0.0178 | 0.0163 | 0.0158 | 0.0161 | 0.0173 | 0.0197 |
| T7 | GAS | 4.6931 | 0.9386 | 0.4001 | 0.2056 | 0.1610 | 0.1326 | 0.1154 | 0.1058 | 0.1027 | 0.1055 | 0.1138 | 0.1282 |
| UBUS | GAS | 3.0609 | 0.6122 | 0.2845 | 0.1620 | 0.1317 | 0.1125 | 0.1010 | 0.0952 | 0.0941 | 0.0977 | 0.1064 | 0.1216 |
| T7 | NG | 0.7276 | 15.0506 | 8.1780 | 4.1923 | 3.1226 | 2.3302 | 1.7443 | 1.3125 | 0.9963 | 0.7672 | 0.6786 | 0.6786 |
| UBUS | NG | 94.1015 | 18.8203 | 7.0918 | 2.0978 | 1.6654 | 1.3489 | 1.1271 | 0.9896 | 0.9308 | 0.9476 | 1.0466 | 1.2241 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CH4

Project Phase 1 (2022)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.483 | 0.050 | 0.263 | 0.054 | 0.850 |
| 0 | 0.097 | 0.030 | 0.045 | 0.066 | 0.020 | 0.001 | 0.014 | 0.066 | 0.340 |
| 1 | 0.304 | 0.097 | 0.143 | 0.215 | 0.118 | 0.006 | 0.133 | 0.502 | 1.517 |
| 2 | 0.606 | 0.193 | 0.284 | 0.434 | 0.155 | 0.007 | 0.205 | 1.215 | 3.099 |
| 3 | 0.215 | 0.069 | 0.101 | 0.153 | 0.077 | 0.004 | 0.114 | 0.975 | 1.708 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.006 | 0.002 | 0.003 | 0.004 | 0.002 | 0.000 | 0.003 | 0.002 | 0.023 |
| 6 | 0.072 | 0.023 | 0.034 | 0.051 | 0.015 | 0.001 | 0.019 | 0.024 | 0.239 |
| 7 | 0.222 | 0.071 | 0.104 | 0.159 | 0.053 | 0.003 | 0.079 | 0.467 | 1.158 |
| 8 | 0.001 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.525** | **0.486** | **0.715** | **1.083** | **0.922** | **0.072** | **0.830** | **3.304** | **8.936** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.483 | 0.050 | 0.263 | 0.054 | 0.850 |
| 0 | 0.097 | 0.030 | 0.045 | 0.066 | 0.020 | 0.001 | 0.014 | 0.066 | 0.340 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.097** | **0.030** | **0.045** | **0.066** | **0.503** | **0.052** | **0.277** | **0.120** | **1.189** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.238 | 0.076 | 0.112 | 0.168 | 0.102 | 0.005 | 0.108 | 0.455 | 1.264 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.238** | **0.076** | **0.112** | **0.168** | **0.102** | **0.005** | **0.108** | **0.455** | **1.264** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.067 | 0.021 | 0.031 | 0.047 | 0.015 | 0.001 | 0.024 | 0.047 | 0.253 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.082 | 0.026 | 0.038 | 0.058 | 0.020 | 0.001 | 0.025 | 0.011 | 0.262 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.006 | 0.002 | 0.003 | 0.004 | 0.002 | 0.000 | 0.003 | 0.002 | 0.023 |
| 6 | 0.072 | 0.023 | 0.034 | 0.051 | 0.015 | 0.001 | 0.019 | 0.024 | 0.239 |
| 7 | 0.150 | 0.048 | 0.071 | 0.108 | 0.030 | 0.001 | 0.041 | 0.072 | 0.521 |
| 8 | 0.001 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.378** | **0.121** | **0.177** | **0.269** | **0.082** | **0.004** | **0.113** | **0.156** | **1.301** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.606 | 0.193 | 0.284 | 0.434 | 0.155 | 0.007 | 0.205 | 1.215 | 3.099 |
| 3 | 0.133 | 0.043 | 0.063 | 0.095 | 0.057 | 0.003 | 0.089 | 0.888 | 1.370 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.072 | 0.023 | 0.034 | 0.051 | 0.023 | 0.001 | 0.038 | 0.288 | 0.530 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.812** | **0.259** | **0.381** | **0.580** | **0.235** | **0.011** | **0.332** | **2.391** | **4.999** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.076 | 0.076 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.107 | 0.107 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.182** | **0.182** |

# E.6 - Mobile Spreadsheets: Phase 1 2022 Mitigated

# World Logistics Center

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Trip and Vehicle Miles Traveled Calculation

**2022**

## World Logistics Center

**Vehicle Fleet Mix**

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Vehicle VMT for South Coast Air Basin per EMFAC2011 @ All Speeds**

| GAS Vehicle Class | VMT (miles/day) |
|---|---|
| LDA-GAS | 203,834,625 |
| LDT1-GAS | 24,148,511 |
| LDT2-GAS | 73,608,549 |
| MDT-GAS | 56,830,183 |
| LHDT1-GAS | 13,343,229 |
| LHDT2-GAS | 1,398,344 |
| MHDT-GAS | 1,227,001 |
| HHDT-GAS | 231,606 |
| Subtotal | 374,622,049 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 649,368 |
| LDT1-DSL | 34,560 |
| LDT2-DSL | 33,483 |
| MDT-DSL | 58,019 |
| LHDT1-DSL | 4,131,147 |
| LHDT2-DSL | 1,351,476 |
| MHDT-DSL | 5,376,142 |
| HHDT-DSL | 13,501,382 |
| Subtotal | 25,135,578 |
| | |
| Grand Total | 399,757,627 |

| Vehicle Class | | VMT-GAS | VMT-DSL | VMT-Total | % VMT-Total | %GAS | %DSL |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 203834625 | 649368 | 204483993 | 56.93% | 99.7% | 0.32% |
| LDT1 | | 24148511 | 34560 | 24183071 | 6.73% | 99.9% | 0.14% |
| LDT2 | | 73608549 | 33483 | 73642032 | 20.50% | 100.0% | 0.05% |
| MDT | | 56830183 | 58019 | 56888202 | 15.84% | 99.9% | 0.10% |
| Subtotal | | 358421868 | 775431 | 359197299 | 100.00% | 99.8% | 0.22% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 13343229 | 4131147 | 17474377 | 86.40% | 76.4% | 23.64% |
| LHDT2 | | 1398344 | 1351476 | 2749821 | 13.60% | 50.9% | 49.15% |
| Subtotal | | 14741574 | 5482623 | 20224197 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1227001 | 5376142 | 6603143 | 100% | 18.6% | 81.42% |
| HHDT | Heavy Heavy Truck | 231606 | 13501382 | 13732988 | 100% | 1.7% | 98.31% |

**Area Source Assumptions**

| | |
|---|---|
| Onsite truck idle time: | 5 minutes (truck idling only applies to HDT vehicles) |
| Onsite Travel: | 15 mph |
| Facility Operations for Warehouses: | 24 hrs |
| Facility operations for All Others: | 24 hrs |

| Onsite Diesel Truck Travel Links | Location | Diesel Truck Travel Distance (m) |
|---|---|---|
| | High Cube | 330 |
| | Light Logistics | 175 |
| | Utility Service | 100 |
| | Gas Station w/Convenience | 50 |
| | Convenience Store | 50 |
| | Fire Station | 50 |

## World Logistics Center

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

Area Source Trip Distribution

| | Building Size (sq-ft) | |
|---|---|---|
| High Cube Warehouse | 22,900,000 | Sq-feet |
| Light Logistics | 45,500 | Sq-feet |
| Utilities Service Station | 30,800 | Sq-feet |
| Gas Station w/Convenience Store | 12 | Pumps |
| Convenience Store | 3,000 | Sq-feet |
| Fire Station | 1 | Sq-feet |

**Trip Generation**

| | trips/day (Non-PCE) | Source |
|---|---|---|
| High Cube Warehouse | 38472 | Traffic Impact Analysis Report |
| Light Logistics | 162 | prepared by Parsons Brinckerhoff, Inc. |
| Utilities Service Station | 248 | September 2014 |
| Gas Station w/Convenience Store | 219 | |
| Convenience Store | 354 | |
| Fire Station | 137 | |
| Total | 39592 | |

**Vehicle Fleet for High Cube Warehouse**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 79.6% | 56.93% | 0.32% | 55 | 17378 | 17433 |
| LDT1 | | 6.73% | 0.14% | 3 | 2059 | 2062 |
| LDT2 | | 20.50% | 0.05% | 3 | 6276 | 6278 |
| MDT | | 15.84% | 0.10% | 5 | 4845 | 4850 |
| SubTotal | | 100.00% | 0.22% | 66 | 30558 | 30624 |
| LHDT1 (2 axle truck) | 3.5% | 86.40% | 23.64% | 275 | 888 | 1163 |
| LHDT2 | | 13.60% | 49.15% | 90 | 93 | 183 |
| Subtotal | | 100.0% | | 365 | 981 | 1347 |
| MHDT (3 axle truck) | 4.6% | 100.00% | 81.42% | 1441 | 329 | 1770 |
| HHDT (4+ axle truck) | 12.3% | 100.00% | 98.31% | 4652 | 80 | 4732 |
| Total | 100.0% | | | 6524 | 31948 | 38472 |

**Vehicle Fleet for Light Logistics**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 80.3% | 56.93% | 0.32% | 0 | 74 | 74 |
| LDT1 | | 6.73% | 0.14% | 0 | 9 | 9 |
| LDT2 | | 20.50% | 0.05% | 0 | 27 | 27 |
| MDT | | 15.84% | 0.10% | 0 | 21 | 21 |
| SubTotal | | 100.00% | 0.22% | 0 | 130 | 130 |
| LHDT1 (2 axle truck) | 5.2% | 86.40% | 23.64% | 2 | 6 | 7 |
| LHDT2 | | 13.60% | 49.15% | 1 | 1 | 1 |
| Subtotal | | 100.0% | | 2 | 6 | 8 |
| MHDT (3 axle truck) | 4.5% | 100.0% | 81.42% | 6 | 1 | 7 |
| HHDT (4+ axle truck) | 10.0% | 100.0% | 98.31% | 16 | 0 | 16 |
| Total | 100.0% | | | 24 | 138 | 162 |

**Vehicle Fleet for Utilities Service Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 77.3% | 56.93% | 0.32% | 0.3 | 109 | 109 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 13 | 13 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 39 | 39 |
| MDT | | 15.84% | 0.10% | 0.0 | 30 | 30 |
| SubTotal | | 100.00% | 0.22% | 0.4 | 191 | 192 |
| LHDT1 (2 axle truck) | 11.3% | 86.40% | 23.64% | 6 | 19 | 24 |
| LHDT2 | | 13.60% | 49.15% | 2 | 2 | 4 |
| Subtotal | | 100.00% | | 8 | 20 | 28 |
| MHDT (3 axle truck) | 2.4% | 100.00% | 81.42% | 5 | 1 | 6 |
| HHDT (4+ axle truck) | 8.9% | 100.00% | 98.31% | 22 | 0 | 22 |
| Total | 100.0% | | | 35 | 213 | 248 |

**Vehicle Fleet for Gas Station with Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 50.7% | 56.93% | 0.32% | 0.2 | 63 | 63 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 7 | 7 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 23 | 23 |
| MDT | | 15.84% | 0.10% | 0.0 | 18 | 18 |
| SubTotal | | 100.00% | 0.22% | 0.2 | 111 | 111 |
| LHDT1 (2 axle truck) | 1.8% | 86.40% | 23.64% | 0.8 | 3 | 3 |
| LHDT2 | | 13.60% | 49.15% | 0.3 | 0 | 1 |
| Subtotal | | 100.00% | | 1.1 | 3 | 4 |
| MHDT (3 axle truck) | 7.8% | 100.00% | 81.42% | 13.9 | 3 | 17 |
| HHDT (4+ axle truck) | 39.7% | 100.00% | 98.31% | 85.5 | 1 | 87 |
| Total | 100.0% | | | 100.7 | 118 | 219 |

**Vehicle Fleet for Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 52.0% | 56.93% | 0.32% | 0.5 | 104 | 105 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 12 | 12 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 38 | 38 |
| MDT | | 15.84% | 0.10% | 0.0 | 29 | 29 |
| SubTotal | | 100.00% | 0.22% | 0.6 | 183 | 184 |
| LHDT1 (2 axle truck) | 1.7% | 86.40% | 23.64% | 1.2 | 4 | 5 |
| LHDT2 | | 13.60% | 49.15% | 0.4 | 0 | 1 |
| Subtotal | | 100.00% | | 1.6 | 4 | 6 |
| MHDT (3 axle truck) | 7.9% | 100.00% | 81.42% | 22.8 | 5 | 28 |
| HHDT (4+ axle truck) | 38.4% | 100.00% | 98.31% | 133.6 | 2 | 136 |
| Total | 100.0% | | | 158.7 | 195 | 354 |

**Vehicle Fleet for Fire Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 100.0% | 56.93% | 0.32% | 0.2 | 78 | 78 |
| LDT1 | | 6.73% | 0.14% | 0.0 | 9 | 9 |
| LDT2 | | 20.50% | 0.05% | 0.0 | 28 | 28 |
| MDT | | 15.84% | 0.10% | 0.0 | 22 | 22 |
| SubTotal | | 100.00% | 0.22% | 0.2 | 137 | 137 |
| LHDT1 (2 axle truck) | 0.0% | 86.40% | 23.64% | 0.0 | 0 | 0 |
| LHDT2 | | 13.60% | 49.15% | 0.0 | 0 | 0 |
| Subtotal | | 100.00% | | 0.0 | 0 | 0 |
| MHDT (3 axle truck) | 0.0% | 100.00% | 81.42% | 0.0 | 0 | 0 |
| HHDT (4+ axle truck) | 0.0% | 100.00% | 98.31% | 0.0 | 0 | 0 |
| Total | 100.0% | | | 0.2 | 137 | 137 |

**Vehicle Summary (Phase Summary)**

| Vehicle Class | Daily Diesel Trips | Daily Non Diesel Trips | Total Daily Trips |
|---|---|---|---|
| LDA | 57 | 17806 | 17863 |
| LDT1 | 3 | 2109 | 2113 |
| LDT2 | 3 | 6430 | 6433 |
| MDT | 5 | 4964 | 4969 |
| LHDT1 | 285 | 919 | 1204 |
| LHDT2 | 93 | 96 | 189 |
| MHDT | 1488 | 340 | 1828 |
| HHDT | 4909 | 84 | 4993 |
| Total | 6843 | 32749 | 39592 |

Trip Generation from PB 2014 Traffic Study
Vehicle Fleet Mix taken from EMFAC2011 for the SoCAB in **2022** and the PB 2014 Traffic Study
% Diesel taken from EMAC2011 for the SoCAB in **2022**

# World Logistics Center

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Area Source: Diesel Trip Distribution by Land Use and Building

**Land Use**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 22,900,000 |
| Light Logistics | 45,500 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 55 | 3 | 3 | 5 | 275 | 90 | 1441 | 4652 | 6524 |
| Light Logistics | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 16 | 24 |
| Utilities Service Station | 0 | 0 | 0 | 0 | 6 | 2 | 5 | 22 | 35 |
| Gas Station w/Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 85 | 101 |
| Convenience Store | 1 | 0 | 0 | 0 | 1 | 0 | 23 | 134 | 159 |
| Fire Station | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | |
| Total | 57 | 3 | 3 | 5 | 285 | 93 | 1488 | 4909 | 6843 |

# World Logistics Center

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Area Source: Non-Diesel Trip Distribution by Land Use and Building

**Land Use:**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 22,900,000 |
| Light Logistics | 45,500 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Non-Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 17378 | 2059 | 6276 | 4845 | 888 | 93 | 329 | 80 | 31948 |
| Light Logistics | 74 | 9 | 27 | 21 | 6 | 1 | 1 | 0 | 138 |
| Utilities Service Station | 109 | 13 | 39 | 30 | 19 | 2 | 1 | 0 | 213 |
| Gas Station w/Convenience Store | 63 | 7 | 23 | 18 | 3 | 0 | 3 | 1 | 118 |
| Convenience Store | 104 | 12 | 38 | 29 | 4 | 0 | 5 | 2 | 195 |
| Fire Station | 78 | 9 | 28 | 22 | 0 | 0 | 0 | 0 | 137 |
| | | | | | | | | | |
| Total | 17806 | 2109 | 6430 | 4964 | 919 | 96 | 340 | 84 | 32749 |

## World Logistics Center

### Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

Area Source Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 55 | 330 | 0.21 | 11.3 |
| | **LDT1** | 15 | 3 | 330 | 0.21 | 0.6 |
| | **LDT2** | 15 | 3 | 330 | 0.21 | 0.6 |
| | **MDT** | 15 | 5 | 330 | 0.21 | 1.0 |
| | **LHDT1** | 15 | 275 | 330 | 0.21 | 56.4 |
| | **LHDT2** | 15 | 90 | 330 | 0.21 | 18.4 |
| | **MHDT** | 15 | 1441 | 330 | 0.21 | 295.4 |
| | **HHDT** | 15 | 4652 | 330 | 0.21 | 953.7 |
| **Travel at Light Logistics** | **LDA** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT1** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT2** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **MDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LHDT1** | 15 | 2 | 175 | 0.11 | 0.2 |
| | **LHDT2** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **MHDT** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **HHDT** | 15 | 16 | 175 | 0.11 | 1.7 |
| **Travel at Utility** | **LDA** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT1** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT2** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **MDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LHDT1** | 15 | 6 | 100 | 0.06 | 0.4 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 5 | 100 | 0.06 | 0.3 |
| | **HHDT** | 15 | 22 | 100 | 0.06 | 1.3 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 14 | 50 | 0.03 | 0.4 |
| | **HHDT** | 15 | 85 | 50 | 0.03 | 2.7 |
| **Travel at Convenience Store** | **LDA** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **HHDT** | 15 | 134 | 50 | 0.03 | 4.2 |
| **Travel at Fire Station** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 11 | 1 | 1 | 1 | 57 | 19 | 297 | 964 | **1350** |

## Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 138 | 688 |
| | **LHDT2** | 5 | 45 | 225 |
| | **MHDT** | 5 | 720 | 3602 |
| | **HHDT** | 5 | 2326 | 11631 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 1 | 4 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 15 |
| | **HHDT** | 5 | 8 | 40 |
| **Idle at Utility** | **LHDT1** | 5 | 3 | 14 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 2 | 12 |
| | **HHDT** | 5 | 11 | 54 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 0 | 2 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 7 | 35 |
| | **HHDT** | 5 | 43 | 214 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 1 | 3 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 11 | 57 |
| | **HHDT** | 5 | 67 | 334 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |

| **Total DSL (hrs)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** | **Total** |
|---|---|---|---|---|---|
| | 11.9 | 3.9 | 62.0 | 204.5 | 282.3 |

## World Logistics Center

### Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

Area Source Non-Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 17378 | 330 | 0.21 | 3562.5 |
| | **LDT1** | 15 | 2059 | 330 | 0.21 | 422.1 |
| | **LDT2** | 15 | 6276 | 330 | 0.21 | 1286.5 |
| | **MDT** | 15 | 4845 | 330 | 0.21 | 993.2 |
| | **LHDT1** | 15 | 888 | 330 | 0.21 | 182.1 |
| | **LHDT2** | 15 | 93 | 330 | 0.21 | 19.1 |
| | **MHDT** | 15 | 329 | 330 | 0.21 | 67.4 |
| | **HHDT** | 15 | 80 | 330 | 0.21 | 16.4 |
| **Travel at Light Logistics** | **LDA** | 15 | 74 | 175 | 0.11 | 8.0 |
| | **LDT1** | 15 | 9 | 175 | 0.11 | 1.0 |
| | **LDT2** | 15 | 27 | 175 | 0.11 | 2.9 |
| | **MDT** | 15 | 21 | 175 | 0.11 | 2.2 |
| | **LHDT1** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **LHDT2** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **MHDT** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **HHDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| **Travel at Utility** | **LDA** | 15 | 109 | 100 | 0.06 | 6.8 |
| | **LDT1** | 15 | 13 | 100 | 0.06 | 0.8 |
| | **LDT2** | 15 | 39 | 100 | 0.06 | 2.4 |
| | **MDT** | 15 | 30 | 100 | 0.06 | 1.9 |
| | **LHDT1** | 15 | 19 | 100 | 0.06 | 1.2 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 1 | 100 | 0.06 | 0.1 |
| | **HHDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 63 | 50 | 0.03 | 2.0 |
| | **LDT1** | 15 | 7 | 50 | 0.03 | 0.2 |
| | **LDT2** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **MDT** | 15 | 18 | 50 | 0.03 | 0.5 |
| | **LHDT1** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **HHDT** | 15 | 1 | 50 | 0.03 | 0.0 |
| **Travel at Convenience Store** | **LDA** | 15 | 104 | 50 | 0.03 | 3.2 |
| | **LDT1** | 15 | 12 | 50 | 0.03 | 0.4 |
| | **LDT2** | 15 | 38 | 50 | 0.03 | 1.2 |
| | **MDT** | 15 | 29 | 50 | 0.03 | 0.9 |
| | **LHDT1** | 15 | 4 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 5 | 50 | 0.03 | 0.2 |
| | **HHDT** | 15 | 2 | 50 | 0.03 | 0.1 |
| **Travel at Fire Station** | **LDA** | 15 | 78 | 50 | 0.03 | 2.4 |
| | **LDT1** | 15 | 9 | 50 | 0.03 | 0.3 |
| | **LDT2** | 15 | 28 | 50 | 0.03 | 0.9 |
| | **MDT** | 15 | 22 | 50 | 0.03 | 0.7 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 3585 | 425 | 1295 | 999 | 184 | 19 | 68 | 17 | **6591** |

## Non-Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 444 | 2221 |
| | **LHDT2** | 5 | 47 | 233 |
| | **MHDT** | 5 | 164 | 822 |
| | **HHDT** | 5 | 40 | 200 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 3 | 14 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Utility** | **LHDT1** | 5 | 9 | 46 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 1 | 7 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 2 | 8 |
| | **HHDT** | 5 | 1 | 4 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 2 | 10 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 13 |
| | **HHDT** | 5 | 1 | 6 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |
| **Total GAS Idle Time (hours)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** |
| | 38.3 | 4.0 | 14.2 | 3.5 |

| ID | Arterial | From | To | Internal Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 17,546 | 680 | 2,253 | 7,100 |
| 2 | Street A | Eucalyptus Ave | Street F | 18,224 | 1,321 | 2,451 | 7,634 |
| 3 | Street E | west of Street A | | 9,089 | 613 | 1,261 | 3,945 |
| 5 | Street E | Street D | Street A | 4,165 | 151 | 317 | 106 |
| 6 | Street A | Street F | Street C | 7,907 | 434 | 821 | 1,851 |
| 8 | Street D | Street E | Cactus Ave | 7,495 | 318 | 621 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 74 | 8 | 10 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 548 | 142 | 117 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,049 | 146 | 140 | 298 |
| 18 | Street B | east of Street A | Gilman Springs Rd | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 48 | 0 | 0 | 0 |
| 21 | Street C | east of Street A | Street F | 2,797 | 62 | 172 | 214 |
| 24 | Street C | Street F | Street H | 2,790 | 54 | 176 | 219 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 225 | 8 | 26 | 42 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 225 | 8 | 26 | 42 |
| 31 | Gilman Springs Rd | south of Street C | | 2,993 | 62 | 202 | 261 |

**World Logistics Center** **2022**

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Internal Roadway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27579 | 17,546 | 680 | 2,253 | 7,100 | 327 | 0.203 | 32 | 2 | 2 | 3 | 139 | 45 | 1834 | 6980 | 9037 | 1836 |
| 2 | 29630 | 18,224 | 1,321 | 2,451 | 7,634 | 731 | 0.454 | 33 | 2 | 2 | 3 | 270 | 88 | 1996 | 7505 | 9898 | 4495 |
| 3 | 14908 | 9,089 | 613 | 1,261 | 3,945 | 2352 | 1.461 | 16 | 1 | 1 | 1 | 125 | 41 | 1027 | 3878 | 5091 | 7438 |
| 5 | 4739 | 4,165 | 151 | 317 | 106 | 953 | 0.592 | 8 | 0 | 0 | 1 | 31 | 10 | 258 | 104 | 412 | 244 |
| 6 | 11013 | 7,907 | 434 | 821 | 1,851 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 89 | 29 | 668 | 1820 | 2623 | 1791 |
| 8 | 8434 | 7,495 | 318 | 621 | 0 | 1091 | 0.678 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 412 |
| 11 | 92 | 74 | 8 | 10 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 0 | 10 | 8 |
| 12 | 807 | 548 | 142 | 117 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 29 | 9 | 95 | 0 | 135 | 69 |
| 14 | 1633 | 1,049 | 146 | 140 | 298 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 30 | 10 | 114 | 293 | 449 | 451 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 48 | 48 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 3245 | 2,797 | 62 | 172 | 214 | 1258 | 0.781 | 5 | 0 | 0 | 0 | 13 | 4 | 140 | 210 | 373 | 292 |
| 24 | 3239 | 2,790 | 54 | 176 | 219 | 1946 | 1.209 | 5 | 0 | 0 | 0 | 11 | 4 | 143 | 215 | 379 | 458 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 301 | 225 | 8 | 26 | 42 | 675 | 0.419 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 27 |
| 30 | 301 | 225 | 8 | 26 | 42 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 114 |
| 31 | 3518 | 2,993 | 62 | 202 | 261 | 820 | 0.509 | 5 | 0 | 0 | 0 | 13 | 4 | 164 | 257 | 444 | 226 |
| | | | | | | | | | | | | | | | | Total | 17862 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 0 | 0 | 1 | 28 | 9 | 373 | 1418 |
| 2 | 1 | 15 | 1 | 1 | 1 | 123 | 40 | 906 | 3408 |
| 3 | 1 | 24 | 1 | 1 | 2 | 183 | 60 | 1500 | 5667 |
| 5 | 1 | 4 | 0 | 0 | 0 | 18 | 6 | 153 | 62 |
| 6 | 1 | 10 | 1 | 1 | 1 | 61 | 20 | 456 | 1242 |
| 8 | 1 | 9 | 0 | 0 | 1 | 44 | 14 | 343 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 |
| 12 | 1 | 1 | 0 | 0 | 0 | 15 | 5 | 49 | 0 |
| 14 | 1 | 2 | 0 | 0 | 0 | 30 | 10 | 115 | 294 |
| 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1 | 4 | 0 | 0 | 0 | 10 | 3 | 109 | 164 |
| 24 | 1 | 6 | 0 | 0 | 1 | 13 | 4 | 173 | 260 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 17 |
| 30 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 37 | 73 |
| 31 | 1 | 3 | 0 | 0 | 0 | 6 | 2 | 84 | 131 |
| Total | | **85** | **5** | **4** | **8** | **536** | **175** | **4313** | **12737** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 85 | 5 | 4 | 8 | 536 | 175 | 4313 | 12737 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | **85** | **5** | **4** | **8** | **536** | **175** | **4313** | **12737** | **17862** |

**World Logistics Center** **2022**

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Internal Roadway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27579 | 17,546 | 680 | 2,253 | 7,100 | 327 | 0.203 | 9957 | 1180 | 3596 | 2776 | 449 | 47 | 419 | 120 | 18542 | 3767 |
| 2 | 29630 | 18,224 | 1,321 | 2,451 | 7,634 | 731 | 0.454 | 10342 | 1225 | 3735 | 2883 | 872 | 91 | 455 | 129 | 19732 | 8960 |
| 3 | 14908 | 9,089 | 613 | 1,261 | 3,945 | 2352 | 1.461 | 5158 | 611 | 1863 | 1438 | 404 | 42 | 234 | 67 | 9817 | 14344 |
| 5 | 4739 | 4,165 | 151 | 317 | 106 | 953 | 0.592 | 2364 | 280 | 854 | 659 | 100 | 10 | 59 | 2 | 4327 | 2562 |
| 6 | 11013 | 7,907 | 434 | 821 | 1,851 | 1099 | 0.683 | 4487 | 532 | 1620 | 1251 | 286 | 30 | 153 | 31 | 8390 | 5728 |
| 8 | 8434 | 7,495 | 318 | 621 | 0 | 1091 | 0.678 | 4253 | 504 | 1536 | 1186 | 210 | 22 | 115 | 0 | 7826 | 5304 |
| 11 | 92 | 74 | 8 | 10 | 0 | 1201 | 0.746 | 42 | 5 | 15 | 12 | 5 | 1 | 2 | 0 | 82 | 61 |
| 12 | 807 | 548 | 142 | 117 | 0 | 824 | 0.512 | 311 | 37 | 112 | 87 | 94 | 10 | 22 | 0 | 672 | 344 |
| 14 | 1633 | 1,049 | 146 | 140 | 298 | 1618 | 1.005 | 595 | 71 | 215 | 166 | 96 | 10 | 26 | 5 | 1184 | 1190 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 48 | 48 | 0 | 0 | 0 | 2386 | 1.482 | 27 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | 48 | 71 |
| 21 | 3245 | 2,797 | 62 | 172 | 214 | 1258 | 0.781 | 1587 | 188 | 573 | 443 | 41 | 4 | 32 | 4 | 2872 | 2244 |
| 24 | 3239 | 2,790 | 54 | 176 | 219 | 1946 | 1.209 | 1583 | 188 | 572 | 441 | 36 | 4 | 33 | 4 | 2860 | 3457 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 301 | 225 | 8 | 26 | 42 | 675 | 0.419 | 128 | 15 | 46 | 36 | 5 | 1 | 5 | 1 | 236 | 99 |
| 30 | 301 | 225 | 8 | 26 | 42 | 2827 | 1.756 | 128 | 15 | 46 | 36 | 5 | 1 | 5 | 1 | 236 | 414 |
| 31 | 3518 | 2,993 | 62 | 202 | 261 | 820 | 0.509 | 1698 | 201 | 613 | 474 | 41 | 4 | 38 | 4 | 3074 | 1566 |
| | | | | | | | | | | | | | | | | Total | 50110 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2023 | 240 | 730 | 564 | 91 | 10 | 85 | 24 |
| 2 | 1 | 4696 | 556 | 1696 | 1309 | 396 | 41 | 207 | 58 |
| 3 | 1 | 7536 | 893 | 2721 | 2101 | 591 | 62 | 342 | 97 |
| 5 | 1 | 1399 | 166 | 505 | 390 | 59 | 6 | 35 | 1 |
| 6 | 1 | 3063 | 363 | 1106 | 854 | 195 | 20 | 104 | 21 |
| 8 | 1 | 2883 | 342 | 1041 | 804 | 142 | 15 | 78 | 0 |
| 11 | 1 | 31 | 4 | 11 | 9 | 4 | 0 | 1 | 0 |
| 12 | 1 | 159 | 19 | 57 | 44 | 48 | 5 | 11 | 0 |
| 14 | 1 | 598 | 71 | 216 | 167 | 97 | 10 | 26 | 5 |
| 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 40 | 5 | 15 | 11 | 0 | 0 | 0 | 0 |
| 21 | 1 | 1240 | 147 | 448 | 346 | 32 | 3 | 25 | 3 |
| 24 | 1 | 1914 | 227 | 691 | 534 | 43 | 5 | 40 | 4 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 54 | 6 | 19 | 15 | 2 | 0 | 2 | 0 |
| 30 | 1 | 224 | 27 | 81 | 63 | 9 | 1 | 8 | 1 |
| 31 | 1 | 865 | 102 | 312 | 241 | 21 | 2 | 19 | 2 |
| Total | | **26726** | **3166** | **9651** | **7451** | **1731** | **181** | **984** | **218** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 26726 | 3166 | 9651 | 7451 | 1731 | 181 | 984 | 218 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **26726** | **3166** | **9651** | **7451** | **1731** | **181** | **984** | **218** | **50110** |

**World Logistics Center**
**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**
**Entrained Road Dust**
Internal Roadways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 17,546 | 3564 | 680 | 138 | 2,253 | 458 | 7,100 | 1442 | 5602 | 8.44 | 0.035 | 0.0002 | 1.3 | 0.0009 | 5.1 |
| 2 | A | 731 | 0.45 | 18,224 | 8276 | 1,321 | 600 | 2,451 | 1113 | 7,634 | 3467 | 13455 | 8.52 | 0.035 | 0.0002 | 3.1 | 0.0009 | 12.5 |
| 3 | A | 2352 | 1.46 | 9,089 | 13280 | 613 | 896 | 1,261 | 1842 | 3,945 | 5764 | 21782 | 8.68 | 0.035 | 0.0002 | 5.0 | 0.0009 | 20.5 |
| 5 | A | 953 | 0.59 | 4,165 | 2466 | 151 | 89 | 317 | 188 | 106 | 63 | 2806 | 3.36 | 0.035 | 0.0001 | 0.2 | 0.0004 | 1.0 |
| 6 | A | 1099 | 0.68 | 7,907 | 5398 | 434 | 296 | 821 | 561 | 1,851 | 1264 | 7519 | 6.53 | 0.035 | 0.0002 | 1.3 | 0.0007 | 5.3 |
| 8 | A | 1091 | 0.68 | 7,495 | 5080 | 318 | 216 | 621 | 421 | 0 | 0 | 5716 | 2.97 | 0.035 | 0.0001 | 0.4 | 0.0003 | 1.8 |
| 11 | A | 1201 | 0.75 | 74 | 55 | 8 | 6 | 10 | 7 | 0 | 0 | 69 | 3.48 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 12 | A | 824 | 0.51 | 548 | 281 | 142 | 73 | 117 | 60 | 0 | 0 | 413 | 4.14 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 14 | A | 1618 | 1.01 | 1,049 | 1054 | 146 | 147 | 140 | 141 | 298 | 300 | 1641 | 7.12 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.3 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 19 | A | 2386 | 1.48 | 48 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 21 | A | 1258 | 0.78 | 2,797 | 2186 | 62 | 48 | 172 | 134 | 214 | 167 | 2536 | 4.10 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 24 | A | 1946 | 1.21 | 2,790 | 3373 | 54 | 65 | 176 | 213 | 219 | 265 | 3916 | 4.14 | 0.035 | 0.0001 | 0.4 | 0.0004 | 1.7 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 29 | A | 675 | 0.42 | 225 | 94 | 8 | 3 | 26 | 11 | 42 | 18 | 126 | 6.00 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 30 | A | 2827 | 1.76 | 225 | 395 | 8 | 14 | 26 | 46 | 42 | 74 | 529 | 6.00 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.3 |
| 31 | A | 820 | 0.51 | 2,993 | 1525 | 62 | 32 | 202 | 103 | 261 | 133 | 1792 | 4.31 | 0.035 | 0.0001 | 0.2 | 0.0005 | 0.8 |
| | | | | | | | | | | | | | | | **Totals:** | **12.7** | | **51.9** |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 4,976 | 198 | 482 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 647 | 29 | 41 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 620 | 13 | 38 | 298 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1,576 | 69 | 92 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 481 | 16 | 29 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 187 | 12 | 31 | 450 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1,116 | 62 | 173 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 478 | 39 | 151 | 382 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 2,191 | 129 | 349 | 4 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,607 | 93 | 285 | 449 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 125 | 5 | 5 | 39 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 176 | 8 | 8 | 116 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 85 | 4 | 3 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 239 | 6 | 13 | 27 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 7,495 | 318 | 621 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 0 | 0 | 0 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 4,474 | 164 | 464 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 434 | 30 | 16 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 42 | 3 | 1 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,122 | 59 | 173 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 83 | 3 | 3 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 0 | 0 | 0 | 186 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 738 | 20 | 64 | 289 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 37 | 5 | 5 | 92 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | |
| 65 | Alessandro Blvd | Nason St | Oliver St | 317 | 8 | 16 | 32 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 401 | 13 | 27 | 32 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 907 | 34 | 57 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 1,333 | 51 | 86 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 4,386 | 161 | 462 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 388 | 7 | 7 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 140 | 4 | 7 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 32 | 1 | 4 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 525 | 10 | 10 | 7 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 693 | 15 | 17 | 8 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,058 | 28 | 53 | 177 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 504 | 14 | 26 | 88 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,379 | 47 | 110 | 251 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 15 | 0 | 1 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 26 | 1 | 1 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 480 | 12 | 37 | 33 |
| 96 | N California Ave | W 6th St | E 8th St | 404 | 9 | 19 | 15 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 57 | 2 | 5 | 6 |
| 98 | N California Ave | W 6th St | I-10 | 38 | 2 | 13 | 11 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 141 | 1 | 4 | 3 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 196 | 5 | 13 | 27 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 563 | 13 | 36 | 65 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 1 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 511 | 12 | 30 | 59 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 113 | 2 | 8 | 34 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 12 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 142 | 3 | 12 | 34 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 0 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 29 | 2 | 7 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 110 | Alessandro Blvd | Day St | Elsworth St | 121 | 3 | 9 | 27 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 133 | 5 | 17 | 55 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 12 | 2 | 7 | 14 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 20 | 2 | 8 | 31 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 130 | 3 | 10 | 35 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 8 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 13 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 140 | 4 | 11 | 39 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 28 | 0 | 2 | 0 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 88 | 5 | 15 | 126 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 146 | 4 | 10 | 31 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 58 | 3 | 10 | 101 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 12 | 0 | 0 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 170 | 5 | 12 | 31 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 188 | 5 | 11 | 29 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 39 | 3 | 10 | 188 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 207 | 5 | 12 | 27 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 49 | 2 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 4 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 59 | 2 | 2 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 36 | 2 | 3 | 5 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 275 | 8 | 16 | 32 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 67 | 2 | 2 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 10 | 1 | 4 | 10 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 168 | 4 | 12 | 12 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 12 | 1 | 2 | 12 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 167 | 3 | 9 | 10 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 13 | 1 | 3 | 4 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 177 | 5 | 14 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 181 | 5 | 15 | 0 |
| 145 | Cactus Ave | Graham St | Heacock St | 208 | 6 | 17 | 0 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 24 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 243 | 8 | 20 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 54 | 2 | 8 | 92 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 307 | 10 | 25 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 340 | 11 | 28 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 28 | 2 | 9 | 184 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 437 | 15 | 30 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,147 | 36 | 77 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 607 | 17 | 44 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,334 | 51 | 86 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 194 | 5 | 15 | 18 |
| 159 | Beaumont Ave | E 6th St | I-10 | 317 | 5 | 15 | 17 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 583 | 31 | 104 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 1,351 | 77 | 259 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 712 | 44 | 152 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 15 | 1 | 3 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 4,320 | 157 | 459 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 648 | 40 | 143 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,787 | 71 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,632 | 67 | 189 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,600 | 98 | 324 | 382 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 328 | 15 | 39 | 63 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,943 | 115 | 364 | 446 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 115 | 4 | 5 | 3 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2,924 | 54 | 187 | 185 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 2,523 | 47 | 171 | 152 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 401 | 7 | 16 | 34 |
| 194 | Crescent Ave | West of Alessandro Rd | | 329 | 20 | 63 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 592 | 31 | 95 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 921 | 50 | 158 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 0 | 0 | 0 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 152 | 6 | 10 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,122 | 59 | 173 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 221 | 12 | 41 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 221 | 12 | 41 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 10 | 0 | 0 | 0 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 197 | 4 | 11 | 20 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 317 | 7 | 19 | 30 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 60 | 1 | 4 | 9 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 11 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 5 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 13 | 0 | 0 | 0 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 36 | 1 | 4 | 9 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 9 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 35 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 66 | 1 | 3 | 6 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 520 | 12 | 45 | 73 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 47 | 1 | 4 | 9 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 13 | 0 | 2 | 2 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 404 | 11 | 45 | 74 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 185 | 4 | 17 | 20 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 197 | 6 | 26 | 51 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 201 | 6 | 26 | 50 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 16 | 1 | 2 | 6 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 8 | 0 | 2 | 8 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 46 | 1 | 7 | 18 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 27 | 1 | 6 | 18 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 190 | 6 | 22 | 41 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 546 | 12 | 46 | 74 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 1 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 205 | 3 | 4 | 6 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 761 | 16 | 51 | 83 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 98 | 4 | 13 | 40 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 209 | 7 | 27 | 72 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 781 | 18 | 57 | 95 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 421 | 11 | 37 | 60 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,049 | 26 | 90 | 147 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 163 | 6 | 26 | 43 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 724 | 17 | 54 | 89 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 448 | 15 | 65 | 169 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 9 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 457 | 16 | 66 | 171 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 7 | 0 | 2 | 2 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 472 | 16 | 69 | 174 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 27 | 3 | 10 | 45 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 463 | 17 | 69 | 185 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 141 | 5 | 19 | 46 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 558 | 19 | 81 | 211 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 16 | 0 | 2 | 7 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 298 | 10 | 41 | 100 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 79 | 8 | 30 | 103 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,139 | 36 | 78 | 244 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 366 | 13 | 33 | 151 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 766 | 24 | 56 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 682 | 22 | 49 | 126 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 206 | 7 | 18 | 8 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 721 | 23 | 52 | 103 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 422 | 16 | 33 | 213 |
| 294 | Via Del Lago | South of Iris Ave | | 55 | 2 | 2 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 397 | 10 | 37 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 411 | 10 | 35 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 23 | 1 | 5 | 182 |
| 304 | Iris Ave | Indian St | Perris Blvd | 28 | 7 | 18 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 503 | 22 | 87 | 180 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 936 | 47 | 165 | 180 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 25 | 0 | 1 | 1 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 1,181 | 20 | 76 | 91 |
| 326 | Ramona Expy | Sanderson Ave | State St | 71 | 1 | 2 | 2 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 1,073 | 19 | 73 | 87 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 15 | 1 | 1 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 2,520 | 47 | 170 | 151 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 34 | 0 | 1 | 1 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 1,855 | 36 | 130 | 93 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,297 | 21 | 80 | 95 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 37 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,316 | 25 | 92 | 50 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 1,103 | 21 | 58 | 58 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 556 | 13 | 35 | 55 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 7 | 0 | 2 | 10 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ran | Mid County Pkwy | 3rd St | | | | |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | | | | |
| 377 | Mid County Pkwy WB Off-Ran | Mid County Pkwy | 3rd St | | | | |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | | | | |
| 379 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | 3rd St | | | | |
| 380 | Mid County Pkwy EB On-Ram | 3rd St | Mid County Pkwy | | | | |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | | | | |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 2 | 0 | 1 | 2 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 701 | 29 | 109 | 104 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 16 | 0 | 1 | 2 |
| 390 | Ramona Expy | Webster Ave | Indian St | 286 | 11 | 34 | 13 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 189 | 14 | 64 | 25 |
| 393 | Indian St | Ramona Expy | Morgan St | 34 | 6 | 48 | 44 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 668 | 27 | 106 | 91 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 1,162 | 39 | 139 | 40 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 1,136 | 34 | 124 | 12 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,378 | 62 | 181 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 183 | 4 | 8 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 400 | Evans Rd | Ramona Expy | Rider St | 386 | 9 | 14 | 1 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 1 | 1 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 147 | 6 | 4 | 3 |
| 406 | Ironwood Ave | East of Thedore St | | 76 | 8 | 5 | 4 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 1 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 103 | 4 | 7 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 198 | 6 | 8 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 4 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 72 | 2 | 7 | 8 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 998 | 32 | 109 | 27 |
| 416 | Mid County Pkwy WB On-Ran | Mid County Pkwy | Perris Blvd | 388 | 17 | 65 | 10 |
| 417 | Mid County Pkwy WB Off-Ran | Perris Blvd | Mid County Pkwy | 6 | 0 | 0 | 2 |
| 419 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | Perris Blvd | 451 | 13 | 50 | 12 |
| 420 | Mid County Pkwy EB On-Ram | Perris Blvd | Mid County Pkwy | 0 | 0 | 0 | 2 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 110 | 5 | 14 | 202 |
| 425 | Mid County Pkwy WB On-Ran | West of Evan | | 121 | 1 | 5 | 2 |
| 426 | Mid County Pkwy WB Off-Ran | East of Evan | | 0 | 0 | 0 | 1 |
| 427 | Day St | south of Alessandro Blvd | | 4 | 1 | 5 | 7 |
| 428 | Mid County Pkwy EB Off-Ram | West of Evan | | 41 | 0 | 1 | 2 |
| 429 | Mid County Pkwy EB On-Ram | East of Evan | | 1 | 0 | 0 | 0 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 366 | 8 | 23 | 50 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | |
| 433 | Evans Rd | Rider St | Orange Ave | 185 | 3 | 5 | 1 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 17 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 61 | 1 | 2 | 0 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 45 | 1 | 2 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | |
| 453 | Evans Rd | North of San Jancito Ave | | | | | |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | |
| 455 | Evans Rd | South of San Jancito Ave | | | | | |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | |
| 477 | Ellis Ave | West of Evan Rd | | | | | |
| 478 | Evans Rd | North of Ellis Ave | | | | | |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | |
| 482 | Ellis Ave | East of SR-215 | | | | | |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | |
| 488 | Nason St | North of Iris Ave | | 0 | 0 | 0 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 340 | 13 | 25 | 208 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 358 | 14 | 26 | 208 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | |
| 504 | Krameria Ave | west of Perris Blvd | | 151 | 13 | 56 | 0 |

**World Logistics Center** **2022**
Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Surface Street Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Daily VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5656 | 4,976 | 198 | 482 | 0 | 1820 | 1.131 | 9 | 0 | 0 | 1 | 40 | 13 | 392 | 0 | 457 | 517 |
| 10 | 717 | 647 | 29 | 41 | 0 | 826 | 0.513 | 1 | 0 | 0 | 0 | 6 | 2 | 33 | 0 | 43 | 22 |
| 13 | 969 | 620 | 13 | 38 | 298 | 345 | 0.214 | 1 | 0 | 0 | 0 | 3 | 1 | 31 | 293 | 329 | 70 |
| 32 | 1737 | 1,576 | 69 | 92 | 0 | 1551 | 0.964 | 3 | 0 | 0 | 0 | 14 | 5 | 75 | 0 | 97 | 93 |
| 33 | 526 | 481 | 16 | 29 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 36 |
| 35 | 680 | 187 | 12 | 31 | 450 | 801 | 0.498 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 442 | 471 | 235 |
| 36 | 1351 | 1,116 | 62 | 173 | 0 | 1627 | 1.011 | 2 | 0 | 0 | 0 | 13 | 4 | 141 | 0 | 160 | 162 |
| 37 | 1050 | 478 | 39 | 151 | 382 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 123 | 376 | 510 | 69 |
| 38 | 2673 | 2,191 | 129 | 349 | 4 | 659 | 0.409 | 4 | 0 | 0 | 0 | 26 | 9 | 284 | 4 | 328 | 134 |
| 42 | 2434 | 1,607 | 93 | 285 | 449 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 19 | 6 | 232 | 441 | 702 | 2328 |
| 43 | 174 | 125 | 5 | 5 | 39 | 2598 | 1.614 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 38 | 44 | 71 |
| 46 | 308 | 176 | 8 | 8 | 116 | 806 | 0.501 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 114 | 123 | 62 |
| 47 | 92 | 85 | 4 | 3 | 0 | 1995 | 1.239 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 5 |
| 48 | 285 | 239 | 6 | 13 | 27 | 795 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 19 |
| 50 | 8434 | 7,495 | 318 | 621 | 0 | 479 | 0.298 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 181 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5102 | 4,474 | 164 | 464 | 0 | 1269 | 0.788 | 8 | 0 | 0 | 1 | 33 | 11 | 378 | 0 | 432 | 340 |
| 53 | 480 | 434 | 30 | 16 | 0 | 795 | 0.494 | 1 | 0 | 0 | 0 | 6 | 2 | 13 | 0 | 22 | 11 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 46 | 42 | 3 | 1 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1354 | 1,122 | 59 | 173 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 24 |
| 58 | 89 | 83 | 3 | 3 | 0 | 172 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 |
| 59 | 186 | 0 | 0 | 0 | 186 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 183 | 89 |
| 60 | 1111 | 738 | 20 | 64 | 289 | 159 | 0.099 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 284 | 343 | 34 |
| 61 | 139 | 37 | 5 | 5 | 92 | 97 | 0.060 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 90 | 96 | 6 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 373 | 317 | 8 | 16 | 32 | 795 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 23 |
| 66 | 473 | 401 | 13 | 27 | 32 | 812 | 0.504 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 31 | 58 | 29 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 998 | 907 | 34 | 57 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 7 | 2 | 46 | 0 | 58 | 29 |
| 70 | 1470 | 1,333 | 51 | 86 | 0 | 795 | 0.494 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5009 | 4,386 | 161 | 462 | 0 | 742 | 0.461 | 8 | 0 | 0 | 1 | 33 | 11 | 376 | 0 | 429 | 198 |
| 74 | 403 | 388 | 7 | 7 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 9 | 9 |
| 75 | 156 | 140 | 4 | 7 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 | 12 | 6 |
| 76 | 37 | 32 | 1 | 4 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 4 |
| 77 | 552 | 525 | 10 | 10 | 7 | 438 | 0.272 | 1 | 0 | 0 | 0 | 2 | 1 | 8 | 7 | 19 | 5 |
| 80 | 733 | 693 | 15 | 17 | 8 | 138 | 0.086 | 1 | 0 | 0 | 0 | 3 | 1 | 14 | 8 | 27 | 2 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1316 | 1,058 | 28 | 53 | 177 | 322 | 0.200 | 2 | 0 | 0 | 0 | 6 | 2 | 43 | 174 | 227 | 45 |
| 83 | 632 | 504 | 14 | 26 | 88 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 87 | 113 | 7 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1787 | 1,379 | 47 | 110 | 251 | 284 | 0.176 | 2 | 0 | 0 | 0 | 10 | 3 | 90 | 247 | 352 | 62 |
| 87 | 16 | 15 | 0 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 88 | 28 | 26 | 1 | 1 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 95 | 562 | 480 | 12 | 37 | 33 | 439 | 0.273 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 32 | 67 | 18 |
| 96 | 447 | 404 | 9 | 19 | 15 | 399 | 0.248 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 15 | 34 | 8 |
| 97 | 70 | 57 | 2 | 5 | 6 | 389 | 0.242 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 11 | 3 |
| 98 | 64 | 38 | 2 | 13 | 11 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 22 | 2 |
| 99 | 149 | 141 | 1 | 4 | 3 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |
| 100 | 241 | 196 | 5 | 13 | 27 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 5 |
| 101 | 677 | 563 | 13 | 36 | 65 | 313 | 0.194 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 64 | 98 | 19 |
| 102 | 1 | 1 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | 612 | 511 | 12 | 30 | 59 | 291 | 0.181 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 58 | 87 | 16 |
| 104 | 157 | 113 | 2 | 8 | 34 | 404 | 0.251 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 33 | 41 | 10 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 13 | 12 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 107 | 191 | 142 | 3 | 12 | 34 | 388 | 0.241 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 33 | 44 | 11 |
| 108 | 14 | 12 | 0 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 109 | 38 | 29 | 2 | 7 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 3 |
| 110 | 160 | 121 | 3 | 9 | 27 | 756 | 0.470 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 | 35 | 16 |
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 210 | 133 | 5 | 17 | 55 | 817 | 0.508 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 54 | 70 | 35 |
| 113 | 35 | 12 | 2 | 7 | 14 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 | 20 | 10 |
| 114 | 61 | 20 | 2 | 8 | 31 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 38 | 18 |
| 115 | 178 | 130 | 3 | 10 | 35 | 851 | 0.529 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 34 | 44 | 23 |
| 116 | 9 | 1 | 0 | 0 | 8 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 4 |
| 117 | 13 | 13 | 0 | 0 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 194 | 140 | 4 | 11 | 39 | 765 | 0.475 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 38 | 49 | 23 |
| 119 | 30 | 28 | 0 | 2 | 0 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 120 | 234 | 88 | 5 | 15 | 126 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 124 | 138 | 70 |
| 121 | 191 | 146 | 4 | 10 | 31 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 30 | 40 | 21 |
| 122 | 172 | 58 | 3 | 10 | 101 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 99 | 108 | 53 |
| 123 | 12 | 12 | 0 | 0 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 218 | 170 | 5 | 12 | 31 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 30 | 42 | 21 |
| 125 | 1 | 1 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 233 | 188 | 5 | 11 | 29 | 774 | 0.481 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 29 | 39 | 19 |
| 127 | 240 | 39 | 3 | 10 | 188 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 185 | 194 | 99 |
| 128 | 1 | 1 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 251 | 207 | 5 | 12 | 27 | 823 | 0.511 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 27 | 38 | 19 |
| 130 | 52 | 49 | 2 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 131 | 4 | 4 | 0 | 0 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 63 | 59 | 2 | 2 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 134 | 46 | 36 | 2 | 3 | 5 | 760 | 0.472 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 4 |
| 135 | 331 | 275 | 8 | 16 | 32 | 816 | 0.507 | 0 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 24 |
| 136 | 71 | 67 | 2 | 2 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 137 | 1 | 1 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 25 | 10 | 1 | 4 | 10 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 13 | 2 |
| 139 | 196 | 168 | 4 | 12 | 12 | 504 | 0.313 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 12 | 23 | 7 |
| 140 | 27 | 12 | 1 | 2 | 12 | 527 | 0.327 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 14 | 4 |
| 141 | 189 | 167 | 3 | 9 | 10 | 1001 | 0.622 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 10 | 18 | 11 |
| 142 | 21 | 13 | 1 | 3 | 4 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 1 |
| 143 | 204 | 177 | 5 | 14 | 8 | 845 | 0.525 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 8 | 21 | 11 |
| 144 | 201 | 181 | 5 | 15 | 0 | 783 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 | 7 |
| 145 | 231 | 208 | 6 | 17 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 | 16 | 8 |
| 146 | 25 | 24 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 147 | 271 | 243 | 8 | 20 | 0 | 798 | 0.496 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 19 | 9 |
| 148 | 156 | 54 | 2 | 8 | 92 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 90 | 98 | 44 |
| 149 | 342 | 307 | 10 | 25 | 0 | 808 | 0.502 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 0 | 24 | 12 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 379 | 340 | 11 | 28 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 2 | 1 | 23 | 0 | 27 | 13 |
| 152 | 223 | 28 | 2 | 9 | 184 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 181 | 189 | 92 |
| 153 | 482 | 437 | 15 | 30 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 15 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1260 | 1,147 | 36 | 77 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 7 | 2 | 63 | 0 | 75 | 36 |
| 156 | 668 | 607 | 17 | 44 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 42 | 20 |
| 157 | 1471 | 1,334 | 51 | 86 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 158 | 232 | 194 | 5 | 15 | 18 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 18 | 32 | 20 |
| 159 | 354 | 317 | 5 | 15 | 17 | 170 | 0.106 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 17 | 31 | 3 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 718 | 583 | 31 | 104 | 0 | 784 | 0.487 | 1 | 0 | 0 | 0 | 6 | 2 | 85 | 0 | 94 | 46 |
| 162 | 1687 | 1,351 | 77 | 259 | 0 | 1052 | 0.654 | 2 | 0 | 0 | 0 | 16 | 5 | 211 | 0 | 235 | 153 |
| 163 | 908 | 712 | 44 | 152 | 0 | 350 | 0.217 | 1 | 0 | 0 | 0 | 9 | 3 | 124 | 0 | 137 | 30 |
| 164 | 19 | 15 | 1 | 3 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 165 | 4936 | 4,320 | 157 | 459 | 0 | 1541 | 0.957 | 8 | 0 | 0 | 1 | 32 | 10 | 374 | 0 | 426 | 407 |
| 168 | 831 | 648 | 40 | 143 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 8 | 3 | 116 | 0 | 129 | 61 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3050 | 2,787 | 71 | 192 | 0 | 522 | 0.324 | 5 | 0 | 0 | 0 | 15 | 5 | 156 | 0 | 182 | 59 |
| 172 | 2888 | 2,632 | 67 | 189 | 0 | 993 | 0.617 | 5 | 0 | 0 | 0 | 14 | 4 | 154 | 0 | 178 | 110 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2404 | 1,600 | 98 | 324 | 382 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 20 | 7 | 264 | 376 | 669 | 462 |
| 178 | 445 | 328 | 15 | 39 | 63 | 7132 | 4.430 | 1 | 0 | 0 | 0 | 3 | 1 | 32 | 62 | 98 | 436 |
| 179 | 2868 | 1,943 | 115 | 364 | 446 | 2189 | 1.360 | 4 | 0 | 0 | 0 | 23 | 8 | 296 | 438 | 770 | 1047 |
| 180 | 127 | 115 | 4 | 5 | 3 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 | 8 | 35 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 3350 | 2,924 | 54 | 187 | 185 | 6368 | 3.956 | 5 | 0 | 0 | 0 | 11 | 4 | 152 | 182 | 355 | 1405 |
| 191 | 2893 | 2,523 | 47 | 171 | 152 | 4906 | 3.048 | 5 | 0 | 0 | 0 | 10 | 3 | 139 | 149 | 307 | 935 |
| 192 | 458 | 401 | 7 | 16 | 34 | 4358 | 2.707 | 1 | 0 | 0 | 0 | 1 | 0 | 13 | 33 | 49 | 133 |
| 194 | 412 | 329 | 20 | 63 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 | 57 | 13 |
| 195 | 718 | 592 | 31 | 95 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 6 | 2 | 77 | 0 | 87 | 21 |
| 196 | 1129 | 921 | 50 | 158 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 10 | 3 | 129 | 0 | 144 | 64 |
| 198 | 0 | 0 | 0 | 0 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 168 | 152 | 6 | 10 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 10 | 2 |
| 200 | 1354 | 1,122 | 59 | 173 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 139 |
| 205 | 274 | 221 | 12 | 41 | 0 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 35 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 274 | 221 | 12 | 41 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 60 |
| 215 | 10 | 10 | 0 | 0 | 0 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 232 | 197 | 4 | 11 | 20 | 2000 | 1.242 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 20 | 30 | 37 |
| 217 | 373 | 317 | 7 | 19 | 30 | 663 | 0.412 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | 29 | 48 | 20 |
| 218 | 74 | 60 | 1 | 4 | 9 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 13 | 9 |
| 219 | 12 | 11 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 5 | 5 | 0 | 0 | 0 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 13 | 13 | 0 | 0 | 0 | 359 | 0.223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 50 | 36 | 1 | 4 | 9 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 13 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 9 | 9 | 0 | 0 | 0 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 35 | 35 | 0 | 0 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 76 | 66 | 1 | 3 | 6 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 11 |
| 232 | 650 | 520 | 12 | 45 | 73 | 1719 | 1.068 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 72 | 113 | 120 |
| 233 | 61 | 47 | 1 | 4 | 9 | 976 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 8 |
| 236 | 17 | 13 | 0 | 2 | 2 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 2 |
| 237 | 534 | 404 | 11 | 45 | 74 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 113 | 109 |
| 238 | 226 | 185 | 4 | 17 | 20 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 20 | 35 | 24 |
| 239 | 280 | 197 | 6 | 26 | 51 | 1385 | 0.860 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 50 | 73 | 63 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 283 | 201 | 6 | 26 | 50 | 989 | 0.614 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 49 | 72 | 44 |
| 243 | 25 | 16 | 1 | 2 | 6 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | 0 |
| 244 | 18 | 8 | 0 | 2 | 8 | 173 | 0.107 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 10 | 1 |
| 245 | 72 | 46 | 1 | 7 | 18 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 | 24 | 3 |
| 246 | 52 | 27 | 1 | 6 | 18 | 273 | 0.170 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 18 | 23 | 4 |
| 247 | 259 | 190 | 6 | 22 | 41 | 87 | 0.054 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 40 | 60 | 3 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 678 | 546 | 12 | 46 | 74 | 1588 | 0.986 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 115 | 113 |
| 254 | 1 | 1 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 218 | 205 | 3 | 4 | 6 | 943 | 0.586 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 6 | 10 | 6 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 911 | 761 | 16 | 51 | 83 | 1783 | 1.108 | 1 | 0 | 0 | 0 | 3 | 1 | 42 | 82 | 129 | 143 |
| 261 | 155 | 98 | 4 | 13 | 40 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 39 | 51 | 38 |
| 262 | 315 | 209 | 7 | 27 | 72 | 860 | 0.534 | 0 | 0 | 0 | 0 | 1 | 0 | 22 | 71 | 95 | 51 |
| 263 | 951 | 781 | 18 | 57 | 95 | 141 | 0.088 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 93 | 146 | 13 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 529 | 421 | 11 | 37 | 60 | 98 | 0.061 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 59 | 93 | 6 |
| 266 | 1312 | 1,049 | 26 | 90 | 147 | 171 | 0.106 | 2 | 0 | 0 | 0 | 5 | 2 | 73 | 145 | 227 | 24 |
| 267 | 238 | 163 | 6 | 26 | 43 | 156 | 0.097 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 42 | 65 | 6 |
| 268 | 884 | 724 | 17 | 54 | 89 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 44 | 87 | 138 | 14 |
| 269 | 697 | 448 | 15 | 65 | 169 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 3 | 1 | 53 | 166 | 224 | 341 |
| 270 | 12 | 9 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 271 | 710 | 457 | 16 | 66 | 171 | 370 | 0.230 | 1 | 0 | 0 | 0 | 3 | 1 | 54 | 168 | 227 | 52 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 273 | 11 | 7 | 0 | 2 | 2 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 274 | 731 | 472 | 16 | 69 | 174 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 171 | 233 | 178 |
| 275 | 85 | 27 | 3 | 10 | 45 | 377 | 0.234 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 44 | 53 | 12 |
| 276 | 734 | 463 | 17 | 69 | 185 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 182 | 244 | 24 |
| 277 | 4 | 3 | 0 | 0 | 1 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 211 | 141 | 5 | 19 | 46 | 157 | 0.098 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 45 | 62 | 6 |
| 280 | 869 | 558 | 19 | 81 | 211 | 163 | 0.101 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 207 | 280 | 28 |
| 281 | 25 | 16 | 0 | 2 | 7 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 1 |
| 282 | 449 | 298 | 10 | 41 | 100 | 167 | 0.104 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 98 | 135 | 14 |
| 283 | 220 | 79 | 8 | 30 | 103 | 405 | 0.252 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 101 | 128 | 32 |
| 284 | 1497 | 1,139 | 36 | 78 | 244 | 365 | 0.227 | 2 | 0 | 0 | 0 | 7 | 2 | 64 | 240 | 316 | 72 |
| 285 | 563 | 366 | 13 | 33 | 151 | 230 | 0.143 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 148 | 180 | 26 |
| 286 | 854 | 766 | 24 | 56 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 8 | 62 | 8 |
| 287 | 879 | 682 | 22 | 49 | 126 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 40 | 124 | 171 | 31 |
| 288 | 239 | 206 | 7 | 18 | 8 | 152 | 0.094 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 8 | 25 | 2 |
| 289 | 899 | 721 | 23 | 52 | 103 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 42 | 101 | 151 | 27 |
| 290 | 684 | 422 | 16 | 33 | 213 | 328 | 0.204 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 209 | 242 | 49 |
| 294 | 59 | 55 | 2 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 301 | 444 | 397 | 10 | 37 | 0 | 774 | 0.481 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 0 | 34 | 16 |
| 302 | 456 | 411 | 10 | 35 | 0 | 796 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 0 | 32 | 16 |
| 303 | 211 | 23 | 1 | 5 | 182 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 179 | 183 | 172 |
| 304 | 53 | 28 | 7 | 18 | 0 | 729 | 0.453 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 17 | 8 |
| 306 | 792 | 503 | 22 | 87 | 180 | 818 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 71 | 177 | 255 | 130 |
| 307 | 1328 | 936 | 47 | 165 | 180 | 0 | 0.000 | 2 | 0 | 0 | 0 | 10 | 3 | 134 | 177 | 326 | 0 |
| 324 | 27 | 25 | 0 | 1 | 1 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 |
| 325 | 1368 | 1,181 | 20 | 76 | 91 | 2224 | 1.382 | 2 | 0 | 0 | 0 | 4 | 1 | 62 | 89 | 159 | 220 |
| 326 | 76 | 71 | 1 | 2 | 2 | 3506 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 9 |
| 327 | 1252 | 1,073 | 19 | 73 | 87 | 227 | 0.141 | 2 | 0 | 0 | 0 | 4 | 1 | 59 | 86 | 152 | 21 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 17 | 15 | 1 | 1 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 358 | 2888 | 2,520 | 47 | 170 | 151 | 0 | 0.000 | 5 | 0 | 0 | 0 | 10 | 3 | 138 | 148 | 305 | 0 |
| 359 | 36 | 34 | 0 | 1 | 1 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 360 | 2114 | 1,855 | 36 | 130 | 93 | 247 | 0.153 | 3 | 0 | 0 | 0 | 7 | 2 | 106 | 91 | 211 | 32 |
| 361 | 1493 | 1,297 | 21 | 80 | 95 | 337 | 0.209 | 2 | 0 | 0 | 0 | 4 | 1 | 65 | 93 | 167 | 35 |
| 362 | 39 | 37 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 1483 | 1,316 | 25 | 92 | 50 | 4495 | 2.792 | 2 | 0 | 0 | 0 | 5 | 2 | 75 | 49 | 134 | 373 |
| 364 | 1240 | 1,103 | 21 | 58 | 58 | 286 | 0.178 | 2 | 0 | 0 | 0 | 4 | 1 | 47 | 57 | 112 | 20 |
| 365 | 659 | 556 | 13 | 35 | 55 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 54 | 87 | 87 |
| 366 | 19 | 7 | 0 | 2 | 10 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 11 | 12 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 5 | 2 | 0 | 1 | 2 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 387 | 943 | 701 | 29 | 109 | 104 | 2761 | 1.715 | 1 | 0 | 0 | 0 | 6 | 2 | 89 | 102 | 200 | 344 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 19 | 16 | 0 | 1 | 2 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 |
| 390 | 344 | 286 | 11 | 34 | 13 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 13 | 44 | 33 |
| 392 | 292 | 189 | 14 | 64 | 25 | 436 | 0.271 | 0 | 0 | 0 | 0 | 3 | 1 | 52 | 25 | 81 | 22 |
| 393 | 132 | 34 | 6 | 48 | 44 | 934 | 0.580 | 0 | 0 | 0 | 0 | 1 | 0 | 39 | 43 | 84 | 49 |
| 394 | 892 | 668 | 27 | 106 | 91 | 1292 | 0.803 | 1 | 0 | 0 | 0 | 6 | 2 | 86 | 89 | 185 | 148 |
| 396 | 1380 | 1,162 | 39 | 139 | 40 | 2366 | 1.470 | 2 | 0 | 0 | 0 | 8 | 3 | 113 | 39 | 166 | 243 |
| 397 | 1306 | 1,136 | 34 | 124 | 12 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 101 | 12 | 124 | 123 |
| 398 | 2621 | 2,378 | 62 | 181 | 0 | 560 | 0.348 | 4 | 0 | 0 | 0 | 13 | 4 | 147 | 0 | 169 | 59 |
| 399 | 195 | 183 | 4 | 8 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 17 |
| 400 | 410 | 386 | 9 | 14 | 1 | 1704 | 1.059 | 1 | 0 | 0 | 0 | 2 | 1 | 11 | 1 | 16 | 17 |
| 401 | 3 | 1 | 0 | 1 | 1 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 160 | 147 | 6 | 4 | 3 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 8 | 5 |
| 406 | 93 | 76 | 8 | 5 | 4 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 4 | 10 | 3 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 5 | 0 | 0 | 1 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 409 | 114 | 103 | 4 | 7 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 5 |
| 410 | 212 | 198 | 6 | 8 | 0 | 884 | 0.549 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 | 5 |
| 411 | 4 | 4 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 89 | 72 | 2 | 7 | 8 | 678 | 0.421 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 14 | 6 |
| 414 | 5 | 5 | 0 | 0 | 0 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 1166 | 998 | 32 | 109 | 27 | 855 | 0.531 | 2 | 0 | 0 | 0 | 7 | 2 | 89 | 27 | 126 | 67 |
| 416 | 480 | 388 | 17 | 65 | 10 | 284 | 0.176 | 1 | 0 | 0 | 0 | 3 | 1 | 53 | 10 | 68 | 12 |
| 417 | 8 | 6 | 0 | 0 | 2 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 419 | 526 | 451 | 13 | 50 | 12 | 343 | 0.213 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 12 | 57 | 12 |
| 420 | 2 | 0 | 0 | 0 | 2 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 331 | 110 | 5 | 14 | 202 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 199 | 212 | 109 |
| 425 | 129 | 121 | 1 | 5 | 2 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 7 | 1 |
| 426 | 1 | 0 | 0 | 0 | 1 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 427 | 17 | 4 | 1 | 5 | 7 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 11 | 5 |
| 428 | 44 | 41 | 0 | 1 | 2 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 429 | 1 | 1 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 447 | 366 | 8 | 23 | 50 | 114 | 0.071 | 1 | 0 | 0 | 0 | 2 | 1 | 19 | 49 | 71 | 5 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 194 | 185 | 3 | 5 | 1 | 1802 | 1.119 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 6 | 7 |
| 434 | 17 | 17 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 64 | 61 | 1 | 2 | 0 | 2365 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| 443 | 48 | 45 | 1 | 2 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 586 | 340 | 13 | 25 | 208 | 660 | 0.410 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 204 | 229 | 94 |
| 500 | 606 | 358 | 14 | 26 | 208 | 395 | 0.245 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 204 | 230 | 56 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 220 | 151 | 13 | 56 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 3 | 1 | 46 | 0 | 49 | 11 |
| | | | | | | | | | | | | | | | | | 15969 |

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 10 | 1 | 1 | 1 | 46 | 15 | 444 | 0 |
| 10 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 17 | 0 |
| 13 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 63 |
| 32 | 3 | 3 | 0 | 0 | 0 | 14 | 4 | 72 | 0 |
| 33 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 29 | 0 |
| 35 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 220 |
| 36 | 7 | 2 | 0 | 0 | 0 | 13 | 4 | 142 | 0 |
| 37 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 51 |
| 38 | 7 | 2 | 0 | 0 | 0 | 11 | 4 | 116 | 2 |
| 42 | 7 | 10 | 1 | 0 | 1 | 63 | 21 | 769 | 1464 |
| 43 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 62 |
| 46 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 57 |
| 47 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 48 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 50 | 3 | 4 | 0 | 0 | 0 | 19 | 6 | 150 | 0 |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 3 | 6 | 0 | 0 | 1 | 26 | 9 | 298 | 0 |
| 53 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 6 | 0 |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 0 |
| 58 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 60 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 28 |
| 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 16 |
| 66 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 16 |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 0 |
| 70 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 35 | 0 |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 3 | 4 | 0 | 0 | 0 | 15 | 5 | 173 | 0 |
| 74 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 1 |
| 75 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 76 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 77 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 |
| 80 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 35 |
| 83 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 44 |
| 87 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 88 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 9 |
| 96 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| 97 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 98 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 100 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 101 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 12 |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 10 |
| 104 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 107 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 108 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 109 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 110 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 12 |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 |
| 113 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 15 |
| 115 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 18 |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 117 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 18 |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 120 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 63 |
| 121 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 16 |
| 122 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 48 |
| 123 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 15 |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 14 |
| 127 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 95 |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 14 |
| 130 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 131 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 134 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 135 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 16 |
| 136 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 139 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 140 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 141 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 |
| 142 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 143 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 4 |
| 144 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 145 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 41 |
| 149 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 |
| 152 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 88 |
| 153 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 12 | 0 |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 30 | 0 |
| 156 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 17 | 0 |
| 157 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 35 | 0 |
| 158 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 11 |
| 159 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 0 |
| 162 | 3 | 2 | 0 | 0 | 0 | 10 | 3 | 138 | 0 |
| 163 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 0 |
| 164 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 165 | 1 | 7 | 0 | 0 | 1 | 31 | 10 | 358 | 0 |
| 168 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 55 | 0 |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3 | 2 | 0 | 0 | 0 | 5 | 2 | 51 | 0 |
| 172 | 6 | 3 | 0 | 0 | 0 | 8 | 3 | 95 | 0 |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 7 | 2 | 0 | 0 | 0 | 14 | 5 | 182 | 259 |
| 178 | 7 | 3 | 0 | 0 | 0 | 14 | 4 | 141 | 274 |
| 179 | 7 | 5 | 0 | 0 | 0 | 32 | 10 | 403 | 596 |
| 180 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 17 | 12 |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 7 | 21 | 1 | 1 | 2 | 44 | 14 | 602 | 719 |
| 191 | 7 | 14 | 1 | 1 | 1 | 29 | 10 | 424 | 455 |
| 192 | 7 | 2 | 0 | 0 | 0 | 4 | 1 | 35 | 90 |
| 194 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 |
| 195 | 5 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 0 |
| 196 | 5 | 1 | 0 | 0 | 0 | 5 | 1 | 57 | 0 |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 200 | 6 | 2 | 0 | 0 | 0 | 11 | 3 | 123 | 0 |
| 205 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 31 | 0 |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 0 |
| 215 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 24 |
| 217 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 12 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 |
| 219 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 232 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 39 | 77 |
| 233 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| 236 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 237 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 35 | 70 |
| 238 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 14 |
| 239 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 43 |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 30 |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 245 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 246 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 247 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 72 |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 3 | 2 | 0 | 0 | 0 | 4 | 1 | 46 | 90 |
| 261 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 29 |
| 262 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 38 |
| 263 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 266 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 15 |
| 267 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 268 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| 269 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 81 | 253 |
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 271 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 39 |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 274 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 43 | 131 |
| 275 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 276 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 |
| 277 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| 280 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 21 |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 282 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 25 |
| 284 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 14 | 54 |
| 285 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 21 |
| 286 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 |
| 287 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 22 |
| 288 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 289 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 18 |
| 290 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 43 |
| 294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 301 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 |
| 302 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 |
| 303 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 168 |
| 304 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 306 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 36 | 90 |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 325 | 7 | 3 | 0 | 0 | 0 | 6 | 2 | 85 | 124 |
| 326 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| 327 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 12 |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 359 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 360 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 16 | 14 |
| 361 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 20 |
| 362 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 1 | 7 | 0 | 0 | 1 | 14 | 5 | 209 | 137 |
| 364 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 365 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 54 |
| 366 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 387 | 3 | 2 | 0 | 0 | 0 | 10 | 3 | 152 | 175 |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 9 |
| 392 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 7 |
| 393 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 25 |
| 394 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 69 | 72 |
| 396 | 3 | 3 | 0 | 0 | 0 | 12 | 4 | 166 | 58 |
| 397 | 7 | 2 | 0 | 0 | 0 | 7 | 2 | 100 | 12 |
| 398 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 399 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 14 | 0 |
| 400 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 1 |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 |
| 406 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 409 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 410 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 3 | 1 | 0 | 0 | 0 | 3 | 1 | 47 | 14 |
| 416 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 2 |
| 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 3 |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 102 |
| 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 1 |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 443 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 84 |
| 500 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 50 |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 |
| Total | | **163** | **9** | **8** | **15** | **619** | **203** | **7231** | **7721** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | 1 | 1 | 2 | 80 | 26 | 961 | 1309 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 37 | 2 | 2 | 3 | 156 | 51 | 1647 | 562 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 2 | 0 | 0 | 0 | 10 | 3 | 112 | 49 | |
| 6 | 30 | 2 | 2 | 3 | 115 | 37 | 1254 | 1170 | |
| 7 | 71 | 4 | 4 | 6 | 259 | 85 | 3254 | 4627 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **163** | **9** | **8** | **15** | **619** | **203** | **7231** | **7721** | **15969** |

**World Logistics Center** **2022**
Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Surface Street Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5656 | 4,976 | 198 | 482 | 0 | 1820 | 1.131 | 2824 | 335 | 1020 | 787 | 131 | 14 | 90 | 0 | 5199 | 5878 |
| 10 | 717 | 647 | 29 | 41 | 0 | 826 | 0.513 | 367 | 43 | 133 | 102 | 19 | 2 | 8 | 0 | 674 | 346 |
| 13 | 969 | 620 | 13 | 38 | 298 | 345 | 0.214 | 352 | 42 | 127 | 98 | 9 | 1 | 7 | 5 | 640 | 137 |
| 32 | 1737 | 1,576 | 69 | 92 | 0 | 1551 | 0.964 | 894 | 106 | 323 | 249 | 46 | 5 | 17 | 0 | 1640 | 1580 |
| 33 | 526 | 481 | 16 | 29 | 0 | 2006 | 1.246 | 273 | 32 | 99 | 76 | 11 | 1 | 5 | 0 | 497 | 619 |
| 35 | 680 | 187 | 12 | 31 | 450 | 801 | 0.498 | 106 | 13 | 38 | 30 | 8 | 1 | 6 | 8 | 209 | 104 |
| 36 | 1351 | 1,116 | 62 | 173 | 0 | 1627 | 1.011 | 633 | 75 | 229 | 177 | 41 | 4 | 32 | 0 | 1191 | 1204 |
| 37 | 1050 | 478 | 39 | 151 | 382 | 219 | 0.136 | 271 | 32 | 98 | 76 | 26 | 3 | 28 | 6 | 540 | 73 |
| 38 | 2673 | 2,191 | 129 | 349 | 4 | 659 | 0.409 | 1243 | 147 | 449 | 347 | 85 | 9 | 65 | 0 | 2345 | 960 |
| 42 | 2434 | 1,607 | 93 | 285 | 449 | 5338 | 3.316 | 912 | 108 | 329 | 254 | 61 | 6 | 53 | 8 | 1732 | 5743 |
| 43 | 174 | 125 | 5 | 5 | 39 | 2598 | 1.614 | 71 | 8 | 26 | 20 | 3 | 0 | 1 | 1 | 130 | 210 |
| 46 | 308 | 176 | 8 | 8 | 116 | 806 | 0.501 | 100 | 12 | 36 | 28 | 5 | 1 | 1 | 2 | 185 | 93 |
| 47 | 92 | 85 | 4 | 3 | 0 | 1995 | 1.239 | 48 | 6 | 17 | 13 | 3 | 0 | 1 | 0 | 88 | 109 |
| 48 | 285 | 239 | 6 | 13 | 27 | 795 | 0.494 | 136 | 16 | 49 | 38 | 4 | 0 | 2 | 0 | 246 | 121 |
| 50 | 8434 | 7,495 | 318 | 621 | 0 | 479 | 0.298 | 4253 | 504 | 1536 | 1186 | 210 | 22 | 115 | 0 | 7826 | 2329 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5102 | 4,474 | 164 | 464 | 0 | 1269 | 0.788 | 2539 | 301 | 917 | 708 | 108 | 11 | 86 | 0 | 4670 | 3682 |
| 53 | 480 | 434 | 30 | 16 | 0 | 795 | 0.494 | 246 | 29 | 89 | 69 | 20 | 2 | 3 | 0 | 458 | 226 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 46 | 42 | 3 | 1 | 0 | 2042 | 1.269 | 24 | 3 | 9 | 7 | 2 | 0 | 0 | 0 | 44 | 56 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1354 | 1,122 | 59 | 173 | 0 | 246 | 0.153 | 637 | 75 | 230 | 178 | 39 | 4 | 32 | 0 | 1195 | 183 |
| 58 | 89 | 83 | 3 | 3 | 0 | 172 | 0.107 | 47 | 6 | 17 | 13 | 2 | 0 | 1 | 0 | 86 | 9 |
| 59 | 186 | 0 | 0 | 0 | 186 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 60 | 1111 | 738 | 20 | 64 | 289 | 159 | 0.099 | 419 | 50 | 151 | 117 | 13 | 1 | 12 | 5 | 768 | 76 |
| 61 | 139 | 37 | 5 | 5 | 92 | 97 | 0.060 | 21 | 2 | 8 | 6 | 3 | 0 | 1 | 2 | 43 | 3 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 373 | 317 | 8 | 16 | 32 | 795 | 0.494 | 180 | 21 | 65 | 50 | 5 | 1 | 3 | 1 | 326 | 161 |
| 66 | 473 | 401 | 13 | 27 | 32 | 812 | 0.504 | 228 | 27 | 82 | 63 | 9 | 1 | 5 | 1 | 415 | 209 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 69 | 998 | 907 | 34 | 57 | 0 | 819 | 0.509 | 515 | 61 | 186 | 144 | 22 | 2 | 11 | 0 | 940 | 478 |
| 70 | 1470 | 1,333 | 51 | 86 | 0 | 795 | 0.494 | 756 | 90 | 273 | 211 | 34 | 4 | 16 | 0 | 1383 | 683 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5009 | 4,386 | 161 | 462 | 0 | 742 | 0.461 | 2489 | 295 | 899 | 694 | 106 | 11 | 86 | 0 | 4580 | 2111 |
| 74 | 403 | 388 | 7 | 7 | 1 | 1573 | 0.977 | 220 | 26 | 80 | 61 | 5 | 0 | 1 | 0 | 394 | 385 |
| 75 | 156 | 140 | 4 | 7 | 5 | 805 | 0.500 | 79 | 9 | 29 | 22 | 3 | 0 | 1 | 0 | 144 | 72 |
| 76 | 37 | 32 | 1 | 4 | 0 | 1597 | 0.992 | 18 | 2 | 7 | 5 | 1 | 0 | 1 | 0 | 33 | 33 |
| 77 | 552 | 525 | 10 | 10 | 7 | 438 | 0.272 | 298 | 35 | 108 | 83 | 7 | 1 | 2 | 0 | 533 | 145 |
| 80 | 733 | 693 | 15 | 17 | 8 | 138 | 0.086 | 393 | 47 | 142 | 110 | 10 | 1 | 3 | 0 | 706 | 61 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1316 | 1,058 | 28 | 53 | 177 | 322 | 0.200 | 600 | 71 | 217 | 167 | 18 | 2 | 10 | 3 | 1089 | 218 |
| 83 | 632 | 504 | 14 | 26 | 88 | 95 | 0.059 | 286 | 34 | 103 | 80 | 9 | 1 | 5 | 1 | 519 | 31 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1787 | 1,379 | 47 | 110 | 251 | 284 | 0.176 | 783 | 93 | 283 | 218 | 31 | 3 | 20 | 4 | 1435 | 253 |
| 87 | 16 | 15 | 0 | 1 | 0 | 800 | 0.497 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 15 | 8 |
| 88 | 28 | 26 | 1 | 1 | 0 | 809 | 0.503 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 27 | 13 |
| 95 | 562 | 480 | 12 | 37 | 33 | 439 | 0.273 | 272 | 32 | 98 | 76 | 8 | 1 | 7 | 1 | 495 | 135 |
| 96 | 447 | 404 | 9 | 19 | 15 | 399 | 0.248 | 229 | 27 | 83 | 64 | 6 | 1 | 4 | 0 | 413 | 102 |
| 97 | 70 | 57 | 2 | 5 | 6 | 389 | 0.242 | 32 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 59 | 14 |
| 98 | 64 | 38 | 2 | 13 | 11 | 160 | 0.099 | 22 | 3 | 8 | 6 | 1 | 0 | 2 | 0 | 42 | 4 |
| 99 | 149 | 141 | 1 | 4 | 3 | 405 | 0.252 | 80 | 9 | 29 | 22 | 1 | 0 | 1 | 0 | 142 | 36 |
| 100 | 241 | 196 | 5 | 13 | 27 | 227 | 0.141 | 111 | 13 | 40 | 31 | 3 | 0 | 2 | 0 | 202 | 28 |
| 101 | 677 | 563 | 13 | 36 | 65 | 313 | 0.194 | 319 | 38 | 115 | 89 | 9 | 1 | 7 | 1 | 579 | 113 |
| 102 | 1 | 1 | 0 | 0 | 0 | 246 | 0.153 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 103 | 612 | 511 | 12 | 30 | 59 | 291 | 0.181 | 290 | 34 | 105 | 81 | 8 | 1 | 6 | 1 | 525 | 95 |
| 104 | 157 | 113 | 2 | 8 | 34 | 404 | 0.251 | 64 | 8 | 23 | 18 | 1 | 0 | 1 | 1 | 116 | 29 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 13 | 12 | 0 | 1 | 0 | 1803 | 1.120 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 14 |
| 107 | 191 | 142 | 3 | 12 | 34 | 388 | 0.241 | 81 | 10 | 29 | 22 | 2 | 0 | 2 | 1 | 147 | 35 |
| 108 | 14 | 12 | 0 | 2 | 0 | 997 | 0.619 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 8 |
| 109 | 38 | 29 | 2 | 7 | 0 | 787 | 0.489 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | 32 | 15 |
| 110 | 160 | 121 | 3 | 9 | 27 | 756 | 0.470 | 69 | 8 | 25 | 19 | 2 | 0 | 2 | 0 | 125 | 59 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 210 | 133 | 5 | 17 | 55 | 817 | 0.508 | 75 | 9 | 27 | 21 | 3 | 0 | 3 | 1 | 140 | 71 |
| 113 | 35 | 12 | 2 | 7 | 14 | 791 | 0.491 | 7 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 15 | 7 |
| 114 | 61 | 20 | 2 | 8 | 31 | 791 | 0.491 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 1 | 23 | 12 |
| 115 | 178 | 130 | 3 | 10 | 35 | 851 | 0.529 | 74 | 9 | 27 | 21 | 2 | 0 | 2 | 1 | 134 | 71 |
| 116 | 9 | 1 | 0 | 0 | 8 | 819 | 0.509 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 117 | 13 | 13 | 0 | 0 | 0 | 757 | 0.470 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 6 |
| 118 | 194 | 140 | 4 | 11 | 39 | 765 | 0.475 | 79 | 9 | 29 | 22 | 3 | 0 | 2 | 1 | 145 | 69 |
| 119 | 30 | 28 | 0 | 2 | 0 | 782 | 0.486 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | 28 | 14 |
| 120 | 234 | 88 | 5 | 15 | 126 | 814 | 0.506 | 50 | 6 | 18 | 14 | 3 | 0 | 3 | 2 | 96 | 49 |
| 121 | 191 | 146 | 4 | 10 | 31 | 825 | 0.513 | 83 | 10 | 30 | 23 | 3 | 0 | 2 | 1 | 151 | 77 |
| 122 | 172 | 58 | 3 | 10 | 101 | 782 | 0.486 | 33 | 4 | 12 | 9 | 2 | 0 | 2 | 2 | 64 | 31 |
| 123 | 12 | 12 | 0 | 0 | 0 | 791 | 0.491 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 6 |
| 124 | 218 | 170 | 5 | 12 | 31 | 800 | 0.497 | 96 | 11 | 35 | 27 | 3 | 0 | 2 | 1 | 176 | 87 |
| 125 | 1 | 1 | 0 | 0 | 0 | 817 | 0.508 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 126 | 233 | 188 | 5 | 11 | 29 | 774 | 0.481 | 107 | 13 | 39 | 30 | 3 | 0 | 2 | 0 | 194 | 93 |
| 127 | 240 | 39 | 3 | 10 | 188 | 825 | 0.513 | 22 | 3 | 8 | 6 | 2 | 0 | 2 | 3 | 46 | 24 |
| 128 | 1 | 1 | 0 | 0 | 0 | 774 | 0.481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 129 | 251 | 207 | 5 | 12 | 27 | 823 | 0.511 | 117 | 14 | 42 | 33 | 3 | 0 | 2 | 0 | 213 | 109 |
| 130 | 52 | 49 | 2 | 1 | 0 | 800 | 0.497 | 28 | 3 | 10 | 8 | 1 | 0 | 0 | 0 | 51 | 25 |
| 131 | 4 | 4 | 0 | 0 | 0 | 775 | 0.481 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 133 | 63 | 59 | 2 | 2 | 0 | 804 | 0.499 | 33 | 4 | 12 | 9 | 1 | 0 | 0 | 0 | 61 | 30 |
| 134 | 46 | 36 | 2 | 3 | 5 | 760 | 0.472 | 20 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | 38 | 18 |
| 135 | 331 | 275 | 8 | 16 | 32 | 816 | 0.507 | 156 | 18 | 56 | 44 | 5 | 1 | 3 | 1 | 284 | 144 |
| 136 | 71 | 67 | 2 | 2 | 0 | 786 | 0.488 | 38 | 5 | 14 | 11 | 1 | 0 | 0 | 0 | 69 | 34 |
| 137 | 1 | 1 | 0 | 0 | 0 | 790 | 0.491 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 138 | 25 | 10 | 1 | 4 | 10 | 267 | 0.166 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 12 | 2 |
| 139 | 196 | 168 | 4 | 12 | 12 | 504 | 0.313 | 95 | 11 | 34 | 27 | 3 | 0 | 2 | 0 | 173 | 54 |
| 140 | 27 | 12 | 1 | 2 | 12 | 527 | 0.327 | 7 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 13 | 4 |
| 141 | 189 | 167 | 3 | 9 | 10 | 1001 | 0.622 | 95 | 11 | 34 | 26 | 2 | 0 | 2 | 0 | 171 | 106 |
| 142 | 21 | 13 | 1 | 3 | 4 | 291 | 0.181 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 14 | 3 |
| 143 | 204 | 177 | 5 | 14 | 8 | 845 | 0.525 | 100 | 12 | 36 | 28 | 3 | 0 | 3 | 0 | 183 | 96 |
| 144 | 201 | 181 | 5 | 15 | 0 | 783 | 0.486 | 103 | 12 | 37 | 29 | 3 | 0 | 3 | 0 | 187 | 91 |
| 145 | 231 | 208 | 6 | 17 | 0 | 787 | 0.489 | 118 | 14 | 43 | 33 | 4 | 0 | 3 | 0 | 215 | 105 |
| 146 | 25 | 24 | 0 | 1 | 0 | 814 | 0.506 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 12 |
| 147 | 271 | 243 | 8 | 20 | 0 | 798 | 0.496 | 138 | 16 | 50 | 38 | 5 | 1 | 4 | 0 | 252 | 125 |
| 148 | 156 | 54 | 2 | 8 | 92 | 731 | 0.454 | 31 | 4 | 11 | 9 | 1 | 0 | 1 | 2 | 58 | 27 |
| 149 | 342 | 307 | 10 | 25 | 0 | 808 | 0.502 | 174 | 21 | 63 | 49 | 7 | 1 | 5 | 0 | 318 | 160 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 379 | 340 | 11 | 28 | 0 | 787 | 0.489 | 193 | 23 | 70 | 54 | 7 | 1 | 5 | 0 | 352 | 172 |
| 152 | 223 | 28 | 2 | 9 | 184 | 782 | 0.486 | 16 | 2 | 6 | 4 | 1 | 0 | 2 | 3 | 34 | 17 |
| 153 | 482 | 437 | 15 | 30 | 0 | 798 | 0.496 | 248 | 29 | 90 | 69 | 10 | 1 | 6 | 0 | 453 | 224 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1260 | 1,147 | 36 | 77 | 0 | 775 | 0.481 | 651 | 77 | 235 | 181 | 24 | 2 | 14 | 0 | 1185 | 571 |
| 156 | 668 | 607 | 17 | 44 | 0 | 771 | 0.479 | 344 | 41 | 124 | 96 | 11 | 1 | 8 | 0 | 626 | 300 |
| 157 | 1471 | 1,334 | 51 | 86 | 0 | 804 | 0.499 | 757 | 90 | 273 | 211 | 34 | 4 | 16 | 0 | 1384 | 691 |
| 158 | 232 | 194 | 5 | 15 | 18 | 1039 | 0.645 | 110 | 13 | 40 | 31 | 3 | 0 | 3 | 0 | 200 | 129 |
| 159 | 354 | 317 | 5 | 15 | 17 | 170 | 0.106 | 180 | 21 | 65 | 50 | 3 | 0 | 3 | 0 | 323 | 34 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 718 | 583 | 31 | 104 | 0 | 784 | 0.487 | 331 | 39 | 119 | 92 | 20 | 2 | 19 | 0 | 624 | 304 |
| 162 | 1687 | 1,351 | 77 | 259 | 0 | 1052 | 0.654 | 767 | 91 | 277 | 214 | 51 | 5 | 48 | 0 | 1452 | 949 |
| 163 | 908 | 712 | 44 | 152 | 0 | 350 | 0.217 | 404 | 48 | 146 | 113 | 29 | 3 | 28 | 0 | 771 | 168 |
| 164 | 19 | 15 | 1 | 3 | 0 | 473 | 0.294 | 9 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 16 | 5 |
| 165 | 4936 | 4,320 | 157 | 459 | 0 | 1541 | 0.957 | 2451 | 290 | 885 | 683 | 104 | 11 | 85 | 0 | 4510 | 4318 |
| 168 | 831 | 648 | 40 | 143 | 0 | 758 | 0.471 | 368 | 44 | 133 | 103 | 26 | 3 | 27 | 0 | 702 | 331 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3050 | 2,787 | 71 | 192 | 0 | 522 | 0.324 | 1582 | 187 | 571 | 441 | 47 | 5 | 36 | 0 | 2868 | 930 |
| 172 | 2888 | 2,632 | 67 | 189 | 0 | 993 | 0.617 | 1494 | 177 | 539 | 416 | 44 | 5 | 35 | 0 | 2710 | 1672 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2404 | 1,600 | 98 | 324 | 382 | 1110 | 0.690 | 908 | 108 | 328 | 253 | 65 | 7 | 60 | 6 | 1735 | 1196 |
| 178 | 445 | 328 | 15 | 39 | 63 | 7132 | 4.430 | 186 | 22 | 67 | 52 | 10 | 1 | 7 | 1 | 347 | 1535 |
| 179 | 2868 | 1,943 | 115 | 364 | 446 | 2189 | 1.360 | 1103 | 131 | 398 | 307 | 76 | 8 | 68 | 8 | 2098 | 2853 |
| 180 | 127 | 115 | 4 | 5 | 3 | 6725 | 4.178 | 65 | 8 | 24 | 18 | 3 | 0 | 1 | 0 | 119 | 496 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 3350 | 2,924 | 54 | 187 | 185 | 6368 | 3.956 | 1659 | 197 | 599 | 463 | 36 | 4 | 35 | 3 | 2995 | 11848 |
| 191 | 2893 | 2,523 | 47 | 171 | 152 | 4906 | 3.048 | 1432 | 170 | 517 | 399 | 31 | 3 | 32 | 3 | 2586 | 7882 |
| 192 | 458 | 401 | 7 | 16 | 34 | 4358 | 2.707 | 228 | 27 | 82 | 63 | 5 | 0 | 3 | 1 | 409 | 1107 |
| 194 | 412 | 329 | 20 | 63 | 0 | 355 | 0.221 | 187 | 22 | 67 | 52 | 13 | 1 | 12 | 0 | 355 | 78 |
| 195 | 718 | 592 | 31 | 95 | 0 | 397 | 0.247 | 336 | 40 | 121 | 94 | 20 | 2 | 18 | 0 | 631 | 156 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196 | 1129 | 921 | 50 | 158 | 0 | 716 | 0.445 | 523 | 62 | 189 | 146 | 33 | 3 | 29 | 0 | 985 | 438 |
| 198 | 0 | 0 | 0 | 0 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 168 | 152 | 6 | 10 | 0 | 378 | 0.235 | 86 | 10 | 31 | 24 | 4 | 0 | 2 | 0 | 158 | 37 |
| 200 | 1354 | 1,122 | 59 | 173 | 0 | 1403 | 0.872 | 637 | 75 | 230 | 178 | 39 | 4 | 32 | 0 | 1195 | 1041 |
| 205 | 274 | 221 | 12 | 41 | 0 | 1501 | 0.932 | 125 | 15 | 45 | 35 | 8 | 1 | 8 | 0 | 237 | 221 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 274 | 221 | 12 | 41 | 0 | 2611 | 1.622 | 125 | 15 | 45 | 35 | 8 | 1 | 8 | 0 | 237 | 384 |
| 215 | 10 | 10 | 0 | 0 | 0 | 2937 | 1.825 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 18 |
| 216 | 232 | 197 | 4 | 11 | 20 | 2000 | 1.242 | 112 | 13 | 40 | 31 | 3 | 0 | 2 | 0 | 202 | 251 |
| 217 | 373 | 317 | 7 | 19 | 30 | 663 | 0.412 | 180 | 21 | 65 | 50 | 5 | 0 | 4 | 1 | 325 | 134 |
| 218 | 74 | 60 | 1 | 4 | 9 | 1167 | 0.725 | 34 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 61 | 45 |
| 219 | 12 | 11 | 0 | 0 | 1 | 2672 | 1.660 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 18 |
| 221 | 5 | 5 | 0 | 0 | 0 | 2622 | 1.629 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 8 |
| 223 | 13 | 13 | 0 | 0 | 0 | 359 | 0.223 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 3 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 50 | 36 | 1 | 4 | 9 | 1643 | 1.021 | 20 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | 38 | 38 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 9 | 9 | 0 | 0 | 0 | 1122 | 0.697 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 6 |
| 230 | 35 | 35 | 0 | 0 | 0 | 1007 | 0.626 | 20 | 2 | 7 | 6 | 0 | 0 | 0 | 0 | 35 | 22 |
| 231 | 76 | 66 | 1 | 3 | 6 | 1968 | 1.223 | 37 | 4 | 14 | 10 | 1 | 0 | 1 | 0 | 67 | 82 |
| 232 | 650 | 520 | 12 | 45 | 73 | 1719 | 1.068 | 295 | 35 | 107 | 82 | 8 | 1 | 8 | 1 | 537 | 574 |
| 233 | 61 | 47 | 1 | 4 | 9 | 976 | 0.606 | 27 | 3 | 10 | 7 | 1 | 0 | 1 | 0 | 49 | 29 |
| 236 | 17 | 13 | 0 | 2 | 2 | 794 | 0.493 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 7 |
| 237 | 534 | 404 | 11 | 45 | 74 | 1556 | 0.967 | 229 | 27 | 83 | 64 | 7 | 1 | 8 | 1 | 421 | 407 |
| 238 | 226 | 185 | 4 | 17 | 20 | 1120 | 0.696 | 105 | 12 | 38 | 29 | 3 | 0 | 3 | 0 | 191 | 133 |
| 239 | 280 | 197 | 6 | 26 | 51 | 1385 | 0.860 | 112 | 13 | 40 | 31 | 4 | 0 | 5 | 1 | 207 | 178 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 283 | 201 | 6 | 26 | 50 | 989 | 0.614 | 114 | 14 | 41 | 32 | 4 | 0 | 5 | 1 | 211 | 129 |
| 243 | 25 | 16 | 1 | 2 | 6 | 64 | 0.040 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 17 | 1 |
| 244 | 18 | 8 | 0 | 2 | 8 | 173 | 0.107 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 1 |
| 245 | 72 | 46 | 1 | 7 | 18 | 181 | 0.112 | 26 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | 48 | 5 |
| 246 | 52 | 27 | 1 | 6 | 18 | 273 | 0.170 | 15 | 2 | 6 | 4 | 1 | 0 | 1 | 0 | 29 | 5 |
| 247 | 259 | 190 | 6 | 22 | 41 | 87 | 0.054 | 108 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 199 | 11 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 678 | 546 | 12 | 46 | 74 | 1588 | 0.986 | 310 | 37 | 112 | 86 | 8 | 1 | 9 | 1 | 563 | 556 |
| 254 | 1 | 1 | 0 | 0 | 0 | 424 | 0.263 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 256 | 218 | 205 | 3 | 4 | 6 | 943 | 0.586 | 116 | 14 | 42 | 32 | 2 | 0 | 1 | 0 | 208 | 122 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 911 | 761 | 16 | 51 | 83 | 1783 | 1.108 | 432 | 51 | 156 | 120 | 11 | 1 | 9 | 1 | 782 | 866 |
| 261 | 155 | 98 | 4 | 13 | 40 | 1181 | 0.734 | 56 | 7 | 20 | 16 | 3 | 0 | 2 | 1 | 104 | 76 |
| 262 | 315 | 209 | 7 | 27 | 72 | 860 | 0.534 | 119 | 14 | 43 | 33 | 5 | 0 | 5 | 1 | 220 | 117 |
| 263 | 951 | 781 | 18 | 57 | 95 | 141 | 0.088 | 443 | 53 | 160 | 124 | 12 | 1 | 11 | 2 | 805 | 70 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 529 | 421 | 11 | 37 | 60 | 98 | 0.061 | 239 | 28 | 86 | 67 | 7 | 1 | 7 | 1 | 436 | 27 |
| 266 | 1312 | 1,049 | 26 | 90 | 147 | 171 | 0.106 | 595 | 71 | 215 | 166 | 17 | 2 | 17 | 2 | 1085 | 115 |
| 267 | 238 | 163 | 6 | 26 | 43 | 156 | 0.097 | 92 | 11 | 33 | 26 | 4 | 0 | 5 | 1 | 173 | 17 |
| 268 | 884 | 724 | 17 | 54 | 89 | 159 | 0.099 | 411 | 49 | 148 | 115 | 11 | 1 | 10 | 2 | 746 | 74 |
| 269 | 697 | 448 | 15 | 65 | 169 | 2450 | 1.522 | 254 | 30 | 92 | 71 | 10 | 1 | 12 | 3 | 473 | 720 |
| 270 | 12 | 9 | 0 | 1 | 2 | 620 | 0.385 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 4 |
| 271 | 710 | 457 | 16 | 66 | 171 | 370 | 0.230 | 259 | 31 | 94 | 72 | 11 | 1 | 12 | 3 | 483 | 111 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 11 | 7 | 0 | 2 | 2 | 625 | 0.388 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 | 3 |
| 274 | 731 | 472 | 16 | 69 | 174 | 1231 | 0.765 | 268 | 32 | 97 | 75 | 11 | 1 | 13 | 3 | 498 | 381 |
| 275 | 85 | 27 | 3 | 10 | 45 | 377 | 0.234 | 15 | 2 | 6 | 4 | 2 | 0 | 2 | 1 | 32 | 7 |
| 276 | 734 | 463 | 17 | 69 | 185 | 159 | 0.099 | 263 | 31 | 95 | 73 | 11 | 1 | 13 | 3 | 490 | 48 |
| 277 | 4 | 3 | 0 | 0 | 1 | 1074 | 0.667 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 211 | 141 | 5 | 19 | 46 | 157 | 0.098 | 80 | 9 | 29 | 22 | 3 | 0 | 4 | 1 | 149 | 14 |
| 280 | 869 | 558 | 19 | 81 | 211 | 163 | 0.101 | 317 | 38 | 114 | 88 | 13 | 1 | 15 | 4 | 589 | 60 |
| 281 | 25 | 16 | 0 | 2 | 7 | 280 | 0.174 | 9 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 16 | 3 |
| 282 | 449 | 298 | 10 | 41 | 100 | 167 | 0.104 | 169 | 20 | 61 | 47 | 7 | 1 | 8 | 2 | 314 | 33 |
| 283 | 220 | 79 | 8 | 30 | 103 | 405 | 0.252 | 45 | 5 | 16 | 12 | 5 | 1 | 6 | 2 | 92 | 23 |
| 284 | 1497 | 1,139 | 36 | 78 | 244 | 365 | 0.227 | 646 | 77 | 233 | 180 | 24 | 2 | 14 | 4 | 1181 | 268 |
| 285 | 563 | 366 | 13 | 33 | 151 | 230 | 0.143 | 208 | 25 | 75 | 58 | 9 | 1 | 6 | 3 | 383 | 55 |
| 286 | 854 | 766 | 24 | 56 | 8 | 209 | 0.130 | 435 | 51 | 157 | 121 | 16 | 2 | 10 | 0 | 792 | 103 |
| 287 | 879 | 682 | 22 | 49 | 126 | 292 | 0.181 | 387 | 46 | 140 | 108 | 15 | 2 | 9 | 2 | 708 | 128 |
| 288 | 239 | 206 | 7 | 18 | 8 | 152 | 0.094 | 117 | 14 | 42 | 33 | 5 | 0 | 3 | 0 | 214 | 20 |
| 289 | 899 | 721 | 23 | 52 | 103 | 285 | 0.177 | 409 | 48 | 148 | 114 | 15 | 2 | 10 | 2 | 748 | 132 |
| 290 | 684 | 422 | 16 | 33 | 213 | 328 | 0.204 | 239 | 28 | 86 | 67 | 11 | 1 | 6 | 4 | 442 | 90 |
| 294 | 59 | 55 | 2 | 2 | 0 | 824 | 0.512 | 31 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 57 | 29 |
| 301 | 444 | 397 | 10 | 37 | 0 | 774 | 0.481 | 225 | 27 | 81 | 63 | 7 | 1 | 7 | 0 | 410 | 197 |
| 302 | 456 | 411 | 10 | 35 | 0 | 796 | 0.494 | 233 | 28 | 84 | 65 | 7 | 1 | 7 | 0 | 424 | 210 |
| 303 | 211 | 23 | 1 | 5 | 182 | 1514 | 0.941 | 13 | 2 | 5 | 4 | 1 | 0 | 1 | 3 | 28 | 26 |
| 304 | 53 | 28 | 7 | 18 | 0 | 729 | 0.453 | 16 | 2 | 6 | 4 | 5 | 0 | 3 | 0 | 36 | 16 |
| 306 | 792 | 503 | 22 | 87 | 180 | 818 | 0.508 | 285 | 34 | 103 | 80 | 15 | 2 | 16 | 3 | 537 | 273 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 307 | 1328 | 936 | 47 | 165 | 180 | 0 | 0.000 | 531 | 63 | 192 | 148 | 31 | 3 | 31 | 3 | 1002 | 0 |
| 324 | 27 | 25 | 0 | 1 | 1 | 2925 | 1.817 | 14 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 25 | 46 |
| 325 | 1368 | 1,181 | 20 | 76 | 91 | 2224 | 1.382 | 670 | 79 | 242 | 187 | 13 | 1 | 14 | 2 | 1209 | 1670 |
| 326 | 76 | 71 | 1 | 2 | 2 | 3506 | 2.178 | 40 | 5 | 15 | 11 | 1 | 0 | 0 | 0 | 72 | 157 |
| 327 | 1252 | 1,073 | 19 | 73 | 87 | 227 | 0.141 | 609 | 72 | 220 | 170 | 13 | 1 | 14 | 1 | 1100 | 155 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 17 | 15 | 1 | 1 | 0 | 0 | 0.000 | 9 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 16 | 0 |
| 358 | 2888 | 2,520 | 47 | 170 | 151 | 0 | 0.000 | 1430 | 169 | 516 | 399 | 31 | 3 | 32 | 3 | 2583 | 0 |
| 359 | 36 | 34 | 0 | 1 | 1 | 339 | 0.211 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 34 | 7 |
| 360 | 2114 | 1,855 | 36 | 130 | 93 | 247 | 0.153 | 1053 | 125 | 380 | 293 | 24 | 2 | 24 | 2 | 1903 | 292 |
| 361 | 1493 | 1,297 | 21 | 80 | 95 | 337 | 0.209 | 736 | 87 | 266 | 205 | 14 | 1 | 15 | 2 | 1326 | 278 |
| 362 | 39 | 37 | 0 | 1 | 1 | 338 | 0.210 | 21 | 2 | 8 | 6 | 0 | 0 | 0 | 0 | 37 | 8 |
| 363 | 1483 | 1,316 | 25 | 92 | 50 | 4495 | 2.792 | 747 | 88 | 270 | 208 | 16 | 2 | 17 | 1 | 1349 | 3768 |
| 364 | 1240 | 1,103 | 21 | 58 | 58 | 286 | 0.178 | 626 | 74 | 226 | 175 | 14 | 1 | 11 | 1 | 1128 | 200 |
| 365 | 659 | 556 | 13 | 35 | 55 | 1602 | 0.995 | 316 | 37 | 114 | 88 | 9 | 1 | 7 | 1 | 572 | 569 |
| 366 | 19 | 7 | 0 | 2 | 10 | 1742 | 1.082 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 8 | 8 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 5 | 2 | 0 | 1 | 2 | 810 | 0.503 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 387 | 943 | 701 | 29 | 109 | 104 | 2761 | 1.715 | 398 | 47 | 144 | 111 | 19 | 2 | 20 | 2 | 743 | 1274 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 19 | 16 | 0 | 1 | 2 | 189 | 0.117 | 9 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 16 | 2 |
| 390 | 344 | 286 | 11 | 34 | 13 | 1189 | 0.739 | 162 | 19 | 59 | 45 | 7 | 1 | 6 | 0 | 300 | 222 |
| 392 | 292 | 189 | 14 | 64 | 25 | 436 | 0.271 | 107 | 13 | 39 | 30 | 9 | 1 | 12 | 0 | 211 | 57 |
| 393 | 132 | 34 | 6 | 48 | 44 | 934 | 0.580 | 19 | 2 | 7 | 5 | 4 | 0 | 9 | 1 | 48 | 28 |
| 394 | 892 | 668 | 27 | 106 | 91 | 1292 | 0.803 | 379 | 45 | 137 | 106 | 18 | 2 | 20 | 2 | 707 | 568 |
| 396 | 1380 | 1,162 | 39 | 139 | 40 | 2366 | 1.470 | 659 | 78 | 238 | 184 | 26 | 3 | 26 | 1 | 1214 | 1785 |
| 397 | 1306 | 1,136 | 34 | 124 | 12 | 1588 | 0.986 | 645 | 76 | 233 | 180 | 22 | 2 | 23 | 0 | 1182 | 1166 |
| 398 | 2621 | 2,378 | 62 | 181 | 0 | 560 | 0.348 | 1349 | 160 | 487 | 376 | 41 | 4 | 34 | 0 | 2452 | 853 |
| 399 | 195 | 183 | 4 | 8 | 0 | 3389 | 2.105 | 104 | 12 | 38 | 29 | 3 | 0 | 1 | 0 | 187 | 394 |
| 400 | 410 | 386 | 9 | 14 | 1 | 1704 | 1.059 | 219 | 26 | 79 | 61 | 6 | 1 | 3 | 0 | 394 | 417 |
| 401 | 3 | 1 | 0 | 1 | 1 | 790 | 0.491 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 160 | 147 | 6 | 4 | 3 | 1010 | 0.627 | 83 | 10 | 30 | 23 | 4 | 0 | 1 | 0 | 152 | 95 |
| 406 | 93 | 76 | 8 | 5 | 4 | 395 | 0.245 | 43 | 5 | 16 | 12 | 5 | 1 | 1 | 0 | 83 | 20 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 5 | 0 | 0 | 1 | 1072 | 0.666 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 3 |
| 409 | 114 | 103 | 4 | 7 | 0 | 1137 | 0.706 | 58 | 7 | 21 | 16 | 3 | 0 | 1 | 0 | 107 | 76 |
| 410 | 212 | 198 | 6 | 8 | 0 | 884 | 0.549 | 112 | 13 | 41 | 31 | 4 | 0 | 1 | 0 | 203 | 112 |
| 411 | 4 | 4 | 0 | 0 | 0 | 2332 | 1.449 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 6 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 89 | 72 | 2 | 7 | 8 | 678 | 0.421 | 41 | 5 | 15 | 11 | 1 | 0 | 1 | 0 | 75 | 31 |
| 414 | 5 | 5 | 0 | 0 | 0 | 895 | 0.556 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 3 |
| 415 | 1166 | 998 | 32 | 109 | 27 | 855 | 0.531 | 566 | 67 | 205 | 158 | 21 | 2 | 20 | 0 | 1040 | 552 |
| 416 | 480 | 388 | 17 | 65 | 10 | 284 | 0.176 | 220 | 26 | 80 | 61 | 11 | 1 | 12 | 0 | 412 | 73 |
| 417 | 8 | 6 | 0 | 0 | 2 | 303 | 0.188 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 6 | 1 |
| 419 | 526 | 451 | 13 | 50 | 12 | 343 | 0.213 | 256 | 30 | 92 | 71 | 9 | 1 | 9 | 0 | 469 | 100 |
| 420 | 2 | 0 | 0 | 0 | 2 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 331 | 110 | 5 | 14 | 202 | 828 | 0.514 | 62 | 7 | 23 | 17 | 3 | 0 | 3 | 3 | 119 | 61 |
| 425 | 129 | 121 | 1 | 5 | 2 | 203 | 0.126 | 69 | 8 | 25 | 19 | 1 | 0 | 1 | 0 | 122 | 15 |
| 426 | 1 | 0 | 0 | 0 | 1 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 17 | 4 | 1 | 5 | 7 | 654 | 0.406 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 6 | 2 |
| 428 | 44 | 41 | 0 | 1 | 2 | 293 | 0.182 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 41 | 7 |
| 429 | 1 | 1 | 0 | 0 | 0 | 219 | 0.136 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 430 | 447 | 366 | 8 | 23 | 50 | 114 | 0.071 | 208 | 25 | 75 | 58 | 5 | 1 | 4 | 1 | 376 | 27 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 194 | 185 | 3 | 5 | 1 | 1802 | 1.119 | 105 | 12 | 38 | 29 | 2 | 0 | 1 | 0 | 188 | 210 |
| 434 | 17 | 17 | 0 | 0 | 0 | 1269 | 0.788 | 10 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 17 | 13 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 64 | 61 | 1 | 2 | 0 | 2365 | 1.469 | 35 | 4 | 13 | 10 | 1 | 0 | 0 | 0 | 62 | 91 |
| 443 | 48 | 45 | 1 | 2 | 0 | 1588 | 0.986 | 26 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | 46 | 45 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 586 | 340 | 13 | 25 | 208 | 660 | 0.410 | 193 | 23 | 70 | 54 | 9 | 1 | 5 | 4 | 357 | 146 |
| 500 | 606 | 358 | 14 | 26 | 208 | 395 | 0.245 | 203 | 24 | 73 | 57 | 9 | 1 | 5 | 4 | 376 | 92 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 220 | 151 | 13 | 56 | 0 | 360 | 0.224 | 86 | 10 | 31 | 24 | 9 | 1 | 10 | 0 | 171 | 38 |

Total 93990

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2-GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) | Road Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 3193 | 378 | 1153 | 890 | 148 | 15 | 101 | 0 | A |
| 10 | 3 | 188 | 22 | 68 | 53 | 10 | 1 | 4 | 0 | A |
| 13 | 6 | 75 | 9 | 27 | 21 | 2 | 0 | 2 | 1 | A |
| 32 | 3 | 862 | 102 | 311 | 240 | 44 | 5 | 16 | 0 | A |
| 33 | 1 | 340 | 40 | 123 | 95 | 13 | 1 | 7 | 0 | M |
| 35 | 7 | 53 | 6 | 19 | 15 | 4 | 0 | 3 | 4 | A |
| 36 | 7 | 640 | 76 | 231 | 178 | 41 | 4 | 32 | 0 | A |
| 37 | 7 | 37 | 4 | 13 | 10 | 4 | 0 | 4 | 1 | A |
| 38 | 7 | 509 | 60 | 184 | 142 | 35 | 4 | 27 | 0 | A |
| 42 | 7 | 3024 | 358 | 1092 | 843 | 203 | 21 | 176 | 25 | A |
| 43 | 7 | 114 | 14 | 41 | 32 | 5 | 1 | 1 | 1 | A |
| 46 | 7 | 50 | 6 | 18 | 14 | 3 | 0 | 1 | 1 | A |
| 47 | 7 | 60 | 7 | 22 | 17 | 3 | 0 | 1 | 0 | A |
| 48 | 6 | 67 | 8 | 24 | 19 | 2 | 0 | 1 | 0 | A |
| 50 | 3 | 1266 | 150 | 457 | 353 | 62 | 7 | 34 | 0 | A |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 52 | 3 | 2001 | 237 | 723 | 558 | 85 | 9 | 68 | 0 | A |
| 53 | 6 | 122 | 14 | 44 | 34 | 10 | 1 | 1 | 0 | A |
| 54 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 55 | 6 | 30 | 4 | 11 | 8 | 3 | 0 | 0 | 0 | A |
| 56 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 57 | 7 | 97 | 12 | 35 | 27 | 6 | 1 | 5 | 0 | A |
| 58 | 1 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | M |
| 60 | 1 | 41 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | M |
| 61 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 65 | 3 | 89 | 11 | 32 | 25 | 3 | 0 | 1 | 0 | A |
| 66 | 3 | 115 | 14 | 41 | 32 | 4 | 0 | 3 | 0 | A |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 68 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 69 | 3 | 262 | 31 | 95 | 73 | 11 | 1 | 5 | 0 | A |
| 70 | 3 | 374 | 44 | 135 | 104 | 17 | 2 | 8 | 0 | A |
| 71 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 73 | 3 | 1147 | 136 | 414 | 320 | 49 | 5 | 40 | 0 | A |
| 74 | 6 | 215 | 25 | 78 | 60 | 5 | 0 | 1 | 0 | A |
| 75 | 1 | 40 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | M |
| 76 | 1 | 18 | 2 | 7 | 5 | 1 | 0 | 1 | 0 | M |
| 77 | 5 | 81 | 10 | 29 | 23 | 2 | 0 | 1 | 0 | A |
| 80 | 5 | 34 | 4 | 12 | 9 | 1 | 0 | 0 | 0 | A |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 82 | 1 | 120 | 14 | 43 | 33 | 4 | 0 | 2 | 1 | M |
| 83 | 5 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | A |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 86 | 1 | 138 | 16 | 50 | 38 | 5 | 1 | 4 | 1 | M |
| 87 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 88 | 1 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 95 | 6 | 74 | 9 | 27 | 21 | 2 | 0 | 2 | 0 | A |
| 96 | 8 | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | A |
| 97 | 5 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 98 | 5 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 99 | 5 | 20 | 2 | 7 | 6 | 0 | 0 | 0 | 0 | A |
| 100 | 1 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | M |
| 101 | 1 | 62 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | M |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 103 | 1 | 52 | 6 | 19 | 15 | 1 | 0 | 1 | 0 | M |
| 104 | 1 | 16 | 2 | 6 | 4 | 0 | 0 | 0 | 0 | M |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 106 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 107 | 1 | 19 | 2 | 7 | 5 | 0 | 0 | 1 | 0 | M |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 1 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 109 | 5 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | A |
| 110 | 6 | 32 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | A |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 112 | 6 | 38 | 5 | 14 | 11 | 2 | 0 | 2 | 0 | A |
| 113 | 5 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | A |
| 114 | 1 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | M |
| 115 | 6 | 39 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 117 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 118 | 6 | 38 | 4 | 14 | 11 | 1 | 0 | 1 | 0 | A |
| 119 | 6 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 120 | 1 | 25 | 3 | 9 | 7 | 2 | 0 | 1 | 1 | M |
| 121 | 6 | 42 | 5 | 15 | 12 | 1 | 0 | 1 | 0 | A |
| 122 | 3 | 16 | 2 | 6 | 4 | 1 | 0 | 1 | 1 | A |
| 123 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 124 | 6 | 48 | 6 | 17 | 13 | 2 | 0 | 1 | 0 | A |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 126 | 6 | 51 | 6 | 19 | 14 | 2 | 0 | 1 | 0 | A |
| 127 | 1 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 2 | M |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 129 | 6 | 60 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | A |
| 130 | 6 | 14 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 131 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 133 | 3 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | A |
| 134 | 1 | 10 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 135 | 3 | 79 | 9 | 29 | 22 | 3 | 0 | 2 | 0 | A |
| 136 | 6 | 19 | 2 | 7 | 5 | 1 | 0 | 0 | 0 | A |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 139 | 1 | 30 | 4 | 11 | 8 | 1 | 0 | 1 | 0 | M |
| 140 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 141 | 1 | 59 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | M |
| 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 143 | 3 | 53 | 6 | 19 | 15 | 2 | 0 | 1 | 0 | A |
| 144 | 3 | 50 | 6 | 18 | 14 | 2 | 0 | 1 | 0 | A |
| 145 | 3 | 58 | 7 | 21 | 16 | 2 | 0 | 2 | 0 | A |
| 146 | 6 | 7 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 147 | 6 | 68 | 8 | 25 | 19 | 3 | 0 | 2 | 0 | A |
| 148 | 3 | 14 | 2 | 5 | 4 | 1 | 0 | 1 | 1 | A |
| 149 | 6 | 87 | 10 | 32 | 24 | 3 | 0 | 2 | 0 | A |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 151 | 1 | 94 | 11 | 34 | 26 | 4 | 0 | 3 | 0 | M |
| 152 | 1 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 2 | M |
| 153 | 1 | 123 | 15 | 44 | 34 | 5 | 1 | 3 | 0 | M |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 155 | 3 | 313 | 37 | 113 | 87 | 11 | 1 | 7 | 0 | A |
| 156 | 3 | 165 | 20 | 60 | 46 | 5 | 1 | 4 | 0 | A |
| 157 | 3 | 378 | 45 | 137 | 105 | 17 | 2 | 8 | 0 | A |
| 158 | 6 | 71 | 8 | 26 | 20 | 2 | 0 | 2 | 0 | A |
| 159 | 6 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | A |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 161 | 3 | 161 | 19 | 58 | 45 | 10 | 1 | 9 | 0 | A |
| 162 | 3 | 501 | 59 | 181 | 140 | 33 | 3 | 31 | 0 | A |
| 163 | 3 | 88 | 10 | 32 | 24 | 6 | 1 | 6 | 0 | A |
| 164 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 165 | 1 | 2347 | 278 | 847 | 654 | 99 | 10 | 82 | 0 | M |
| 168 | 1 | 173 | 21 | 63 | 48 | 12 | 1 | 13 | 0 | M |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 170 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 171 | 3 | 513 | 61 | 185 | 143 | 15 | 2 | 12 | 0 | A |
| 172 | 6 | 921 | 109 | 333 | 257 | 27 | 3 | 22 | 0 | A |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 177 | 7 | 626 | 74 | 226 | 175 | 45 | 5 | 42 | 4 | A |
| 178 | 7 | 825 | 98 | 298 | 230 | 44 | 5 | 32 | 5 | A |
| 179 | 7 | 1499 | 178 | 541 | 418 | 103 | 11 | 92 | 10 | A |
| 180 | 7 | 273 | 32 | 98 | 76 | 11 | 1 | 4 | 0 | A |
| 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 182 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 184 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 186 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 190 | 7 | 6564 | 778 | 2370 | 1830 | 141 | 15 | 137 | 12 | A |
| 191 | 7 | 4363 | 517 | 1576 | 1217 | 95 | 10 | 97 | 8 | A |
| 192 | 7 | 616 | 73 | 222 | 172 | 13 | 1 | 8 | 2 | A |
| 194 | 5 | 41 | 5 | 15 | 11 | 3 | 0 | 3 | 0 | A |
| 195 | 5 | 83 | 10 | 30 | 23 | 5 | 1 | 4 | 0 | A |
| 196 | 5 | 232 | 28 | 84 | 65 | 15 | 2 | 13 | 0 | A |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 199 | 5 | 20 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | A |
| 200 | 6 | 555 | 66 | 200 | 155 | 34 | 4 | 28 | 0 | A |
| 205 | 6 | 117 | 14 | 42 | 33 | 7 | 1 | 7 | 0 | A |
| 206 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 207 | 6 | 203 | 24 | 73 | 57 | 13 | 1 | 12 | 0 | A |
| 215 | 3 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 216 | 6 | 139 | 16 | 50 | 39 | 3 | 0 | 3 | 0 | A |
| 217 | 3 | 74 | 9 | 27 | 21 | 2 | 0 | 1 | 0 | A |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 7 | 25 | 3 | 9 | 7 | 0 | 0 | 1 | 0 | A |
| 219 | 6 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 221 | 6 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 223 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 226 | 7 | 21 | 2 | 8 | 6 | 1 | 0 | 1 | 0 | A |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 229 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 230 | 6 | 12 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 231 | 6 | 46 | 5 | 17 | 13 | 1 | 0 | 1 | 0 | A |
| 232 | 7 | 315 | 37 | 114 | 88 | 8 | 1 | 9 | 1 | A |
| 233 | 7 | 16 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | A |
| 236 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 237 | 7 | 222 | 26 | 80 | 62 | 7 | 1 | 8 | 1 | A |
| 238 | 6 | 73 | 9 | 26 | 20 | 2 | 0 | 2 | 0 | A |
| 239 | 6 | 96 | 11 | 35 | 27 | 3 | 0 | 4 | 1 | A |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 242 | 1 | 70 | 8 | 25 | 20 | 2 | 0 | 3 | 1 | M |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 245 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 246 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 247 | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 250 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 252 | 6 | 306 | 36 | 110 | 85 | 8 | 1 | 8 | 1 | A |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 256 | 6 | 68 | 8 | 25 | 19 | 1 | 0 | 0 | 0 | A |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 260 | 3 | 478 | 57 | 173 | 133 | 12 | 1 | 10 | 2 | A |
| 261 | 5 | 41 | 5 | 15 | 11 | 2 | 0 | 2 | 0 | A |
| 262 | 1 | 63 | 8 | 23 | 18 | 2 | 0 | 3 | 1 | M |
| 263 | 1 | 39 | 5 | 14 | 11 | 1 | 0 | 1 | 0 | M |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 265 | 1 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| 266 | 1 | 63 | 7 | 23 | 18 | 2 | 0 | 2 | 0 | M |
| 267 | 1 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 268 | 1 | 41 | 5 | 15 | 11 | 1 | 0 | 1 | 0 | M |
| 269 | 6 | 387 | 46 | 140 | 108 | 15 | 2 | 18 | 4 | A |
| 270 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 271 | 6 | 60 | 7 | 22 | 17 | 2 | 0 | 3 | 1 | A |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 273 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| 274 | 6 | 205 | 24 | 74 | 57 | 8 | 1 | 10 | 2 | A |
| 275 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 276 | 6 | 26 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 277 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 279 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 280 | 1 | 32 | 4 | 12 | 9 | 1 | 0 | 2 | 0 | M |
| 281 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| 282 | 1 | 18 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | M |
| 283 | 1 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | M |
| 284 | 1 | 147 | 17 | 53 | 41 | 5 | 1 | 3 | 1 | M |
| 285 | 1 | 30 | 4 | 11 | 8 | 1 | 0 | 1 | 0 | M |
| 286 | 1 | 56 | 7 | 20 | 16 | 2 | 0 | 1 | 0 | M |
| 287 | 1 | 70 | 8 | 25 | 20 | 3 | 0 | 2 | 0 | M |
| 288 | 1 | 11 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | M |
| 289 | 1 | 72 | 9 | 26 | 20 | 3 | 0 | 2 | 0 | M |
| 290 | 1 | 49 | 6 | 18 | 14 | 2 | 0 | 1 | 1 | M |
| 294 | 7 | 16 | 2 | 6 | 4 | 1 | 0 | 0 | 0 | A |
| 301 | 6 | 108 | 13 | 39 | 30 | 3 | 0 | 3 | 0 | A |
| 302 | 6 | 115 | 14 | 42 | 32 | 3 | 0 | 3 | 0 | A |
| 303 | 6 | 12 | 1 | 4 | 3 | 1 | 0 | 1 | 3 | A |
| 304 | 6 | 7 | 1 | 3 | 2 | 2 | 0 | 2 | 0 | A |
| 306 | 6 | 145 | 17 | 52 | 40 | 7 | 1 | 8 | 2 | A |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 324 | 7 | 26 | 3 | 9 | 7 | 0 | 0 | 0 | 0 | A |
| 325 | 7 | 926 | 110 | 334 | 258 | 18 | 2 | 20 | 2 | A |
| 326 | 7 | 88 | 10 | 32 | 24 | 1 | 0 | 1 | 0 | A |
| 327 | 7 | 86 | 10 | 31 | 24 | 2 | 0 | 2 | 0 | A |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 359 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 360 | 1 | 162 | 19 | 58 | 45 | 4 | 0 | 4 | 0 | M |
| 361 | 1 | 154 | 18 | 56 | 43 | 3 | 0 | 3 | 0 | M |
| 362 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 363 | 1 | 2085 | 247 | 753 | 581 | 46 | 5 | 48 | 2 | M |
| 364 | 1 | 111 | 13 | 40 | 31 | 2 | 0 | 2 | 0 | M |
| 365 | 6 | 314 | 37 | 113 | 88 | 9 | 1 | 6 | 1 | A |
| 366 | 6 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 375 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 376 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 378 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 379 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 381 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 386 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 387 | 3 | 682 | 81 | 246 | 190 | 33 | 3 | 35 | 3 | A |
| | 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 389 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 390 | 7 | 120 | 14 | 43 | 33 | 5 | 1 | 5 | 0 | A |
| | 392 | 7 | 29 | 3 | 10 | 8 | 3 | 0 | 3 | 0 | A |
| | 393 | 7 | 11 | 1 | 4 | 3 | 2 | 0 | 5 | 0 | A |
| | 394 | 3 | 304 | 36 | 110 | 85 | 14 | 1 | 16 | 1 | A |
| | 396 | 3 | 969 | 115 | 350 | 270 | 38 | 4 | 38 | 1 | A |
| | 397 | 7 | 636 | 75 | 230 | 177 | 22 | 2 | 23 | 0 | A |
| | 398 | 6 | 469 | 56 | 170 | 131 | 14 | 1 | 12 | 0 | A |
| | 399 | 7 | 219 | 26 | 79 | 61 | 6 | 1 | 3 | 0 | A |
| | 400 | 6 | 232 | 27 | 84 | 65 | 6 | 1 | 3 | 0 | A |
| | 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 405 | 1 | 52 | 6 | 19 | 15 | 2 | 0 | 0 | 0 | M |
| | 406 | 7 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| | 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 408 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 409 | 7 | 41 | 5 | 15 | 12 | 2 | 0 | 1 | 0 | A |
| | 410 | 6 | 62 | 7 | 22 | 17 | 2 | 0 | 1 | 0 | A |
| | 411 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 413 | 6 | 17 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | A |
| | 414 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| | 415 | 3 | 301 | 36 | 109 | 84 | 11 | 1 | 11 | 0 | A |
| | 416 | 1 | 39 | 5 | 14 | 11 | 2 | 0 | 2 | 0 | M |
| | 417 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 419 | 1 | 55 | 6 | 20 | 15 | 2 | 0 | 2 | 0 | M |
| | 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 424 | 1 | 32 | 4 | 12 | 9 | 2 | 0 | 1 | 2 | M |
| | 425 | 1 | 9 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| | 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 427 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 428 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| | 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 430 | 1 | 15 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | M |
| | 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 433 | 6 | 118 | 14 | 42 | 33 | 2 | 0 | 1 | 0 | A |
| | 434 | 6 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| | 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 442 | 6 | 51 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | A |
| | 443 | 6 | 25 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | A |
| | 444 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 453 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 455 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 478 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 480 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 483 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 485 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 494 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 499 | 1 | 79 | 9 | 29 | 22 | 4 | 0 | 2 | 1 | M |
| | 500 | 1 | 50 | 6 | 18 | 14 | 2 | 0 | 1 | 1 | M |
| | 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 504 | 1 | 19 | 2 | 7 | 5 | 2 | 0 | 2 | 0 | M |
| Total | | **1177** | **51181** | **6063** | **18482** | **14270** | **2001** | **210** | **1650** | **132** | |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7485 | 887 | 2703 | 2087 | 260 | 27 | 219 | 22 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 11531 | 1366 | 4164 | 3215 | 504 | 53 | 376 | 10 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 592 | 70 | 214 | 165 | 31 | 3 | 26 | 1 | |
| 6 | 9359 | 1109 | 3380 | 2609 | 370 | 39 | 286 | 20 | |
| 7 | 22158 | 2625 | 8002 | 6178 | 835 | 88 | 743 | 79 | |
| 8 | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **51181** | **6063** | **18482** | **14270** | **2001** | **210** | **1650** | **132** | **93990** |

**World Logistics Center**
**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**
**Entrained Road Dust**
Surface Streets

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1820 | 1.13 | 4,976 | 5626 | 198 | 224 | 482 | 545 | 0 | 0 | 6395 | 3.07 | 0.035 | 0.0001 | 0.5 | 0.0003 | 2.1 |
| 10 | A | 826 | 0.51 | 647 | 332 | 29 | 15 | 41 | 21 | 0 | 0 | 368 | 2.82 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 13 | A | 345 | 0.21 | 620 | 133 | 13 | 3 | 38 | 8 | 298 | 64 | 208 | 9.05 | 0.035 | 0.0002 | 0.1 | 0.0010 | 0.2 |
| 32 | A | 1551 | 0.96 | 1,576 | 1518 | 69 | 66 | 92 | 89 | 0 | 0 | 1674 | 2.78 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 33 | M | 2006 | 1.25 | 481 | 599 | 16 | 20 | 29 | 36 | 0 | 0 | 655 | 2.77 | 0.32 | 0.0005 | 0.4 | 0.0022 | 1.4 |
| 35 | A | 801 | 0.50 | 187 | 93 | 12 | 6 | 31 | 15 | 450 | 224 | 338 | 16.61 | 0.035 | 0.0004 | 0.2 | 0.0018 | 0.6 |
| 36 | A | 1627 | 1.01 | 1,116 | 1128 | 62 | 63 | 173 | 175 | 0 | 0 | 1365 | 3.52 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 37 | A | 219 | 0.14 | 478 | 65 | 39 | 5 | 151 | 21 | 382 | 52 | 143 | 11.33 | 0.035 | 0.0003 | 0.0 | 0.0012 | 0.2 |
| 38 | A | 659 | 0.41 | 2,191 | 897 | 129 | 53 | 349 | 143 | 4 | 2 | 1094 | 3.59 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 42 | A | 5338 | 3.32 | 1,607 | 5329 | 93 | 308 | 285 | 945 | 449 | 1489 | 8071 | 7.29 | 0.035 | 0.0002 | 1.6 | 0.0008 | 6.4 |
| 43 | A | 2598 | 1.61 | 125 | 202 | 5 | 8 | 5 | 8 | 39 | 63 | 281 | 7.24 | 0.035 | 0.0002 | 0.1 | 0.0008 | 0.2 |
| 46 | A | 806 | 0.50 | 176 | 88 | 8 | 4 | 8 | 4 | 116 | 58 | 154 | 10.43 | 0.035 | 0.0003 | 0.0 | 0.0011 | 0.2 |
| 47 | A | 1995 | 1.24 | 85 | 105 | 4 | 5 | 3 | 4 | 0 | 0 | 114 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 48 | A | 795 | 0.49 | 239 | 118 | 6 | 3 | 13 | 6 | 27 | 13 | 141 | 4.64 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 50 | A | 479 | 0.30 | 7,495 | 2230 | 318 | 95 | 621 | 185 | 0 | 0 | 2510 | 2.97 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.8 |
| 51 | A | 975 | 0.61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 52 | A | 1269 | 0.79 | 4,474 | 3527 | 164 | 129 | 464 | 366 | 0 | 0 | 4022 | 3.12 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 53 | A | 795 | 0.49 | 434 | 214 | 30 | 15 | 16 | 8 | 0 | 0 | 237 | 2.67 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 54 | A | 325 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 55 | A | 2042 | 1.27 | 42 | 53 | 3 | 4 | 1 | 1 | 0 | 0 | 58 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 56 | A | 1152 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 57 | A | 246 | 0.15 | 1,122 | 171 | 59 | 9 | 173 | 26 | 0 | 0 | 207 | 3.51 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 58 | M | 172 | 0.11 | 83 | 9 | 3 | 0 | 3 | 0 | 0 | 0 | 10 | 2.57 | 0.32 | 0.0005 | 0.0 | 0.0020 | 0.0 |
| 59 | M | 786 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | 91 | 91 | 23.25 | 0.32 | 0.0047 | 0.4 | 0.0193 | 1.8 |
| 60 | M | 159 | 0.10 | 738 | 73 | 20 | 2 | 64 | 6 | 289 | 29 | 110 | 8.24 | 0.32 | 0.0016 | 0.2 | 0.0067 | 0.7 |
| 61 | M | 97 | 0.06 | 37 | 2 | 5 | 0 | 5 | 0 | 92 | 6 | 8 | 16.58 | 0.32 | 0.0034 | 0.0 | 0.0137 | 0.1 |
| 62 | M | 781 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 65 | A | 795 | 0.49 | 317 | 157 | 8 | 4 | 16 | 8 | 32 | 16 | 184 | 4.43 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 66 | A | 812 | 0.50 | 401 | 202 | 13 | 7 | 27 | 14 | 32 | 16 | 239 | 4.20 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 67 | M | 778 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 68 | A | 814 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 69 | A | 819 | 0.51 | 907 | 461 | 34 | 17 | 57 | 29 | 0 | 0 | 508 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 70 | A | 795 | 0.49 | 1,333 | 658 | 51 | 25 | 86 | 42 | 0 | 0 | 726 | 2.81 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 71 | M | 803 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 72 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 73 | A | 742 | 0.46 | 4,386 | 2022 | 161 | 74 | 462 | 213 | 0 | 0 | 2309 | 3.13 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.8 |
| 74 | A | 1573 | 0.98 | 388 | 379 | 7 | 7 | 7 | 7 | 1 | 1 | 394 | 2.41 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 75 | M | 805 | 0.50 | 140 | 70 | 4 | 2 | 7 | 4 | 5 | 3 | 78 | 3.33 | 0.32 | 0.0007 | 0.1 | 0.0027 | 0.2 |
| 76 | M | 1597 | 0.99 | 32 | 32 | 1 | 1 | 4 | 4 | 0 | 0 | 37 | 3.26 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.1 |
| 77 | A | 438 | 0.27 | 525 | 143 | 10 | 3 | 10 | 3 | 7 | 2 | 150 | 2.64 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 80 | A | 138 | 0.09 | 693 | 59 | 15 | 1 | 17 | 1 | 8 | 1 | 63 | 2.66 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 81 | M | 407 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 82 | M | 322 | 0.20 | 1,058 | 212 | 28 | 6 | 53 | 11 | 177 | 35 | 263 | 5.43 | 0.32 | 0.0011 | 0.3 | 0.0044 | 1.2 |
| 83 | A | 95 | 0.06 | 504 | 30 | 14 | 1 | 26 | 2 | 88 | 5 | 37 | 5.54 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 85 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 86 | M | 284 | 0.18 | 1,379 | 243 | 47 | 8 | 110 | 19 | 251 | 44 | 315 | 5.78 | 0.32 | 0.0011 | 0.4 | 0.0047 | 1.5 |
| 87 | M | 800 | 0.50 | 15 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 8 | 2.73 | 0.32 | 0.0005 | 0.0 | 0.0022 | 0.0 |
| 88 | M | 809 | 0.50 | 26 | 13 | 1 | 1 | 1 | 1 | 0 | 0 | 14 | 2.60 | 0.32 | 0.0005 | 0.0 | 0.0021 | 0.0 |
| 95 | A | 439 | 0.27 | 480 | 131 | 12 | 3 | 37 | 10 | 33 | 9 | 153 | 4.08 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 96 | A | 399 | 0.25 | 404 | 100 | 9 | 2 | 19 | 5 | 15 | 4 | 111 | 3.32 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 97 | A | 389 | 0.24 | 57 | 14 | 2 | 0 | 5 | 1 | 6 | 1 | 17 | 4.73 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 98 | A | 160 | 0.10 | 38 | 4 | 2 | 0 | 13 | 1 | 11 | 1 | 6 | 7.82 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 99 | A | 405 | 0.25 | 141 | 35 | 1 | 0 | 4 | 1 | 3 | 1 | 37 | 2.84 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 100 | M | 227 | 0.14 | 196 | 28 | 5 | 1 | 13 | 2 | 27 | 4 | 34 | 5.09 | 0.32 | 0.0010 | 0.0 | 0.0041 | 0.1 |
| 101 | M | 313 | 0.19 | 563 | 109 | 13 | 3 | 36 | 7 | 65 | 13 | 132 | 4.74 | 0.32 | 0.0009 | 0.1 | 0.0038 | 0.5 |
| 102 | M | 246 | 0.15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 103 | M | 291 | 0.18 | 511 | 92 | 12 | 2 | 30 | 5 | 59 | 11 | 111 | 4.71 | 0.32 | 0.0009 | 0.1 | 0.0038 | 0.4 |
| 104 | M | 404 | 0.25 | 113 | 28 | 2 | 1 | 8 | 2 | 34 | 9 | 39 | 7.24 | 0.32 | 0.0014 | 0.1 | 0.0059 | 0.2 |
| 105 | M | 195 | 0.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 106 | M | 1803 | 1.12 | 12 | 13 | 0 | 0 | 1 | 1 | 0 | 0 | 15 | 2.87 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 107 | M | 388 | 0.24 | 142 | 34 | 3 | 1 | 12 | 3 | 34 | 8 | 46 | 6.55 | 0.32 | 0.0013 | 0.1 | 0.0053 | 0.2 |
| 108 | M | 997 | 0.62 | 12 | 7 | 0 | 0 | 2 | 1 | 0 | 0 | 9 | 3.50 | 0.32 | 0.0007 | 0.0 | 0.0028 | 0.0 |
| 109 | A | 787 | 0.49 | 29 | 14 | 2 | 1 | 7 | 3 | 0 | 0 | 19 | 4.09 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 110 | A | 756 | 0.47 | 121 | 57 | 3 | 1 | 9 | 4 | 27 | 13 | 75 | 6.30 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 111 | A | 800 | 0.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 112 | A | 817 | 0.51 | 133 | 68 | 5 | 3 | 17 | 9 | 55 | 28 | 107 | 8.52 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 113 | A | 791 | 0.49 | 12 | 6 | 2 | 1 | 7 | 3 | 14 | 7 | 17 | 12.70 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 114 | M | 791 | 0.49 | 20 | 10 | 2 | 1 | 8 | 4 | 31 | 15 | 30 | 14.24 | 0.32 | 0.0029 | 0.1 | 0.0117 | 0.4 |
| 115 | A | 851 | 0.53 | 130 | 69 | 3 | 2 | 10 | 5 | 35 | 19 | 94 | 6.88 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 116 | M | 819 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 8 | 4 | 5 | 20.90 | 0.32 | 0.0043 | 0.0 | 0.0173 | 0.1 |
| 117 | A | 757 | 0.47 | 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 118 | A | 765 | 0.48 | 140 | 67 | 4 | 2 | 11 | 5 | 39 | 19 | 92 | 6.99 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 119 | A | 782 | 0.49 | 28 | 14 | 0 | 0 | 2 | 1 | 0 | 0 | 15 | 2.77 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 120 | M | 814 | 0.51 | 88 | 44 | 5 | 3 | 15 | 8 | 126 | 64 | 118 | 14.19 | 0.32 | 0.0029 | 0.3 | 0.0117 | 1.4 |
| 121 | A | 825 | 0.51 | 146 | 75 | 4 | 2 | 10 | 5 | 31 | 16 | 98 | 6.13 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 122 | A | 782 | 0.49 | 58 | 28 | 3 | 1 | 10 | 5 | 101 | 49 | 84 | 15.15 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 123 | M | 791 | 0.49 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 124 | A | 800 | 0.50 | 170 | 84 | 5 | 2 | 12 | 6 | 31 | 15 | 108 | 5.74 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 125 | A | 817 | 0.51 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 126 | A | 774 | 0.48 | 188 | 90 | 5 | 2 | 11 | 5 | 29 | 14 | 112 | 5.29 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 127 | M | 825 | 0.51 | 39 | 20 | 3 | 2 | 10 | 5 | 188 | 96 | 123 | 19.12 | 0.32 | 0.0039 | 0.5 | 0.0158 | 1.9 |
| 128 | A | 774 | 0.48 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 129 | A | 823 | 0.51 | 207 | 106 | 5 | 3 | 12 | 6 | 27 | 14 | 128 | 4.93 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 130 | A | 800 | 0.50 | 49 | 24 | 2 | 1 | 1 | 0 | 0 | 0 | 26 | 2.45 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 131 | A | 775 | 0.48 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 133 | A | 804 | 0.50 | 59 | 29 | 2 | 1 | 2 | 1 | 0 | 0 | 31 | 2.55 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 134 | M | 760 | 0.47 | 36 | 17 | 2 | 1 | 3 | 1 | 5 | 2 | 22 | 5.21 | 0.32 | 0.0010 | 0.0 | 0.0042 | 0.1 |
| 135 | A | 816 | 0.51 | 275 | 139 | 8 | 4 | 16 | 8 | 32 | 16 | 168 | 4.72 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 136 | A | 786 | 0.49 | 67 | 33 | 2 | 1 | 2 | 1 | 0 | 0 | 35 | 2.50 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 137 | A | 790 | 0.49 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 138 | M | 267 | 0.17 | 10 | 2 | 1 | 0 | 4 | 1 | 10 | 2 | 4 | 12.26 | 0.32 | 0.0025 | 0.0 | 0.0101 | 0.0 |
| 139 | M | 504 | 0.31 | 168 | 53 | 4 | 1 | 12 | 4 | 12 | 4 | 61 | 4.08 | 0.32 | 0.0008 | 0.0 | 0.0033 | 0.2 |
| 140 | M | 527 | 0.33 | 12 | 4 | 1 | 0 | 2 | 1 | 12 | 4 | 9 | 12.36 | 0.32 | 0.0025 | 0.0 | 0.0101 | 0.1 |
| 141 | M | 1001 | 0.62 | 167 | 104 | 3 | 2 | 9 | 6 | 10 | 6 | 118 | 3.76 | 0.32 | 0.0007 | 0.1 | 0.0030 | 0.4 |
| 142 | M | 291 | 0.18 | 13 | 2 | 1 | 0 | 3 | 1 | 4 | 1 | 4 | 7.69 | 0.32 | 0.0015 | 0.0 | 0.0063 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 143 | A | 845 | 0.52 | 177 | 93 | 5 | 3 | 14 | 7 | 8 | 4 | 107 | 3.70 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 144 | A | 783 | 0.49 | 181 | 88 | 5 | 2 | 15 | 7 | 0 | 0 | 98 | 2.93 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 145 | A | 787 | 0.49 | 208 | 102 | 6 | 3 | 17 | 8 | 0 | 0 | 113 | 2.93 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 146 | A | 814 | 0.51 | 24 | 12 | 0 | 0 | 1 | 1 | 0 | 0 | 13 | 2.51 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 147 | A | 798 | 0.50 | 243 | 120 | 8 | 4 | 20 | 10 | 0 | 0 | 134 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 148 | A | 731 | 0.45 | 54 | 25 | 2 | 1 | 8 | 4 | 92 | 42 | 71 | 15.12 | 0.035 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 149 | A | 808 | 0.50 | 307 | 154 | 10 | 5 | 25 | 13 | 0 | 0 | 172 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 150 | A | 793 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 151 | M | 787 | 0.49 | 340 | 166 | 11 | 5 | 28 | 14 | 0 | 0 | 185 | 2.94 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.4 |
| 152 | M | 782 | 0.49 | 28 | 14 | 2 | 1 | 9 | 4 | 184 | 89 | 108 | 19.98 | 0.32 | 0.0041 | 0.4 | 0.0165 | 1.8 |
| 153 | M | 798 | 0.50 | 437 | 217 | 15 | 7 | 30 | 15 | 0 | 0 | 239 | 2.84 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.5 |
| 154 | A | 901 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 155 | A | 775 | 0.48 | 1,147 | 552 | 36 | 17 | 77 | 37 | 0 | 0 | 607 | 2.82 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 156 | A | 771 | 0.48 | 607 | 291 | 17 | 8 | 44 | 21 | 0 | 0 | 320 | 2.85 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 157 | A | 804 | 0.50 | 1,334 | 666 | 51 | 25 | 86 | 43 | 0 | 0 | 735 | 2.81 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 158 | A | 1039 | 0.65 | 194 | 125 | 5 | 3 | 15 | 10 | 18 | 12 | 150 | 4.47 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 159 | A | 170 | 0.11 | 317 | 33 | 5 | 1 | 15 | 2 | 17 | 2 | 37 | 3.60 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 160 | A | 717 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 161 | A | 784 | 0.49 | 583 | 284 | 31 | 15 | 104 | 51 | 0 | 0 | 350 | 3.67 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 162 | A | 1052 | 0.65 | 1,351 | 883 | 77 | 50 | 259 | 169 | 0 | 0 | 1102 | 3.77 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 163 | A | 350 | 0.22 | 712 | 155 | 44 | 10 | 152 | 33 | 0 | 0 | 197 | 3.91 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 164 | A | 473 | 0.29 | 15 | 4 | 1 | 0 | 3 | 1 | 0 | 0 | 6 | 3.83 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 165 | M | 1541 | 0.96 | 4,320 | 4135 | 157 | 150 | 459 | 439 | 0 | 0 | 4725 | 3.14 | 0.32 | 0.0006 | 2.9 | 0.0025 | 11.8 |
| 168 | M | 758 | 0.47 | 648 | 305 | 40 | 19 | 143 | 67 | 0 | 0 | 391 | 3.95 | 0.32 | 0.0008 | 0.3 | 0.0032 | 1.2 |
| 169 | A | 931 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 170 | A | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 171 | A | 522 | 0.32 | 2,787 | 904 | 71 | 23 | 192 | 62 | 0 | 0 | 989 | 2.82 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 172 | A | 993 | 0.62 | 2,632 | 1624 | 67 | 41 | 189 | 117 | 0 | 0 | 1782 | 2.84 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.5 |
| 173 | A | 1615 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 174 | A | 330 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 177 | A | 1110 | 0.69 | 1,600 | 1103 | 98 | 68 | 324 | 223 | 382 | 263 | 1658 | 6.93 | 0.035 | 0.0002 | 0.3 | 0.0007 | 1.2 |
| 178 | A | 7132 | 4.43 | 328 | 1453 | 15 | 66 | 39 | 173 | 63 | 279 | 1972 | 6.08 | 0.035 | 0.0002 | 0.3 | 0.0007 | 1.3 |
| 179 | A | 2189 | 1.36 | 1,943 | 2642 | 115 | 156 | 364 | 495 | 446 | 606 | 3900 | 6.78 | 0.035 | 0.0002 | 0.7 | 0.0007 | 2.9 |
| 180 | A | 6725 | 4.18 | 115 | 480 | 4 | 17 | 5 | 21 | 3 | 13 | 531 | 3.12 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 181 | M | 625 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 182 | M | 349 | 0.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 183 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 184 | M | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 185 | M | 287 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 186 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 190 | A | 6368 | 3.96 | 2,924 | 11567 | 54 | 214 | 187 | 740 | 185 | 732 | 13252 | 3.89 | 0.035 | 0.0001 | 1.4 | 0.0004 | 5.5 |
| 191 | A | 4906 | 3.05 | 2,523 | 7689 | 47 | 143 | 171 | 521 | 152 | 463 | 8817 | 3.87 | 0.035 | 0.0001 | 0.9 | 0.0004 | 3.6 |
| 192 | A | 4358 | 2.71 | 401 | 1086 | 7 | 19 | 16 | 43 | 34 | 92 | 1240 | 4.09 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 194 | A | 355 | 0.22 | 329 | 73 | 20 | 4 | 63 | 14 | 0 | 0 | 91 | 3.77 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 195 | A | 397 | 0.25 | 592 | 146 | 31 | 8 | 95 | 23 | 0 | 0 | 177 | 3.55 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 196 | A | 716 | 0.44 | 921 | 410 | 50 | 22 | 158 | 70 | 0 | 0 | 502 | 3.63 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 198 | A | 1009 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 199 | A | 378 | 0.23 | 152 | 36 | 6 | 1 | 10 | 2 | 0 | 0 | 39 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 200 | A | 1403 | 0.87 | 1,122 | 978 | 59 | 51 | 173 | 151 | 0 | 0 | 1180 | 3.51 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.4 |
| 205 | A | 1501 | 0.93 | 221 | 206 | 12 | 11 | 41 | 38 | 0 | 0 | 255 | 3.72 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 206 | A | 2658 | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 207 | A | 2611 | 1.62 | 221 | 358 | 12 | 19 | 41 | 67 | 0 | 0 | 444 | 3.72 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.2 |
| 215 | A | 2937 | 1.82 | 10 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 216 | A | 2000 | 1.24 | 197 | 245 | 4 | 5 | 11 | 14 | 20 | 25 | 288 | 4.47 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 217 | A | 663 | 0.41 | 317 | 131 | 7 | 3 | 19 | 8 | 30 | 12 | 154 | 4.38 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 218 | A | 1167 | 0.72 | 60 | 43 | 1 | 1 | 4 | 3 | 9 | 7 | 54 | 5.27 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 219 | A | 2672 | 1.66 | 11 | 18 | 0 | 0 | 0 | 0 | 1 | 2 | 20 | 3.89 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 221 | A | 2622 | 1.63 | 5 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 223 | A | 359 | 0.22 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 225 | M | 1243 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 226 | A | 1643 | 1.02 | 36 | 37 | 1 | 1 | 4 | 4 | 9 | 9 | 51 | 6.77 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 227 | M | 1154 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 229 | A | 1122 | 0.70 | 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 230 | A | 1007 | 0.63 | 35 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 231 | A | 1968 | 1.22 | 66 | 81 | 1 | 1 | 3 | 4 | 6 | 7 | 93 | 4.22 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 232 | A | 1719 | 1.07 | 520 | 555 | 12 | 13 | 45 | 48 | 73 | 78 | 694 | 5.23 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.4 |
| 233 | A | 976 | 0.61 | 47 | 28 | 1 | 1 | 4 | 2 | 9 | 5 | 37 | 5.93 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.0 |
| 236 | A | 794 | 0.49 | 13 | 6 | 0 | 0 | 2 | 1 | 2 | 1 | 8 | 5.75 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.0 |
| 237 | A | 1556 | 0.97 | 404 | 391 | 11 | 11 | 45 | 43 | 74 | 72 | 516 | 5.94 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.3 |
| 238 | A | 1120 | 0.70 | 185 | 129 | 4 | 3 | 17 | 12 | 20 | 14 | 157 | 4.78 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 239 | A | 1385 | 0.86 | 197 | 169 | 6 | 5 | 26 | 22 | 51 | 44 | 241 | 6.95 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.2 |
| 240 | A | 240 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 241 | A | 843 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 242 | M | 989 | 0.61 | 201 | 123 | 6 | 4 | 26 | 16 | 50 | 31 | 174 | 6.82 | 0.32 | 0.0014 | 0.2 | 0.0055 | 1.0 |
| 243 | M | 64 | 0.04 | 16 | 1 | 1 | 0 | 2 | 0 | 6 | 0 | 1 | 8.11 | 0.32 | 0.0016 | 0.0 | 0.0066 | 0.0 |
| 244 | M | 173 | 0.11 | 8 | 1 | 0 | 0 | 2 | 0 | 8 | 1 | 2 | 12.59 | 0.32 | 0.0025 | 0.0 | 0.0103 | 0.0 |
| 245 | M | 181 | 0.11 | 46 | 5 | 1 | 0 | 7 | 1 | 18 | 2 | 8 | 8.39 | 0.32 | 0.0017 | 0.0 | 0.0068 | 0.1 |
| 246 | M | 273 | 0.17 | 27 | 5 | 1 | 0 | 6 | 1 | 18 | 3 | 9 | 10.62 | 0.32 | 0.0021 | 0.0 | 0.0087 | 0.1 |
| 247 | M | 87 | 0.05 | 190 | 10 | 6 | 0 | 22 | 1 | 41 | 2 | 14 | 6.37 | 0.32 | 0.0013 | 0.0 | 0.0052 | 0.1 |
| 250 | A | 1366 | 0.85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 252 | A | 1588 | 0.99 | 546 | 539 | 12 | 12 | 46 | 45 | 74 | 73 | 669 | 5.15 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.4 |
| 254 | A | 424 | 0.26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 256 | A | 943 | 0.59 | 205 | 120 | 3 | 2 | 4 | 2 | 6 | 4 | 128 | 2.94 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 258 | A | 472 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 260 | A | 1783 | 1.11 | 761 | 843 | 16 | 18 | 51 | 56 | 83 | 92 | 1009 | 4.65 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 261 | A | 1181 | 0.73 | 98 | 72 | 4 | 3 | 13 | 10 | 40 | 29 | 114 | 8.48 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 262 | M | 860 | 0.53 | 209 | 112 | 7 | 4 | 27 | 14 | 72 | 38 | 168 | 7.86 | 0.32 | 0.0016 | 0.3 | 0.0064 | 1.1 |
| 263 | M | 141 | 0.09 | 781 | 68 | 18 | 2 | 57 | 5 | 95 | 8 | 83 | 4.88 | 0.32 | 0.0010 | 0.1 | 0.0039 | 0.3 |
| 264 | M | 224 | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 265 | M | 98 | 0.06 | 421 | 26 | 11 | 1 | 37 | 2 | 60 | 4 | 32 | 5.27 | 0.32 | 0.0010 | 0.0 | 0.0043 | 0.1 |
| 266 | M | 171 | 0.11 | 1,049 | 111 | 26 | 3 | 90 | 10 | 147 | 16 | 139 | 5.23 | 0.32 | 0.0010 | 0.1 | 0.0042 | 0.6 |
| 267 | M | 156 | 0.10 | 163 | 16 | 6 | 1 | 26 | 3 | 43 | 4 | 23 | 7.08 | 0.32 | 0.0014 | 0.0 | 0.0057 | 0.1 |
| 268 | M | 159 | 0.10 | 724 | 72 | 17 | 2 | 54 | 5 | 89 | 9 | 87 | 4.91 | 0.32 | 0.0010 | 0.1 | 0.0040 | 0.3 |
| 269 | A | 2450 | 1.52 | 448 | 682 | 15 | 23 | 65 | 99 | 169 | 257 | 1061 | 8.22 | 0.035 | 0.0002 | 0.2 | 0.0009 | 0.9 |
| 270 | A | 620 | 0.39 | 9 | 3 | 0 | 0 | 1 | 0 | 2 | 1 | 5 | 6.45 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 271 | A | 370 | 0.23 | 457 | 105 | 16 | 4 | 66 | 15 | 171 | 39 | 163 | 8.19 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 272 | A | 1246 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 273 | M | 625 | 0.39 | 7 | 3 | 0 | 0 | 2 | 1 | 2 | 1 | 4 | 7.72 | 0.32 | 0.0015 | 0.0 | 0.0063 | 0.0 |
| 274 | A | 1231 | 0.76 | 472 | 361 | 16 | 12 | 69 | 53 | 174 | 133 | 559 | 8.14 | 0.035 | 0.0002 | 0.1 | 0.0009 | 0.5 |
| 275 | M | 377 | 0.23 | 27 | 6 | 3 | 1 | 10 | 2 | 45 | 11 | 20 | 14.57 | 0.32 | 0.0029 | 0.1 | 0.0120 | 0.2 |
| 276 | A | 159 | 0.10 | 463 | 46 | 17 | 2 | 69 | 7 | 185 | 18 | 72 | 8.44 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 277 | M | 1074 | 0.67 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 7.41 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.0 |
| 278 | M | 239 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 279 | M | 157 | 0.10 | 141 | 14 | 5 | 0 | 19 | 2 | 46 | 4 | 21 | 7.68 | 0.32 | 0.0015 | 0.0 | 0.0062 | 0.1 |
| 280 | M | 163 | 0.10 | 558 | 57 | 19 | 2 | 81 | 8 | 211 | 21 | 88 | 8.23 | 0.32 | 0.0016 | 0.1 | 0.0067 | 0.6 |
| 281 | M | 280 | 0.17 | 16 | 3 | 0 | 0 | 2 | 0 | 7 | 1 | 4 | 8.81 | 0.32 | 0.0018 | 0.0 | 0.0072 | 0.0 |
| 282 | M | 167 | 0.10 | 298 | 31 | 10 | 1 | 41 | 4 | 100 | 10 | 47 | 7.79 | 0.32 | 0.0016 | 0.1 | 0.0063 | 0.3 |
| 283 | M | 405 | 0.25 | 79 | 20 | 8 | 2 | 30 | 8 | 103 | 26 | 55 | 13.46 | 0.32 | 0.0027 | 0.2 | 0.0111 | 0.6 |
| 284 | M | 365 | 0.23 | 1,139 | 258 | 36 | 8 | 78 | 18 | 244 | 55 | 339 | 6.16 | 0.32 | 0.0012 | 0.4 | 0.0050 | 1.7 |
| 285 | M | 230 | 0.14 | 366 | 52 | 13 | 2 | 33 | 5 | 151 | 22 | 80 | 8.44 | 0.32 | 0.0017 | 0.1 | 0.0069 | 0.6 |
| 286 | M | 209 | 0.13 | 766 | 99 | 24 | 3 | 56 | 7 | 8 | 1 | 111 | 3.06 | 0.32 | 0.0006 | 0.1 | 0.0024 | 0.3 |
| 287 | M | 292 | 0.18 | 682 | 124 | 22 | 4 | 49 | 9 | 126 | 23 | 159 | 5.78 | 0.32 | 0.0011 | 0.2 | 0.0047 | 0.7 |
| 288 | M | 152 | 0.09 | 206 | 19 | 7 | 1 | 18 | 2 | 8 | 1 | 23 | 3.66 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.1 |
| 289 | M | 285 | 0.18 | 721 | 128 | 23 | 4 | 52 | 9 | 103 | 18 | 159 | 5.20 | 0.32 | 0.0010 | 0.2 | 0.0042 | 0.7 |
| 290 | M | 328 | 0.20 | 422 | 86 | 16 | 3 | 33 | 7 | 213 | 43 | 139 | 9.25 | 0.32 | 0.0019 | 0.3 | 0.0075 | 1.1 |
| 294 | A | 824 | 0.51 | 55 | 28 | 2 | 1 | 2 | 1 | 0 | 0 | 30 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 301 | A | 774 | 0.48 | 397 | 191 | 10 | 5 | 37 | 18 | 0 | 0 | 213 | 3.01 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 302 | A | 796 | 0.49 | 411 | 203 | 10 | 5 | 35 | 17 | 0 | 0 | 225 | 2.95 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 303 | A | 1514 | 0.94 | 23 | 22 | 1 | 1 | 5 | 5 | 182 | 171 | 198 | 20.59 | 0.035 | 0.0006 | 0.1 | 0.0023 | 0.5 |
| 304 | A | 729 | 0.45 | 28 | 13 | 7 | 3 | 18 | 8 | 0 | 0 | 24 | 5.86 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.0 |
| 306 | A | 818 | 0.51 | 503 | 256 | 22 | 11 | 87 | 44 | 180 | 91 | 402 | 8.08 | 0.035 | 0.0002 | 0.1 | 0.0009 | 0.4 |
| 307 | M | 0 | 0.00 | 936 | 0 | 47 | 0 | 165 | 0 | 180 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 324 | A | 2925 | 1.82 | 25 | 45 | 0 | 0 | 1 | 2 | 1 | 2 | 49 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 325 | A | 2224 | 1.38 | 1,181 | 1632 | 20 | 28 | 76 | 105 | 91 | 126 | 1890 | 4.12 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.8 |
| 326 | A | 3506 | 2.18 | 71 | 155 | 1 | 2 | 2 | 4 | 2 | 4 | 166 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 327 | A | 227 | 0.14 | 1,073 | 151 | 19 | 3 | 73 | 10 | 87 | 12 | 177 | 4.21 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 340 | A | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 351 | A | 0 | 0.00 | 15 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 358 | A | 0 | 0.00 | 2,520 | 0 | 47 | 0 | 170 | 0 | 151 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 359 | M | 339 | 0.21 | 34 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 2.98 | 0.32 | 0.0006 | 0.0 | 0.0024 | 0.0 |
| 360 | M | 247 | 0.15 | 1,855 | 285 | 36 | 6 | 130 | 20 | 93 | 14 | 324 | 3.71 | 0.32 | 0.0007 | 0.2 | 0.0030 | 1.0 |
| 361 | M | 337 | 0.21 | 1,297 | 272 | 21 | 4 | 80 | 17 | 95 | 20 | 313 | 4.04 | 0.32 | 0.0008 | 0.2 | 0.0032 | 1.0 |
| 362 | M | 338 | 0.21 | 37 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 2.92 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 363 | M | 4495 | 2.79 | 1,316 | 3675 | 25 | 70 | 92 | 257 | 50 | 140 | 4141 | 3.50 | 0.32 | 0.0007 | 2.8 | 0.0028 | 11.6 |
| 364 | M | 286 | 0.18 | 1,103 | 196 | 21 | 4 | 58 | 10 | 58 | 10 | 220 | 3.63 | 0.32 | 0.0007 | 0.2 | 0.0029 | 0.6 |
| 365 | A | 1602 | 1.00 | 556 | 553 | 13 | 13 | 35 | 35 | 55 | 55 | 656 | 4.47 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 366 | A | 1742 | 1.08 | 7 | 8 | 0 | 0 | 2 | 2 | 10 | 11 | 21 | 14.26 | 0.035 | 0.0004 | 0.0 | 0.0016 | 0.0 |
| 367 | A | 1054 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 375 | M | 388 | 0.24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 376 | M | 477 | 0.30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 377 | M | 339 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 378 | M | 212 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 379 | M | 331 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 380 | M | 283 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 381 | M | 469 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 386 | A | 810 | 0.50 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 3 | 12.50 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 387 | A | 2761 | 1.72 | 701 | 1202 | 29 | 50 | 109 | 187 | 104 | 178 | 1617 | 5.68 | 0.035 | 0.0002 | 0.2 | 0.0006 | 1.0 |
| 388 | A | 175 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 389 | A | 189 | 0.12 | 16 | 2 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 4.86 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 390 | A | 1189 | 0.74 | 286 | 211 | 11 | 8 | 34 | 25 | 13 | 10 | 254 | 3.99 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 392 | A | 436 | 0.27 | 189 | 51 | 14 | 4 | 64 | 17 | 25 | 7 | 79 | 6.21 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 393 | A | 934 | 0.58 | 34 | 20 | 6 | 3 | 48 | 28 | 44 | 26 | 77 | 12.83 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.1 |
| 394 | A | 1292 | 0.80 | 668 | 536 | 27 | 22 | 106 | 85 | 91 | 73 | 716 | 5.53 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.4 |
| 396 | A | 2366 | 1.47 | 1,162 | 1708 | 39 | 57 | 139 | 204 | 40 | 59 | 2028 | 3.81 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.8 |
| 397 | A | 1588 | 0.99 | 1,136 | 1121 | 34 | 34 | 124 | 122 | 12 | 12 | 1288 | 3.33 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 398 | A | 560 | 0.35 | 2,378 | 827 | 62 | 22 | 181 | 63 | 0 | 0 | 912 | 2.88 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 399 | A | 3389 | 2.11 | 183 | 385 | 4 | 8 | 8 | 17 | 0 | 0 | 411 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 400 | A | 1704 | 1.06 | 386 | 409 | 9 | 10 | 14 | 15 | 1 | 1 | 434 | 2.59 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 401 | M | 790 | 0.49 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 12.38 | 0.32 | 0.0025 | 0.0 | 0.0102 | 0.0 |
| 402 | M | 1199 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 404 | M | 768 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 405 | M | 1010 | 0.63 | 147 | 92 | 6 | 4 | 4 | 3 | 3 | 2 | 100 | 2.90 | 0.32 | 0.0006 | 0.1 | 0.0023 | 0.2 |
| 406 | A | 395 | 0.25 | 76 | 19 | 8 | 2 | 5 | 1 | 4 | 1 | 23 | 3.86 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 407 | A | 756 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 408 | A | 1072 | 0.67 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 5.65 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 409 | A | 1137 | 0.71 | 103 | 73 | 4 | 3 | 7 | 5 | 0 | 0 | 81 | 2.84 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 410 | A | 884 | 0.55 | 198 | 109 | 6 | 3 | 8 | 4 | 0 | 0 | 116 | 2.59 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 411 | A | 2332 | 1.45 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 412 | A | 141 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 413 | A | 678 | 0.42 | 72 | 30 | 2 | 1 | 7 | 3 | 8 | 3 | 37 | 4.86 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 414 | A | 895 | 0.56 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 415 | A | 855 | 0.53 | 998 | 530 | 32 | 17 | 109 | 58 | 27 | 14 | 619 | 3.61 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.2 |
| 416 | M | 284 | 0.18 | 388 | 68 | 17 | 3 | 65 | 11 | 10 | 2 | 85 | 4.00 | 0.32 | 0.0008 | 0.1 | 0.0032 | 0.3 |
| 417 | M | 303 | 0.19 | 6 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 7.41 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.0 |
| 419 | M | 343 | 0.21 | 451 | 96 | 13 | 3 | 50 | 11 | 12 | 3 | 112 | 3.61 | 0.32 | 0.0007 | 0.1 | 0.0029 | 0.3 |
| 420 | M | 300 | 0.19 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 421 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 424 | M | 828 | 0.51 | 110 | 57 | 5 | 3 | 14 | 7 | 202 | 104 | 170 | 15.48 | 0.32 | 0.0031 | 0.5 | 0.0128 | 2.2 |
| 425 | M | 203 | 0.13 | 121 | 15 | 1 | 0 | 5 | 1 | 2 | 0 | 16 | 2.86 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 426 | M | 276 | 0.17 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 427 | A | 654 | 0.41 | 4 | 2 | 1 | 0 | 5 | 2 | 7 | 3 | 7 | 13.86 | 0.035 | 0.0004 | 0.0 | 0.0015 | 0.0 |
| 428 | M | 293 | 0.18 | 41 | 7 | 0 | 0 | 1 | 0 | 2 | 0 | 8 | 3.31 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 429 | M | 219 | 0.14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 430 | M | 114 | 0.07 | 366 | 26 | 8 | 1 | 23 | 2 | 50 | 4 | 32 | 5.05 | 0.32 | 0.0010 | 0.0 | 0.0041 | 0.1 |
| 431 | M | 524 | 0.33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 432 | M | 629 | 0.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 433 | A | 1802 | 1.12 | 185 | 207 | 3 | 3 | 5 | 6 | 1 | 1 | 217 | 2.54 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 434 | A | 1269 | 0.79 | 17 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 435 | A | 1537 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 436 | M | 178 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 441 | A | 1192 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 442 | A | 2365 | 1.47 | 61 | 90 | 1 | 1 | 2 | 3 | 0 | 0 | 94 | 2.49 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 443 | A | 1588 | 0.99 | 45 | 44 | 1 | 1 | 2 | 2 | 0 | 0 | 47 | 2.60 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 444 | A | 905 | 0.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 452 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 453 | A | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 454 | M | 661 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 455 | A | 366 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 458 | M | 237 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 464 | A | 702 | 0.44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 477 | M | 750 | 0.47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 478 | M | 253 | 0.16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 479 | M | 461 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 480 | A | 500 | 0.31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 481 | M | 377 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 482 | A | 1353 | 0.84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 483 | M | 589 | 0.37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 484 | M | 684 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 485 | M | 319 | 0.20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 488 | A | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 494 | A | 1039 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 498 | M | 792 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 499 | M | 660 | 0.41 | 340 | 139 | 13 | 5 | 25 | 10 | 208 | 85 | 240 | 10.11 | 0.32 | 0.0020 | 0.5 | 0.0083 | 2.0 |
| 500 | M | 395 | 0.25 | 358 | 88 | 14 | 3 | 26 | 6 | 208 | 51 | 149 | 9.87 | 0.32 | 0.0020 | 0.3 | 0.0081 | 1.2 |
| 502 | A | 855 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 503 | A | 820 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 504 | M | 360 | 0.22 | 151 | 34 | 13 | 3 | 56 | 13 | 0 | 0 | 49 | 4.79 | 0.32 | 0.0009 | 0.0 | 0.0039 | 0.2 |
| | | | | **117829** | **90191** | **4132** | **3032** | **11652** | **8881** | **11176** | **7854** | **109959** | | **Totals:** | | **26.0** | | **105.9** |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 530 | 50 | 150 | 1,580 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 450 | 50 | 150 | 1,600 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 470 | 60 | 160 | 1,610 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 510 | 60 | 170 | 1,640 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 550 | 60 | 180 | 1,670 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 580 | 60 | 180 | 1,690 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 610 | 60 | 190 | 1,710 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 630 | 60 | 190 | 1,730 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 680 | 70 | 210 | 1,840 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 700 | 70 | 220 | 1,850 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 730 | 70 | 230 | 1,870 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,080 | 90 | 290 | 2,090 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,160 | 90 | 310 | 2,170 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,190 | 100 | 330 | 2,230 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,190 | 100 | 330 | 2,240 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,280 | 100 | 330 | 2,250 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 1,490 | 110 | 350 | 2,300 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 1,690 | 110 | 370 | 2,320 |
| FRWY19 | SR60 | Market St to Main St | 1,840 | 120 | 400 | 2,400 |
| FRWY20 | SR60 | Main St to SR-91 | 2,220 | 150 | 480 | 2,690 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 3,970 | 230 | 790 | 4,140 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 4,030 | 240 | 830 | 4,220 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 4,080 | 240 | 850 | 4,260 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 4,480 | 260 | 910 | 4,400 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 5,070 | 280 | 970 | 4,510 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 5,390 | 280 | 960 | 4,460 |
| FRWY27 | SR60 | I-215 to Day St | 6,600 | 330 | 1,120 | 5,130 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 6,370 | 340 | 1,150 | 5,130 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 6,570 | 350 | 1,190 | 5,170 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 7,480 | 380 | 1,240 | 5,300 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 8,670 | 430 | 1,340 | 5,490 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 9,240 | 450 | 1,360 | 5,490 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 11,580 | 460 | 1,560 | 6,340 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,500 | 470 | 1,560 | 6,490 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 3,360 | 120 | 380 | 850 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 3,040 | 120 | 320 | 740 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 3,010 | 110 | 300 | 720 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 127 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 127 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 127 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 127 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 127 |
| FRWY75 | SR91 | I-15 to McKinley St | 730 | 50 | 190 | 1,090 |
| FRWY76 | SR91 | McKinley St to Pierce St | 850 | 50 | 210 | 1,120 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 850 | 50 | 210 | 1,120 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 920 | 60 | 220 | 1,140 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,020 | 60 | 230 | 1,150 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,120 | 60 | 240 | 1,170 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,210 | 60 | 250 | 1,190 |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY82 | SR91 | Adam St to Madison St | 1,270 | 70 | 260 | 1,210 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,300 | 70 | 270 | 1,220 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,360 | 70 | 270 | 1,230 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,340 | 70 | 270 | 1,220 |
| FRWY86 | SR91 | 14th St to University Ave | 1,330 | 60 | 240 | 1,110 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,370 | 60 | 240 | 1,120 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 1,660 | 60 | 190 | 590 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 1,200 | 50 | 160 | 570 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 1,200 | 50 | 160 | 570 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 900 | 40 | 140 | 550 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 730 | 40 | 130 | 540 |
| FRWY106 | I-10 | 22nd St to S 8th St | 670 | 40 | 130 | 540 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 550 | 30 | 120 | 520 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 470 | 30 | 110 | 510 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 450 | 30 | 90 | 490 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 410 | 30 | 90 | 490 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 400 | 30 | 90 | 490 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 400 | 30 | 80 | 490 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 340 | 20 | 70 | 430 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 340 | 20 | 70 | 430 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 910 | 20 | 90 | 210 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,080 | 20 | 100 | 220 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,220 | 30 | 110 | 230 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,270 | 30 | 110 | 240 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,290 | 30 | 120 | 240 |
| FRWY167 | I-215 | Redlands Ave to D St | 840 | 20 | 90 | 270 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 1,020 | 30 | 110 | 360 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 990 | 30 | 100 | 360 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 580 | 20 | 60 | 410 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 590 | 20 | 80 | 480 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 710 | 20 | 80 | 490 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 700 | 20 | 90 | 490 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 1,060 | 40 | 110 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 1,100 | 40 | 120 | 550 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 580 | 30 | 90 | 470 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 570 | 30 | 80 | 450 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 560 | 30 | 80 | 440 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 490 | 20 | 60 | 410 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 460 | 20 | 60 | 400 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 570 | 20 | 70 | 390 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 620 | 30 | 90 | 400 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 610 | 30 | 70 | 370 |
| FRWY142 | SR-215 | Mill St to 2rd St | 600 | 30 | 70 | 360 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 590 | 20 | 70 | 330 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 540 | 20 | 50 | 290 |

**World Logistics Center** **2022**

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Freeway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2310 | 530 | 50 | 150 | 1,580 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1553 | 1690 | 1653 |
| FRWY2 | 2250 | 450 | 50 | 150 | 1,600 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1573 | 1710 | 2287 |
| FRWY3 | 2300 | 470 | 60 | 160 | 1,610 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 12 | 4 | 130 | 1583 | 1730 | 1867 |
| FRWY4 | 2380 | 510 | 60 | 170 | 1,640 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 12 | 4 | 138 | 1612 | 1768 | 2029 |
| FRWY5 | 2460 | 550 | 60 | 180 | 1,670 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1642 | 1806 | 1595 |
| FRWY6 | 2510 | 580 | 60 | 180 | 1,690 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1661 | 1826 | 2367 |
| FRWY7 | 2570 | 610 | 60 | 190 | 1,710 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1681 | 1853 | 1900 |
| FRWY8 | 2610 | 630 | 60 | 190 | 1,730 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1701 | 1873 | 1788 |
| FRWY9 | 2800 | 680 | 70 | 210 | 1,840 | 1792 | 1.113 | 1 | 0 | 0 | 0 | 14 | 5 | 171 | 1809 | 2000 | 2227 |
| FRWY10 | 2840 | 700 | 70 | 220 | 1,850 | 1665 | 1.034 | 1 | 0 | 0 | 0 | 14 | 5 | 179 | 1819 | 2018 | 2088 |
| FRWY11 | 2900 | 730 | 70 | 230 | 1,870 | 849 | 0.527 | 1 | 0 | 0 | 0 | 14 | 5 | 187 | 1838 | 2046 | 1079 |
| FRWY12 | 3550 | 1,080 | 90 | 290 | 2,090 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 18 | 6 | 236 | 2055 | 2318 | 3310 |
| FRWY13 | 3730 | 1,160 | 90 | 310 | 2,170 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 18 | 6 | 252 | 2133 | 2413 | 2531 |
| FRWY14 | 3850 | 1,190 | 100 | 330 | 2,230 | 2444 | 1.518 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2192 | 2491 | 3782 |
| FRWY15 | 3860 | 1,190 | 100 | 330 | 2,240 | 1608 | 0.999 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2202 | 2501 | 2498 |
| FRWY16 | 3960 | 1,280 | 100 | 330 | 2,250 | 2722 | 1.691 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2212 | 2511 | 4245 |
| FRWY17 | 4250 | 1,490 | 110 | 350 | 2,300 | 3198 | 1.987 | 3 | 0 | 0 | 0 | 22 | 7 | 285 | 2261 | 2579 | 5124 |
| FRWY18 | 4490 | 1,690 | 110 | 370 | 2,320 | 2509 | 1.559 | 3 | 0 | 0 | 0 | 22 | 7 | 301 | 2281 | 2616 | 4077 |
| FRWY19 | 4760 | 1,840 | 120 | 400 | 2,400 | 910 | 0.565 | 3 | 0 | 0 | 0 | 25 | 8 | 326 | 2360 | 2722 | 1539 |
| FRWY20 | 5540 | 2,220 | 150 | 480 | 2,690 | 774 | 0.481 | 4 | 0 | 0 | 0 | 31 | 10 | 391 | 2645 | 3081 | 1481 |
| FRWY21 | 9130 | 3,970 | 230 | 790 | 4,140 | 1798 | 1.117 | 7 | 0 | 0 | 1 | 47 | 15 | 643 | 4070 | 4784 | 5344 |
| FRWY22 | 9320 | 4,030 | 240 | 830 | 4,220 | 1035 | 0.643 | 7 | 0 | 0 | 1 | 49 | 16 | 676 | 4149 | 4898 | 3149 |
| FRWY23 | 9430 | 4,080 | 240 | 850 | 4,260 | 1042 | 0.647 | 7 | 0 | 0 | 1 | 49 | 16 | 692 | 4188 | 4954 | 3207 |
| FRWY24 | 10050 | 4,480 | 260 | 910 | 4,400 | 2260 | 1.404 | 8 | 0 | 0 | 1 | 53 | 17 | 741 | 4326 | 5147 | 7226 |
| FRWY25 | 10830 | 5,070 | 280 | 970 | 4,510 | 1305 | 0.811 | 9 | 0 | 0 | 1 | 57 | 19 | 790 | 4434 | 5311 | 4305 |
| FRWY26 | 11090 | 5,390 | 280 | 960 | 4,460 | 977 | 0.607 | 10 | 1 | 1 | 1 | 57 | 19 | 782 | 4385 | 5254 | 3189 |
| FRWY27 | 13180 | 6,600 | 330 | 1,120 | 5,130 | 1186 | 0.737 | 12 | 1 | 1 | 1 | 67 | 22 | 912 | 5043 | 6059 | 4464 |
| FRWY28 | 12990 | 6,370 | 340 | 1,150 | 5,130 | 1642 | 1.020 | 12 | 1 | 1 | 1 | 69 | 23 | 936 | 5043 | 6086 | 6208 |
| FRWY29 | 13280 | 6,570 | 350 | 1,190 | 5,170 | 1636 | 1.016 | 12 | 1 | 1 | 1 | 71 | 23 | 969 | 5083 | 6161 | 6261 |
| FRWY30 | 14400 | 7,480 | 380 | 1,240 | 5,300 | 1555 | 0.966 | 14 | 1 | 1 | 1 | 78 | 25 | 1010 | 5211 | 6339 | 6124 |
| FRWY31 | 15930 | 8,670 | 430 | 1,340 | 5,490 | 3384 | 2.102 | 16 | 1 | 1 | 1 | 88 | 29 | 1091 | 5397 | 6624 | 13924 |
| FRWY32 | 16540 | 9,240 | 450 | 1,360 | 5,490 | 1112 | 0.691 | 17 | 1 | 1 | 1 | 92 | 30 | 1107 | 5397 | 6647 | 4591 |
| FRWY33 | 19940 | 11,580 | 460 | 1,560 | 6,340 | 1935 | 1.202 | 21 | 1 | 1 | 2 | 94 | 31 | 1270 | 6233 | 7653 | 9199 |
| FRWY34 | 21020 | 12,500 | 470 | 1,560 | 6,490 | 1675 | 1.041 | 23 | 1 | 1 | 2 | 96 | 31 | 1270 | 6381 | 7805 | 8121 |
| FRWY35 | 4710 | 3,360 | 120 | 380 | 850 | 1143 | 0.710 | 6 | 0 | 0 | 1 | 25 | 8 | 309 | 836 | 1185 | 841 |
| FRWY36 | 4220 | 3,040 | 120 | 320 | 740 | 9120 | 5.665 | 5 | 0 | 0 | 0 | 25 | 8 | 261 | 728 | 1027 | 5819 |
| FRWY37 | 4140 | 3,010 | 110 | 300 | 720 | 3802 | 2.362 | 5 | 0 | 0 | 0 | 22 | 7 | 244 | 708 | 988 | 2335 |
| FRWY294 | 127 | 0 | 0 | 0 | 127 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 227 |
| FRWY295 | 127 | 0 | 0 | 0 | 127 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| FRWY296 | 127 | 0 | 0 | 0 | 127 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 140 |
| FRWY297 | 127 | 0 | 0 | 0 | 127 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| FRWY299 | 127 | 0 | 0 | 0 | 127 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 128 |
| FRWY75 | 2060 | 730 | 50 | 190 | 1,090 | 2861 | 1.777 | 1 | 0 | 0 | 0 | 10 | 3 | 155 | 1072 | 1241 | 2206 |
| FRWY76 | 2230 | 850 | 50 | 210 | 1,120 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 1999 |
| FRWY77 | 2230 | 850 | 50 | 210 | 1,120 | 450 | 0.280 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 360 |
| FRWY78 | 2340 | 920 | 60 | 220 | 1,140 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 12 | 4 | 179 | 1121 | 1318 | 1133 |
| FRWY79 | 2460 | 1,020 | 60 | 230 | 1,150 | 1713 | 1.064 | 2 | 0 | 0 | 0 | 12 | 4 | 187 | 1131 | 1336 | 1422 |
| FRWY80 | 2590 | 1,120 | 60 | 240 | 1,170 | 1703 | 1.058 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1150 | 1364 | 1443 |
| FRWY81 | 2710 | 1,210 | 60 | 250 | 1,190 | 2512 | 1.560 | 2 | 0 | 0 | 0 | 12 | 4 | 204 | 1170 | 1392 | 2173 |
| FRWY82 | 2810 | 1,270 | 70 | 260 | 1,210 | 1674 | 1.040 | 2 | 0 | 0 | 0 | 14 | 5 | 212 | 1190 | 1423 | 1480 |
| FRWY83 | 2860 | 1,300 | 70 | 270 | 1,220 | 1819 | 1.130 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 1628 |
| FRWY84 | 2930 | 1,360 | 70 | 270 | 1,230 | 1182 | 0.734 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1209 | 1451 | 1065 |
| FRWY85 | 2900 | 1,340 | 70 | 270 | 1,220 | 2360 | 1.466 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 2113 |
| FRWY86 | 2740 | 1,330 | 60 | 240 | 1,110 | 783 | 0.486 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1091 | 1306 | 635 |
| FRWY87 | 2790 | 1,370 | 60 | 240 | 1,120 | 1370 | 0.851 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1101 | 1316 | 1120 |
| FRWY101 | 2500 | 1,660 | 60 | 190 | 590 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 580 | 755 | 798 |
| FRWY102 | 1980 | 1,200 | 50 | 160 | 570 | 925 | 0.575 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 406 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 1980 | 1,200 | 50 | 160 | 570 | 1770 | 1.100 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 777 |
| FRWY104 | 1630 | 900 | 40 | 140 | 550 | 3182 | 1.977 | 2 | 0 | 0 | 0 | 8 | 3 | 114 | 541 | 667 | 1319 |
| FRWY105 | 1440 | 730 | 40 | 130 | 540 | 1010 | 0.627 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 407 |
| FRWY106 | 1380 | 670 | 40 | 130 | 540 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 526 |
| FRWY107 | 1220 | 550 | 30 | 120 | 520 | 1655 | 1.028 | 1 | 0 | 0 | 0 | 6 | 2 | 98 | 511 | 618 | 636 |
| FRWY108 | 1120 | 470 | 30 | 110 | 510 | 4341 | 2.697 | 1 | 0 | 0 | 0 | 6 | 2 | 90 | 501 | 600 | 1618 |
| FRWY109 | 1060 | 450 | 30 | 90 | 490 | 1728 | 1.073 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 606 |
| FRWY110 | 1020 | 410 | 30 | 90 | 490 | 2788 | 1.732 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 977 |
| FRWY111 | 1010 | 400 | 30 | 90 | 490 | 7717 | 4.794 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 2704 |
| FRWY112 | 1000 | 400 | 30 | 80 | 490 | 1384 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 482 | 556 | 478 |
| FRWY113 | 860 | 340 | 20 | 70 | 430 | 3380 | 2.100 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1020 |
| FRWY114 | 860 | 340 | 20 | 70 | 430 | 3719 | 2.310 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1123 |
| FRWY129 | 1230 | 910 | 20 | 90 | 210 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 206 | 287 | 798 |
| FRWY130 | 1420 | 1,080 | 20 | 100 | 220 | 3830 | 2.379 | 2 | 0 | 0 | 0 | 4 | 1 | 81 | 216 | 305 | 727 |
| FRWY131 | 1590 | 1,220 | 30 | 110 | 230 | 2967 | 1.843 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 226 | 326 | 602 |
| FRWY132 | 1650 | 1,270 | 30 | 110 | 240 | 1163 | 0.722 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 236 | 336 | 243 |
| FRWY133 | 1680 | 1,290 | 30 | 120 | 240 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 236 | 345 | 972 |
| FRWY167 | 1220 | 840 | 20 | 90 | 270 | 1471 | 0.914 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 265 | 346 | 316 |
| FRWY168 | 1520 | 1,020 | 30 | 110 | 360 | 916 | 0.569 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 354 | 454 | 258 |
| FRWY169 | 1480 | 990 | 30 | 100 | 360 | 4924 | 3.059 | 2 | 0 | 0 | 0 | 6 | 2 | 81 | 354 | 446 | 1363 |
| FRWY171 | 1070 | 580 | 20 | 60 | 410 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 459 | 611 |
| FRWY172 | 1170 | 590 | 20 | 80 | 480 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 472 | 544 | 1013 |
| FRWY173 | 1300 | 710 | 20 | 80 | 490 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 482 | 554 | 860 |
| FRWY174 | 1300 | 700 | 20 | 90 | 490 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 482 | 562 | 396 |
| FRWY175 | 1750 | 1,060 | 40 | 110 | 540 | 1547 | 0.961 | 2 | 0 | 0 | 0 | 8 | 3 | 90 | 531 | 634 | 609 |
| FRWY176 | 1810 | 1,100 | 40 | 120 | 550 | 1359 | 0.844 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 541 | 652 | 550 |
| FRWY134 | 1170 | 580 | 30 | 90 | 470 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 462 | 545 | 469 |
| FRWY135 | 1130 | 570 | 30 | 80 | 450 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 442 | 517 | 549 |
| FRWY136 | 1110 | 560 | 30 | 80 | 440 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 433 | 507 | 327 |
| FRWY137 | 980 | 490 | 20 | 60 | 410 | 1516 | 0.942 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 458 | 432 |
| FRWY138 | 940 | 460 | 20 | 60 | 400 | 2485 | 1.544 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 393 | 449 | 692 |
| FRWY139 | 1050 | 570 | 20 | 70 | 390 | 1950 | 1.211 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 383 | 447 | 542 |
| FRWY140 | 1140 | 620 | 30 | 90 | 400 | 1581 | 0.982 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 393 | 476 | 467 |
| FRWY141 | 1080 | 610 | 30 | 70 | 370 | 1447 | 0.899 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 364 | 430 | 387 |
| FRWY142 | 1060 | 600 | 30 | 70 | 360 | 938 | 0.583 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 354 | 420 | 245 |
| FRWY143 | 1010 | 590 | 20 | 70 | 330 | 2032 | 1.262 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 324 | 388 | 490 |
| FRWY144 | 900 | 540 | 20 | 50 | 290 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 4 | 1 | 41 | 285 | 332 | 644 |
| | | | | | | | | | | | | | | | | | **191204** |

**VMT per Vehicle Class**

| Freeway Segment | **Speed Group** | **LDA-DSL** (miles) | **LDT1-DSL** (miles) | **LDT2-DSL** (miles) | **MDT-DSL** (miles) | **LHDT1-DSL** (miles) | **LHDT2_DSL** (miles) | **MHDT-DSL** (miles) | **HHDT-DSL** (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3 | 1 | 0 | 0 | 0 | 10 | 3 | 119 | 1519 |
| FRWY2 | 3 | 1 | 0 | 0 | 0 | 14 | 4 | 163 | 2104 |
| FRWY3 | 3 | 1 | 0 | 0 | 0 | 13 | 4 | 141 | 1708 |
| FRWY4 | 3 | 1 | 0 | 0 | 0 | 14 | 5 | 159 | 1850 |
| FRWY5 | 3 | 1 | 0 | 0 | 0 | 11 | 4 | 129 | 1450 |
| FRWY6 | 3 | 1 | 0 | 0 | 0 | 16 | 5 | 190 | 2154 |
| FRWY7 | 3 | 1 | 0 | 0 | 0 | 13 | 4 | 159 | 1723 |
| FRWY8 | 3 | 1 | 0 | 0 | 0 | 12 | 4 | 148 | 1624 |
| FRWY9 | 3 | 1 | 0 | 0 | 0 | 16 | 5 | 190 | 2014 |
| FRWY10 | 3 | 1 | 0 | 0 | 0 | 15 | 5 | 185 | 1881 |
| FRWY11 | 3 | 1 | 0 | 0 | 0 | 8 | 2 | 99 | 970 |
| FRWY12 | 2 | 3 | 0 | 0 | 0 | 26 | 9 | 337 | 2935 |
| FRWY13 | 2 | 2 | 0 | 0 | 0 | 19 | 6 | 265 | 2238 |
| FRWY14 | 2 | 3 | 0 | 0 | 0 | 31 | 10 | 408 | 3329 |
| FRWY15 | 2 | 2 | 0 | 0 | 0 | 20 | 7 | 268 | 2200 |
| FRWY16 | 2 | 4 | 0 | 0 | 0 | 35 | 11 | 454 | 3740 |
| FRWY17 | 2 | 5 | 0 | 0 | 0 | 45 | 15 | 566 | 4492 |
| FRWY18 | 2 | 5 | 0 | 0 | 0 | 35 | 11 | 470 | 3555 |
| FRWY19 | 2 | 2 | 0 | 0 | 0 | 14 | 5 | 184 | 1334 |
| FRWY20 | 2 | 2 | 0 | 0 | 0 | 15 | 5 | 188 | 1272 |
| FRWY21 | 3 | 8 | 0 | 0 | 1 | 52 | 17 | 718 | 4546 |
| FRWY22 | 3 | 5 | 0 | 0 | 0 | 32 | 10 | 434 | 2668 |
| FRWY23 | 3 | 5 | 0 | 0 | 0 | 32 | 10 | 448 | 2711 |
| FRWY24 | 3 | 11 | 1 | 1 | 1 | 75 | 24 | 1040 | 6073 |
| FRWY25 | 3 | 7 | 0 | 0 | 1 | 46 | 15 | 640 | 3595 |
| FRWY26 | 3 | 6 | 0 | 0 | 1 | 35 | 11 | 474 | 2661 |
| FRWY27 | 2 | 9 | 0 | 0 | 1 | 50 | 16 | 672 | 3716 |
| FRWY28 | 2 | 12 | 1 | 1 | 1 | 71 | 23 | 955 | 5145 |
| FRWY29 | 2 | 12 | 1 | 1 | 1 | 73 | 24 | 985 | 5166 |
| FRWY30 | 2 | 13 | 1 | 1 | 1 | 75 | 25 | 975 | 5033 |
| FRWY31 | 2 | 33 | 2 | 2 | 3 | 185 | 60 | 2293 | 11346 |
| FRWY32 | 2 | 12 | 1 | 1 | 1 | 63 | 21 | 765 | 3728 |
| FRWY33 | 2 | 25 | 1 | 1 | 2 | 113 | 37 | 1527 | 7492 |
| FRWY34 | 2 | 24 | 1 | 1 | 2 | 100 | 33 | 1322 | 6639 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY35 | 2 | 4 | 0 | 0 | 0 | 17 | 6 | 220 | 593 |
| FRWY36 | 2 | 31 | 2 | 2 | 3 | 139 | 45 | 1476 | 4122 |
| FRWY37 | 2 | 13 | 1 | 1 | 1 | 53 | 17 | 577 | 1672 |
| FRWY294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 227 |
| FRWY295 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| FRWY296 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 140 |
| FRWY297 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 |
| FRWY299 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 128 |
| FRWY75 | 7 | 2 | 0 | 0 | 0 | 18 | 6 | 275 | 1905 |
| FRWY76 | 7 | 2 | 0 | 0 | 0 | 16 | 5 | 266 | 1710 |
| FRWY77 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 48 | 308 |
| FRWY78 | 7 | 1 | 0 | 0 | 0 | 11 | 3 | 154 | 964 |
| FRWY79 | 7 | 2 | 0 | 0 | 0 | 13 | 4 | 199 | 1203 |
| FRWY80 | 7 | 2 | 0 | 0 | 0 | 13 | 4 | 207 | 1217 |
| FRWY81 | 7 | 3 | 0 | 0 | 0 | 19 | 6 | 318 | 1826 |
| FRWY82 | 7 | 2 | 0 | 0 | 0 | 15 | 5 | 220 | 1237 |
| FRWY83 | 7 | 3 | 0 | 0 | 0 | 16 | 5 | 248 | 1355 |
| FRWY84 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 161 | 888 |
| FRWY85 | 7 | 4 | 0 | 0 | 0 | 21 | 7 | 322 | 1758 |
| FRWY86 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 95 | 531 |
| FRWY87 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 166 | 937 |
| FRWY101 | 2 | 3 | 0 | 0 | 0 | 13 | 4 | 164 | 614 |
| FRWY102 | 2 | 1 | 0 | 0 | 0 | 6 | 2 | 75 | 322 |
| FRWY103 | 2 | 2 | 0 | 0 | 0 | 11 | 4 | 143 | 616 |
| FRWY104 | 2 | 3 | 0 | 0 | 0 | 16 | 5 | 225 | 1069 |
| FRWY105 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 333 |
| FRWY106 | 2 | 1 | 0 | 0 | 0 | 7 | 2 | 86 | 430 |
| FRWY107 | 2 | 1 | 0 | 0 | 0 | 6 | 2 | 100 | 526 |
| FRWY108 | 2 | 2 | 0 | 0 | 0 | 17 | 5 | 242 | 1352 |
| FRWY109 | 2 | 1 | 0 | 0 | 0 | 7 | 2 | 79 | 517 |
| FRWY110 | 2 | 1 | 0 | 0 | 0 | 11 | 3 | 127 | 834 |
| FRWY111 | 2 | 3 | 0 | 0 | 0 | 29 | 10 | 351 | 2309 |
| FRWY112 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 414 |
| FRWY113 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 120 | 888 |
| FRWY114 | 2 | 1 | 0 | 0 | 0 | 9 | 3 | 132 | 977 |
| FRWY129 | 2 | 5 | 0 | 0 | 0 | 11 | 4 | 204 | 574 |
| FRWY130 | 2 | 5 | 0 | 0 | 0 | 10 | 3 | 194 | 515 |
| FRWY131 | 2 | 4 | 0 | 0 | 0 | 11 | 4 | 165 | 417 |
| FRWY132 | 2 | 2 | 0 | 0 | 0 | 4 | 1 | 65 | 170 |
| FRWY133 | 2 | 7 | 0 | 0 | 1 | 17 | 6 | 276 | 666 |
| FRWY167 | 2 | 1 | 0 | 0 | 0 | 4 | 1 | 67 | 243 |
| FRWY168 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 51 | 201 |
| FRWY169 | 2 | 5 | 0 | 0 | 0 | 19 | 6 | 249 | 1083 |
| FRWY171 | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 537 |
| FRWY172 | 2 | 2 | 0 | 0 | 0 | 8 | 2 | 121 | 879 |
| FRWY173 | 2 | 2 | 0 | 0 | 0 | 6 | 2 | 101 | 748 |
| FRWY174 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 52 | 340 |
| FRWY175 | 2 | 2 | 0 | 0 | 0 | 8 | 3 | 86 | 510 |
| FRWY176 | 2 | 2 | 0 | 0 | 0 | 7 | 2 | 82 | 456 |
| FRWY134 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 398 |
| FRWY135 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 69 | 470 |
| FRWY136 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 42 | 279 |
| FRWY137 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 380 |
| FRWY138 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 75 | 607 |
| FRWY139 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 69 | 464 |
| FRWY140 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 72 | 386 |
| FRWY141 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 51 | 327 |
| FRWY142 | 7 | 1 | 0 | 0 | 0 | 4 | 1 | 33 | 206 |
| FRWY143 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 72 | 410 |
| FRWY144 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 79 | 552 |
| **Total** | | **372** | **20** | **19** | **33** | **2088** | **683** | **27439** | **160550** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2_DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 279 | 15 | 14 | 25 | 1446 | 473 | 18650 | 98288 | |
| 3 | 60 | 3 | 3 | 5 | 442 | 145 | 5803 | 43848 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 34 | 2 | 2 | 3 | 200 | 65 | 2987 | 18414 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **372** | **20** | **19** | **33** | **2088** | **683** | **27439** | **160550** | **191204** |

**World Logistics Center** **2022**
Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Freeway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2310 | 530 | 50 | 150 | 1,580 | 1574 | 0.978 | 301 | 36 | 109 | 84 | 33 | 3 | 28 | 27 | 620 | 606 |
| FRWY2 | 2250 | 450 | 50 | 150 | 1,600 | 2153 | 1.337 | 255 | 30 | 92 | 71 | 33 | 3 | 28 | 27 | 540 | 723 |
| FRWY3 | 2300 | 470 | 60 | 160 | 1,610 | 1737 | 1.079 | 267 | 32 | 96 | 74 | 40 | 4 | 30 | 27 | 570 | 615 |
| FRWY4 | 2380 | 510 | 60 | 170 | 1,640 | 1847 | 1.147 | 289 | 34 | 105 | 81 | 40 | 4 | 32 | 28 | 612 | 702 |
| FRWY5 | 2460 | 550 | 60 | 180 | 1,670 | 1422 | 0.883 | 312 | 37 | 113 | 87 | 40 | 4 | 33 | 28 | 654 | 578 |
| FRWY6 | 2510 | 580 | 60 | 180 | 1,690 | 2087 | 1.296 | 329 | 39 | 119 | 92 | 40 | 4 | 33 | 29 | 684 | 887 |
| FRWY7 | 2570 | 610 | 60 | 190 | 1,710 | 1650 | 1.025 | 346 | 41 | 125 | 97 | 40 | 4 | 35 | 29 | 717 | 734 |
| FRWY8 | 2610 | 630 | 60 | 190 | 1,730 | 1537 | 0.955 | 358 | 42 | 129 | 100 | 40 | 4 | 35 | 29 | 737 | 704 |
| FRWY9 | 2800 | 680 | 70 | 210 | 1,840 | 1792 | 1.113 | 386 | 46 | 139 | 108 | 46 | 5 | 39 | 31 | 800 | 890 |
| FRWY10 | 2840 | 700 | 70 | 220 | 1,850 | 1665 | 1.034 | 397 | 47 | 143 | 111 | 46 | 5 | 41 | 31 | 822 | 850 |
| FRWY11 | 2900 | 730 | 70 | 230 | 1,870 | 849 | 0.527 | 414 | 49 | 150 | 115 | 46 | 5 | 43 | 32 | 854 | 450 |
| FRWY12 | 3550 | 1,080 | 90 | 290 | 2,090 | 2299 | 1.428 | 613 | 73 | 221 | 171 | 59 | 6 | 54 | 35 | 1232 | 1760 |
| FRWY13 | 3730 | 1,160 | 90 | 310 | 2,170 | 1689 | 1.049 | 658 | 78 | 238 | 184 | 59 | 6 | 58 | 37 | 1317 | 1382 |
| FRWY14 | 3850 | 1,190 | 100 | 330 | 2,230 | 2444 | 1.518 | 675 | 80 | 244 | 188 | 66 | 7 | 61 | 38 | 1359 | 2064 |
| FRWY15 | 3860 | 1,190 | 100 | 330 | 2,240 | 1608 | 0.999 | 675 | 80 | 244 | 188 | 66 | 7 | 61 | 38 | 1359 | 1358 |
| FRWY16 | 3960 | 1,280 | 100 | 330 | 2,250 | 2722 | 1.691 | 726 | 86 | 262 | 203 | 66 | 7 | 61 | 38 | 1449 | 2451 |
| FRWY17 | 4250 | 1,490 | 110 | 350 | 2,300 | 3198 | 1.987 | 846 | 100 | 305 | 236 | 73 | 8 | 65 | 39 | 1671 | 3319 |
| FRWY18 | 4490 | 1,690 | 110 | 370 | 2,320 | 2509 | 1.559 | 959 | 114 | 346 | 267 | 73 | 8 | 69 | 39 | 1874 | 2921 |
| FRWY19 | 4760 | 1,840 | 120 | 400 | 2,400 | 910 | 0.565 | 1044 | 124 | 377 | 291 | 79 | 8 | 74 | 40 | 2038 | 1152 |
| FRWY20 | 5540 | 2,220 | 150 | 480 | 2,690 | 774 | 0.481 | 1260 | 149 | 455 | 351 | 99 | 10 | 89 | 45 | 2459 | 1182 |
| FRWY21 | 9130 | 3,970 | 230 | 790 | 4,140 | 1798 | 1.117 | 2253 | 267 | 814 | 628 | 152 | 16 | 147 | 70 | 4346 | 4854 |
| FRWY22 | 9320 | 4,030 | 240 | 830 | 4,220 | 1035 | 0.643 | 2287 | 271 | 826 | 638 | 158 | 17 | 154 | 71 | 4422 | 2843 |
| FRWY23 | 9430 | 4,080 | 240 | 850 | 4,260 | 1042 | 0.647 | 2315 | 274 | 836 | 646 | 158 | 17 | 158 | 72 | 4476 | 2897 |
| FRWY24 | 10050 | 4,480 | 260 | 910 | 4,400 | 2260 | 1.404 | 2542 | 301 | 918 | 709 | 172 | 18 | 169 | 74 | 4903 | 6884 |
| FRWY25 | 10830 | 5,070 | 280 | 970 | 4,510 | 1305 | 0.811 | 2877 | 341 | 1039 | 802 | 185 | 19 | 180 | 76 | 5519 | 4475 |
| FRWY26 | 11090 | 5,390 | 280 | 960 | 4,460 | 977 | 0.607 | 3059 | 362 | 1105 | 853 | 185 | 19 | 178 | 75 | 5836 | 3542 |
| FRWY27 | 13180 | 6,600 | 330 | 1,120 | 5,130 | 1186 | 0.737 | 3745 | 444 | 1353 | 1044 | 218 | 23 | 208 | 87 | 7121 | 5246 |
| FRWY28 | 12990 | 6,370 | 340 | 1,150 | 5,130 | 1642 | 1.020 | 3615 | 428 | 1305 | 1008 | 224 | 24 | 214 | 87 | 6904 | 7043 |
| FRWY29 | 13280 | 6,570 | 350 | 1,190 | 5,170 | 1636 | 1.016 | 3728 | 442 | 1346 | 1039 | 231 | 24 | 221 | 87 | 7119 | 7235 |
| FRWY30 | 14400 | 7,480 | 380 | 1,240 | 5,300 | 1555 | 0.966 | 4245 | 503 | 1533 | 1183 | 251 | 26 | 230 | 89 | 8061 | 7786 |
| FRWY31 | 15930 | 8,670 | 430 | 1,340 | 5,490 | 3384 | 2.102 | 4920 | 583 | 1777 | 1372 | 284 | 30 | 249 | 93 | 9306 | 19564 |
| FRWY32 | 16540 | 9,240 | 450 | 1,360 | 5,490 | 1112 | 0.691 | 5243 | 621 | 1894 | 1462 | 297 | 31 | 253 | 93 | 9893 | 6834 |
| FRWY33 | 19940 | 11,580 | 460 | 1,560 | 6,340 | 1935 | 1.202 | 6571 | 779 | 2373 | 1832 | 303 | 32 | 290 | 107 | 12287 | 14770 |
| FRWY34 | 21020 | 12,500 | 470 | 1,560 | 6,490 | 1675 | 1.041 | 7093 | 840 | 2562 | 1978 | 310 | 32 | 290 | 109 | 13215 | 13751 |
| FRWY35 | 4710 | 3,360 | 120 | 380 | 850 | 1143 | 0.710 | 1907 | 226 | 689 | 532 | 79 | 8 | 71 | 14 | 3525 | 2503 |
| FRWY36 | 4220 | 3,040 | 120 | 320 | 740 | 9120 | 5.665 | 1725 | 204 | 623 | 481 | 79 | 8 | 59 | 12 | 3193 | 18089 |
| FRWY37 | 4140 | 3,010 | 110 | 300 | 720 | 3802 | 2.362 | 1708 | 202 | 617 | 476 | 73 | 8 | 56 | 12 | 3152 | 7444 |
| FRWY294 | 127 | 0 | 0 | 0 | 127 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| FRWY295 | 127 | 0 | 0 | 0 | 127 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| FRWY296 | 127 | 0 | 0 | 0 | 127 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY297 | 127 | 0 | 0 | 0 | 127 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY299 | 127 | 0 | 0 | 0 | 127 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| FRWY75 | 2060 | 730 | 50 | 190 | 1,090 | 2861 | 1.777 | 414 | 49 | 150 | 115 | 33 | 3 | 35 | 18 | 819 | 1455 |
| FRWY76 | 2230 | 850 | 50 | 210 | 1,120 | 2500 | 1.553 | 482 | 57 | 174 | 134 | 33 | 3 | 39 | 19 | 943 | 1464 |
| FRWY77 | 2230 | 850 | 50 | 210 | 1,120 | 450 | 0.280 | 482 | 57 | 174 | 134 | 33 | 3 | 39 | 19 | 943 | 263 |
| FRWY78 | 2340 | 920 | 60 | 220 | 1,140 | 1384 | 0.860 | 522 | 62 | 189 | 146 | 40 | 4 | 41 | 19 | 1022 | 879 |
| FRWY79 | 2460 | 1,020 | 60 | 230 | 1,150 | 1713 | 1.064 | 579 | 69 | 209 | 161 | 40 | 4 | 43 | 19 | 1124 | 1196 |
| FRWY80 | 2590 | 1,120 | 60 | 240 | 1,170 | 1703 | 1.058 | 636 | 75 | 230 | 177 | 40 | 4 | 45 | 20 | 1226 | 1297 |
| FRWY81 | 2710 | 1,210 | 60 | 250 | 1,190 | 2512 | 1.560 | 687 | 81 | 248 | 191 | 40 | 4 | 46 | 20 | 1318 | 2056 |
| FRWY82 | 2810 | 1,270 | 70 | 260 | 1,210 | 1674 | 1.040 | 721 | 85 | 260 | 201 | 46 | 5 | 48 | 20 | 1387 | 1442 |
| FRWY83 | 2860 | 1,300 | 70 | 270 | 1,220 | 1819 | 1.130 | 738 | 87 | 266 | 206 | 46 | 5 | 50 | 21 | 1419 | 1603 |
| FRWY84 | 2930 | 1,360 | 70 | 270 | 1,230 | 1182 | 0.734 | 772 | 91 | 279 | 215 | 46 | 5 | 50 | 21 | 1479 | 1086 |
| FRWY85 | 2900 | 1,340 | 70 | 270 | 1,220 | 2360 | 1.466 | 760 | 90 | 275 | 212 | 46 | 5 | 50 | 21 | 1459 | 2139 |
| FRWY86 | 2740 | 1,330 | 60 | 240 | 1,110 | 783 | 0.486 | 755 | 89 | 273 | 210 | 40 | 4 | 45 | 19 | 1434 | 698 |
| FRWY87 | 2790 | 1,370 | 60 | 240 | 1,120 | 1370 | 0.851 | 777 | 92 | 281 | 217 | 40 | 4 | 45 | 19 | 1474 | 1255 |
| FRWY101 | 2500 | 1,660 | 60 | 190 | 590 | 1703 | 1.058 | 942 | 112 | 340 | 263 | 40 | 4 | 35 | 10 | 1745 | 1847 |
| FRWY102 | 1980 | 1,200 | 50 | 160 | 570 | 925 | 0.575 | 681 | 81 | 246 | 190 | 33 | 3 | 30 | 10 | 1273 | 732 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 1980 | 1,200 | 50 | 160 | 570 | 1770 | 1.100 | 681 | 81 | 246 | 190 | 33 | 3 | 30 | 10 | 1273 | 1400 |
| FRWY104 | 1630 | 900 | 40 | 140 | 550 | 3182 | 1.977 | 511 | 61 | 184 | 142 | 26 | 3 | 26 | 9 | 963 | 1903 |
| FRWY105 | 1440 | 730 | 40 | 130 | 540 | 1010 | 0.627 | 414 | 49 | 150 | 115 | 26 | 3 | 24 | 9 | 791 | 496 |
| FRWY106 | 1380 | 670 | 40 | 130 | 540 | 1305 | 0.811 | 380 | 45 | 137 | 106 | 26 | 3 | 24 | 9 | 731 | 593 |
| FRWY107 | 1220 | 550 | 30 | 120 | 520 | 1655 | 1.028 | 312 | 37 | 113 | 87 | 20 | 2 | 22 | 9 | 602 | 619 |
| FRWY108 | 1120 | 470 | 30 | 110 | 510 | 4341 | 2.697 | 267 | 32 | 96 | 74 | 20 | 2 | 20 | 9 | 520 | 1402 |
| FRWY109 | 1060 | 450 | 30 | 90 | 490 | 1728 | 1.073 | 255 | 30 | 92 | 71 | 20 | 2 | 17 | 8 | 496 | 532 |
| FRWY110 | 1020 | 410 | 30 | 90 | 490 | 2788 | 1.732 | 233 | 28 | 84 | 65 | 20 | 2 | 17 | 8 | 456 | 790 |
| FRWY111 | 1010 | 400 | 30 | 90 | 490 | 7717 | 4.794 | 227 | 27 | 82 | 63 | 20 | 2 | 17 | 8 | 446 | 2138 |
| FRWY112 | 1000 | 400 | 30 | 80 | 490 | 1384 | 0.860 | 227 | 27 | 82 | 63 | 20 | 2 | 15 | 8 | 444 | 382 |
| FRWY113 | 860 | 340 | 20 | 70 | 430 | 3380 | 2.100 | 193 | 23 | 70 | 54 | 13 | 1 | 13 | 7 | 374 | 786 |
| FRWY114 | 860 | 340 | 20 | 70 | 430 | 3719 | 2.310 | 193 | 23 | 70 | 54 | 13 | 1 | 13 | 7 | 374 | 864 |
| FRWY129 | 1230 | 910 | 20 | 90 | 210 | 4476 | 2.781 | 516 | 61 | 186 | 144 | 13 | 1 | 17 | 4 | 943 | 2622 |
| FRWY130 | 1420 | 1,080 | 20 | 100 | 220 | 3830 | 2.379 | 613 | 73 | 221 | 171 | 13 | 1 | 19 | 4 | 1115 | 2652 |
| FRWY131 | 1590 | 1,220 | 30 | 110 | 230 | 2967 | 1.843 | 692 | 82 | 250 | 193 | 20 | 2 | 20 | 4 | 1264 | 2329 |
| FRWY132 | 1650 | 1,270 | 30 | 110 | 240 | 1163 | 0.722 | 721 | 85 | 260 | 201 | 20 | 2 | 20 | 4 | 1314 | 949 |
| FRWY133 | 1680 | 1,290 | 30 | 120 | 240 | 4541 | 2.821 | 732 | 87 | 264 | 204 | 20 | 2 | 22 | 4 | 1335 | 3767 |
| FRWY167 | 1220 | 840 | 20 | 90 | 270 | 1471 | 0.914 | 477 | 56 | 172 | 133 | 13 | 1 | 17 | 5 | 874 | 799 |
| FRWY168 | 1520 | 1,020 | 30 | 110 | 360 | 916 | 0.569 | 579 | 69 | 209 | 161 | 20 | 2 | 20 | 6 | 1066 | 607 |
| FRWY169 | 1480 | 990 | 30 | 100 | 360 | 4924 | 3.059 | 562 | 67 | 203 | 157 | 20 | 2 | 19 | 6 | 1034 | 3164 |
| FRWY171 | 1070 | 580 | 20 | 60 | 410 | 2145 | 1.333 | 329 | 39 | 119 | 92 | 13 | 1 | 11 | 7 | 611 | 815 |
| FRWY172 | 1170 | 590 | 20 | 80 | 480 | 3000 | 1.864 | 335 | 40 | 121 | 93 | 13 | 1 | 15 | 8 | 626 | 1167 |
| FRWY173 | 1300 | 710 | 20 | 80 | 490 | 2501 | 1.554 | 403 | 48 | 145 | 112 | 13 | 1 | 15 | 8 | 746 | 1159 |
| FRWY174 | 1300 | 700 | 20 | 90 | 490 | 1135 | 0.705 | 397 | 47 | 143 | 111 | 13 | 1 | 17 | 8 | 738 | 520 |
| FRWY175 | 1750 | 1,060 | 40 | 110 | 540 | 1547 | 0.961 | 602 | 71 | 217 | 168 | 26 | 3 | 20 | 9 | 1116 | 1073 |
| FRWY176 | 1810 | 1,100 | 40 | 120 | 550 | 1359 | 0.844 | 624 | 74 | 225 | 174 | 26 | 3 | 22 | 9 | 1158 | 978 |
| FRWY134 | 1170 | 580 | 30 | 90 | 470 | 1385 | 0.860 | 329 | 39 | 119 | 92 | 20 | 2 | 17 | 8 | 625 | 538 |
| FRWY135 | 1130 | 570 | 30 | 80 | 450 | 1711 | 1.063 | 323 | 38 | 117 | 90 | 20 | 2 | 15 | 8 | 613 | 652 |
| FRWY136 | 1110 | 560 | 30 | 80 | 440 | 1038 | 0.645 | 318 | 38 | 115 | 89 | 20 | 2 | 15 | 7 | 603 | 389 |
| FRWY137 | 980 | 490 | 20 | 60 | 410 | 1516 | 0.942 | 278 | 33 | 100 | 78 | 13 | 1 | 11 | 7 | 522 | 491 |
| FRWY138 | 940 | 460 | 20 | 60 | 400 | 2485 | 1.544 | 261 | 31 | 94 | 73 | 13 | 1 | 11 | 7 | 491 | 759 |
| FRWY139 | 1050 | 570 | 20 | 70 | 390 | 1950 | 1.211 | 323 | 38 | 117 | 90 | 13 | 1 | 13 | 7 | 603 | 730 |
| FRWY140 | 1140 | 620 | 30 | 90 | 400 | 1581 | 0.982 | 352 | 42 | 127 | 98 | 20 | 2 | 17 | 7 | 664 | 652 |
| FRWY141 | 1080 | 610 | 30 | 70 | 370 | 1447 | 0.899 | 346 | 41 | 125 | 97 | 20 | 2 | 13 | 6 | 650 | 584 |
| FRWY142 | 1060 | 600 | 30 | 70 | 360 | 938 | 0.583 | 340 | 40 | 123 | 95 | 20 | 2 | 13 | 6 | 640 | 373 |
| FRWY143 | 1010 | 590 | 20 | 70 | 330 | 2032 | 1.262 | 335 | 40 | 121 | 93 | 13 | 1 | 13 | 6 | 622 | 785 |
| FRWY144 | 900 | 540 | 20 | 50 | 290 | 3119 | 1.938 | 306 | 36 | 111 | 85 | 13 | 1 | 9 | 5 | 568 | 1100 |
| | | | | | | | | | | | | | | | | | 222066 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3 | 294 | 35 | 106 | 82 | 32 | 3 | 27 | 26 |
| FRWY2 | 3 | 342 | 40 | 123 | 95 | 44 | 5 | 37 | 36 |
| FRWY3 | 3 | 288 | 34 | 104 | 80 | 43 | 4 | 32 | 29 |
| FRWY4 | 3 | 332 | 39 | 120 | 93 | 45 | 5 | 36 | 32 |
| FRWY5 | 3 | 276 | 33 | 100 | 77 | 35 | 4 | 30 | 25 |
| FRWY6 | 3 | 427 | 51 | 154 | 119 | 51 | 5 | 43 | 37 |
| FRWY7 | 3 | 355 | 42 | 128 | 99 | 41 | 4 | 36 | 30 |
| FRWY8 | 3 | 341 | 40 | 123 | 95 | 38 | 4 | 34 | 28 |
| FRWY9 | 3 | 430 | 51 | 155 | 120 | 51 | 5 | 43 | 35 |
| FRWY10 | 3 | 411 | 49 | 148 | 115 | 48 | 5 | 42 | 32 |
| FRWY11 | 3 | 218 | 26 | 79 | 61 | 24 | 3 | 23 | 17 |
| FRWY12 | 2 | 875 | 104 | 316 | 244 | 85 | 9 | 77 | 50 |
| FRWY13 | 2 | 691 | 82 | 249 | 193 | 62 | 7 | 60 | 38 |
| FRWY14 | 2 | 1025 | 121 | 370 | 286 | 100 | 10 | 93 | 57 |
| FRWY15 | 2 | 675 | 80 | 244 | 188 | 66 | 7 | 61 | 38 |
| FRWY16 | 2 | 1228 | 146 | 444 | 342 | 112 | 12 | 104 | 64 |
| FRWY17 | 2 | 1680 | 199 | 607 | 468 | 144 | 15 | 129 | 77 |
| FRWY18 | 2 | 1495 | 177 | 540 | 417 | 113 | 12 | 107 | 61 |
| FRWY19 | 2 | 590 | 70 | 213 | 165 | 45 | 5 | 42 | 23 |
| FRWY20 | 2 | 606 | 72 | 219 | 169 | 48 | 5 | 43 | 22 |
| FRWY21 | 3 | 2516 | 298 | 909 | 702 | 169 | 18 | 164 | 78 |
| FRWY22 | 3 | 1470 | 174 | 531 | 410 | 102 | 11 | 99 | 46 |
| FRWY23 | 3 | 1499 | 178 | 541 | 418 | 102 | 11 | 102 | 47 |
| FRWY24 | 3 | 3569 | 423 | 1289 | 995 | 241 | 25 | 237 | 104 |
| FRWY25 | 3 | 2332 | 276 | 842 | 650 | 150 | 16 | 146 | 62 |
| FRWY26 | 3 | 1856 | 220 | 670 | 518 | 112 | 12 | 108 | 46 |
| FRWY27 | 2 | 2759 | 327 | 996 | 769 | 160 | 17 | 153 | 64 |
| FRWY28 | 2 | 3687 | 437 | 1332 | 1028 | 229 | 24 | 218 | 88 |
| FRWY29 | 2 | 3789 | 449 | 1368 | 1056 | 235 | 25 | 225 | 89 |
| FRWY30 | 2 | 4100 | 486 | 1481 | 1143 | 242 | 25 | 223 | 86 |
| FRWY31 | 2 | 10343 | 1225 | 3735 | 2884 | 596 | 63 | 523 | 195 |
| FRWY32 | 2 | 3622 | 429 | 1308 | 1010 | 205 | 21 | 175 | 64 |
| FRWY33 | 2 | 7899 | 936 | 2852 | 2202 | 365 | 38 | 348 | 129 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY34 | 2 | 7381 | 874 | 2665 | 2058 | 323 | 34 | 302 | 114 |
| FRWY35 | 2 | 1354 | 160 | 489 | 377 | 56 | 6 | 50 | 10 |
| FRWY36 | 2 | 9774 | 1158 | 3529 | 2725 | 449 | 47 | 337 | 71 |
| FRWY37 | 2 | 4034 | 478 | 1457 | 1125 | 171 | 18 | 132 | 29 |
| FRWY294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| FRWY295 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| FRWY296 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY297 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY299 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FRWY75 | 7 | 736 | 87 | 266 | 205 | 59 | 6 | 63 | 33 |
| FRWY76 | 7 | 749 | 89 | 271 | 209 | 51 | 5 | 61 | 29 |
| FRWY77 | 7 | 135 | 16 | 49 | 38 | 9 | 1 | 11 | 5 |
| FRWY78 | 7 | 449 | 53 | 162 | 125 | 34 | 4 | 35 | 17 |
| FRWY79 | 7 | 616 | 73 | 222 | 172 | 42 | 4 | 45 | 21 |
| FRWY80 | 7 | 672 | 80 | 243 | 187 | 42 | 4 | 47 | 21 |
| FRWY81 | 7 | 1071 | 127 | 387 | 299 | 62 | 6 | 72 | 31 |
| FRWY82 | 7 | 749 | 89 | 271 | 209 | 48 | 5 | 50 | 21 |
| FRWY83 | 7 | 834 | 99 | 301 | 232 | 52 | 5 | 57 | 23 |
| FRWY84 | 7 | 567 | 67 | 205 | 158 | 34 | 4 | 37 | 15 |
| FRWY85 | 7 | 1115 | 132 | 403 | 311 | 68 | 7 | 74 | 30 |
| FRWY86 | 7 | 367 | 43 | 133 | 102 | 19 | 2 | 22 | 9 |
| FRWY87 | 7 | 662 | 78 | 239 | 184 | 34 | 4 | 38 | 16 |
| FRWY101 | 2 | 997 | 118 | 360 | 278 | 42 | 4 | 37 | 11 |
| FRWY102 | 2 | 391 | 46 | 141 | 109 | 19 | 2 | 17 | 6 |
| FRWY103 | 2 | 749 | 89 | 270 | 209 | 36 | 4 | 33 | 11 |
| FRWY104 | 2 | 1010 | 120 | 365 | 281 | 52 | 5 | 51 | 18 |
| FRWY105 | 2 | 260 | 31 | 94 | 72 | 17 | 2 | 15 | 6 |
| FRWY106 | 2 | 308 | 37 | 111 | 86 | 21 | 2 | 20 | 7 |
| FRWY107 | 2 | 321 | 38 | 116 | 89 | 20 | 2 | 23 | 9 |
| FRWY108 | 2 | 719 | 85 | 260 | 201 | 53 | 6 | 55 | 23 |
| FRWY109 | 2 | 274 | 32 | 99 | 76 | 21 | 2 | 18 | 9 |
| FRWY110 | 2 | 403 | 48 | 146 | 112 | 34 | 4 | 29 | 14 |
| FRWY111 | 2 | 1088 | 129 | 393 | 303 | 95 | 10 | 80 | 40 |
| FRWY112 | 2 | 195 | 23 | 70 | 54 | 17 | 2 | 13 | 7 |
| FRWY113 | 2 | 405 | 48 | 146 | 113 | 28 | 3 | 27 | 15 |
| FRWY114 | 2 | 446 | 53 | 161 | 124 | 30 | 3 | 30 | 17 |
| FRWY129 | 2 | 1436 | 170 | 519 | 400 | 37 | 4 | 47 | 10 |
| FRWY130 | 2 | 1458 | 173 | 527 | 407 | 31 | 3 | 44 | 9 |
| FRWY131 | 2 | 1276 | 151 | 461 | 356 | 36 | 4 | 38 | 7 |
| FRWY132 | 2 | 521 | 62 | 188 | 145 | 14 | 1 | 15 | 3 |
| FRWY133 | 2 | 2065 | 245 | 746 | 576 | 56 | 6 | 63 | 11 |
| FRWY167 | 2 | 436 | 52 | 157 | 121 | 12 | 1 | 15 | 4 |
| FRWY168 | 2 | 329 | 39 | 119 | 92 | 11 | 1 | 12 | 3 |
| FRWY169 | 2 | 1718 | 204 | 621 | 479 | 61 | 6 | 57 | 19 |
| FRWY171 | 2 | 439 | 52 | 158 | 122 | 18 | 2 | 15 | 9 |
| FRWY172 | 2 | 624 | 74 | 225 | 174 | 25 | 3 | 28 | 15 |
| FRWY173 | 2 | 626 | 74 | 226 | 175 | 21 | 2 | 23 | 13 |
| FRWY174 | 2 | 280 | 33 | 101 | 78 | 9 | 1 | 12 | 6 |
| FRWY175 | 2 | 578 | 68 | 209 | 161 | 25 | 3 | 20 | 9 |
| FRWY176 | 2 | 527 | 62 | 190 | 147 | 22 | 2 | 19 | 8 |
| FRWY134 | 3 | 283 | 34 | 102 | 79 | 17 | 2 | 14 | 7 |
| FRWY135 | 3 | 344 | 41 | 124 | 96 | 21 | 2 | 16 | 8 |
| FRWY136 | 3 | 205 | 24 | 74 | 57 | 13 | 1 | 10 | 5 |
| FRWY137 | 3 | 262 | 31 | 95 | 73 | 12 | 1 | 10 | 7 |
| FRWY138 | 3 | 403 | 48 | 146 | 112 | 20 | 2 | 17 | 10 |
| FRWY139 | 3 | 392 | 46 | 141 | 109 | 16 | 2 | 16 | 8 |
| FRWY140 | 7 | 346 | 41 | 125 | 96 | 19 | 2 | 16 | 7 |
| FRWY141 | 7 | 311 | 37 | 112 | 87 | 18 | 2 | 12 | 6 |
| FRWY142 | 7 | 198 | 24 | 72 | 55 | 12 | 1 | 8 | 4 |
| FRWY143 | 7 | 423 | 50 | 153 | 118 | 17 | 2 | 16 | 7 |
| FRWY144 | 7 | 594 | 70 | 214 | 166 | 26 | 3 | 18 | 9 |
| **Total** | | **116924** | **13852** | **42223** | **32599** | **6744** | **707** | **6262** | **2754** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 87485 | 10365 | 31593 | 24391 | 4670 | 489 | 4256 | 1686 | |
| 3 | 18845 | 2233 | 6805 | 5254 | 1429 | 150 | 1324 | 752 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 10594 | 1255 | 3826 | 2954 | 645 | 68 | 682 | 316 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **116924** | **13852** | **42223** | **32599** | **6744** | **707** | **6262** | **2754** | **222066** |

**World Logistics Center**
**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**
**Entrained Road Dust**
Freeways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | F | 1574 | 0.98 | 530 | 518 | 50 | 49 | 150 | 147 | 1,580 | 1545 | 2259 | 17.28 | 0.022 | 0.0003 | 0.7 | 0.0012 | 2.8 |
| FRWY2 | F | 2153 | 1.34 | 450 | 602 | 50 | 67 | 150 | 201 | 1,600 | 2140 | 3009 | 17.87 | 0.022 | 0.0003 | 1.0 | 0.0013 | 3.9 |
| FRWY3 | F | 1737 | 1.08 | 470 | 507 | 60 | 65 | 160 | 173 | 1,610 | 1737 | 2482 | 17.67 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.2 |
| FRWY4 | F | 1847 | 1.15 | 510 | 585 | 60 | 69 | 170 | 195 | 1,640 | 1882 | 2731 | 17.46 | 0.022 | 0.0003 | 0.8 | 0.0013 | 3.4 |
| FRWY5 | F | 1422 | 0.88 | 550 | 486 | 60 | 53 | 180 | 159 | 1,670 | 1475 | 2173 | 17.26 | 0.022 | 0.0003 | 0.7 | 0.0012 | 2.7 |
| FRWY6 | F | 2087 | 1.30 | 580 | 752 | 60 | 78 | 180 | 233 | 1,690 | 2191 | 3254 | 17.12 | 0.022 | 0.0003 | 1.0 | 0.0012 | 4.0 |
| FRWY7 | F | 1650 | 1.03 | 610 | 625 | 60 | 62 | 190 | 195 | 1,710 | 1753 | 2634 | 16.98 | 0.022 | 0.0003 | 0.8 | 0.0012 | 3.2 |
| FRWY8 | F | 1537 | 0.95 | 630 | 602 | 60 | 57 | 190 | 181 | 1,730 | 1652 | 2492 | 16.91 | 0.022 | 0.0003 | 0.7 | 0.0012 | 3.0 |
| FRWY9 | F | 1792 | 1.11 | 680 | 757 | 70 | 78 | 210 | 234 | 1,840 | 2048 | 3117 | 16.82 | 0.022 | 0.0003 | 0.9 | 0.0012 | 3.8 |
| FRWY10 | F | 1665 | 1.03 | 700 | 724 | 70 | 72 | 220 | 228 | 1,850 | 1913 | 2937 | 16.72 | 0.022 | 0.0003 | 0.9 | 0.0012 | 3.5 |
| FRWY11 | F | 849 | 0.53 | 730 | 385 | 70 | 37 | 230 | 121 | 1,870 | 986 | 1529 | 16.60 | 0.022 | 0.0003 | 0.4 | 0.0012 | 1.8 |
| FRWY12 | F | 2299 | 1.43 | 1,080 | 1542 | 90 | 129 | 290 | 414 | 2,090 | 2985 | 5070 | 15.44 | 0.022 | 0.0003 | 1.4 | 0.0011 | 5.6 |
| FRWY13 | F | 1689 | 1.05 | 1,160 | 1217 | 90 | 94 | 310 | 325 | 2,170 | 2277 | 3914 | 15.30 | 0.022 | 0.0003 | 1.1 | 0.0011 | 4.3 |
| FRWY14 | F | 2444 | 1.52 | 1,190 | 1807 | 100 | 152 | 330 | 501 | 2,230 | 3386 | 5845 | 15.28 | 0.022 | 0.0003 | 1.6 | 0.0011 | 6.4 |
| FRWY15 | F | 1608 | 1.00 | 1,190 | 1189 | 100 | 100 | 330 | 330 | 2,240 | 2238 | 3856 | 15.30 | 0.022 | 0.0003 | 1.0 | 0.0011 | 4.3 |
| FRWY16 | F | 2722 | 1.69 | 1,280 | 2164 | 100 | 169 | 330 | 558 | 2,250 | 3805 | 6696 | 15.02 | 0.022 | 0.0003 | 1.8 | 0.0011 | 7.2 |
| FRWY17 | F | 3198 | 1.99 | 1,490 | 2960 | 110 | 219 | 350 | 695 | 2,300 | 4569 | 8443 | 14.44 | 0.022 | 0.0003 | 2.2 | 0.0010 | 8.8 |
| FRWY18 | F | 2509 | 1.56 | 1,690 | 2634 | 110 | 171 | 370 | 577 | 2,320 | 3616 | 6998 | 13.92 | 0.022 | 0.0002 | 1.7 | 0.0010 | 7.0 |
| FRWY19 | F | 910 | 0.57 | 1,840 | 1040 | 120 | 68 | 400 | 226 | 2,400 | 1357 | 2691 | 13.68 | 0.022 | 0.0002 | 0.6 | 0.0010 | 2.6 |
| FRWY20 | F | 774 | 0.48 | 2,220 | 1067 | 150 | 72 | 480 | 231 | 2,690 | 1293 | 2664 | 13.31 | 0.022 | 0.0002 | 0.6 | 0.0010 | 2.5 |
| FRWY21 | F | 1798 | 1.12 | 3,970 | 4434 | 230 | 257 | 790 | 882 | 4,140 | 4624 | 10198 | 12.63 | 0.022 | 0.0002 | 2.3 | 0.0009 | 9.2 |
| FRWY22 | F | 1035 | 0.64 | 4,030 | 2591 | 240 | 154 | 830 | 534 | 4,220 | 2713 | 5992 | 12.64 | 0.022 | 0.0002 | 1.3 | 0.0009 | 5.4 |
| FRWY23 | F | 1042 | 0.65 | 4,080 | 2641 | 240 | 155 | 850 | 550 | 4,260 | 2758 | 6104 | 12.63 | 0.022 | 0.0002 | 1.4 | 0.0009 | 5.5 |
| FRWY24 | F | 2260 | 1.40 | 4,480 | 6290 | 260 | 365 | 910 | 1278 | 4,400 | 6177 | 14110 | 12.34 | 0.022 | 0.0002 | 3.1 | 0.0009 | 12.5 |
| FRWY25 | F | 1305 | 0.81 | 5,070 | 4110 | 280 | 227 | 970 | 786 | 4,510 | 3656 | 8780 | 11.88 | 0.022 | 0.0002 | 1.8 | 0.0009 | 7.5 |
| FRWY26 | F | 977 | 0.61 | 5,390 | 3271 | 280 | 170 | 960 | 583 | 4,460 | 2707 | 6731 | 11.54 | 0.022 | 0.0002 | 1.4 | 0.0008 | 5.6 |
| FRWY27 | F | 1186 | 0.74 | 6,600 | 4863 | 330 | 243 | 1,120 | 825 | 5,130 | 3780 | 9710 | 11.26 | 0.022 | 0.0002 | 1.9 | 0.0008 | 7.8 |
| FRWY28 | F | 1642 | 1.02 | 6,370 | 6498 | 340 | 347 | 1,150 | 1173 | 5,130 | 5233 | 13250 | 11.41 | 0.022 | 0.0002 | 2.7 | 0.0008 | 10.8 |
| FRWY29 | F | 1636 | 1.02 | 6,570 | 6677 | 350 | 356 | 1,190 | 1209 | 5,170 | 5254 | 13497 | 11.31 | 0.022 | 0.0002 | 2.7 | 0.0008 | 10.9 |
| FRWY30 | F | 1555 | 0.97 | 7,480 | 7226 | 380 | 367 | 1,240 | 1198 | 5,300 | 5120 | 13910 | 10.82 | 0.022 | 0.0002 | 2.6 | 0.0008 | 10.8 |
| FRWY31 | F | 3384 | 2.10 | 8,670 | 18226 | 430 | 904 | 1,340 | 2817 | 5,490 | 11541 | 33488 | 10.31 | 0.022 | 0.0002 | 6.1 | 0.0007 | 24.7 |
| FRWY32 | F | 1112 | 0.69 | 9,240 | 6383 | 450 | 311 | 1,360 | 939 | 5,490 | 3792 | 11426 | 10.03 | 0.022 | 0.0002 | 2.0 | 0.0007 | 8.2 |
| FRWY33 | F | 1935 | 1.20 | 11,580 | 13920 | 460 | 553 | 1,560 | 1875 | 6,340 | 7621 | 23969 | 9.68 | 0.022 | 0.0002 | 4.1 | 0.0007 | 16.6 |
| FRWY34 | F | 1675 | 1.04 | 12,500 | 13007 | 470 | 489 | 1,560 | 1623 | 6,490 | 6753 | 21872 | 9.44 | 0.022 | 0.0002 | 3.6 | 0.0007 | 14.7 |
| FRWY35 | F | 1143 | 0.71 | 3,360 | 2386 | 120 | 85 | 380 | 270 | 850 | 604 | 3344 | 6.81 | 0.022 | 0.0001 | 0.4 | 0.0005 | 1.6 |
| FRWY36 | F | 9120 | 5.67 | 3,040 | 17223 | 120 | 680 | 320 | 1813 | 740 | 4192 | 23908 | 6.66 | 0.022 | 0.0001 | 2.8 | 0.0005 | 11.3 |
| FRWY37 | F | 3802 | 2.36 | 3,010 | 7109 | 110 | 260 | 300 | 709 | 720 | 1701 | 9778 | 6.59 | 0.022 | 0.0001 | 1.1 | 0.0005 | 4.6 |
| FRWY294 | F | 2926 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 231 | 231 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| FRWY295 | F | 1049 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 83 | 83 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| FRWY296 | F | 1811 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 143 | 143 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY297 | F | 1505 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 119 | 119 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| FRWY299 | F | 1654 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 130 | 130 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| FRWY75 | F | 2861 | 1.78 | 730 | 1297 | 50 | 89 | 190 | 338 | 1,090 | 1937 | 3661 | 14.28 | 0.022 | 0.0003 | 0.9 | 0.0010 | 3.8 |
| FRWY76 | F | 2500 | 1.55 | 850 | 1320 | 50 | 78 | 210 | 326 | 1,120 | 1739 | 3463 | 13.72 | 0.022 | 0.0002 | 0.8 | 0.0010 | 3.4 |
| FRWY77 | F | 450 | 0.28 | 850 | 238 | 50 | 14 | 210 | 59 | 1,120 | 313 | 623 | 13.72 | 0.022 | 0.0002 | 0.2 | 0.0010 | 0.6 |
| FRWY78 | F | 1384 | 0.86 | 920 | 791 | 60 | 52 | 220 | 189 | 1,140 | 980 | 2012 | 13.41 | 0.022 | 0.0002 | 0.5 | 0.0010 | 1.9 |
| FRWY79 | F | 1713 | 1.06 | 1,020 | 1085 | 60 | 64 | 230 | 245 | 1,150 | 1224 | 2618 | 12.99 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.4 |
| FRWY80 | F | 1703 | 1.06 | 1,120 | 1185 | 60 | 63 | 240 | 254 | 1,170 | 1238 | 2740 | 12.64 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.5 |
| FRWY81 | F | 2512 | 1.56 | 1,210 | 1888 | 60 | 94 | 250 | 390 | 1,190 | 1857 | 4229 | 12.37 | 0.022 | 0.0002 | 0.9 | 0.0009 | 3.8 |
| FRWY82 | F | 1674 | 1.04 | 1,270 | 1321 | 70 | 73 | 260 | 270 | 1,210 | 1258 | 2922 | 12.20 | 0.022 | 0.0002 | 0.6 | 0.0009 | 2.6 |
| FRWY83 | F | 1819 | 1.13 | 1,300 | 1469 | 70 | 79 | 270 | 305 | 1,220 | 1379 | 3232 | 12.13 | 0.022 | 0.0002 | 0.7 | 0.0009 | 2.8 |
| FRWY84 | F | 1182 | 0.73 | 1,360 | 999 | 70 | 51 | 270 | 198 | 1,230 | 903 | 2151 | 11.97 | 0.022 | 0.0002 | 0.5 | 0.0009 | 1.8 |
| FRWY85 | F | 2360 | 1.47 | 1,340 | 1965 | 70 | 103 | 270 | 396 | 1,220 | 1789 | 4252 | 12.00 | 0.022 | 0.0002 | 0.9 | 0.0009 | 3.7 |
| FRWY86 | F | 783 | 0.49 | 1,330 | 647 | 60 | 29 | 240 | 117 | 1,110 | 540 | 1333 | 11.61 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY87 | F | 1370 | 0.85 | 1,370 | 1166 | 60 | 51 | 240 | 204 | 1,120 | 953 | 2374 | 11.51 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.0 |
| FRWY101 | F | 1703 | 1.06 | 1,660 | 1756 | 60 | 63 | 190 | 201 | 590 | 624 | 2645 | 7.93 | 0.022 | 0.0001 | 0.4 | 0.0006 | 1.5 |
| FRWY102 | F | 925 | 0.57 | 1,200 | 690 | 50 | 29 | 160 | 92 | 570 | 328 | 1138 | 9.08 | 0.022 | 0.0002 | 0.2 | 0.0006 | 0.7 |
| FRWY103 | F | 1770 | 1.10 | 1,200 | 1319 | 50 | 55 | 160 | 176 | 570 | 627 | 2177 | 9.08 | 0.022 | 0.0002 | 0.3 | 0.0006 | 1.4 |
| FRWY104 | F | 3182 | 1.98 | 900 | 1779 | 40 | 79 | 140 | 277 | 550 | 1087 | 3222 | 10.17 | 0.022 | 0.0002 | 0.6 | 0.0007 | 2.3 |
| FRWY105 | F | 1010 | 0.63 | 730 | 458 | 40 | 25 | 130 | 82 | 540 | 339 | 903 | 11.02 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.7 |
| FRWY106 | F | 1305 | 0.81 | 670 | 543 | 40 | 32 | 130 | 105 | 540 | 438 | 1119 | 11.40 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.9 |
| FRWY107 | F | 1655 | 1.03 | 550 | 565 | 30 | 31 | 120 | 123 | 520 | 535 | 1254 | 12.16 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.1 |
| FRWY108 | F | 4341 | 2.70 | 470 | 1267 | 30 | 81 | 110 | 297 | 510 | 1375 | 3020 | 12.79 | 0.022 | 0.0002 | 0.7 | 0.0009 | 2.8 |
| FRWY109 | F | 1728 | 1.07 | 450 | 483 | 30 | 32 | 90 | 97 | 490 | 526 | 1138 | 12.81 | 0.022 | 0.0002 | 0.3 | 0.0009 | 1.0 |
| FRWY110 | F | 2788 | 1.73 | 410 | 710 | 30 | 52 | 90 | 156 | 490 | 849 | 1767 | 13.23 | 0.022 | 0.0002 | 0.4 | 0.0010 | 1.7 |
| FRWY111 | F | 7717 | 4.79 | 400 | 1918 | 30 | 144 | 90 | 431 | 490 | 2349 | 4842 | 13.34 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.6 |
| FRWY112 | F | 1384 | 0.86 | 400 | 344 | 30 | 26 | 80 | 69 | 490 | 421 | 860 | 13.35 | 0.022 | 0.0002 | 0.2 | 0.0010 | 0.8 |
| FRWY113 | F | 3380 | 2.10 | 340 | 714 | 20 | 42 | 70 | 147 | 430 | 903 | 1806 | 13.55 | 0.022 | 0.0002 | 0.4 | 0.0010 | 1.8 |
| FRWY114 | F | 3719 | 2.31 | 340 | 785 | 20 | 46 | 70 | 162 | 430 | 993 | 1987 | 13.55 | 0.022 | 0.0002 | 0.5 | 0.0010 | 1.9 |
| FRWY129 | F | 4476 | 2.78 | 910 | 2530 | 20 | 56 | 90 | 250 | 210 | 584 | 3420 | 6.50 | 0.022 | 0.0001 | 0.4 | 0.0005 | 1.6 |
| FRWY130 | F | 3830 | 2.38 | 1,080 | 2570 | 20 | 48 | 100 | 238 | 220 | 523 | 3379 | 6.13 | 0.022 | 0.0001 | 0.4 | 0.0004 | 1.5 |
| FRWY131 | F | 2967 | 1.84 | 1,220 | 2249 | 30 | 55 | 110 | 203 | 230 | 424 | 2931 | 5.92 | 0.022 | 0.0001 | 0.3 | 0.0004 | 1.2 |
| FRWY132 | F | 1163 | 0.72 | 1,270 | 918 | 30 | 22 | 110 | 79 | 240 | 173 | 1192 | 5.91 | 0.022 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| FRWY133 | F | 4541 | 2.82 | 1,290 | 3639 | 30 | 85 | 120 | 339 | 240 | 677 | 4739 | 5.90 | 0.022 | 0.0001 | 0.5 | 0.0004 | 2.0 |
| FRWY167 | F | 1471 | 0.91 | 840 | 768 | 20 | 18 | 90 | 82 | 270 | 247 | 1115 | 7.57 | 0.022 | 0.0001 | 0.1 | 0.0005 | 0.6 |
| FRWY168 | F | 916 | 0.57 | 1,020 | 580 | 30 | 17 | 110 | 63 | 360 | 205 | 865 | 7.90 | 0.022 | 0.0001 | 0.1 | 0.0006 | 0.5 |
| FRWY169 | F | 4924 | 3.06 | 990 | 3028 | 30 | 92 | 100 | 306 | 360 | 1101 | 4527 | 7.99 | 0.022 | 0.0001 | 0.6 | 0.0006 | 2.6 |
| FRWY171 | F | 2145 | 1.33 | 580 | 773 | 20 | 27 | 60 | 80 | 410 | 546 | 1426 | 10.83 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY172 | F | 3000 | 1.86 | 590 | 1100 | 20 | 37 | 80 | 149 | 480 | 895 | 2180 | 11.51 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.8 |
| FRWY173 | F | 2501 | 1.55 | 710 | 1103 | 20 | 31 | 80 | 124 | 490 | 761 | 2020 | 10.74 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.6 |
| FRWY174 | F | 1135 | 0.71 | 700 | 494 | 20 | 14 | 90 | 63 | 490 | 345 | 917 | 10.81 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.7 |
| FRWY175 | F | 1547 | 0.96 | 1,060 | 1019 | 40 | 38 | 110 | 106 | 540 | 519 | 1682 | 9.33 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.1 |
| FRWY176 | F | 1359 | 0.84 | 1,100 | 929 | 40 | 34 | 120 | 101 | 550 | 464 | 1528 | 9.26 | 0.022 | 0.0002 | 0.2 | 0.0007 | 1.0 |
| FRWY134 | F | 1385 | 0.86 | 580 | 499 | 30 | 26 | 90 | 77 | 470 | 404 | 1007 | 11.44 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| FRWY135 | F | 1711 | 1.06 | 570 | 606 | 30 | 32 | 80 | 85 | 450 | 478 | 1201 | 11.31 | 0.022 | 0.0002 | 0.2 | 0.0008 | 1.0 |
| FRWY136 | F | 1038 | 0.64 | 560 | 361 | 30 | 19 | 80 | 52 | 440 | 284 | 716 | 11.29 | 0.022 | 0.0002 | 0.1 | 0.0008 | 0.6 |
| FRWY137 | F | 1516 | 0.94 | 490 | 461 | 20 | 19 | 60 | 57 | 410 | 386 | 923 | 11.63 | 0.022 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| FRWY138 | F | 2485 | 1.54 | 460 | 710 | 20 | 31 | 60 | 93 | 400 | 617 | 1451 | 11.81 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.2 |
| FRWY139 | F | 1950 | 1.21 | 570 | 690 | 20 | 24 | 70 | 85 | 390 | 472 | 1272 | 10.68 | 0.022 | 0.0002 | 0.2 | 0.0008 | 1.0 |
| FRWY140 | F | 1581 | 0.98 | 620 | 609 | 30 | 29 | 90 | 88 | 400 | 393 | 1120 | 10.39 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.8 |
| FRWY141 | F | 1447 | 0.90 | 610 | 548 | 30 | 27 | 70 | 63 | 370 | 333 | 971 | 10.09 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.7 |
| FRWY142 | F | 938 | 0.58 | 600 | 350 | 30 | 17 | 70 | 41 | 360 | 210 | 618 | 10.04 | 0.022 | 0.0002 | 0.1 | 0.0007 | 0.4 |
| FRWY143 | F | 2032 | 1.26 | 590 | 745 | 20 | 25 | 70 | 88 | 330 | 417 | 1275 | 9.77 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.9 |
| FRWY144 | F | 3119 | 1.94 | 540 | 1046 | 20 | 39 | 50 | 97 | 290 | 562 | 1744 | 9.55 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.2 |
| | | | | | | | | | | | | | | | **Totals:** | **82.5** | | **336.1** |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 127 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 127 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 127 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 127 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 127 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 127 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 127 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 127 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 127 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 127 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 127 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 127 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 127 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 127 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 127 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 127 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 127 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 127 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 127 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 127 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 127 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 127 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 127 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 127 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 127 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 127 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 127 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 127 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 127 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 127 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 127 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 127 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 127 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 127 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 127 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 127 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 127 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 127 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 127 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 127 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 127 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 127 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 127 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 127 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 127 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 127 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 127 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 127 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 127 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 127 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 127 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 127 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 127 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 254 |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 254 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 254 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 254 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 254 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 254 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 254 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 127 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 127 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 127 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 127 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 127 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 127 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 127 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 127 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 127 |

**World Logistics Center** **2022**
Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Freeway to Port
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.4% | 6.7% | 81.4% | 98.3% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 127 | 0 | 0 | 0 | 127 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 229 | 127 | 0 | 0 | 0 | 127 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 90 |
| 228 | 127 | 0 | 0 | 0 | 127 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 40 |
| 227 | 127 | 0 | 0 | 0 | 127 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 65 |
| 226 | 127 | 0 | 0 | 0 | 127 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 225 | 127 | 0 | 0 | 0 | 127 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 80 |
| 224 | 127 | 0 | 0 | 0 | 127 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 211 |
| 223 | 127 | 0 | 0 | 0 | 127 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 92 |
| 222 | 127 | 0 | 0 | 0 | 127 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 96 |
| 221 | 127 | 0 | 0 | 0 | 127 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 89 |
| 220 | 127 | 0 | 0 | 0 | 127 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 219 | 127 | 0 | 0 | 0 | 127 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 191 |
| 218 | 127 | 0 | 0 | 0 | 127 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 209 |
| 217 | 127 | 0 | 0 | 0 | 127 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 240 |
| 216 | 127 | 0 | 0 | 0 | 127 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 194 |
| 215 | 127 | 0 | 0 | 0 | 127 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 112 |
| 214 | 127 | 0 | 0 | 0 | 127 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 121 |
| 213 | 127 | 0 | 0 | 0 | 127 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 190 |
| 212 | 127 | 0 | 0 | 0 | 127 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 182 |
| 211 | 127 | 0 | 0 | 0 | 127 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 210 | 127 | 0 | 0 | 0 | 127 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 291 |
| 209 | 127 | 0 | 0 | 0 | 127 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 154 |
| 263 | 127 | 0 | 0 | 0 | 127 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 160 |
| 264 | 127 | 0 | 0 | 0 | 127 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 77 |
| 265 | 127 | 0 | 0 | 0 | 127 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 266 | 127 | 0 | 0 | 0 | 127 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 267 | 127 | 0 | 0 | 0 | 127 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 51 |
| 268 | 127 | 0 | 0 | 0 | 127 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 78 |
| 269 | 127 | 0 | 0 | 0 | 127 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 150 |
| 270 | 127 | 0 | 0 | 0 | 127 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 271 | 127 | 0 | 0 | 0 | 127 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 82 |
| 272 | 127 | 0 | 0 | 0 | 127 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 273 | 127 | 0 | 0 | 0 | 127 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 19 |
| 274 | 127 | 0 | 0 | 0 | 127 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 134 |
| 275 | 127 | 0 | 0 | 0 | 127 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 276 | 127 | 0 | 0 | 0 | 127 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 138 |
| 277 | 127 | 0 | 0 | 0 | 127 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| 278 | 127 | 0 | 0 | 0 | 127 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 279 | 127 | 0 | 0 | 0 | 127 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 280 | 127 | 0 | 0 | 0 | 127 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| 281 | 127 | 0 | 0 | 0 | 127 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 282 | 127 | 0 | 0 | 0 | 127 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 88 |
| 283 | 127 | 0 | 0 | 0 | 127 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 114 |
| 284 | 127 | 0 | 0 | 0 | 127 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 115 |
| 285 | 127 | 0 | 0 | 0 | 127 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 286 | 127 | 0 | 0 | 0 | 127 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 124 |
| 287 | 127 | 0 | 0 | 0 | 127 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 97 |
| 288 | 127 | 0 | 0 | 0 | 127 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 289 | 127 | 0 | 0 | 0 | 127 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 177 |
| 290 | 127 | 0 | 0 | 0 | 127 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 367 |
| 291 | 127 | 0 | 0 | 0 | 127 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 230 |
| 292 | 127 | 0 | 0 | 0 | 127 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 419 |
| 293 | 127 | 0 | 0 | 0 | 127 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 119 |
| 262 | 254 | 0 | 0 | 0 | 254 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 263 |
| 261 | 254 | 0 | 0 | 0 | 254 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 132 |
| 260 | 254 | 0 | 0 | 0 | 254 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 206 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 259 | 254 | 0 | 0 | 0 | 254 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 392 |
| 258 | 254 | 0 | 0 | 0 | 254 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 348 |
| 257 | 254 | 0 | 0 | 0 | 254 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 303 |
| 256 | 254 | 0 | 0 | 0 | 254 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 224 |
| 255 | 127 | 0 | 0 | 0 | 127 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 116 |
| 254 | 127 | 0 | 0 | 0 | 127 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 126 |
| 253 | 127 | 0 | 0 | 0 | 127 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 237 |
| 252 | 127 | 0 | 0 | 0 | 127 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 181 |
| 251 | 127 | 0 | 0 | 0 | 127 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 167 |
| 250 | 127 | 0 | 0 | 0 | 127 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 268 |
| 249 | 127 | 0 | 0 | 0 | 127 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 248 | 127 | 0 | 0 | 0 | 127 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 94 |
| 247 | 127 | 0 | 0 | 0 | 127 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 163 |
| | | | | | | | | | | | | | | | | | 10558 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 229 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| 228 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 227 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 166 |
| 225 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| 224 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 211 |
| 223 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 |
| 222 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| 221 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 220 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 219 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 191 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 |
| 217 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 240 |
| 216 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 194 |
| 215 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| 214 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 |
| 213 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 190 |
| 212 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 182 |
| 211 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 210 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 291 |
| 209 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154 |
| 263 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 |
| 264 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 265 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 266 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 267 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 268 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 |
| 269 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| 270 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 139 |
| 271 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 |
| 272 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 274 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 |
| 275 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 276 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 138 |
| 277 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| 278 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 279 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 280 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 |
| 281 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 166 |
| 282 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| 283 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 |
| 284 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 |
| 285 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 139 |
| 286 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 124 |
| 287 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 |
| 288 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 289 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 177 |
| 290 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 367 |
| 291 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 230 |
| 292 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 419 |
| 293 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 119 |
| 262 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 263 |
| 261 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 |
| 260 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 206 |
| 259 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 392 |
| 258 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 257 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 303 |
| 256 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 224 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 255 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 |
| 254 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 |
| 253 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 |
| 252 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 |
| 251 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 167 |
| 250 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 268 |
| 249 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 248 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| 247 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10558** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3748 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6811 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10558** | **10558** |

**World Logistics Center** **2022**
Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Freeway to Port
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 127 | 0 | 0 | 0 | 127 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 229 | 127 | 0 | 0 | 0 | 127 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 228 | 127 | 0 | 0 | 0 | 127 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 227 | 127 | 0 | 0 | 0 | 127 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 226 | 127 | 0 | 0 | 0 | 127 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 225 | 127 | 0 | 0 | 0 | 127 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 224 | 127 | 0 | 0 | 0 | 127 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 223 | 127 | 0 | 0 | 0 | 127 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 222 | 127 | 0 | 0 | 0 | 127 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 221 | 127 | 0 | 0 | 0 | 127 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 220 | 127 | 0 | 0 | 0 | 127 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 219 | 127 | 0 | 0 | 0 | 127 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 218 | 127 | 0 | 0 | 0 | 127 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 217 | 127 | 0 | 0 | 0 | 127 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 216 | 127 | 0 | 0 | 0 | 127 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 215 | 127 | 0 | 0 | 0 | 127 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 214 | 127 | 0 | 0 | 0 | 127 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 213 | 127 | 0 | 0 | 0 | 127 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 212 | 127 | 0 | 0 | 0 | 127 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 211 | 127 | 0 | 0 | 0 | 127 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 210 | 127 | 0 | 0 | 0 | 127 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| 209 | 127 | 0 | 0 | 0 | 127 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 263 | 127 | 0 | 0 | 0 | 127 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 264 | 127 | 0 | 0 | 0 | 127 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 265 | 127 | 0 | 0 | 0 | 127 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 266 | 127 | 0 | 0 | 0 | 127 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 267 | 127 | 0 | 0 | 0 | 127 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 268 | 127 | 0 | 0 | 0 | 127 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 269 | 127 | 0 | 0 | 0 | 127 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 270 | 127 | 0 | 0 | 0 | 127 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 271 | 127 | 0 | 0 | 0 | 127 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 272 | 127 | 0 | 0 | 0 | 127 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 273 | 127 | 0 | 0 | 0 | 127 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| 274 | 127 | 0 | 0 | 0 | 127 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 275 | 127 | 0 | 0 | 0 | 127 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 276 | 127 | 0 | 0 | 0 | 127 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 277 | 127 | 0 | 0 | 0 | 127 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 278 | 127 | 0 | 0 | 0 | 127 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 279 | 127 | 0 | 0 | 0 | 127 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 280 | 127 | 0 | 0 | 0 | 127 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 281 | 127 | 0 | 0 | 0 | 127 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 282 | 127 | 0 | 0 | 0 | 127 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 283 | 127 | 0 | 0 | 0 | 127 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 284 | 127 | 0 | 0 | 0 | 127 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 285 | 127 | 0 | 0 | 0 | 127 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 286 | 127 | 0 | 0 | 0 | 127 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 287 | 127 | 0 | 0 | 0 | 127 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 288 | 127 | 0 | 0 | 0 | 127 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 289 | 127 | 0 | 0 | 0 | 127 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 290 | 127 | 0 | 0 | 0 | 127 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 6 |
| 291 | 127 | 0 | 0 | 0 | 127 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 292 | 127 | 0 | 0 | 0 | 127 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 7 |
| 293 | 127 | 0 | 0 | 0 | 127 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 262 | 254 | 0 | 0 | 0 | 254 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 5 |
| 261 | 254 | 0 | 0 | 0 | 254 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 |
| 260 | 254 | 0 | 0 | 0 | 254 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 |
| 259 | 254 | 0 | 0 | 0 | 254 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 7 |
| 258 | 254 | 0 | 0 | 0 | 254 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 6 |
| 257 | 254 | 0 | 0 | 0 | 254 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 5 |
| 256 | 254 | 0 | 0 | 0 | 254 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 |
| 255 | 127 | 0 | 0 | 0 | 127 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 254 | 127 | 0 | 0 | 0 | 127 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 253 | 127 | 0 | 0 | 0 | 127 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 252 | 127 | 0 | 0 | 0 | 127 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 251 | 127 | 0 | 0 | 0 | 127 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 250 | 127 | 0 | 0 | 0 | 127 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| 249 | 127 | 0 | 0 | 0 | 127 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| 248 | 127 | 0 | 0 | 0 | 127 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 247 | 127 | 0 | 0 | 0 | 127 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| | | | | | | | | | | | | | | | | | 181 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 229 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 228 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 227 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 226 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 225 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 224 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 223 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 222 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 220 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 219 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 218 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 217 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 216 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 215 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 214 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 213 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 212 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 211 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 210 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 209 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 263 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 264 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 265 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 266 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 267 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 268 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 269 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 270 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 271 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 272 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 274 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 275 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 276 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 277 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 278 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 279 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 280 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 281 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 282 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 283 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 284 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 285 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 286 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 287 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 288 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 289 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 290 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 291 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 292 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 293 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 262 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 261 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 260 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 259 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 258 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 257 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 256 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 255 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 254 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 253 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 252 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 251 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 250 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 249 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 248 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 247 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **181** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **181** | **181** |

**World Logistics Center**
**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**
**Entrained Road Dust**
Freeway to Port

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) | |
|---|---|---|---|
| Freeway | F | 0.022 | |
| Arterial, Major Collector | A | 0.035 | |
| Minor Collector | M | 0.32 | |
| Particle Size Multiplier for PM10 = | | 0.0022 | lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 | lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | F | 1854 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 146 | 146 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 229 | F | 1159 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 91 | 91 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 228 | F | 520 | 0.32 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 41 | 41 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 227 | F | 833 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 66 | 66 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 226 | F | 2141 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 169 | 169 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 225 | F | 1032 | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 81 | 81 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 224 | F | 2726 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 215 | 215 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 223 | F | 1185 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 93 | 93 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 222 | F | 1233 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 97 | 97 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 221 | F | 1153 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 91 | 91 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 220 | F | 1458 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 115 | 115 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 219 | F | 2467 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 195 | 195 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 218 | F | 2700 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 213 | 213 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 217 | F | 3089 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 244 | 244 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 216 | F | 2502 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 197 | 197 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 215 | F | 1445 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 114 | 114 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 214 | F | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 123 | 123 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 213 | F | 2452 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 193 | 193 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 212 | F | 2347 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 185 | 185 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 211 | F | 1767 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 210 | F | 3749 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 296 | 296 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 209 | F | 1985 | 1.23 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 157 | 157 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 263 | F | 2061 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 163 | 163 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 264 | F | 997 | 0.62 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 79 | 79 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 265 | F | 720 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 57 | 57 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 266 | F | 675 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 53 | 53 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 267 | F | 659 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 52 | 52 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 268 | F | 1012 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 80 | 80 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 269 | F | 1929 | 1.20 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 152 | 152 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 270 | F | 1798 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 142 | 142 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 271 | F | 1058 | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 83 | 83 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 272 | F | 676 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 53 | 53 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 273 | F | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 20 | 20 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 274 | F | 1725 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 136 | 136 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 275 | F | 1766 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 276 | F | 1776 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 140 | 140 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 277 | F | 1050 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 83 | 83 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 278 | F | 1765 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 139 | 139 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 279 | F | 1851 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 146 | 146 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 280 | F | 1510 | 0.94 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 119 | 119 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 281 | F | 2140 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 169 | 169 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 282 | F | 1138 | 0.71 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 90 | 90 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 283 | F | 1464 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 116 | 116 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 284 | F | 1480 | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 117 | 117 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 285 | F | 1797 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 142 | 142 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 286 | F | 1596 | 0.99 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 126 | 126 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 287 | F | 1247 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 98 | 98 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 288 | F | 1463 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 115 | 115 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 289 | F | 2284 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 180 | 180 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 290 | F | 4728 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 373 | 373 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 291 | F | 2967 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 234 | 234 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 292 | F | 5404 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 426 | 426 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 293 | F | 1533 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 121 | 121 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 262 | F | 1695 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 267 | 267 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 261 | F | 854 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 135 | 135 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 260 | F | 1330 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 210 | 210 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 259 | F | 2529 | 1.57 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 399 | 399 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 258 | F | 2243 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 354 | 354 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 257 | F | 1956 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 309 | 309 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 256 | F | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 227 | 227 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 255 | F | 1501 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 118 | 118 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 254 | F | 1627 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 128 | 128 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 253 | F | 3060 | 1.90 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 241 | 241 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 252 | F | 2329 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 184 | 184 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 251 | F | 2154 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 170 | 170 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 250 | F | 3452 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 272 | 272 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 249 | F | 722 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 57 | 57 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 248 | F | 1211 | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 96 | 96 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.2 |
| 247 | F | 2097 | 1.30 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| | | | | | | | | | | | | | | | **Totals:** | **4.5** | | **18.1** |

## World Logistics Center

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)
Total Vehicle Miles Traveled

**Segment Vehicle Speed (mph)**

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT |
|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 1 | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| 2 | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| 3 | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| 4 | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| 5 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| 6 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| 7 | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| 8 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 9 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Total VMT per Source**

| | Gas | Diesel | Total |
|---|---|---|---|
| Area | 6591 | 1350 | 7942 |
| Internal | 50110 | 17862 | 67972 |
| Surface | 93990 | 15969 | 109959 |
| Freeways | 222066 | 191204 | 413270 |
| Freeways to Ports | 181 | 10558 | 10740 |
| Total | **372938** | **236944** | **609883** |

**TOTAL VMT Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 38 | 4 | 14 | 4 | 60 |
| 0 | (miles) | 3585 | 425 | 1295 | 999 | 184 | 19 | 68 | 17 | 6591 |
| 1 | | 34212 | 4053 | 12354 | 9538 | 1990 | 209 | 1204 | 241 | 63801 |
| 2 | | 87485 | 10365 | 31593 | 24391 | 4670 | 489 | 4256 | 1686 | 164936 |
| 3 | | 30376 | 3599 | 10969 | 8469 | 1933 | 203 | 1700 | 826 | 58074 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 592 | 70 | 214 | 165 | 31 | 3 | 26 | 1 | 1101 |
| 6 | | 9359 | 1109 | 3380 | 2609 | 370 | 39 | 286 | 20 | 17171 |
| 7 | | 32752 | 3880 | 11827 | 9131 | 1480 | 155 | 1424 | 512 | 61162 |
| 8 | | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | 102 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | (miles) | **198417** | **23507** | **71652** | **55320** | **10659** | **1117** | **8965** | **3303** | **372938** |

**TOTAL VMT Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 12 | 4 | 62 | 205 | 282 |
| 0 | (miles) | 11 | 1 | 1 | 1 | 57 | 19 | 297 | 964 | 1350 |
| 1 | | 109 | 6 | 6 | 10 | 616 | 202 | 5273 | 14046 | 20267 |
| 2 | | 279 | 15 | 14 | 25 | 1446 | 473 | 18650 | 98288 | 119189 |
| 3 | | 97 | 5 | 5 | 9 | 598 | 196 | 7449 | 48158 | 56517 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 2 | 0 | 0 | 0 | 10 | 3 | 112 | 49 | 176 |
| 6 | | 30 | 2 | 2 | 3 | 115 | 37 | 1254 | 1170 | 2612 |
| 7 | | 104 | 6 | 5 | 9 | 458 | 150 | 6241 | 29851 | 36824 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | (miles) | **632** | **34** | **33** | **56** | **3300** | **1080** | **39280** | **192530** | **236944** |
| Grand total VMT | | **199049** | **23540** | **71685** | **55376** | **13959** | **2197** | **48245** | **195832** | **609883** |

**VMT: Area Source, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 38 | 4 | 14 | 4 | 60 |
| 0 | (miles) | 3585 | 425 | 1295 | 999 | 184 | 19 | 68 | 17 | 6591 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **3585** | **425** | **1295** | **999** | **184** | **19** | **68** | **17** | **6591** |

**VMT: Area Source, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 12 | 4 | 62 | 205 | 282 |
| 0 | (miles) | 11 | 1 | 1 | 1 | 57 | 19 | 297 | 964 | 1350 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **11** | **1** | **1** | **1** | **57** | **19** | **297** | **964** | **1350** |
| Grand total VMT | | **3596** | **425** | **1295** | **1001** | **241** | **38** | **365** | **980** | **7942** |

**VMT: Internal, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 26726 | 3166 | 9651 | 7451 | 1731 | 181 | 984 | 218 | 50110 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **26726** | **3166** | **9651** | **7451** | **1731** | **181** | **984** | **218** | **50110** |

**VMT: Internal, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 85 | 5 | 4 | 8 | 536 | 175 | 4313 | 12737 | 17862 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **85** | **5** | **4** | **8** | **536** | **175** | **4313** | **12737** | **17862** |
| Grand total VMT | | **26812** | **3171** | **9656** | **7459** | **2266** | **357** | **5297** | **12955** | **67972** |

**VMT: Surface, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 7485 | 887 | 2703 | 2087 | 260 | 27 | 219 | 22 | 13691 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 11531 | 1366 | 4164 | 3215 | 504 | 53 | 376 | 10 | 21217 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 592 | 70 | 214 | 165 | 31 | 3 | 26 | 1 | 1101 |
| 6 | | 9359 | 1109 | 3380 | 2609 | 370 | 39 | 286 | 20 | 17171 |
| 7 | | 22158 | 2625 | 8002 | 6178 | 835 | 88 | 743 | 79 | 40707 |
| 8 | | 57 | 7 | 21 | 16 | 1 | 0 | 1 | 0 | 102 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **51181** | **6063** | **18482** | **14270** | **2001** | **210** | **1650** | **132** | **93990** |

**VMT: Surface, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 24 | 1 | 1 | 2 | 80 | 26 | 961 | 1309 | 2405 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 37 | 2 | 2 | 3 | 156 | 51 | 1647 | 562 | 2460 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | 2 | 0 | 0 | 0 | 10 | 3 | 112 | 49 | 176 |
| 6 | | 30 | 2 | 2 | 3 | 115 | 37 | 1254 | 1170 | 2612 |
| 7 | | 71 | 4 | 4 | 6 | 259 | 85 | 3254 | 4627 | 8308 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **163** | **9** | **8** | **15** | **619** | **203** | **7231** | **7721** | **15969** |
| Grand total VMT | | **51344** | **6072** | **18491** | **14284** | **2620** | **412** | **8881** | **7854** | **109959** |

**VMT: Freeways, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 87485 | 10365 | 31593 | 24391 | 4670 | 489 | 4256 | 1686 | 164936 |
| 3 | | 18845 | 2233 | 6805 | 5254 | 1429 | 150 | 1324 | 752 | 36792 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 10594 | 1255 | 3826 | 2954 | 645 | 68 | 682 | 316 | 20338 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **116924** | **13852** | **42223** | **32599** | **6744** | **707** | **6262** | **2754** | **222066** |

**VMT: Freeways, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 279 | 15 | 14 | 25 | 1446 | 473 | 18650 | 98288 | 119189 |
| 3 | | 60 | 3 | 3 | 5 | 442 | 145 | 5803 | 43848 | 50310 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 34 | 2 | 2 | 3 | 200 | 65 | 2987 | 18414 | 21705 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **372** | **20** | **19** | **33** | **2088** | **683** | **27439** | **160550** | **191204** |
| Grand total VMT | | **117297** | **13872** | **42243** | **32632** | **8832** | **1390** | **33701** | **163304** | **413270** |

**VMT: Freeways to Ports, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 64 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 117 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **181** | **181** |

**VMT: Freeways to Ports, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3748 | 3748 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6811 | 6811 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10558** | **10558** |
| Grand total VMT | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **10740** | **10740** |

# World Logistics Center

## Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT) Emissions Estimates

**Emissions Summary: Pounds per day**

| Source | ROG | NOx | CO | SOx | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 6 | 39 | 51 | | 0.15 | | | | 0.14 | | | | 19570 | | 1.2 | 0.1 |
| Internal | 15 | 130 | 146 | | 0.53 | | | | 0.50 | | | | 100411 | | 1.2 | 0.8 |
| Surface | 14 | 68 | 173 | | 0.52 | | | | 0.49 | | | | 107980 | | 1.3 | 1.3 |
| Freeways | 55 | 687 | 652 | | 3.66 | | | | 3.48 | | | | 760250 | | 4.6 | 4.7 |
| Freeways to Ports | 2 | 44 | 24 | | 0.18 | | | | 0.18 | | | | 36640 | | 0.1 | 0.1 |
| **Total** | **93** | **968** | **1044** | | **5.04** | **100** | **512** | **617** | **4.78** | **39** | **126** | **169** | **1024851** | **2.8** | **8.3** | **7.0** |

**Emissions Summary: tons per year**

| Source | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 1.09 | 7.04 | 9.24 | | 0.03 | | | | 0.03 | | | | 3572 | | 0.21 | 0.02 |
| Internal | 2.76 | 23.76 | 26.56 | | 0.10 | | | | 0.09 | | | | 18325 | | 0.21 | 0.14 |
| Surface | 2.56 | 12.43 | 31.50 | | 0.10 | | | | 0.09 | | | | 19706 | | 0.23 | 0.23 |
| Freeways | 10.12 | 125.36 | 118.97 | | 0.67 | | | | 0.63 | | | | 138746 | | 0.83 | 0.86 |
| Freeways to Ports | 0.42 | 7.98 | 4.31 | | 0.03 | | | | 0.03 | | | | 6687 | | 0.03 | 0.02 |
| **Total** | **16.94** | **176.57** | **190.58** | | **0.92** | **18.21** | **93.45** | **112.57** | **0.87** | **7.04** | **22.94** | **30.84** | **187035** | **0.50** | **1.52** | **1.27** |

**World Logistics Center** 2022 **ROG**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.3493 | 0.8257 | 0.4487 | 0.8436 | 14.0679 | 13.7664 | 20.7522 | 11.6142 |
| 0 | 0.0948 | 0.3541 | 0.1421 | 0.2212 | 0.8079 | 0.3701 | 0.3927 | 1.1471 |
| 1 | 0.0375 | 0.1451 | 0.0571 | 0.0885 | 0.4793 | 0.2192 | 0.2241 | 0.6030 |
| 2 | 0.0253 | 0.0961 | 0.0382 | 0.0603 | 0.2666 | 0.0446 | 0.1217 | 0.3142 |
| 3 | 0.0294 | 0.1135 | 0.0446 | 0.0694 | 0.3397 | 0.1552 | 0.1548 | 0.3954 |
| 4 | 0.0241 | 0.0874 | 0.0357 | 0.0580 | 0.2254 | 0.1016 | 0.1064 | 0.3038 |
| 5 | 0.0444 | 0.1708 | 0.0673 | 0.1043 | 0.4793 | 0.2192 | 0.2241 | 0.6030 |
| 6 | 0.0328 | 0.1270 | 0.0499 | 0.0774 | 0.3397 | 0.1552 | 0.1548 | 0.3954 |
| 7 | 0.0269 | 0.1033 | 0.0408 | 0.0638 | 0.2981 | 0.1360 | 0.1354 | 0.3444 |
| 8 | 0.0544 | 0.2076 | 0.0821 | 0.1274 | 0.4793 | 0.2192 | 0.2241 | 0.6030 |
| 9 | 0.0244 | 0.0908 | 0.0365 | 0.0582 | 0.2427 | 0.1101 | 0.1122 | 0.3012 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.9969 | 3.1877 | 1.2954 | 0.9279 | 3.1731 | 3.1731 | 0.2050 | 0.6441 |
| 0 | 0.0809 | 0.3132 | 0.0958 | 0.0700 | 0.3005 | 0.2803 | 0.1414 | 0.4467 |
| 1 | 0.0175 | 0.1194 | 0.0143 | 0.0117 | 0.1078 | 0.0859 | 0.0750 | 0.2028 |
| 2 | 0.0128 | 0.1075 | 0.0081 | 0.0073 | 0.0625 | 0.0452 | 0.0221 | 0.0615 |
| 3 | 0.0139 | 0.1034 | 0.0102 | 0.0087 | 0.0753 | 0.0572 | 0.0407 | 0.1108 |
| 4 | 0.0141 | 0.1311 | 0.0079 | 0.0077 | 0.0599 | 0.0412 | 0.0120 | 0.0350 |
| 5 | 0.0216 | 0.1400 | 0.0179 | 0.0145 | 0.1078 | 0.0859 | 0.0750 | 0.2028 |
| 6 | 0.0152 | 0.1086 | 0.0119 | 0.0099 | 0.0753 | 0.0572 | 0.0407 | 0.1108 |
| 7 | 0.0130 | 0.1024 | 0.0090 | 0.0078 | 0.0673 | 0.0500 | 0.0300 | 0.0826 |
| 8 | 0.0278 | 0.1711 | 0.0235 | 0.0188 | 0.1078 | 0.0859 | 0.0750 | 0.2028 |
| 9 | 0.0133 | 0.1165 | 0.0078 | 0.0073 | 0.0612 | 0.0431 | 0.0163 | 0.0446 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.997 | 0.199 | 0.081 | 0.028 | 0.022 | 0.017 | 0.015 | 0.014 | 0.013 | 0.013 | 0.013 | 0.014 |
| LDT1 | DSL | 3.188 | 0.638 | 0.313 | 0.171 | 0.140 | 0.119 | 0.109 | 0.103 | 0.102 | 0.108 | 0.116 | 0.131 |
| LDT2 | DSL | 1.295 | 0.259 | 0.096 | 0.024 | 0.018 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 |
| LHDT1 | DSL | 3.173 | 0.748 | 0.301 | 0.108 | 0.088 | 0.075 | 0.067 | 0.062 | 0.061 | 0.060 | 0.064 | 0.075 |
| LHDT2 | DSL | 3.173 | 0.726 | 0.280 | 0.086 | 0.068 | 0.057 | 0.050 | 0.045 | 0.043 | 0.041 | 0.043 | 0.049 |
| MDV | DSL | 0.928 | 0.186 | 0.070 | 0.019 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.007 | 0.007 | 0.008 |
| MH | DSL | 5.109 | 1.022 | 0.389 | 0.118 | 0.096 | 0.079 | 0.067 | 0.059 | 0.054 | 0.053 | 0.056 | 0.062 |
| OBUS | DSL | 0.935 | 0.627 | 0.355 | 0.187 | 0.138 | 0.102 | 0.075 | 0.056 | 0.041 | 0.031 | 0.026 | 0.026 |
| SBUS | DSL | 0.387 | 0.695 | 0.307 | 0.125 | 0.096 | 0.074 | 0.058 | 0.047 | 0.041 | 0.039 | 0.040 | 0.040 |
| T6 | DSL | 0.205 | 0.248 | 0.141 | 0.075 | 0.055 | 0.041 | 0.030 | 0.022 | 0.016 | 0.012 | 0.010 | 0.010 |
| T7 | DSL | 0.644 | 0.849 | 0.447 | 0.203 | 0.149 | 0.111 | 0.083 | 0.062 | 0.045 | 0.035 | 0.029 | 0.027 |
| UBUS | DSL | 29.993 | 5.999 | 2.558 | 0.859 | 0.710 | 0.595 | 0.512 | 0.462 | 0.446 | 0.463 | 0.512 | 0.595 |
| LDA | GAS | 0.349 | 0.070 | 0.031 | 0.016 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 | 0.008 | 0.009 |
| LDT1 | GAS | 0.826 | 0.165 | 0.079 | 0.042 | 0.033 | 0.027 | 0.024 | 0.022 | 0.021 | 0.021 | 0.022 | 0.024 |
| LDT2 | GAS | 0.449 | 0.090 | 0.039 | 0.020 | 0.016 | 0.013 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 |
| LHDT1 | GAS | 14.068 | 0.239 | 0.113 | 0.063 | 0.050 | 0.042 | 0.038 | 0.035 | 0.034 | 0.036 | 0.039 | 0.045 |
| LHDT2 | GAS | 13.766 | 0.094 | 0.043 | 0.023 | 0.018 | 0.015 | 0.013 | 0.012 | 0.012 | 0.012 | 0.013 | 0.015 |
| MCY | GAS | 62.772 | 12.554 | 5.615 | 3.096 | 2.484 | 2.097 | 1.862 | 1.740 | 1.708 | 1.764 | 1.913 | 2.181 |
| MDV | GAS | 0.844 | 0.169 | 0.074 | 0.039 | 0.031 | 0.026 | 0.022 | 0.020 | 0.020 | 0.020 | 0.021 | 0.024 |
| MH | GAS | 2.220 | 0.444 | 0.205 | 0.116 | 0.094 | 0.080 | 0.072 | 0.067 | 0.067 | 0.069 | 0.075 | 0.086 |
| OBUS | GAS | 15.721 | 0.203 | 0.086 | 0.045 | 0.035 | 0.029 | 0.025 | 0.023 | 0.023 | 0.023 | 0.025 | 0.028 |
| SBUS | GAS | 15.517 | 0.334 | 0.140 | 0.072 | 0.056 | 0.046 | 0.040 | 0.037 | 0.035 | 0.036 | 0.039 | 0.044 |
| T6 | GAS | 20.752 | 0.348 | 0.149 | 0.078 | 0.061 | 0.050 | 0.044 | 0.040 | 0.039 | 0.040 | 0.043 | 0.049 |
| T7 | GAS | 11.614 | 2.323 | 0.990 | 0.509 | 0.398 | 0.328 | 0.286 | 0.262 | 0.254 | 0.261 | 0.282 | 0.317 |
| UBUS | GAS | 7.575 | 1.515 | 0.704 | 0.401 | 0.326 | 0.279 | 0.250 | 0.236 | 0.233 | 0.242 | 0.263 | 0.301 |
| T7 | NG | 0.063 | 0.864 | 0.421 | 0.198 | 0.152 | 0.117 | 0.091 | 0.072 | 0.058 | 0.049 | 0.045 | 0.045 |
| UBUS | NG | 11.685 | 2.337 | 0.892 | 0.287 | 0.231 | 0.188 | 0.158 | 0.140 | 0.134 | 0.141 | 0.160 | 0.192 |

**EMFAC2014 Running Losses Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | GAS | 0 | 0.193 | 0.064 | 0.039 | 0.032 | 0.028 | 0.024 | 0.021 | 0.019 | 0.018 | 0.016 | 0.015 |
| LDT1 | GAS | 0 | 0.826 | 0.275 | 0.165 | 0.138 | 0.118 | 0.103 | 0.092 | 0.083 | 0.075 | 0.069 | 0.064 |
| LDT2 | GAS | 0 | 0.308 | 0.103 | 0.062 | 0.051 | 0.044 | 0.039 | 0.034 | 0.031 | 0.028 | 0.026 | 0.024 |
| LHDT1 | GAS | 0 | 2.083 | 0.694 | 0.417 | 0.347 | 0.298 | 0.260 | 0.231 | 0.208 | 0.189 | 0.174 | 0.160 |
| LHDT2 | GAS | 0 | 0.983 | 0.328 | 0.197 | 0.164 | 0.140 | 0.123 | 0.109 | 0.098 | 0.089 | 0.082 | 0.076 |
| MCY | GAS | 0 | 0.383 | 0.128 | 0.077 | 0.064 | 0.055 | 0.048 | 0.043 | 0.038 | 0.035 | 0.032 | 0.029 |
| MDV | GAS | 0 | 0.441 | 0.147 | 0.088 | 0.073 | 0.063 | 0.055 | 0.049 | 0.044 | 0.040 | 0.037 | 0.034 |
| MH | GAS | 0 | 5.855 | 1.952 | 1.171 | 0.976 | 0.836 | 0.732 | 0.651 | 0.585 | 0.532 | 0.488 | 0.450 |
| OBUS | GAS | 0 | 0.556 | 0.185 | 0.111 | 0.093 | 0.079 | 0.069 | 0.062 | 0.056 | 0.051 | 0.046 | 0.043 |
| SBUS | GAS | 0 | 0.617 | 0.206 | 0.123 | 0.103 | 0.088 | 0.077 | 0.069 | 0.062 | 0.056 | 0.051 | 0.047 |
| HHDT | GAS | 0 | 0.731 | 0.244 | 0.146 | 0.122 | 0.104 | 0.091 | 0.081 | 0.073 | 0.066 | 0.061 | 0.056 |
| MHDT | GAS | 0 | 0.471 | 0.157 | 0.094 | 0.078 | 0.067 | 0.059 | 0.052 | 0.047 | 0.043 | 0.039 | 0.036 |
| UBUS | GAS | 0 | 1.497 | 0.499 | 0.299 | 0.250 | 0.214 | 0.187 | 0.166 | 0.150 | 0.136 | 0.125 | 0.115 |

**EMFAC2014 Total Emission Factors (grams/mile)**

| | | idle | 5mph | 15mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.997 | 0.199 | 0.081 | 0.028 | 0.022 | 0.017 | 0.015 | 0.014 | 0.013 | 0.013 | 0.013 | 0.014 |
| LDT1 | DSL | 3.188 | 0.638 | 0.313 | 0.171 | 0.140 | 0.119 | 0.109 | 0.103 | 0.102 | 0.108 | 0.116 | 0.131 |
| LDT2 | DSL | 1.295 | 0.259 | 0.096 | 0.024 | 0.018 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 |
| LHDT1 | DSL | 3.173 | 0.748 | 0.301 | 0.108 | 0.088 | 0.075 | 0.067 | 0.062 | 0.061 | 0.060 | 0.064 | 0.075 |
| LHDT2 | DSL | 3.173 | 0.726 | 0.280 | 0.086 | 0.068 | 0.057 | 0.050 | 0.045 | 0.043 | 0.041 | 0.043 | 0.049 |
| MDV | DSL | 0.928 | 0.186 | 0.070 | 0.019 | 0.014 | 0.012 | 0.010 | 0.009 | 0.008 | 0.007 | 0.007 | 0.008 |
| MH | DSL | 5.109 | 1.022 | 0.389 | 0.118 | 0.096 | 0.079 | 0.067 | 0.059 | 0.054 | 0.053 | 0.056 | 0.062 |
| OBUS | DSL | 0.935 | 0.627 | 0.355 | 0.187 | 0.138 | 0.102 | 0.075 | 0.056 | 0.041 | 0.031 | 0.026 | 0.026 |
| SBUS | DSL | 0.387 | 0.695 | 0.307 | 0.125 | 0.096 | 0.074 | 0.058 | 0.047 | 0.041 | 0.039 | 0.040 | 0.040 |
| T6 | DSL | 0.205 | 0.248 | 0.141 | 0.075 | 0.055 | 0.041 | 0.030 | 0.022 | 0.016 | 0.012 | 0.010 | 0.010 |
| T7 | DSL | 0.644 | 0.849 | 0.447 | 0.203 | 0.149 | 0.111 | 0.083 | 0.062 | 0.045 | 0.035 | 0.029 | 0.027 |
| UBUS | DSL | 29.993 | 5.999 | 2.558 | 0.859 | 0.710 | 0.595 | 0.512 | 0.462 | 0.446 | 0.463 | 0.512 | 0.595 |
| LDA | GAS | 0.349 | 0.262 | 0.095 | 0.054 | 0.044 | 0.038 | 0.033 | 0.029 | 0.027 | 0.025 | 0.024 | 0.024 |
| LDT1 | GAS | 0.826 | 0.991 | 0.354 | 0.208 | 0.171 | 0.145 | 0.127 | 0.113 | 0.103 | 0.096 | 0.091 | 0.087 |
| LDT2 | GAS | 0.449 | 0.398 | 0.142 | 0.082 | 0.067 | 0.057 | 0.050 | 0.045 | 0.041 | 0.038 | 0.036 | 0.036 |
| LHDT1 | GAS | 14.068 | 2.323 | 0.808 | 0.479 | 0.397 | 0.340 | 0.298 | 0.267 | 0.243 | 0.225 | 0.212 | 0.205 |
| LHDT2 | GAS | 13.766 | 1.077 | 0.370 | 0.219 | 0.182 | 0.155 | 0.136 | 0.121 | 0.110 | 0.102 | 0.095 | 0.091 |
| MCY | GAS | 62.772 | 12.938 | 5.743 | 3.172 | 2.548 | 2.152 | 1.910 | 1.782 | 1.747 | 1.798 | 1.945 | 2.211 |
| MDV | GAS | 0.844 | 0.609 | 0.221 | 0.127 | 0.104 | 0.089 | 0.077 | 0.069 | 0.064 | 0.060 | 0.058 | 0.058 |
| MH | GAS | 2.220 | 6.299 | 2.156 | 1.287 | 1.070 | 0.916 | 0.804 | 0.718 | 0.652 | 0.601 | 0.563 | 0.536 |
| OBUS | GAS | 15.721 | 0.759 | 0.271 | 0.156 | 0.128 | 0.109 | 0.095 | 0.085 | 0.078 | 0.074 | 0.071 | 0.071 |
| SBUS | GAS | 15.517 | 0.952 | 0.345 | 0.196 | 0.159 | 0.134 | 0.117 | 0.105 | 0.097 | 0.092 | 0.090 | 0.091 |
| T6 | GAS | 20.752 | 1.079 | 0.393 | 0.224 | 0.183 | 0.155 | 0.135 | 0.122 | 0.112 | 0.106 | 0.104 | 0.105 |
| T7 | GAS | 11.614 | 2.794 | 1.147 | 0.603 | 0.477 | 0.395 | 0.344 | 0.314 | 0.301 | 0.304 | 0.321 | 0.353 |
| UBUS | GAS | 7.575 | 3.012 | 1.203 | 0.700 | 0.576 | 0.492 | 0.437 | 0.402 | 0.383 | 0.378 | 0.388 | 0.416 |
| T7 | NG | 0.063 | 0.864 | 0.421 | 0.198 | 0.152 | 0.117 | 0.091 | 0.072 | 0.058 | 0.049 | 0.045 | 0.045 |
| UBUS | NG | 11.685 | 2.337 | 0.892 | 0.287 | 0.231 | 0.188 | 0.158 | 0.140 | 0.134 | 0.141 | 0.160 | 0.192 |

# World Logistics Center ROG

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 1 | 3 | 1 | 2 | 2 | 2 | 0 | 1 | 7 | 18 |
| 2 | 5 | 2 | 3 | 3 | 3 | 0 | 2 | 14 | 33 |
| 3 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 12 | 21 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 6 | 13 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **13** | **6** | **7** | **9** | **10** | **1** | **7** | **41** | **93** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1** | **0** | **0** | **0** | **2** | **0** | **1** | **1** | **6** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 6 | 15 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2** | **1** | **1** | **1** | **2** | **0** | **1** | **6** | **15** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 5 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **2** | **2** | **2** | **2** | **0** | **1** | **2** | **14** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 5 | 2 | 3 | 3 | 3 | 0 | 2 | 14 | 33 |
| 3 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 11 | 17 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **7** | **3** | **4** | **4** | **5** | **0** | **3** | **29** | **55** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **2** |

**World Logistics Center** **NOx**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.4185 | 1.1950 | 0.6247 | 1.1590 | 1.1987 | 1.1727 | 1.8087 | 24.5582 |
| 0 | 0.0650 | 0.1824 | 0.0970 | 0.1771 | 0.3655 | 0.1988 | 0.5149 | 3.8063 |
| 1 | 0.0448 | 0.1188 | 0.0663 | 0.1251 | 0.3104 | 0.1645 | 0.4234 | 3.1044 |
| 2 | 0.0420 | 0.1179 | 0.0625 | 0.1208 | 0.2712 | 0.0621 | 0.3470 | 2.5309 |
| 3 | 0.0420 | 0.1131 | 0.0621 | 0.1181 | 0.2818 | 0.1457 | 0.3708 | 2.7150 |
| 4 | 0.0443 | 0.1298 | 0.0665 | 0.1316 | 0.2764 | 0.1378 | 0.3444 | 2.5240 |
| 5 | 0.0481 | 0.1285 | 0.0711 | 0.1324 | 0.3104 | 0.1645 | 0.4234 | 3.1044 |
| 6 | 0.0430 | 0.1147 | 0.0636 | 0.1207 | 0.2818 | 0.1457 | 0.3708 | 2.7150 |
| 7 | 0.0414 | 0.1129 | 0.0613 | 0.1180 | 0.2751 | 0.1406 | 0.3561 | 2.6013 |
| 8 | 0.0524 | 0.1416 | 0.0775 | 0.1429 | 0.3104 | 0.1645 | 0.4234 | 3.1044 |
| 9 | 0.0429 | 0.1226 | 0.0639 | 0.1245 | 0.2717 | 0.1365 | 0.3424 | 2.5050 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.7245 | 3.1291 | 0.7470 | 0.6243 | 64.9760 | 60.9283 | 20.1021 | 17.6853 |
| 0 | 0.1064 | 0.6777 | 0.0883 | 0.0761 | 1.4238 | 0.8911 | 4.1784 | 9.7239 |
| 1 | 0.0731 | 0.7281 | 0.0386 | 0.0376 | 1.4383 | 0.8416 | 1.5392 | 3.6751 |
| 2 | 0.0755 | 0.8527 | 0.0317 | 0.0334 | 1.8343 | 1.0280 | 0.4945 | 1.4843 |
| 3 | 0.0738 | 0.7897 | 0.0341 | 0.0345 | 1.6422 | 0.9330 | 0.7813 | 2.0621 |
| 4 | 0.0764 | 0.8864 | 0.0314 | 0.0341 | 1.9664 | 1.1003 | 0.3517 | 1.2746 |
| 5 | 0.0767 | 0.7206 | 0.0431 | 0.0406 | 1.4383 | 0.8416 | 1.5392 | 3.6751 |
| 6 | 0.0728 | 0.7568 | 0.0359 | 0.0357 | 1.6422 | 0.9330 | 0.7813 | 2.0621 |
| 7 | 0.0738 | 0.8138 | 0.0325 | 0.0337 | 1.7429 | 0.9825 | 0.6093 | 1.7147 |
| 8 | 0.0811 | 0.7073 | 0.0496 | 0.0455 | 1.4383 | 0.8416 | 1.5392 | 3.6751 |
| 9 | 0.0768 | 0.8774 | 0.0314 | 0.0335 | 1.9646 | 1.0995 | 0.4128 | 1.2408 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.724 | 0.145 | 0.106 | 0.081 | 0.077 | 0.073 | 0.073 | 0.074 | 0.074 | 0.075 | 0.077 | 0.076 |
| LDT1 | DSL | 3.129 | 0.626 | 0.678 | 0.707 | 0.721 | 0.728 | 0.757 | 0.790 | 0.814 | 0.853 | 0.877 | 0.886 |
| LDT2 | DSL | 0.747 | 0.149 | 0.088 | 0.050 | 0.043 | 0.039 | 0.036 | 0.034 | 0.033 | 0.032 | 0.031 | 0.031 |
| LHDT1 | DSL | 64.976 | 1.542 | 1.424 | 1.438 | 1.538 | 1.642 | 1.743 | 1.834 | 1.965 | 1.966 | 2.056 | 2.283 |
| LHDT2 | DSL | 60.928 | 1.045 | 0.891 | 0.842 | 0.884 | 0.933 | 0.982 | 1.028 | 1.100 | 1.100 | 1.143 | 1.276 |
| MDV | DSL | 0.624 | 0.125 | 0.076 | 0.045 | 0.041 | 0.038 | 0.036 | 0.034 | 0.034 | 0.033 | 0.033 | 0.034 |
| MH | DSL | 68.554 | 13.711 | 7.979 | 5.014 | 4.560 | 4.230 | 3.988 | 3.817 | 3.707 | 3.652 | 3.670 | 3.753 |
| OBUS | DSL | 35.703 | 12.614 | 6.876 | 3.522 | 2.886 | 2.496 | 2.233 | 2.044 | 1.901 | 1.789 | 1.741 | 1.741 |
| SBUS | DSL | 75.655 | 15.565 | 8.612 | 5.612 | 5.236 | 4.987 | 4.822 | 4.720 | 4.671 | 4.671 | 4.685 | 4.685 |
| T6 | DSL | 20.102 | 8.667 | 4.178 | 1.539 | 1.055 | 0.781 | 0.609 | 0.495 | 0.413 | 0.352 | 0.327 | 0.326 |
| T7 | DSL | 17.685 | 19.337 | 9.724 | 3.675 | 2.648 | 2.062 | 1.715 | 1.484 | 1.241 | 1.275 | 1.112 | 0.902 |
| UBUS | DSL | 289.747 | 57.949 | 35.855 | 26.817 | 25.596 | 24.665 | 24.024 | 23.671 | 23.605 | 23.827 | 24.337 | 25.135 |
| LDA | GAS | 0.418 | 0.084 | 0.065 | 0.052 | 0.048 | 0.045 | 0.043 | 0.042 | 0.041 | 0.042 | 0.043 | 0.044 |
| LDT1 | GAS | 1.195 | 0.239 | 0.182 | 0.142 | 0.129 | 0.119 | 0.115 | 0.113 | 0.113 | 0.118 | 0.123 | 0.130 |
| LDT2 | GAS | 0.625 | 0.125 | 0.097 | 0.078 | 0.071 | 0.066 | 0.064 | 0.062 | 0.061 | 0.062 | 0.064 | 0.066 |
| LHDT1 | GAS | 1.199 | 0.451 | 0.366 | 0.310 | 0.294 | 0.282 | 0.275 | 0.271 | 0.272 | 0.276 | 0.282 | 0.295 |
| LHDT2 | GAS | 1.173 | 0.252 | 0.199 | 0.164 | 0.154 | 0.146 | 0.141 | 0.138 | 0.136 | 0.138 | 0.141 | 0.146 |
| MCY | GAS | 7.295 | 1.459 | 1.216 | 1.083 | 1.045 | 1.022 | 1.010 | 1.010 | 1.019 | 1.038 | 1.067 | 1.106 |
| MDV | GAS | 1.159 | 0.232 | 0.177 | 0.143 | 0.132 | 0.125 | 0.121 | 0.118 | 0.118 | 0.121 | 0.124 | 0.132 |
| MH | GAS | 3.308 | 0.662 | 0.544 | 0.478 | 0.459 | 0.446 | 0.439 | 0.437 | 0.440 | 0.448 | 0.460 | 0.476 |
| OBUS | GAS | 1.344 | 0.399 | 0.308 | 0.254 | 0.236 | 0.223 | 0.214 | 0.208 | 0.206 | 0.207 | 0.212 | 0.219 |
| SBUS | GAS | 1.324 | 0.678 | 0.520 | 0.425 | 0.394 | 0.371 | 0.355 | 0.345 | 0.341 | 0.342 | 0.349 | 0.361 |
| T6 | GAS | 1.809 | 0.661 | 0.515 | 0.423 | 0.393 | 0.371 | 0.356 | 0.347 | 0.342 | 0.344 | 0.350 | 0.364 |
| T7 | GAS | 24.558 | 4.912 | 3.806 | 3.104 | 2.882 | 2.715 | 2.601 | 2.531 | 2.505 | 2.524 | 2.579 | 2.664 |
| UBUS | GAS | 8.902 | 1.780 | 1.430 | 1.228 | 1.165 | 1.122 | 1.095 | 1.083 | 1.084 | 1.098 | 1.125 | 1.166 |
| T7 | NG | 23.764 | 4.544 | 2.868 | 1.953 | 1.772 | 1.638 | 1.536 | 1.459 | 1.403 | 1.365 | 1.353 | 1.353 |
| UBUS | NG | 57.849 | 11.570 | 6.389 | 4.522 | 4.384 | 4.289 | 4.231 | 4.207 | 4.216 | 4.256 | 4.330 | 4.438 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center NOx

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 8 | 13 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 25 |
| 1 | 3 | 1 | 2 | 3 | 3 | 0 | 19 | 115 | 147 |
| 2 | 8 | 3 | 4 | 6 | 9 | 1 | 24 | 330 | 385 |
| 3 | 3 | 1 | 1 | 2 | 3 | 0 | 14 | 223 | 249 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 5 | 11 |
| 7 | 3 | 1 | 2 | 2 | 3 | 0 | 9 | 116 | 136 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **19** | **6** | **10** | **15** | **21** | **3** | **75** | **819** | **968** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 8 | 13 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 25 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1** | **0** | **0** | **0** | **2** | **1** | **6** | **29** | **39** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 3 | 1 | 1 | 2 | 3 | 0 | 16 | 104 | 130 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **1** | **1** | **2** | **3** | **0** | **16** | **104** | **130** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | 3 | 11 | 17 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 1 | 1 | 1 | 0 | 3 | 3 | 10 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 5 | 11 |
| 7 | 2 | 1 | 1 | 2 | 1 | 0 | 5 | 18 | 30 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **5** | **2** | **3** | **4** | **4** | **0** | **14** | **37** | **68** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 8 | 3 | 4 | 6 | 9 | 1 | 24 | 330 | 385 |
| 3 | 2 | 1 | 1 | 1 | 2 | 0 | 11 | 203 | 222 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 0 | 1 | 1 | 1 | 0 | 5 | 71 | 80 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **11** | **4** | **6** | **9** | **12** | **2** | **39** | **605** | **687** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 26 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **44** | **44** |

## World Logistics Center

## N2O

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 0 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 1 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 2 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 3 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 4 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 5 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 6 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 7 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 8 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 9 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 0 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 1 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 2 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 3 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 4 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 5 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 6 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 7 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 8 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 9 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |

Source: United States Environmental Protection Agency. April 4, 2014. Emission Factors for Greenhouse Gas Inventories. www.epa.gov/climateleadership/documents/emission-factors.pdf. N2O for Gasoline Vehicles is from Table 3; diesel vehicles from Table 4.

# World Logistics Center N2O

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.005 |
| 0 | 0.028 | 0.006 | 0.019 | 0.015 | 0.006 | 0.001 | 0.005 | 0.011 | 0.091 |
| 1 | 0.271 | 0.059 | 0.179 | 0.139 | 0.065 | 0.008 | 0.091 | 0.155 | 0.968 |
| 2 | 0.693 | 0.151 | 0.459 | 0.354 | 0.153 | 0.019 | 0.322 | 1.088 | 3.240 |
| 3 | 0.241 | 0.052 | 0.159 | 0.123 | 0.063 | 0.008 | 0.129 | 0.533 | 1.308 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.005 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.002 | 0.001 | 0.015 |
| 6 | 0.074 | 0.016 | 0.049 | 0.038 | 0.012 | 0.002 | 0.022 | 0.013 | 0.226 |
| 7 | 0.260 | 0.056 | 0.172 | 0.133 | 0.048 | 0.006 | 0.108 | 0.330 | 1.113 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.573** | **0.341** | **1.040** | **0.804** | **0.350** | **0.044** | **0.680** | **2.133** | **6.966** |

**Area Source Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.002 | 0.005 |
| 0 | 0.028 | 0.006 | 0.019 | 0.015 | 0.006 | 0.001 | 0.005 | 0.011 | 0.091 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.028** | **0.006** | **0.019** | **0.015** | **0.007** | **0.001** | **0.006** | **0.013** | **0.095** |

**Internal Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.212 | 0.046 | 0.140 | 0.108 | 0.057 | 0.007 | 0.075 | 0.141 | 0.786 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.212** | **0.046** | **0.140** | **0.108** | **0.057** | **0.007** | **0.075** | **0.141** | **0.786** |

**Surface Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.059 | 0.013 | 0.039 | 0.030 | 0.009 | 0.001 | 0.017 | 0.014 | 0.182 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.091 | 0.020 | 0.060 | 0.047 | 0.016 | 0.002 | 0.028 | 0.006 | 0.272 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.005 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.002 | 0.001 | 0.015 |
| 6 | 0.074 | 0.016 | 0.049 | 0.038 | 0.012 | 0.002 | 0.022 | 0.013 | 0.226 |
| 7 | 0.176 | 0.038 | 0.116 | 0.090 | 0.027 | 0.003 | 0.056 | 0.051 | 0.558 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.406** | **0.088** | **0.268** | **0.207** | **0.066** | **0.008** | **0.125** | **0.085** | **1.254** |

**Freeway Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.693 | 0.151 | 0.459 | 0.354 | 0.153 | 0.019 | 0.322 | 1.088 | 3.240 |
| 3 | 0.149 | 0.032 | 0.099 | 0.076 | 0.047 | 0.006 | 0.100 | 0.485 | 0.995 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.084 | 0.018 | 0.056 | 0.043 | 0.021 | 0.003 | 0.052 | 0.204 | 0.480 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.927** | **0.201** | **0.613** | **0.474** | **0.221** | **0.028** | **0.474** | **1.777** | **4.715** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gr | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.041 | 0.041 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.075 | 0.075 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.117** | **0.117** |

**World Logistics Center** **CO**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 5.4594 | 13.9614 | 6.6651 | 11.3361 | 125.6735 | 128.7862 | 322.2897 | 266.9530 |
| 0 | 0.9057 | 2.2262 | 1.1074 | 1.8053 | 1.8748 | 0.6578 | 2.2864 | 44.5208 |
| 1 | 0.6204 | 1.4034 | 0.7611 | 1.2385 | 1.3659 | 0.5061 | 1.8713 | 37.1574 |
| 2 | 0.4686 | 1.1105 | 0.5757 | 0.9680 | 1.0157 | 0.6555 | 1.3716 | 27.1813 |
| 3 | 0.5345 | 1.2193 | 0.6555 | 1.0749 | 1.1104 | 0.4185 | 1.5779 | 31.5623 |
| 4 | 0.4154 | 1.0375 | 0.5110 | 0.9038 | 1.0573 | 0.3614 | 1.2291 | 23.7925 |
| 5 | 0.6794 | 1.5564 | 0.8313 | 1.3423 | 1.3659 | 0.5061 | 1.8713 | 37.1574 |
| 6 | 0.5743 | 1.3022 | 0.7049 | 1.1515 | 1.1104 | 0.4185 | 1.5779 | 31.5623 |
| 7 | 0.4975 | 1.1458 | 0.6101 | 1.0133 | 1.0524 | 0.3930 | 1.4667 | 29.2526 |
| 8 | 0.7457 | 1.7382 | 0.9108 | 1.4673 | 1.3659 | 0.5061 | 1.8713 | 37.1574 |
| 9 | 0.4409 | 1.0671 | 0.5410 | 0.9276 | 1.0089 | 0.3599 | 1.2889 | 25.3520 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 15.9514 | 17.1205 | 11.8631 | 17.3076 | 26.3000 | 26.3000 | 1.5669 | 2.4346 |
| 0 | 1.1957 | 1.6572 | 0.8747 | 1.2736 | 1.2515 | 1.1301 | 0.7236 | 2.2480 |
| 1 | 0.2015 | 0.6699 | 0.1276 | 0.1879 | 0.4879 | 0.3725 | 0.3839 | 1.1090 |
| 2 | 0.1373 | 0.7661 | 0.0729 | 0.1087 | 0.3453 | 0.2339 | 0.1133 | 0.3309 |
| 3 | 0.1542 | 0.6450 | 0.0914 | 0.1350 | 0.3713 | 0.2669 | 0.2086 | 0.6025 |
| 4 | 0.1553 | 1.0967 | 0.0732 | 0.1112 | 0.3844 | 0.2461 | 0.0615 | 0.1838 |
| 5 | 0.2477 | 0.7542 | 0.1598 | 0.2343 | 0.4879 | 0.3725 | 0.3839 | 1.1090 |
| 6 | 0.1726 | 0.6397 | 0.1063 | 0.1568 | 0.3713 | 0.2669 | 0.2086 | 0.6025 |
| 7 | 0.1421 | 0.6792 | 0.0805 | 0.1195 | 0.3498 | 0.2442 | 0.1537 | 0.4466 |
| 8 | 0.3202 | 0.8900 | 0.2105 | 0.3078 | 0.4879 | 0.3725 | 0.3839 | 1.1090 |
| 9 | 0.1425 | 0.8976 | 0.0709 | 0.1063 | 0.3643 | 0.2392 | 0.0835 | 0.2421 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 15.9514 | 3.1903 | 1.1957 | 0.3202 | 0.2477 | 0.2015 | 0.1726 | 0.1542 | 0.1421 | 0.1373 | 0.1425 | 0.1553 |
| LDT1 | DSL | 17.1205 | 3.4241 | 1.6572 | 0.8900 | 0.7542 | 0.6699 | 0.6397 | 0.6450 | 0.6792 | 0.7661 | 0.8976 | 1.0967 |
| LDT2 | DSL | 11.8631 | 2.3726 | 0.8747 | 0.2105 | 0.1598 | 0.1276 | 0.1063 | 0.0914 | 0.0805 | 0.0729 | 0.0709 | 0.0732 |
| LHDT1 | DSL | 26.3000 | 3.0529 | 1.2515 | 0.4879 | 0.4139 | 0.3713 | 0.3498 | 0.3453 | 0.3643 | 0.3844 | 0.4478 | 0.5826 |
| LHDT2 | DSL | 26.3000 | 2.8886 | 1.1301 | 0.3725 | 0.3064 | 0.2669 | 0.2442 | 0.2339 | 0.2392 | 0.2461 | 0.2785 | 0.3557 |
| MDV | DSL | 17.3076 | 3.4615 | 1.2736 | 0.3078 | 0.2343 | 0.1879 | 0.1568 | 0.1350 | 0.1195 | 0.1087 | 0.1063 | 0.1112 |
| MH | DSL | 11.6334 | 2.3267 | 1.1023 | 0.4952 | 0.4222 | 0.3671 | 0.3263 | 0.2980 | 0.2814 | 0.2759 | 0.2827 | 0.3011 |
| OBUS | DSL | 3.9647 | 2.4637 | 1.4021 | 0.7431 | 0.5490 | 0.4060 | 0.3007 | 0.2232 | 0.1662 | 0.1244 | 0.1079 | 0.1079 |
| SBUS | DSL | 3.4649 | 1.3437 | 0.7767 | 0.4217 | 0.3314 | 0.2625 | 0.2108 | 0.1731 | 0.1470 | 0.1308 | 0.1259 | 0.1259 |
| T6 | DSL | 1.5669 | 1.2712 | 0.7236 | 0.3839 | 0.2830 | 0.2086 | 0.1537 | 0.1133 | 0.0835 | 0.0615 | 0.0528 | 0.0528 |
| T7 | DSL | 2.4346 | 4.0848 | 2.2480 | 1.1090 | 0.8170 | 0.6025 | 0.4466 | 0.3309 | 0.2421 | 0.1838 | 0.1551 | 0.1498 |
| UBUS | DSL | 85.9565 | 17.1913 | 12.4708 | 8.4663 | 7.1928 | 6.1061 | 5.2042 | 4.4862 | 3.9515 | 3.6000 | 3.4322 | 3.4478 |
| LDA | GAS | 5.4594 | 1.0919 | 0.9057 | 0.7457 | 0.6794 | 0.6204 | 0.5743 | 0.5345 | 0.4975 | 0.4686 | 0.4409 | 0.4154 |
| LDT1 | GAS | 13.9614 | 2.7923 | 2.2262 | 1.7382 | 1.5564 | 1.4034 | 1.3022 | 1.2193 | 1.1458 | 1.1105 | 1.0671 | 1.0375 |
| LDT2 | GAS | 6.6651 | 1.3330 | 1.1074 | 0.9108 | 0.8313 | 0.7611 | 0.7049 | 0.6555 | 0.6101 | 0.5757 | 0.5410 | 0.5110 |
| LHDT1 | GAS | 125.6735 | 2.7999 | 1.8748 | 1.3659 | 1.2161 | 1.1104 | 1.0524 | 1.0157 | 1.0089 | 1.0573 | 1.1271 | 1.3072 |
| LHDT2 | GAS | 128.7862 | 0.8915 | 0.6578 | 0.5061 | 0.4570 | 0.4185 | 0.3930 | 0.3726 | 0.3599 | 0.3614 | 0.3665 | 0.3987 |
| MCY | GAS | 234.0772 | 46.8154 | 28.5672 | 20.5828 | 18.3854 | 16.9389 | 16.0949 | 15.7977 | 16.0708 | 17.0253 | 18.8923 | 22.0927 |
| MDV | GAS | 11.3361 | 2.2672 | 1.8053 | 1.4673 | 1.3423 | 1.2385 | 1.1515 | 1.0749 | 1.0133 | 0.9680 | 0.9276 | 0.9038 |
| MH | GAS | 35.1923 | 7.0385 | 4.2423 | 3.0328 | 2.7045 | 2.4914 | 2.3708 | 2.3340 | 2.3849 | 2.5408 | 2.8377 | 3.3412 |
| OBUS | GAS | 131.1737 | 1.5956 | 1.2533 | 1.0292 | 0.9435 | 0.8707 | 0.8089 | 0.7568 | 0.7140 | 0.6807 | 0.6579 | 0.6483 |
| SBUS | GAS | 130.0778 | 2.5264 | 2.1011 | 1.7663 | 1.6260 | 1.5009 | 1.3892 | 1.2893 | 1.1998 | 1.1196 | 1.0475 | 0.9827 |
| T6 | GAS | 322.2897 | 2.8691 | 2.2864 | 1.8713 | 1.7135 | 1.5779 | 1.4667 | 1.3716 | 1.2889 | 1.2291 | 1.1815 | 1.1666 |
| T7 | GAS | 266.9530 | 53.3906 | 44.5208 | 37.1574 | 34.2109 | 31.5623 | 29.2526 | 27.1813 | 25.3520 | 23.7925 | 22.3607 | 21.0778 |
| UBUS | GAS | 48.4762 | 9.6952 | 6.7232 | 5.2083 | 4.7220 | 4.3546 | 4.0844 | 3.9018 | 3.8080 | 3.8155 | 3.9528 | 4.2730 |
| T7 | NG | 4.2116 | 42.6052 | 24.2905 | 12.8774 | 9.4957 | 7.0038 | 5.1676 | 3.8149 | 2.8186 | 2.0851 | 1.7946 | 1.7946 |
| UBUS | NG | 228.6390 | 45.7278 | 20.0805 | 7.7082 | 6.3726 | 5.3976 | 4.6824 | 4.1783 | 3.8589 | 3.7091 | 3.7607 | 3.9958 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 11 | 1 | 10 | 3 | 26 |
| 0 | 7 | 2 | 3 | 4 | 1 | 0 | 1 | 6 | 25 |
| 1 | 47 | 13 | 21 | 26 | 7 | 0 | 9 | 54 | 176 |
| 2 | 90 | 25 | 40 | 52 | 12 | 1 | 17 | 172 | 410 |
| 3 | 36 | 10 | 16 | 20 | 5 | 0 | 9 | 121 | 217 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 6 | 12 | 3 | 5 | 7 | 1 | 0 | 2 | 3 | 32 |
| 7 | 36 | 10 | 16 | 20 | 4 | 0 | 7 | 62 | 155 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **229** | **63** | **101** | **129** | **40** | **3** | **56** | **423** | **1044** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 11 | 1 | 10 | 3 | 26 |
| 0 | 7 | 2 | 3 | 4 | 1 | 0 | 1 | 6 | 25 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **7** | **2** | **3** | **4** | **12** | **1** | **11** | **10** | **51** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 37 | 10 | 16 | 20 | 6 | 0 | 8 | 49 | 146 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **37** | **10** | **16** | **20** | **6** | **0** | **8** | **49** | **146** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 10 | 3 | 5 | 6 | 1 | 0 | 2 | 5 | 31 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 14 | 4 | 6 | 8 | 1 | 0 | 2 | 1 | 36 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 6 | 12 | 3 | 5 | 7 | 1 | 0 | 2 | 3 | 32 |
| 7 | 24 | 7 | 11 | 14 | 2 | 0 | 3 | 10 | 71 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **61** | **16** | **27** | **34** | **5** | **0** | **9** | **19** | **173** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 90 | 25 | 40 | 52 | 12 | 1 | 17 | 172 | 410 |
| 3 | 22 | 6 | 10 | 12 | 4 | 0 | 7 | 110 | 172 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 12 | 3 | 5 | 7 | 2 | 0 | 3 | 38 | 70 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **124** | **35** | **55** | **71** | **17** | **1** | **28** | **321** | **652** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 14 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **24** | **24** |

**World Logistics Center** **PM10**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0590 | 0.0835 | 0.0585 | 0.0598 | 0.0419 | 0.0330 | 0.0323 | 0.0293 |
| 0 | 0.0050 | 0.0075 | 0.0050 | 0.0051 | 0.0036 | 0.0028 | 0.0027 | 0.0024 |
| 1 | 0.0017 | 0.0025 | 0.0016 | 0.0017 | 0.0019 | 0.0014 | 0.0014 | 0.0013 |
| 2 | 0.0013 | 0.0020 | 0.0013 | 0.0013 | 0.0010 | 0.0013 | 0.0007 | 0.0006 |
| 3 | 0.0013 | 0.0020 | 0.0013 | 0.0014 | 0.0012 | 0.0009 | 0.0009 | 0.0008 |
| 4 | 0.0016 | 0.0023 | 0.0016 | 0.0016 | 0.0010 | 0.0007 | 0.0007 | 0.0006 |
| 5 | 0.0020 | 0.0031 | 0.0020 | 0.0021 | 0.0019 | 0.0014 | 0.0014 | 0.0013 |
| 6 | 0.0014 | 0.0022 | 0.0014 | 0.0015 | 0.0012 | 0.0009 | 0.0009 | 0.0008 |
| 7 | 0.0013 | 0.0019 | 0.0013 | 0.0013 | 0.0011 | 0.0008 | 0.0008 | 0.0007 |
| 8 | 0.0026 | 0.0040 | 0.0026 | 0.0027 | 0.0019 | 0.0014 | 0.0014 | 0.0013 |
| 9 | 0.0014 | 0.0021 | 0.0014 | 0.0014 | 0.0010 | 0.0007 | 0.0007 | 0.0006 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.2117 | 1.9979 | 0.0643 | 0.0856 | 0.7384 | 0.7285 | 0.0014 | 0.0015 |
| 0 | 0.0248 | 0.2101 | 0.0093 | 0.0112 | 0.0346 | 0.0264 | 0.0049 | 0.0155 |
| 1 | 0.0104 | 0.0893 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0040 | 0.0094 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0030 | 0.0075 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0034 | 0.0082 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0026 | 0.0072 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0040 | 0.0094 |
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0034 | 0.0082 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0032 | 0.0078 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0040 | 0.0094 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0028 | 0.0068 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.212 | 0.042 | 0.025 | 0.015 | 0.012 | 0.010 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 |
| LDT1 | DSL | 1.998 | 0.400 | 0.210 | 0.126 | 0.104 | 0.089 | 0.082 | 0.078 | 0.078 | 0.082 | 0.089 | 0.101 |
| LDT2 | DSL | 0.064 | 0.013 | 0.009 | 0.006 | 0.006 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| LHDT1 | DSL | 0.738 | 0.062 | 0.035 | 0.022 | 0.020 | 0.018 | 0.016 | 0.016 | 0.015 | 0.015 | 0.016 | 0.019 |
| LHDT2 | DSL | 0.728 | 0.043 | 0.026 | 0.018 | 0.016 | 0.014 | 0.013 | 0.012 | 0.012 | 0.012 | 0.012 | 0.013 |
| MDV | DSL | 0.086 | 0.017 | 0.011 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| MH | DSL | 1.383 | 0.277 | 0.176 | 0.111 | 0.101 | 0.096 | 0.096 | 0.101 | 0.110 | 0.123 | 0.142 | 0.165 |
| OBUS | DSL | 0.008 | 0.025 | 0.019 | 0.015 | 0.014 | 0.013 | 0.012 | 0.012 | 0.011 | 0.010 | 0.010 | 0.010 |
| SBUS | DSL | 0.077 | 0.111 | 0.062 | 0.033 | 0.028 | 0.025 | 0.023 | 0.023 | 0.024 | 0.027 | 0.029 | 0.029 |
| T6 | DSL | 0.001 | 0.006 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| T7 | DSL | 0.001 | 0.023 | 0.016 | 0.009 | 0.009 | 0.008 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 | 0.006 |
| UBUS | DSL | 8.448 | 1.690 | 0.965 | 0.528 | 0.451 | 0.393 | 0.351 | 0.328 | 0.321 | 0.332 | 0.360 | 0.406 |
| LDA | GAS | 0.059 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| LDT1 | GAS | 0.084 | 0.017 | 0.007 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT2 | GAS | 0.058 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| LHDT1 | GAS | 0.042 | 0.008 | 0.004 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.033 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.057 | 0.011 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MDV | GAS | 0.060 | 0.012 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| MH | GAS | 0.047 | 0.009 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.031 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.026 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.032 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.029 | 0.006 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.039 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.044 | 0.009 | 0.006 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 | 0.005 |
| UBUS | NG | 0.106 | 0.021 | 0.012 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 | 0.006 |

**Break and Tire Dust Emission Factors (g/mi)**

| Source | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0370 | 0.0370 | 0.0370 | 0.0760 | 0.0890 | 0.0370 | 0.1300 | 0.0620 |
| Tires | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.012 | 0.02 |
| Total | **0.045** | **0.045** | **0.045** | **0.084** | **0.097** | **0.045** | **0.142** | **0.082** |

| Source | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.037 | 0.037 | 0.037 | 0.076 | 0.089 | 0.037 | 0.130 | 0.062 |
| Tires | 0.008 | 0.008 | 0.008 | 0.012 | 0.012 | 0.008 | 0.012 | 0.036 |
| Total | **0.045** | **0.045** | **0.045** | **0.088** | **0.101** | **0.045** | **0.142** | **0.098** |

**Paved Road Dust Emissions (pounds/day)**

| Source | PM10 |
|---|---|
| Freeways | 336 |
| Freeways to Ports | 18 |
| Internal | 52 |
| Surface | 106 |
| **Total** | **512** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 19.643 | 2.327 | 7.094 | 10.223 | 2.275 | 0.111 | 2.801 | 0.596 | 45.069 |
| Diesel | 0.063 | 0.003 | 0.003 | 0.011 | 0.733 | 0.107 | 12.271 | 41.509 | 54.701 |
| Total | **19.706** | **2.330** | **7.097** | **10.234** | **3.008** | **0.217** | **15.072** | **42.105** | **99.769** |

# World Logistics Center PM10

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.023 | 0.007 | 0.001 | 0.001 | 0.031 |
| 0 | 0.040 | 0.007 | 0.014 | 0.011 | 0.006 | 0.001 | 0.004 | 0.033 | 0.116 |
| 1 | 0.127 | 0.024 | 0.045 | 0.036 | 0.039 | 0.009 | 0.050 | 0.292 | 0.622 |
| 2 | 0.254 | 0.048 | 0.089 | 0.072 | 0.060 | 0.014 | 0.129 | 1.622 | 2.289 |
| 3 | 0.090 | 0.017 | 0.032 | 0.025 | 0.028 | 0.006 | 0.059 | 0.870 | 1.128 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.000 | 0.001 | 0.001 | 0.008 |
| 6 | 0.030 | 0.006 | 0.011 | 0.009 | 0.005 | 0.001 | 0.010 | 0.021 | 0.093 |
| 7 | 0.094 | 0.017 | 0.033 | 0.026 | 0.020 | 0.005 | 0.046 | 0.514 | 0.755 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.638** | **0.119** | **0.224** | **0.181** | **0.182** | **0.043** | **0.300** | **3.355** | **5.042** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.023 | 0.007 | 0.001 | 0.001 | 0.031 |
| 0 | 0.040 | 0.007 | 0.014 | 0.011 | 0.006 | 0.001 | 0.004 | 0.033 | 0.116 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.040** | **0.007** | **0.014** | **0.011** | **0.029** | **0.008** | **0.005** | **0.034** | **0.148** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.100 | 0.019 | 0.035 | 0.028 | 0.034 | 0.007 | 0.041 | 0.265 | 0.528 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.100** | **0.019** | **0.035** | **0.028** | **0.034** | **0.007** | **0.041** | **0.265** | **0.528** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.028 | 0.005 | 0.010 | 0.008 | 0.005 | 0.001 | 0.009 | 0.027 | 0.093 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.034 | 0.006 | 0.012 | 0.010 | 0.007 | 0.002 | 0.013 | 0.010 | 0.095 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.000 | 0.001 | 0.001 | 0.008 |
| 6 | 0.030 | 0.006 | 0.011 | 0.009 | 0.005 | 0.001 | 0.010 | 0.021 | 0.093 |
| 7 | 0.063 | 0.012 | 0.022 | 0.018 | 0.011 | 0.003 | 0.024 | 0.080 | 0.233 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.159** | **0.030** | **0.056** | **0.045** | **0.030** | **0.007** | **0.057** | **0.139** | **0.522** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.254 | 0.048 | 0.089 | 0.072 | 0.060 | 0.014 | 0.129 | 1.622 | 2.289 |
| 3 | 0.056 | 0.010 | 0.020 | 0.016 | 0.021 | 0.005 | 0.046 | 0.792 | 0.965 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.030 | 0.006 | 0.011 | 0.009 | 0.009 | 0.002 | 0.022 | 0.317 | 0.405 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.340** | **0.064** | **0.120** | **0.096** | **0.089** | **0.021** | **0.197** | **2.731** | **3.659** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.068 | 0.068 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.117 | 0.117 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.185** | **0.185** |

**World Logistics Center** **PM2.5**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0542 | 0.0768 | 0.0538 | 0.0550 | 0.0385 | 0.0303 | 0.0297 | 0.0269 |
| 0 | 0.0046 | 0.0069 | 0.0046 | 0.0047 | 0.0033 | 0.0026 | 0.0025 | 0.0022 |
| 1 | 0.0015 | 0.0023 | 0.0015 | 0.0016 | 0.0018 | 0.0013 | 0.0013 | 0.0012 |
| 2 | 0.0012 | 0.0018 | 0.0012 | 0.0012 | 0.0009 | 0.0012 | 0.0007 | 0.0006 |
| 3 | 0.0012 | 0.0019 | 0.0012 | 0.0013 | 0.0011 | 0.0009 | 0.0008 | 0.0007 |
| 4 | 0.0014 | 0.0021 | 0.0014 | 0.0015 | 0.0009 | 0.0007 | 0.0007 | 0.0006 |
| 5 | 0.0019 | 0.0028 | 0.0018 | 0.0019 | 0.0018 | 0.0013 | 0.0013 | 0.0012 |
| 6 | 0.0013 | 0.0020 | 0.0013 | 0.0014 | 0.0011 | 0.0009 | 0.0008 | 0.0007 |
| 7 | 0.0012 | 0.0018 | 0.0012 | 0.0012 | 0.0010 | 0.0007 | 0.0007 | 0.0006 |
| 8 | 0.0024 | 0.0036 | 0.0024 | 0.0025 | 0.0018 | 0.0013 | 0.0013 | 0.0012 |
| 9 | 0.0013 | 0.0019 | 0.0013 | 0.0013 | 0.0009 | 0.0007 | 0.0006 | 0.0006 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.2026 | 1.9114 | 0.0615 | 0.0819 | 0.7064 | 0.6969 | 0.0013 | 0.0014 |
| 0 | 0.0237 | 0.2010 | 0.0089 | 0.0107 | 0.0331 | 0.0252 | 0.0047 | 0.0149 |
| 1 | 0.0100 | 0.0855 | 0.0048 | 0.0054 | 0.0215 | 0.0170 | 0.0038 | 0.0090 |
| 2 | 0.0086 | 0.0785 | 0.0037 | 0.0044 | 0.0149 | 0.0117 | 0.0028 | 0.0072 |
| 3 | 0.0087 | 0.0748 | 0.0041 | 0.0046 | 0.0169 | 0.0134 | 0.0033 | 0.0078 |
| 4 | 0.0096 | 0.0964 | 0.0038 | 0.0048 | 0.0146 | 0.0111 | 0.0025 | 0.0069 |
| 5 | 0.0119 | 0.0995 | 0.0053 | 0.0061 | 0.0215 | 0.0170 | 0.0038 | 0.0090 |
| 6 | 0.0091 | 0.0782 | 0.0044 | 0.0049 | 0.0169 | 0.0134 | 0.0033 | 0.0078 |
| 7 | 0.0083 | 0.0745 | 0.0039 | 0.0044 | 0.0156 | 0.0124 | 0.0030 | 0.0075 |
| 8 | 0.0145 | 0.1207 | 0.0062 | 0.0071 | 0.0215 | 0.0170 | 0.0038 | 0.0090 |
| 9 | 0.0090 | 0.0853 | 0.0037 | 0.0045 | 0.0147 | 0.0114 | 0.0027 | 0.0065 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.203 | 0.041 | 0.024 | 0.015 | 0.012 | 0.010 | 0.009 | 0.009 | 0.008 | 0.009 | 0.009 | 0.010 |
| LDT1 | DSL | 1.911 | 0.382 | 0.201 | 0.121 | 0.100 | 0.085 | 0.078 | 0.075 | 0.075 | 0.079 | 0.085 | 0.096 |
| LDT2 | DSL | 0.061 | 0.012 | 0.009 | 0.006 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| LHDT1 | DSL | 0.706 | 0.059 | 0.033 | 0.022 | 0.019 | 0.017 | 0.016 | 0.015 | 0.015 | 0.015 | 0.015 | 0.018 |
| LHDT2 | DSL | 0.697 | 0.041 | 0.025 | 0.017 | 0.015 | 0.013 | 0.012 | 0.012 | 0.011 | 0.011 | 0.012 | 0.013 |
| MDV | DSL | 0.082 | 0.016 | 0.011 | 0.007 | 0.006 | 0.005 | 0.005 | 0.005 | 0.004 | 0.004 | 0.005 | 0.005 |
| MH | DSL | 1.323 | 0.265 | 0.168 | 0.106 | 0.097 | 0.092 | 0.092 | 0.096 | 0.105 | 0.118 | 0.136 | 0.158 |
| OBUS | DSL | 0.008 | 0.023 | 0.018 | 0.015 | 0.014 | 0.013 | 0.012 | 0.011 | 0.011 | 0.010 | 0.010 | 0.010 |
| SBUS | DSL | 0.074 | 0.107 | 0.059 | 0.032 | 0.027 | 0.024 | 0.022 | 0.022 | 0.023 | 0.026 | 0.028 | 0.028 |
| T6 | DSL | 0.001 | 0.006 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 |
| T7 | DSL | 0.001 | 0.022 | 0.015 | 0.009 | 0.008 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 | 0.006 | 0.005 |
| UBUS | DSL | 8.083 | 1.617 | 0.924 | 0.505 | 0.432 | 0.376 | 0.336 | 0.313 | 0.307 | 0.317 | 0.345 | 0.388 |
| LDA | GAS | 0.054 | 0.011 | 0.005 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | GAS | 0.077 | 0.015 | 0.007 | 0.004 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| LDT2 | GAS | 0.054 | 0.011 | 0.005 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT1 | GAS | 0.039 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.030 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.053 | 0.011 | 0.005 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| MDV | GAS | 0.055 | 0.011 | 0.005 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | GAS | 0.043 | 0.009 | 0.004 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.029 | 0.006 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.024 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.030 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.027 | 0.005 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.036 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.042 | 0.008 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 |
| UBUS | NG | 0.101 | 0.020 | 0.011 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.006 |

**Break and Tire Dust Emission Factors (g/mi)**

| | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0050 |
| Total | **0.018** | **0.018** | **0.018** | **0.035** | **0.04** | **0.018** | **0.059** | **0.031** |

| | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0030 | 0.0020 | 0.0030 | 0.0090 |
| Total | **0.018** | **0.018** | **0.018** | **0.036** | **0.041** | **0.018** | **0.059** | **0.035** |

**PM2.5 Paved Road Dust Emissions (pounds/day)**

| Source | PM.5 |
|---|---|
| Freeways | 82.5 |
| Freeways to Ports | 4.5 |
| Internal | 12.7 |
| Surface | 26.0 |
| **Total** | **125.7** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 7.857 | 0.931 | 2.837 | 4.260 | 0.938 | 0.044 | 1.164 | 0.225 | 18.256 |
| Diesel | 0.025 | 0.001 | 0.001 | 0.004 | 0.298 | 0.043 | 5.099 | 14.825 | 20.296 |
| Total | **7.882** | **0.932** | **2.839** | **4.264** | **1.236** | **0.087** | **6.262** | **15.050** | **38.552** |

**Black Carbon Emissions (pounds/day)**

Percent of diesel PM2.5 exhaust

| | |
|---|---|
| LDT1, LDT2, MDT: | 64% |
| LHDT1, LHDT2, MHDT, HHDT: | 77% |

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.03 | 0.21 | 0.28 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.09 | 1.19 | 1.33 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.04 | 0.64 | 0.70 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.03 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.03 | 0.38 | 0.43 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.09** | **0.02** | **0.20** | **2.44** | **2.77** |

# World Logistics Center PM2.5

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.022 | 0.006 | 0.001 | 0.001 | 0.030 |
| 0 | 0.037 | 0.007 | 0.013 | 0.010 | 0.005 | 0.001 | 0.003 | 0.032 | 0.108 |
| 1 | 0.117 | 0.022 | 0.041 | 0.033 | 0.037 | 0.008 | 0.048 | 0.280 | 0.586 |
| 2 | 0.234 | 0.044 | 0.082 | 0.066 | 0.057 | 0.013 | 0.123 | 1.552 | 2.172 |
| 3 | 0.083 | 0.016 | 0.029 | 0.023 | 0.027 | 0.006 | 0.056 | 0.832 | 1.072 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.002 | 0.000 | 0.001 | 0.001 | 0.001 | 0.000 | 0.001 | 0.001 | 0.007 |
| 6 | 0.028 | 0.005 | 0.010 | 0.008 | 0.005 | 0.001 | 0.009 | 0.020 | 0.087 |
| 7 | 0.086 | 0.016 | 0.030 | 0.024 | 0.019 | 0.004 | 0.044 | 0.492 | 0.716 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.588** | **0.110** | **0.206** | **0.166** | **0.173** | **0.041** | **0.286** | **3.209** | **4.779** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.022 | 0.006 | 0.001 | 0.001 | 0.030 |
| 0 | 0.037 | 0.007 | 0.013 | 0.010 | 0.005 | 0.001 | 0.003 | 0.032 | 0.108 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.037** | **0.007** | **0.013** | **0.010** | **0.027** | **0.007** | **0.005** | **0.032** | **0.138** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.092 | 0.017 | 0.032 | 0.026 | 0.032 | 0.007 | 0.039 | 0.254 | 0.498 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.092** | **0.017** | **0.032** | **0.026** | **0.032** | **0.007** | **0.039** | **0.254** | **0.498** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.026 | 0.005 | 0.009 | 0.007 | 0.005 | 0.001 | 0.009 | 0.026 | 0.087 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.031 | 0.006 | 0.011 | 0.009 | 0.007 | 0.002 | 0.012 | 0.010 | 0.088 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.002 | 0.000 | 0.001 | 0.001 | 0.001 | 0.000 | 0.001 | 0.001 | 0.007 |
| 6 | 0.028 | 0.005 | 0.010 | 0.008 | 0.005 | 0.001 | 0.009 | 0.020 | 0.087 |
| 7 | 0.058 | 0.011 | 0.020 | 0.016 | 0.011 | 0.002 | 0.023 | 0.076 | 0.218 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.146** | **0.027** | **0.051** | **0.041** | **0.028** | **0.006** | **0.055** | **0.133** | **0.488** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.234 | 0.044 | 0.082 | 0.066 | 0.057 | 0.013 | 0.123 | 1.552 | 2.172 |
| 3 | 0.051 | 0.010 | 0.018 | 0.015 | 0.020 | 0.005 | 0.044 | 0.757 | 0.920 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.028 | 0.005 | 0.010 | 0.008 | 0.008 | 0.002 | 0.021 | 0.303 | 0.385 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.313** | **0.059** | **0.110** | **0.089** | **0.085** | **0.020** | **0.188** | **2.613** | **3.477** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.065 | 0.065 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.112 | 0.112 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.177** | **0.177** |

**World Logistics Center** **CO2**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 4174.6549 | 4941.0049 | 5542.9344 | 7499.6819 | 4724.1123 | 5417.0913 | 13952.2616 | 20014.6855 |
| 0 | 478.0428 | 566.2576 | 634.2593 | 855.8843 | 939.8963 | 1053.8213 | 2230.8276 | 2456.6922 |
| 1 | 242.7073 | 287.3835 | 322.3595 | 437.8889 | 747.9768 | 833.8809 | 1370.1180 | 1864.6855 |
| 2 | 224.3757 | 265.7151 | 297.8223 | 405.2351 | 673.6834 | 287.6419 | 1005.1126 | 1605.8157 |
| 3 | 216.5995 | 256.4689 | 287.6419 | 390.7964 | 679.1975 | 753.9141 | 1162.7248 | 1702.9430 |
| 4 | 269.3015 | 318.8239 | 357.4716 | 487.9214 | 748.7757 | 784.1416 | 913.6201 | 1558.1131 |
| 5 | 271.9865 | 322.0665 | 361.1521 | 489.1356 | 747.9768 | 833.8809 | 1370.1180 | 1864.6855 |
| 6 | 225.0585 | 266.4996 | 298.8816 | 406.2331 | 679.1975 | 753.9141 | 1162.7248 | 1702.9430 |
| 7 | 216.2912 | 256.0555 | 287.1565 | 390.7204 | 676.6898 | 736.7295 | 1081.6366 | 1641.8162 |
| 8 | 316.3035 | 374.5532 | 419.8612 | 567.4907 | 747.9768 | 833.8809 | 1370.1180 | 1864.6855 |
| 9 | 241.3080 | 285.6990 | 320.3259 | 436.0177 | 710.7312 | 750.0915 | 940.0641 | 1586.3387 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 3134.0566 | 4327.5582 | 4054.8831 | 4972.5593 | 3940.4917 | 6246.3631 | 6678.2724 | 5952.0026 |
| 0 | 429.6177 | 610.6158 | 566.8100 | 716.1691 | 667.8984 | 749.2676 | 1630.6542 | 2244.5741 |
| 1 | 231.0509 | 323.0173 | 303.7949 | 393.7796 | 504.9094 | 569.4881 | 1314.8364 | 1774.6247 |
| 2 | 219.2286 | 304.6317 | 286.1671 | 375.7527 | 436.5211 | 476.7528 | 1098.4512 | 1469.7315 |
| 3 | 208.8806 | 290.7669 | 273.3703 | 354.4420 | 459.5420 | 514.3364 | 1185.6074 | 1591.1568 |
| 4 | 267.1773 | 367.9205 | 347.7014 | 456.6177 | 478.0618 | 511.6164 | 1035.2761 | 1387.5441 |
| 5 | 255.6968 | 360.0808 | 337.0392 | 434.2252 | 504.9094 | 569.4881 | 1314.8364 | 1774.6247 |
| 6 | 216.2310 | 301.4289 | 283.4798 | 368.2619 | 459.5420 | 514.3364 | 1185.6074 | 1591.1568 |
| 7 | 209.4938 | 290.5456 | 273.6708 | 356.1321 | 447.2959 | 495.8081 | 1138.3910 | 1525.5192 |
| 8 | 295.3242 | 418.2898 | 390.1308 | 502.9294 | 504.9094 | 569.4881 | 1314.8364 | 1774.6247 |
| 9 | 237.6786 | 329.2203 | 309.9175 | 406.8970 | 458.0618 | 494.6991 | 1064.0280 | 1417.2784 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 3134.1 | 626.8 | 429.6 | 295.3 | 255.7 | 231.1 | 216.2 | 208.9 | 209.5 | 219.2 | 237.7 | 267.2 |
| LDT1 | DSL | 4327.6 | 865.5 | 610.6 | 418.3 | 360.1 | 323.0 | 301.4 | 290.8 | 290.5 | 304.6 | 329.2 | 367.9 |
| LDT2 | DSL | 4054.9 | 811.0 | 566.8 | 390.1 | 337.0 | 303.8 | 283.5 | 273.4 | 273.7 | 286.2 | 309.9 | 347.7 |
| LHDT1 | DSL | 3940.5 | 1219.2 | 667.9 | 504.9 | 459.1 | 459.5 | 447.3 | 436.5 | 458.1 | 478.1 | 483.0 | 490.3 |
| LHDT2 | DSL | 6246.4 | 1268.4 | 749.3 | 569.5 | 514.0 | 514.3 | 495.8 | 476.8 | 494.7 | 511.6 | 513.5 | 515.7 |
| MDV | DSL | 4972.6 | 994.5 | 716.2 | 502.9 | 434.2 | 393.8 | 368.3 | 354.4 | 356.1 | 375.8 | 406.9 | 456.6 |
| MH | DSL | 10376.1 | 2075.2 | 1547.2 | 1138.8 | 1069.0 | 1011.0 | 964.9 | 930.7 | 908.4 | 897.9 | 899.4 | 912.7 |
| OBUS | DSL | 6705.2 | 2586.9 | 1931.3 | 1554.1 | 1465.0 | 1394.8 | 1337.4 | 1289.2 | 1247.8 | 1211.9 | 1195.6 | 1195.6 |
| SBUS | DSL | 7059.4 | 2284.2 | 1703.6 | 1323.1 | 1244.6 | 1181.6 | 1130.8 | 1090.2 | 1058.6 | 1035.2 | 1026.2 | 1026.2 |
| T6 | DSL | 6678.3 | 2192.4 | 1630.7 | 1314.8 | 1242.8 | 1185.6 | 1138.4 | 1098.5 | 1064.0 | 1035.3 | 1022.2 | 1022.2 |
| T7 | DSL | 5952.0 | 3041.7 | 2244.6 | 1774.6 | 1672.4 | 1591.2 | 1525.5 | 1469.7 | 1417.3 | 1387.5 | 1364.9 | 1354.2 |
| UBUS | DSL | 20879.6 | 4175.9 | 3113.4 | 2291.6 | 2151.0 | 2034.4 | 1941.6 | 1872.8 | 1827.9 | 1806.9 | 1809.8 | 1836.6 |
| LDA | GAS | 4174.7 | 834.9 | 478.0 | 316.3 | 272.0 | 242.7 | 225.1 | 216.6 | 216.3 | 224.4 | 241.3 | 269.3 |
| LDT1 | GAS | 4941.0 | 988.2 | 566.3 | 374.6 | 322.1 | 287.4 | 266.5 | 256.5 | 256.1 | 265.7 | 285.7 | 318.8 |
| LDT2 | GAS | 5542.9 | 1108.6 | 634.3 | 419.9 | 361.2 | 322.4 | 298.9 | 287.6 | 287.2 | 297.8 | 320.3 | 357.5 |
| LHDT1 | GAS | 4724.1 | 1375.8 | 939.9 | 748.0 | 679.0 | 679.2 | 676.7 | 673.7 | 710.7 | 748.8 | 760.0 | 770.2 |
| LHDT2 | GAS | 5417.1 | 1443.0 | 1053.8 | 833.9 | 753.8 | 753.9 | 736.7 | 719.4 | 750.1 | 784.1 | 792.5 | 800.0 |
| MCY | GAS | 2795.2 | 559.0 | 319.2 | 211.5 | 182.1 | 162.6 | 150.8 | 145.1 | 145.0 | 150.3 | 161.7 | 180.6 |
| MDV | GAS | 7499.7 | 1499.9 | 855.9 | 567.5 | 489.1 | 437.9 | 406.2 | 390.8 | 390.7 | 405.2 | 436.0 | 487.9 |
| MH | GAS | 19265.5 | 3853.1 | 2267.3 | 1392.0 | 1279.2 | 1181.0 | 1098.7 | 1020.9 | 955.0 | 928.7 | 934.4 | 951.8 |
| OBUS | GAS | 9705.9 | 3765.1 | 2215.5 | 1360.2 | 1249.9 | 1154.0 | 1073.6 | 997.6 | 933.2 | 907.5 | 913.1 | 930.0 |
| SBUS | GAS | 4627.6 | 1814.3 | 1067.6 | 655.5 | 602.3 | 556.1 | 517.4 | 480.7 | 449.7 | 437.3 | 440.0 | 448.2 |
| T6 | GAS | 13952.3 | 3794.0 | 2230.8 | 1370.1 | 1259.2 | 1162.7 | 1081.6 | 1005.1 | 940.1 | 913.6 | 919.2 | 936.0 |
| T7 | GAS | 20014.7 | 4002.9 | 2456.7 | 1864.7 | 1775.8 | 1702.9 | 1641.8 | 1605.8 | 1586.3 | 1558.1 | 1536.7 | 1531.6 |
| UBUS | GAS | 19074.9 | 3815.0 | 2244.9 | 1378.2 | 1266.5 | 1169.3 | 1087.9 | 1010.8 | 945.5 | 919.5 | 925.2 | 942.3 |
| T7 | NG | 6002.2 | 5200.9 | 3874.4 | 3113.6 | 2942.5 | 2807.1 | 2696.2 | 2603.1 | 2523.7 | 2455.1 | 2424.2 | 2424.2 |
| UBUS | NG | 15190.6 | 3038.1 | 2265.1 | 1667.2 | 1564.9 | 1480.1 | 1412.6 | 1362.5 | 1329.8 | 1314.5 | 1316.7 | 1336.2 |

# World Logistics Center CO2

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 501 | 101 | 1346 | 2833 | 4780 |
| 0 | 3781 | 530 | 1807 | 1884 | 464 | 75 | 1400 | 4848 | 14790 |
| 1 | 18323 | 2567 | 8765 | 9197 | 3960 | 635 | 18882 | 55825 | 118155 |
| 2 | 43320 | 6069 | 20709 | 21766 | 8311 | 806 | 54480 | 323761 | 479221 |
| 3 | 14519 | 2034 | 6944 | 7288 | 3493 | 557 | 23779 | 171676 | 230290 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 355 | 50 | 170 | 178 | 61 | 10 | 401 | 196 | 1421 |
| 6 | 4648 | 651 | 2223 | 2334 | 668 | 107 | 4002 | 4172 | 18806 |
| 7 | 15633 | 2189 | 7475 | 7856 | 2654 | 415 | 19018 | 102033 | 157273 |
| 8 | 40 | 6 | 19 | 20 | 3 | 0 | 14 | 15 | 116 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **100618** | **14095** | **48113** | **50523** | **20114** | **2707** | **123323** | **665359** | **1024851** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 501 | 101 | 1346 | 2833 | 4780 |
| 0 | 3781 | 530 | 1807 | 1884 | 464 | 75 | 1400 | 4848 | 14790 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3781** | **530** | **1807** | **1884** | **965** | **177** | **2746** | **7681** | **19570** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 14314 | 2005 | 6848 | 7185 | 3443 | 552 | 15442 | 50623 | 100411 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **14314** | **2005** | **6848** | **7185** | **3443** | **552** | **15442** | **50623** | **100411** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 4009 | 562 | 1918 | 2012 | 517 | 83 | 3440 | 5203 | 17743 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 5511 | 772 | 2636 | 2766 | 910 | 145 | 5256 | 2005 | 20003 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 355 | 50 | 170 | 178 | 61 | 10 | 401 | 196 | 1421 |
| 6 | 4648 | 651 | 2223 | 2334 | 668 | 107 | 4002 | 4172 | 18806 |
| 7 | 10576 | 1481 | 5057 | 5315 | 1497 | 234 | 9916 | 15814 | 49892 |
| 8 | 40 | 6 | 19 | 20 | 3 | 0 | 14 | 15 | 116 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **25139** | **3521** | **12023** | **12626** | **3657** | **579** | **23030** | **27404** | **107980** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 43320 | 6069 | 20709 | 21766 | 8311 | 806 | 54480 | 323761 | 479221 |
| 3 | 9008 | 1262 | 4308 | 4521 | 2582 | 412 | 18523 | 156311 | 196927 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 5056 | 708 | 2418 | 2541 | 1156 | 181 | 9102 | 62940 | 84102 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **57384** | **8039** | **27435** | **28829** | **12049** | **1399** | **82105** | **543012** | **760250** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13360 | 13360 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23279 | 23279 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **36640** | **36640** |

**World Logistics Center** **CH4**

**Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1409 | 0.3324 | 0.1811 | 0.3389 | 5.6846 | 5.5627 | 8.3855 | 4.6931 |
| 0 | 0.0123 | 0.0317 | 0.0159 | 0.0298 | 0.0458 | 0.0172 | 0.0602 | 0.4001 |
| 1 | 0.0040 | 0.0109 | 0.0053 | 0.0102 | 0.0253 | 0.0092 | 0.0315 | 0.2056 |
| 2 | 0.0031 | 0.0085 | 0.0041 | 0.0081 | 0.0142 | 0.0042 | 0.0163 | 0.1058 |
| 3 | 0.0032 | 0.0087 | 0.0042 | 0.0082 | 0.0170 | 0.0060 | 0.0203 | 0.1326 |
| 4 | 0.0037 | 0.0096 | 0.0048 | 0.0097 | 0.0145 | 0.0050 | 0.0161 | 0.1055 |
| 5 | 0.0050 | 0.0133 | 0.0064 | 0.0124 | 0.0253 | 0.0092 | 0.0315 | 0.2056 |
| 6 | 0.0035 | 0.0095 | 0.0046 | 0.0090 | 0.0170 | 0.0060 | 0.0203 | 0.1326 |
| 7 | 0.0031 | 0.0083 | 0.0040 | 0.0079 | 0.0152 | 0.0053 | 0.0178 | 0.1154 |
| 8 | 0.0064 | 0.0170 | 0.0083 | 0.0158 | 0.0253 | 0.0092 | 0.0315 | 0.2056 |
| 9 | 0.0033 | 0.0088 | 0.0043 | 0.0086 | 0.0139 | 0.0048 | 0.0158 | 0.1027 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0463 | 0.1481 | 0.0602 | 0.0431 | 0.1474 | 0.1474 | 0.0095 | 0.0299 |
| 0 | 0.0038 | 0.0145 | 0.0044 | 0.0033 | 0.0140 | 0.0130 | 0.0066 | 0.0207 |
| 1 | 0.0008 | 0.0055 | 0.0007 | 0.0005 | 0.0050 | 0.0040 | 0.0035 | 0.0094 |
| 2 | 0.0006 | 0.0050 | 0.0004 | 0.0003 | 0.0029 | 0.0021 | 0.0010 | 0.0029 |
| 3 | 0.0006 | 0.0048 | 0.0005 | 0.0004 | 0.0035 | 0.0027 | 0.0019 | 0.0051 |
| 4 | 0.0007 | 0.0061 | 0.0004 | 0.0004 | 0.0028 | 0.0019 | 0.0006 | 0.0016 |
| 5 | 0.0010 | 0.0065 | 0.0008 | 0.0007 | 0.0050 | 0.0040 | 0.0035 | 0.0094 |
| 6 | 0.0007 | 0.0050 | 0.0006 | 0.0005 | 0.0035 | 0.0027 | 0.0019 | 0.0051 |
| 7 | 0.0006 | 0.0048 | 0.0004 | 0.0004 | 0.0031 | 0.0023 | 0.0014 | 0.0038 |
| 8 | 0.0013 | 0.0079 | 0.0011 | 0.0009 | 0.0050 | 0.0040 | 0.0035 | 0.0094 |
| 9 | 0.0006 | 0.0054 | 0.0004 | 0.0003 | 0.0028 | 0.0020 | 0.0008 | 0.0021 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.0463 | 0.0093 | 0.0038 | 0.0013 | 0.0010 | 0.0008 | 0.0007 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0007 |
| LDT1 | DSL | 0.1481 | 0.0296 | 0.0145 | 0.0079 | 0.0065 | 0.0055 | 0.0050 | 0.0048 | 0.0048 | 0.0050 | 0.0054 | 0.0061 |
| LDT2 | DSL | 0.0602 | 0.0120 | 0.0044 | 0.0011 | 0.0008 | 0.0007 | 0.0006 | 0.0005 | 0.0004 | 0.0004 | 0.0004 | 0.0004 |
| LHDT1 | DSL | 0.1474 | 0.0347 | 0.0140 | 0.0050 | 0.0041 | 0.0035 | 0.0031 | 0.0029 | 0.0028 | 0.0028 | 0.0030 | 0.0035 |
| LHDT2 | DSL | 0.1474 | 0.0337 | 0.0130 | 0.0040 | 0.0032 | 0.0027 | 0.0023 | 0.0021 | 0.0020 | 0.0019 | 0.0020 | 0.0023 |
| MDV | DSL | 0.0431 | 0.0086 | 0.0033 | 0.0009 | 0.0007 | 0.0005 | 0.0005 | 0.0004 | 0.0004 | 0.0003 | 0.0003 | 0.0004 |
| MH | DSL | 0.2373 | 0.0475 | 0.0180 | 0.0055 | 0.0044 | 0.0037 | 0.0031 | 0.0027 | 0.0025 | 0.0025 | 0.0026 | 0.0029 |
| OBUS | DSL | 0.0434 | 0.0291 | 0.0165 | 0.0087 | 0.0064 | 0.0047 | 0.0035 | 0.0026 | 0.0019 | 0.0014 | 0.0012 | 0.0012 |
| SBUS | DSL | 0.0180 | 0.0323 | 0.0143 | 0.0058 | 0.0044 | 0.0034 | 0.0027 | 0.0022 | 0.0019 | 0.0018 | 0.0018 | 0.0018 |
| T6 | DSL | 0.0095 | 0.0115 | 0.0066 | 0.0035 | 0.0026 | 0.0019 | 0.0014 | 0.0010 | 0.0008 | 0.0006 | 0.0005 | 0.0005 |
| T7 | DSL | 0.0299 | 0.0394 | 0.0207 | 0.0094 | 0.0069 | 0.0051 | 0.0038 | 0.0029 | 0.0021 | 0.0016 | 0.0013 | 0.0012 |
| UBUS | DSL | 1.3931 | 0.2786 | 0.1188 | 0.0399 | 0.0330 | 0.0276 | 0.0238 | 0.0215 | 0.0207 | 0.0215 | 0.0238 | 0.0276 |
| LDA | GAS | 0.1409 | 0.0282 | 0.0123 | 0.0064 | 0.0050 | 0.0040 | 0.0035 | 0.0032 | 0.0031 | 0.0031 | 0.0033 | 0.0037 |
| LDT1 | GAS | 0.3324 | 0.0665 | 0.0317 | 0.0170 | 0.0133 | 0.0109 | 0.0095 | 0.0087 | 0.0083 | 0.0085 | 0.0088 | 0.0096 |
| LDT2 | GAS | 0.1811 | 0.0362 | 0.0159 | 0.0083 | 0.0064 | 0.0053 | 0.0046 | 0.0042 | 0.0040 | 0.0041 | 0.0043 | 0.0048 |
| LHDT1 | GAS | 5.6846 | 0.0967 | 0.0458 | 0.0253 | 0.0202 | 0.0170 | 0.0152 | 0.0142 | 0.0139 | 0.0145 | 0.0156 | 0.0182 |
| LHDT2 | GAS | 5.5627 | 0.0381 | 0.0172 | 0.0092 | 0.0072 | 0.0060 | 0.0053 | 0.0049 | 0.0048 | 0.0050 | 0.0053 | 0.0062 |
| MCY | GAS | 12.8963 | 2.5793 | 1.1443 | 0.6265 | 0.5011 | 0.4219 | 0.3738 | 0.3485 | 0.3416 | 0.3522 | 0.3818 | 0.4350 |
| MDV | GAS | 0.3389 | 0.0678 | 0.0298 | 0.0158 | 0.0124 | 0.0102 | 0.0090 | 0.0082 | 0.0079 | 0.0081 | 0.0086 | 0.0097 |
| MH | GAS | 0.8972 | 0.1794 | 0.0827 | 0.0468 | 0.0379 | 0.0323 | 0.0290 | 0.0272 | 0.0269 | 0.0279 | 0.0304 | 0.0347 |
| OBUS | GAS | 6.3527 | 0.0819 | 0.0347 | 0.0182 | 0.0143 | 0.0118 | 0.0103 | 0.0095 | 0.0092 | 0.0094 | 0.0101 | 0.0115 |
| SBUS | GAS | 6.2703 | 0.1351 | 0.0564 | 0.0292 | 0.0228 | 0.0187 | 0.0162 | 0.0148 | 0.0143 | 0.0146 | 0.0157 | 0.0178 |
| T6 | GAS | 8.3855 | 0.1404 | 0.0602 | 0.0315 | 0.0247 | 0.0203 | 0.0178 | 0.0163 | 0.0158 | 0.0161 | 0.0173 | 0.0197 |
| T7 | GAS | 4.6931 | 0.9386 | 0.4001 | 0.2056 | 0.1610 | 0.1326 | 0.1154 | 0.1058 | 0.1027 | 0.1055 | 0.1138 | 0.1282 |
| UBUS | GAS | 3.0609 | 0.6122 | 0.2845 | 0.1620 | 0.1317 | 0.1125 | 0.1010 | 0.0952 | 0.0941 | 0.0977 | 0.1064 | 0.1216 |
| T7 | NG | 0.7276 | 15.0506 | 8.1780 | 4.1923 | 3.1226 | 2.3302 | 1.7443 | 1.3125 | 0.9963 | 0.7672 | 0.6786 | 0.6786 |
| UBUS | NG | 94.1015 | 18.8203 | 7.0918 | 2.0978 | 1.6654 | 1.3489 | 1.1271 | 0.9896 | 0.9308 | 0.9476 | 1.0466 | 1.2241 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CH4

Project Phase 1 (2022) Mitigated (Model Year 2010 on MHDT and HHDT)

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.483 | 0.050 | 0.262 | 0.050 | 0.845 |
| 0 | 0.097 | 0.030 | 0.045 | 0.066 | 0.020 | 0.001 | 0.013 | 0.059 | 0.331 |
| 1 | 0.304 | 0.097 | 0.143 | 0.215 | 0.118 | 0.006 | 0.124 | 0.400 | 1.407 |
| 2 | 0.606 | 0.193 | 0.284 | 0.434 | 0.155 | 0.007 | 0.195 | 1.011 | 2.885 |
| 3 | 0.215 | 0.069 | 0.101 | 0.153 | 0.077 | 0.004 | 0.107 | 0.786 | 1.512 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.006 | 0.002 | 0.003 | 0.004 | 0.002 | 0.000 | 0.003 | 0.001 | 0.022 |
| 6 | 0.072 | 0.023 | 0.034 | 0.051 | 0.015 | 0.001 | 0.018 | 0.019 | 0.234 |
| 7 | 0.222 | 0.071 | 0.104 | 0.159 | 0.053 | 0.003 | 0.075 | 0.382 | 1.069 |
| 8 | 0.001 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.525** | **0.486** | **0.715** | **1.083** | **0.922** | **0.072** | **0.797** | **2.708** | **8.306** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.483 | 0.050 | 0.262 | 0.050 | 0.845 |
| 0 | 0.097 | 0.030 | 0.045 | 0.066 | 0.020 | 0.001 | 0.013 | 0.059 | 0.331 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.097** | **0.030** | **0.045** | **0.066** | **0.503** | **0.052** | **0.276** | **0.108** | **1.176** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.238 | 0.076 | 0.112 | 0.168 | 0.102 | 0.005 | 0.101 | 0.363 | 1.165 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.238** | **0.076** | **0.112** | **0.168** | **0.102** | **0.005** | **0.101** | **0.363** | **1.165** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.067 | 0.021 | 0.031 | 0.047 | 0.015 | 0.001 | 0.023 | 0.037 | 0.242 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.082 | 0.026 | 0.038 | 0.058 | 0.020 | 0.001 | 0.024 | 0.009 | 0.258 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.006 | 0.002 | 0.003 | 0.004 | 0.002 | 0.000 | 0.003 | 0.001 | 0.022 |
| 6 | 0.072 | 0.023 | 0.034 | 0.051 | 0.015 | 0.001 | 0.018 | 0.019 | 0.234 |
| 7 | 0.150 | 0.048 | 0.071 | 0.108 | 0.030 | 0.001 | 0.039 | 0.059 | 0.506 |
| 8 | 0.001 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.378** | **0.121** | **0.177** | **0.269** | **0.082** | **0.004** | **0.106** | **0.126** | **1.264** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.606 | 0.193 | 0.284 | 0.434 | 0.155 | 0.007 | 0.195 | 1.011 | 2.885 |
| 3 | 0.133 | 0.043 | 0.063 | 0.095 | 0.057 | 0.003 | 0.083 | 0.716 | 1.193 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.072 | 0.023 | 0.034 | 0.051 | 0.023 | 0.001 | 0.036 | 0.236 | 0.475 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.812** | **0.259** | **0.381** | **0.580** | **0.235** | **0.011** | **0.314** | **1.962** | **4.553** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.061 | 0.061 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.087 | 0.087 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.148** | **0.148** |

# E.7 - Mobile Spreadsheets: Phases 1 and 2, 2035 Unmitigated

# World Logistics Center

## Project Full Buildout 2035

## Trip and Vehicle Miles Traveled Calculation

**2035**

## World Logistics Center
**Vehicle Fleet Mix**
Project Full Buildout 2035

**Vehicle VMT for South Coast Air Basin per EMFAC2011 @ All Speeds**

| GAS Vehicle Class | VMT (miles/day) |
|---|---|
| LDA-GAS | 208,917,637 |
| LDT1-GAS | 27,492,480 |
| LDT2-GAS | 83,024,800 |
| MDT-GAS | 64,718,278 |
| LHDT1-GAS | 15,357,888 |
| LHDT2-GAS | 1,630,290 |
| MHDT-GAS | 1,411,975 |
| HHDT-GAS | 272,774 |
| Subtotal | 402,826,122 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 637,835 |
| LDT1-DSL | 40,323 |
| LDT2-DSL | 37,706 |
| MDT-DSL | 65,898 |
| LHDT1-DSL | 4,722,049 |
| LHDT2-DSL | 1,565,487 |
| MHDT-DSL | 6,235,756 |
| HHDT-DSL | 18,547,545 |
| Subtotal | 31,852,599 |
| | |
| Grand Total | 434,678,722 |

| Vehicle Class | | VMT-GAS | VMT-DSL | VMT-Total | % VMT-Total | %GAS | %DSL |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 208,917,637 | 637,835 | 209,555,472 | 54.44% | 99.7% | 0.30% |
| LDT1 | Pass Car | 27,492,480 | 40,323 | 27,532,803 | 7.15% | 99.9% | 0.15% |
| LDT2 | Pass Car | 83,024,800 | 37,706 | 83,062,506 | 21.58% | 100.0% | 0.05% |
| MDT | Pass Car | 64,718,278 | 65,898 | 64,784,176 | 16.83% | 99.9% | 0.10% |
| Subtotal | | 384,153,195 | 781,762 | 384,934,958 | 100.00% | 99.8% | 0.20% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 15,357,888 | 4,722,049 | 20,079,937 | 86.27% | 76.5% | 23.52% |
| LHDT2 | Light Heavy Truck | 1,630,290 | 1,565,487 | 3,195,778 | 13.73% | 51.0% | 48.99% |
| Subtotal | | 16,988,179 | 6,287,536 | 23,275,715 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1,411,975 | 6,235,756 | 7,647,730 | 100% | 18.5% | 81.54% |
| HHDT | Heavy Heavy Truck | 272,774 | 18,547,545 | 18,820,319 | 100% | 1.4% | 98.55% |

## World Logistics Center

**Project Full Buildout 2035**

Area Source Trip Distribution

| | Building Size (sq-ft) | |
|---|---|---|
| High Cube Warehouse | 40,400,000 | Sq-feet |
| Light Logistics | 200,000 | Sq-feet |
| Utilities Service Station | 30,800 | Sq-feet |
| Gas Station w/Convenience Store | 12 | Pumps |
| Convenience Store | 3,000 | Sq-feet |
| Fire Station | 1 | Sq-feet |

**Trip Generation**

| | trips/day (Non-PCE) | Source |
|---|---|---|
| High Cube Warehouse | 67872 | Traffic Impact Analysis Report |
| Light Logistics | 712 | prepared by Parsons Brinckerhoff, Inc. |
| Utilities Service Station | 248 | September 2014 |
| Gas Station w/Convenience Store | 219 | |
| Convenience Store | 354 | |
| Fire Station | 137 | |
| Total | 69542 | |

**Vehicle Fleet for High Cube Warehouse**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 79.6% | 54.44% | 0.30% | 90 | 29322 | 29411 |
| LDT1 | | 7.15% | 0.15% | 6 | 3859 | 3864 |
| LDT2 | | 21.58% | 0.05% | 5 | 11653 | 11658 |
| MDT | | 16.83% | 0.10% | 9 | 9083 | 9093 |
| SubTotal | | 100.00% | 0.20% | 110 | 53916 | 54026 |
| LHDT1 (2 axle truck) | 3.5% | 86.27% | 23.52% | 482 | 1567 | 2049 |
| LHDT2 | | 13.73% | 48.99% | 160 | 166 | 326 |
| Subtotal | | 100.0% | | 642 | 1734 | 2376 |
| MHDT (3 axle truck) | 4.6% | 100.00% | 81.54% | 2546 | 576 | 3122 |
| HHDT (4+ axle truck) | 12.3% | 100.00% | 98.55% | 8227 | 121 | 8348 |
| Total | 100.0% | | | 11524 | 56348 | 67872 |

**Vehicle Fleet for Light Logistics**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 80.3% | 54.44% | 0.30% | 1 | 310 | 311 |
| LDT1 | | 7.15% | 0.15% | 0 | 41 | 41 |
| LDT2 | | 21.58% | 0.05% | 0 | 123 | 123 |
| MDT | | 16.83% | 0.10% | 0 | 96 | 96 |
| SubTotal | | 100.00% | 0.20% | 1 | 571 | 572 |
| LHDT1 (2 axle truck) | 5.2% | 86.27% | 23.52% | 8 | 24 | 32 |
| LHDT2 | | 13.73% | 48.99% | 2 | 3 | 5 |
| Subtotal | | 100.0% | | 10 | 27 | 37 |
| MHDT (3 axle truck) | 4.5% | 100.0% | 81.54% | 26 | 6 | 32 |
| HHDT (4+ axle truck) | 10.0% | 100.0% | 98.55% | 70 | 1 | 71 |
| Total | 100.0% | | | 107 | 605 | 712 |

**Vehicle Fleet for Utilities Service Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 77.3% | 54.44% | 0.30% | 0.3 | 104 | 104 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 14 | 14 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 41 | 41 |
| MDT | | 16.83% | 0.10% | 0.0 | 32 | 32 |
| SubTotal | | 100.00% | 0.20% | 0.4 | 191 | 192 |
| LHDT1 (2 axle truck) | 11.3% | 86.27% | 23.52% | 6 | 19 | 24 |
| LHDT2 | | 13.73% | 48.99% | 2 | 2 | 4 |
| Subtotal | | 100.00% | | 8 | 21 | 28 |
| MHDT (3 axle truck) | 2.4% | 100.00% | 81.54% | 5 | 1 | 6 |
| HHDT (4+ axle truck) | 8.9% | 100.00% | 98.55% | 22 | 0 | 22 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Total | 100.0% | | | 35 | 213 | 248 |

**Vehicle Fleet for Gas Station with Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 50.7% | 54.44% | 0.30% | 0.2 | 60 | 60 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 8 | 8 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 24 | 24 |
| MDT | | 16.83% | 0.10% | 0.0 | 19 | 19 |
| SubTotal | | 100.00% | 0.20% | 0.2 | 111 | 111 |
| LHDT1 (2 axle truck) | 1.8% | 86.27% | 23.52% | 0.8 | 3 | 3 |
| LHDT2 | | 13.73% | 48.99% | 0.3 | 0 | 1 |
| Subtotal | | 100.00% | | 1.1 | 3 | 4 |
| MHDT (3 axle truck) | 7.8% | 100.00% | 81.54% | 13.9 | 3 | 17 |
| HHDT (4+ axle truck) | 39.7% | 100.00% | 98.55% | 85.7 | 1 | 87 |
| Total | 100.0% | | | 100.9 | 118 | 219 |

**Vehicle Fleet for Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 52.0% | 54.44% | 0.30% | 0.5 | 100 | 100 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 13 | 13 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 40 | 40 |
| MDT | | 16.83% | 0.10% | 0.0 | 31 | 31 |
| SubTotal | | 100.00% | 0.20% | 0.6 | 184 | 184 |
| LHDT1 (2 axle truck) | 1.7% | 86.27% | 23.52% | 1.2 | 4 | 5 |
| LHDT2 | | 13.73% | 48.99% | 0.4 | 0 | 1 |
| Subtotal | | 100.00% | | 1.6 | 4 | 6 |
| MHDT (3 axle truck) | 7.9% | 100.00% | 81.54% | 22.8 | 5 | 28 |
| HHDT (4+ axle truck) | 38.4% | 100.00% | 98.55% | 134.0 | 2 | 136 |
| Total | 100.0% | | | 159.0 | 195 | 354 |

**Vehicle Fleet for Fire Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 100.0% | 54.44% | 0.30% | 0.2 | 74 | 75 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 10 | 10 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 30 | 30 |
| MDT | | 16.83% | 0.10% | 0.0 | 23 | 23 |
| SubTotal | | 100.00% | 0.20% | 0.2 | 137 | 137 |
| LHDT1 (2 axle truck) | 0.0% | 86.27% | 23.52% | 0.0 | 0 | 0 |
| LHDT2 | | 13.73% | 48.99% | 0.0 | 0 | 0 |
| Subtotal | | 100.00% | | 0.0 | 0 | 0 |
| MHDT (3 axle truck) | 0.0% | 100.00% | 81.54% | 0.0 | 0 | 0 |
| HHDT (4+ axle truck) | 0.0% | 100.00% | 98.55% | 0.0 | 0 | 0 |
| Total | 100.0% | | | 0.2 | 137 | 137 |

**Vehicle Summary (Phase Summary)**

| Vehicle Class | Daily Diesel Trips | Daily Non Diesel Trips | Total Daily Trips |
|---|---|---|---|
| LDA | 92 | 29971 | 30062 |
| LDT1 | 6 | 3944 | 3950 |
| LDT2 | 5 | 11911 | 11916 |
| MDT | 9 | 9284 | 9294 |
| LHDT1 | 497 | 1617 | 2114 |
| LHDT2 | 165 | 172 | 336 |
| MHDT | 2613 | 592 | 3205 |
| HHDT | 8539 | 126 | 8664 |
| Total | 11927 | 57615 | 69542 |

Trip Generation from PB 2013 Traffic Study
Vehicle Fleet Mix taken from EMFAC2011 for the SoCAB in **2012** and the PB 2013 Traffic Study
% Diesel taken from EMAC2011 for the SoCAB in **2012**

# World Logistics Center

Project Full Buildout 2035
Area Source: Diesel Trip Distribution by Land Use and Building

## Land Use

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 40,400,000 |
| Light Logistics | 200,000 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

## Vehicle Allocation - Number of Daily Diesel Trips

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 90 | 6 | 5 | 9 | 482 | 160 | 2546 | 8227 | 11524 |
| Light Logistics | 1 | 0 | 0 | 0 | 8 | 2 | 26 | 70 | 107 |
| Utilities Service Station | 0 | 0 | 0 | 0 | 6 | 2 | 5 | 22 | 35 |
| Gas Station w/Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 86 | 101 |
| Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 134 | 159 |
| Fire Station | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | |
| Total | 92 | 6 | 5 | 9 | 497 | 165 | 2613 | 8539 | 11927 |

# World Logistics Center

Project Full Buildout 2035

Area Source: Non-Diesel Trip Distribution by Land Use and Building

**Land Use:**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 40,400,000 |
| Light Logistics | 200,000 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Non-Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 29322 | 3859 | 11653 | 9083 | 1567 | 166 | 576 | 121 | 56348 |
| Light Logistics | 310 | 41 | 123 | 96 | 24 | 3 | 6 | 1 | 605 |
| Utilities Service Station | 104 | 14 | 41 | 32 | 19 | 2 | 1 | 0 | 213 |
| Gas Station w/Convenience Store | 60 | 8 | 24 | 19 | 3 | 0 | 3 | 1 | 118 |
| Convenience Store | 100 | 13 | 40 | 31 | 4 | 0 | 5 | 2 | 195 |
| Fire Station | 74 | 10 | 30 | 23 | 0 | 0 | 0 | 0 | 137 |
| | | | | | | | | | |
| Total | 29971 | 3944 | 11911 | 9284 | 1617 | 172 | 592 | 126 | 57615 |

# World Logistics Center
## Project Full Buildout 2035
Area Source Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 90 | 330 | 0.21 | 18.4 |
| | **LDT1** | 15 | 6 | 330 | 0.21 | 1.2 |
| | **LDT2** | 15 | 5 | 330 | 0.21 | 1.1 |
| | **MDT** | 15 | 9 | 330 | 0.21 | 1.9 |
| | **LHDT1** | 15 | 482 | 330 | 0.21 | 98.8 |
| | **LHDT2** | 15 | 160 | 330 | 0.21 | 32.8 |
| | **MHDT** | 15 | 2546 | 330 | 0.21 | 521.9 |
| | **HHDT** | 15 | 8227 | 330 | 0.21 | 1686.6 |
| **Travel at Light Logistics** | **LDA** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **LDT1** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT2** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **MDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LHDT1** | 15 | 8 | 175 | 0.11 | 0.8 |
| | **LHDT2** | 15 | 2 | 175 | 0.11 | 0.3 |
| | **MHDT** | 15 | 26 | 175 | 0.11 | 2.8 |
| | **HHDT** | 15 | 70 | 175 | 0.11 | 7.6 |
| **Travel at Utility** | **LDA** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT1** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT2** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **MDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LHDT1** | 15 | 6 | 100 | 0.06 | 0.4 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 5 | 100 | 0.06 | 0.3 |
| | **HHDT** | 15 | 22 | 100 | 0.06 | 1.4 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 14 | 50 | 0.03 | 0.4 |
| | **HHDT** | 15 | 86 | 50 | 0.03 | 2.7 |
| **Travel at Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **HHDT** | 15 | 134 | 50 | 0.03 | 4.2 |
| **Travel at Fire Station** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 19 | 1 | 1 | 2 | 100 | 33 | 526 | 1702 | **2384** |

## Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 241 | 1205 |
| | **LHDT2** | 5 | 80 | 399 |
| | **MHDT** | 5 | 1273 | 6364 |
| | **HHDT** | 5 | 4114 | 20568 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 4 | 19 |
| | **LHDT2** | 5 | 1 | 6 |
| | **MHDT** | 5 | 13 | 65 |
| | **HHDT** | 5 | 35 | 175 |
| **Idle at Utility** | **LHDT1** | 5 | 3 | 14 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 2 | 12 |
| | **HHDT** | 5 | 11 | 54 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 0 | 2 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 7 | 35 |
| | **HHDT** | 5 | 43 | 214 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 1 | 3 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 11 | 57 |
| | **HHDT** | 5 | 67 | 335 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |

| **Total DSL (hrs)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** | **Total** |
|---|---|---|---|---|---|
| | 20.7 | 6.9 | 108.9 | 355.8 | 492.3 |

# World Logistics Center
## Project Full Buildout 2035
Area Source Non-Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 29322 | 330 | 0.21 | 6011.0 |
| | **LDT1** | 15 | 3859 | 330 | 0.21 | 791.0 |
| | **LDT2** | 15 | 11653 | 330 | 0.21 | 2388.8 |
| | **MDT** | 15 | 9083 | 330 | 0.21 | 1862.1 |
| | **LHDT1** | 15 | 1567 | 330 | 0.21 | 321.3 |
| | **LHDT2** | 15 | 166 | 330 | 0.21 | 34.1 |
| | **MHDT** | 15 | 576 | 330 | 0.21 | 118.2 |
| | **HHDT** | 15 | 121 | 330 | 0.21 | 24.8 |
| **Travel at Light Logistics** | **LDA** | 15 | 310 | 175 | 0.11 | 33.7 |
| | **LDT1** | 15 | 41 | 175 | 0.11 | 4.4 |
| | **LDT2** | 15 | 123 | 175 | 0.11 | 13.4 |
| | **MDT** | 15 | 96 | 175 | 0.11 | 10.4 |
| | **LHDT1** | 15 | 24 | 175 | 0.11 | 2.7 |
| | **LHDT2** | 15 | 3 | 175 | 0.11 | 0.3 |
| | **MHDT** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **HHDT** | 15 | 1 | 175 | 0.11 | 0.1 |
| **Travel at Utility** | **LDA** | 15 | 104 | 100 | 0.06 | 6.5 |
| | **LDT1** | 15 | 14 | 100 | 0.06 | 0.9 |
| | **LDT2** | 15 | 41 | 100 | 0.06 | 2.6 |
| | **MDT** | 15 | 32 | 100 | 0.06 | 2.0 |
| | **LHDT1** | 15 | 19 | 100 | 0.06 | 1.2 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 1 | 100 | 0.06 | 0.1 |
| | **HHDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 60 | 50 | 0.03 | 1.9 |
| | **LDT1** | 15 | 8 | 50 | 0.03 | 0.2 |
| | **LDT2** | 15 | 24 | 50 | 0.03 | 0.7 |
| | **MDT** | 15 | 19 | 50 | 0.03 | 0.6 |
| | **LHDT1** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **HHDT** | 15 | 1 | 50 | 0.03 | 0.0 |
| **Travel at Convenience Store** | **LDA** | 15 | 100 | 50 | 0.03 | 3.1 |
| | **LDT1** | 15 | 13 | 50 | 0.03 | 0.4 |
| | **LDT2** | 15 | 40 | 50 | 0.03 | 1.2 |
| | **MDT** | 15 | 31 | 50 | 0.03 | 1.0 |
| | **LHDT1** | 15 | 4 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 5 | 50 | 0.03 | 0.2 |
| | **HHDT** | 15 | 2 | 50 | 0.03 | 0.1 |
| **Travel at Fire Station** | **LDA** | 15 | 74 | 50 | 0.03 | 2.3 |
| | **LDT1** | 15 | 10 | 50 | 0.03 | 0.3 |
| | **LDT2** | 15 | 30 | 50 | 0.03 | 0.9 |
| | **MDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 6058 | 797 | 2408 | 1877 | 325 | 35 | 119 | 25 | **11644** |

## Non-Diesel Truck Idling

Idle time: 5 minutes

| Building/Location | Truck Type | Idling Time (min) | # Idling Vehicles/Day | Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 784 | 3919 |
| | **LHDT2** | 5 | 83 | 416 |
| | **MHDT** | 5 | 288 | 1441 |
| | **HHDT** | 5 | 60 | 302 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 12 | 61 |
| | **LHDT2** | 5 | 1 | 6 |
| | **MHDT** | 5 | 3 | 15 |
| | **HHDT** | 5 | 1 | 3 |
| **Idle at Utility** | **LHDT1** | 5 | 9 | 46 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 1 | 7 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 2 | 8 |
| | **HHDT** | 5 | 1 | 3 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 2 | 10 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 13 |
| | **HHDT** | 5 | 1 | 5 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |
| **Total GAS Idle Time (hours)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** |
| | 67.4 | 7.2 | 24.7 | 5.2 |

| ID | Arterial | From | To | Internal Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | east of Street A | Gilman Springs Rd | 2,662 | 180 | 289 | 506 |
| 19 | Street F | east of Street A | Street C | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | east of Street A | Street F | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Street H | 9,679 | 407 | 859 | 1,602 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | 9,883 | 386 | 746 | 1,030 |

**World Logistics Center** **2035**
Project Full Buildout 2035
Internal Roadway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 | 2147 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 | 5590 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 | 6837 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 | 469 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 | 2799 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 | 715 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 | 14 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 | 9 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 | 1410 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 | 691 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 | 2775 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 | 1690 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 | 2912 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 | 1080 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 | 5193 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 | 890 |
| | | | | | | | | | | | | | | | | Total | 35224 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 0 | 0 | 1 | 37 | 12 | 416 | 1675 |
| 2 | 1 | 16 | 1 | 1 | 2 | 145 | 48 | 1099 | 4278 |
| 3 | 1 | 21 | 1 | 1 | 2 | 186 | 62 | 1362 | 5202 |
| 5 | 1 | 8 | 0 | 0 | 1 | 44 | 14 | 361 | 41 |
| 6 | 1 | 9 | 1 | 1 | 1 | 74 | 25 | 595 | 2094 |
| 8 | 1 | 13 | 1 | 1 | 1 | 74 | 25 | 601 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 0 |
| 12 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 |
| 14 | 1 | 5 | 0 | 0 | 0 | 51 | 17 | 305 | 1031 |
| 18 | 1 | 4 | 0 | 0 | 0 | 32 | 11 | 207 | 437 |
| 19 | 1 | 7 | 0 | 0 | 1 | 62 | 20 | 546 | 2139 |
| 21 | 1 | 10 | 1 | 1 | 1 | 66 | 22 | 566 | 1024 |
| 24 | 1 | 19 | 1 | 1 | 2 | 100 | 33 | 847 | 1909 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 3 | 0 | 0 | 0 | 20 | 7 | 211 | 838 |
| 30 | 1 | 20 | 1 | 1 | 2 | 115 | 38 | 1141 | 3873 |
| 31 | 1 | 8 | 1 | 0 | 1 | 40 | 13 | 310 | 517 |
| Total | | **150** | **9** | **9** | **16** | **1050** | **348** | **8584** | **25058** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 150 | 9 | 9 | 16 | 1050 | 348 | 8584 | 25058 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | **150** | **9** | **9** | **16** | **1050** | **348** | **8584** | **25058** | **35224** |

**World Logistics Center** **2035**
Project Full Buildout 2035
Internal Roadway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 | 3899 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 | 10473 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 | 13415 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 | 4884 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 | 6029 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 | 7978 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 | 198 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 | 107 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 | 3170 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 | 2499 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 | 4581 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 | 6631 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 | 12256 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 | 2239 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 | 12873 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 | 5245 |
| | | | | | | | | | | | | | | | | Total | 96475 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1984 | 261 | 789 | 615 | 119 | 13 | 94 | 25 |
| 2 | 1 | 5241 | 690 | 2083 | 1624 | 473 | 50 | 249 | 63 |
| 3 | 1 | 6723 | 885 | 2672 | 2083 | 604 | 64 | 308 | 77 |
| 5 | 1 | 2526 | 332 | 1004 | 782 | 142 | 15 | 82 | 1 |
| 6 | 1 | 3044 | 401 | 1210 | 943 | 241 | 26 | 135 | 31 |
| 8 | 1 | 4119 | 542 | 1637 | 1276 | 241 | 26 | 136 | 0 |
| 11 | 1 | 101 | 13 | 40 | 31 | 8 | 1 | 2 | 0 |
| 12 | 1 | 55 | 7 | 22 | 17 | 4 | 0 | 2 | 0 |
| 14 | 1 | 1579 | 208 | 627 | 489 | 165 | 18 | 69 | 15 |
| 18 | 1 | 1267 | 167 | 504 | 393 | 104 | 11 | 47 | 6 |
| 19 | 1 | 2286 | 301 | 909 | 708 | 200 | 21 | 124 | 31 |
| 21 | 1 | 3399 | 447 | 1351 | 1053 | 216 | 23 | 128 | 15 |
| 24 | 1 | 6350 | 836 | 2524 | 1967 | 325 | 34 | 192 | 28 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 1145 | 151 | 455 | 355 | 66 | 7 | 48 | 12 |
| 30 | 1 | 6603 | 869 | 2624 | 2046 | 375 | 40 | 258 | 57 |
| 31 | 1 | 2732 | 360 | 1086 | 846 | 130 | 14 | 70 | 8 |
| Total | | **49156** | **6469** | **19535** | **15227** | **3414** | **362** | **1944** | **369** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 49156 | 6469 | 19535 | 15227 | 3414 | 362 | 1944 | 369 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **49156** | **6469** | **19535** | **15227** | **3414** | **362** | **1944** | **369** | **96475** |

**World Logistics Center**
**Project Full Buildout 2035**
**Entrained Road Dust**
Internal Roadways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 18,000 | 3656 | 886 | 180 | 2,512 | 510 | 8,368 | 1700 | 6047 | 8.98 | 0.035 | 0.0002 | 1.5 | 0.0010 | 5.9 |
| 2 | A | 731 | 0.45 | 21,267 | 9657 | 1,578 | 717 | 2,969 | 1348 | 9,559 | 4341 | 16063 | 8.80 | 0.035 | 0.0002 | 3.8 | 0.0010 | 15.4 |
| 3 | A | 2352 | 1.46 | 8,478 | 12387 | 627 | 916 | 1,143 | 1670 | 3,613 | 5279 | 20252 | 8.59 | 0.035 | 0.0002 | 4.6 | 0.0009 | 18.9 |
| 5 | A | 953 | 0.59 | 7,861 | 4654 | 363 | 215 | 748 | 443 | 70 | 41 | 5353 | 3.23 | 0.035 | 0.0001 | 0.5 | 0.0003 | 1.8 |
| 6 | A | 1099 | 0.68 | 8,214 | 5608 | 536 | 366 | 1,069 | 730 | 3,112 | 2125 | 8828 | 8.15 | 0.035 | 0.0002 | 1.9 | 0.0009 | 7.8 |
| 8 | A | 1091 | 0.68 | 11,199 | 7590 | 540 | 366 | 1,087 | 737 | 0 | 0 | 8693 | 3.09 | 0.035 | 0.0001 | 0.7 | 0.0003 | 2.9 |
| 11 | A | 1201 | 0.75 | 250 | 187 | 17 | 13 | 17 | 13 | 0 | 0 | 212 | 2.92 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 12 | A | 824 | 0.51 | 197 | 101 | 12 | 6 | 18 | 9 | 0 | 0 | 116 | 3.08 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 14 | A | 1618 | 1.01 | 2,894 | 2909 | 249 | 250 | 372 | 374 | 1,041 | 1046 | 4579 | 7.93 | 0.035 | 0.0002 | 1.0 | 0.0009 | 3.9 |
| 18 | A | 1412 | 0.88 | 2,662 | 2335 | 180 | 158 | 289 | 253 | 506 | 444 | 3190 | 6.01 | 0.035 | 0.0002 | 0.5 | 0.0006 | 2.1 |
| 19 | A | 2386 | 1.48 | 2,842 | 4212 | 205 | 304 | 452 | 670 | 1,464 | 2170 | 7356 | 9.38 | 0.035 | 0.0003 | 1.8 | 0.0010 | 7.5 |
| 21 | A | 1258 | 0.78 | 8,013 | 6262 | 418 | 327 | 888 | 694 | 1,329 | 1039 | 8321 | 5.71 | 0.035 | 0.0002 | 1.3 | 0.0006 | 5.1 |
| 24 | A | 1946 | 1.21 | 9,679 | 11701 | 407 | 492 | 859 | 1038 | 1,602 | 1937 | 15168 | 5.60 | 0.035 | 0.0001 | 2.2 | 0.0006 | 9.2 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 29 | A | 675 | 0.42 | 5,033 | 2110 | 237 | 99 | 617 | 259 | 2,028 | 850 | 3319 | 8.40 | 0.035 | 0.0002 | 0.7 | 0.0009 | 3.0 |
| 30 | A | 2827 | 1.76 | 6,928 | 12167 | 324 | 569 | 797 | 1400 | 2,238 | 3930 | 18066 | 7.58 | 0.035 | 0.0002 | 3.6 | 0.0008 | 14.8 |
| 31 | A | 820 | 0.51 | 9,883 | 5034 | 386 | 197 | 746 | 380 | 1,030 | 525 | 6136 | 4.64 | 0.035 | 0.0001 | 0.8 | 0.0005 | 3.1 |
| | | | | | | | | | | | | | | | **Totals:** | **24.9** | | **101.5** |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 7,006 | 301 | 797 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1,011 | 43 | 72 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1,555 | 60 | 190 | 1,041 |
| 32 | Cactus Ave | west of Redlands Blvd | | 3,010 | 179 | 228 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 749 | 24 | 57 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 595 | 47 | 127 | 636 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 2,377 | 142 | 365 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 388 | 41 | 144 | 587 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 3,045 | 201 | 383 | 7 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,903 | 143 | 401 | 636 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 350 | 15 | 25 | 110 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 777 | 46 | 109 | 59 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 938 | 37 | 88 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 892 | 33 | 74 | 102 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 11,199 | 540 | 1,087 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 75 | 2 | 5 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 7,014 | 299 | 801 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 0 | 0 | 0 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 1,535 | 83 | 247 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 19 | 1 | 0 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 1,535 | 83 | 247 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,267 | 86 | 227 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 493 | 26 | 37 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 974 | 116 | 121 | 0 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 307 | 25 | 66 | 209 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 562 | 30 | 52 | 168 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | 1,330 | 199 | 192 | 0 |
| 65 | Alessandro Blvd | Nason St | Oliver St | 1,018 | 37 | 81 | 102 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 1,167 | 47 | 97 | 102 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 731 | 32 | 64 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 1,033 | 56 | 91 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 2,169 | 130 | 165 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 620 | 42 | 25 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 6,962 | 297 | 799 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 560 | 17 | 27 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 114 | 5 | 5 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 16 | 1 | 1 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 661 | 21 | 30 | 6 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 773 | 27 | 40 | 12 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 976 | 37 | 68 | 93 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 356 | 16 | 27 | 59 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 802 | 38 | 60 | 650 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 77 | 5 | 13 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 70 | 5 | 13 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 637 | 14 | 36 | 48 |
| 96 | N California Ave | W 6th St | E 8th St | 147 | 2 | 4 | 3 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 468 | 12 | 29 | 41 |
| 98 | N California Ave | W 6th St | I-10 | 13 | 0 | 2 | 1 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 330 | 6 | 12 | 13 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 88 | 3 | 8 | 29 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 728 | 24 | 65 | 98 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 297 | 12 | 31 | 148 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 535 | 18 | 53 | 82 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 13 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 554 | 19 | 56 | 81 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 1 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 67 | 4 | 10 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 110 | Alessandro Blvd | Day St | Elsworth St | 562 | 19 | 57 | 81 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 573 | 21 | 64 | 124 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 18 | 3 | 10 | 24 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 27 | 2 | 8 | 40 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 590 | 21 | 60 | 87 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 3 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 24 | 1 | 1 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 624 | 23 | 66 | 108 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 7 | 1 | 3 | 13 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 43 | 3 | 9 | 44 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 656 | 24 | 65 | 95 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 6 | 1 | 3 | 19 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 33 | 2 | 2 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 701 | 26 | 68 | 95 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 12 | 1 | 1 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 756 | 27 | 70 | 101 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 32 | 3 | 11 | 636 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 14 | 0 | 1 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 814 | 29 | 72 | 101 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 61 | 3 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 27 | 1 | 1 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 73 | 4 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 144 | 6 | 8 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 1,040 | 39 | 82 | 102 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 42 | 3 | 4 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 20 | 1 | 2 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 6 | 1 | 5 | 25 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 251 | 10 | 30 | 32 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 223 | 8 | 18 | 0 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 393 | 15 | 37 | 16 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 11 | 1 | 4 | 7 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 531 | 22 | 57 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 539 | 23 | 62 | 5 |
| 145 | Cactus Ave | Graham St | Heacock St | 556 | 26 | 70 | 1 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 4 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 605 | 29 | 76 | 2 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 5 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 664 | 33 | 80 | 4 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 696 | 35 | 82 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 25 | 3 | 10 | 629 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 814 | 40 | 85 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 2 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,228 | 59 | 106 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 302 | 14 | 18 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,415 | 73 | 123 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 380 | 10 | 27 | 42 |
| 159 | Beaumont Ave | E 6th St | I-10 | 275 | 5 | 13 | 19 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,520 | 74 | 246 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 3,857 | 189 | 592 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 2,337 | 115 | 347 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 63 | 5 | 5 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 6,778 | 286 | 794 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 451 | 24 | 80 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 1,886 | 91 | 267 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,694 | 82 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,694 | 82 | 192 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | 2 | 0 | 0 | 1 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | 21 | 0 | 1 | 0 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,655 | 128 | 370 | 587 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 168 | 11 | 23 | 44 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,823 | 138 | 394 | 631 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 46 | 3 | 6 | 4 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | 2,096 | 71 | 179 | 223 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | 3,183 | 107 | 286 | 333 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | 3,204 | 108 | 284 | 347 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | 1,037 | 36 | 102 | 118 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 6,955 | 162 | 514 | 815 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 5,432 | 131 | 448 | 577 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 1,521 | 32 | 66 | 248 |
| 194 | Crescent Ave | West of Alessandro Rd | | 305 | 26 | 69 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 690 | 47 | 134 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 996 | 73 | 202 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 48 | 3 | 6 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 223 | 11 | 20 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,267 | 86 | 227 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 1,502 | 82 | 254 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 1,486 | 81 | 246 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 18 | 2 | 9 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 89 | 2 | 2 | 2 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 359 | 11 | 36 | 46 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 169 | 6 | 16 | 32 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 241 | 8 | 29 | 33 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 14 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 51 | 1 | 2 | 3 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 194 | 5 | 20 | 14 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 2 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 73 | 3 | 12 | 23 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 27 | 1 | 1 | 1 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 52 | 1 | 1 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 152 | 4 | 13 | 33 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 1,025 | 36 | 129 | 345 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 70 | 3 | 12 | 24 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 20 | 1 | 4 | 4 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 889 | 35 | 131 | 344 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 136 | 3 | 10 | 16 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 720 | 31 | 117 | 319 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 1 | 0 | 0 | 1 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 634 | 26 | 94 | 242 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 23 | 1 | 3 | 7 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 52 | 6 | 21 | 74 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 53 | 2 | 9 | 26 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 187 | 14 | 55 | 198 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 530 | 18 | 63 | 128 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 104 | 3 | 11 | 22 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 1,032 | 36 | 126 | 339 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 35 | 1 | 2 | 2 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 367 | 9 | 18 | 33 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 1,346 | 43 | 137 | 354 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 162 | 4 | 13 | 26 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 254 | 9 | 27 | 46 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 1,166 | 38 | 120 | 312 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 14 | 1 | 5 | 25 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 834 | 27 | 84 | 212 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,799 | 64 | 201 | 553 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 216 | 10 | 32 | 63 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 818 | 26 | 80 | 178 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 482 | 23 | 77 | 219 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 488 | 23 | 78 | 220 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 2 | 4 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 508 | 23 | 81 | 225 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 25 | 1 | 3 | 4 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 543 | 25 | 83 | 230 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 14 | 1 | 2 | 4 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 227 | 10 | 33 | 85 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 619 | 29 | 98 | 286 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 454 | 19 | 66 | 171 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0 | 0 | 0 | 0 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,004 | 39 | 62 | 71 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 217 | 12 | 25 | 70 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 516 | 19 | 28 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 439 | 21 | 34 | 325 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 174 | 9 | 21 | 27 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 519 | 24 | 39 | 357 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 227 | 15 | 26 | 649 |
| 294 | Via Del Lago | South of Iris Ave | | 43 | 1 | 0 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 41 | 2 | 7 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 83 | 3 | 8 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 50 | 4 | 11 | 625 |
| 304 | Iris Ave | Indian St | Perris Blvd | 483 | 13 | 44 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 1,019 | 60 | 203 | 620 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,220 | 59 | 189 | 620 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 86 | 3 | 11 | 9 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 3,002 | 74 | 268 | 497 |
| 326 | Ramona Expy | Sanderson Ave | State St | 664 | 19 | 81 | 122 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 2,251 | 52 | 177 | 365 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 5,416 | 130 | 447 | 577 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 54 | 2 | 6 | 7 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 3,734 | 86 | 281 | 353 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 3,310 | 85 | 326 | 572 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 24 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 2,313 | 48 | 137 | 100 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 2,820 | 76 | 286 | 467 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 723 | 23 | 64 | 93 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 5 | 0 | 1 | 4 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ram | Mid County Pkwy | 3rd St | 678 | 16 | 36 | 262 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | 1,331 | 27 | 60 | 245 |
| 377 | Mid County Pkwy WB Off-Ram | Mid County Pkwy | 3rd St | 68 | 2 | 6 | 8 |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | 957 | 19 | 38 | 109 |
| 379 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | 3rd St | 530 | 12 | 25 | 183 |
| 380 | Mid County Pkwy EB On-Ramp | 3rd St | Mid County Pkwy | 24 | 0 | 1 | 1 |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | 681 | 13 | 26 | 18 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 230 | 20 | 56 | 57 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,317 | 58 | 179 | 569 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 25 | 1 | 1 | 3 |
| 390 | Ramona Expy | Webster Ave | Indian St | 430 | 18 | 44 | 33 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 477 | 28 | 113 | 103 |
| 393 | Indian St | Ramona Expy | Morgan St | 49 | 11 | 70 | 70 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 2,613 | 109 | 340 | 451 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 2,125 | 73 | 216 | 293 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 203 | 7 | 16 | 4 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,446 | 73 | 184 | 1 |
| 399 | Ramona Expy | Evans Rd | Rider St | 242 | 4 | 7 | 0 |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 400 | Evans Rd | Ramona Expy | Rider St | 1,740 | 50 | 140 | 4 |
| 401 | Morgan St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 11 | 0 | 0 | 0 |
| 406 | Ironwood Ave | East of Thedore St | | 668 | 59 | 18 | 7 |
| 407 | Rider St | Indian St | Perris Blvd | 1 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 0 | 0 | 0 | 0 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 176 | 7 | 5 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 0 | 0 | 0 | 1 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 125 | 6 | 23 | 28 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 7 | 0 | 0 | 5 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1,870 | 62 | 172 | 238 |
| 416 | Mid County Pkwy WB On-Ram | Mid County Pkwy | Perris Blvd | 626 | 18 | 66 | 107 |
| 417 | Mid County Pkwy WB Off-Ram | Perris Blvd | Mid County Pkwy | 8 | 0 | 2 | 67 |
| 419 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | Perris Blvd | 367 | 9 | 30 | 76 |
| 420 | Mid County Pkwy EB On-Ramp | Perris Blvd | Mid County Pkwy | 3 | 0 | 1 | 33 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 101 | 6 | 15 | 640 |
| 425 | Mid County Pkwy WB On-Ram | West of Evan | | 23 | 1 | 2 | 0 |
| 426 | Mid County Pkwy WB Off-Ram | East of Evan | | 12 | 1 | 2 | 36 |
| 427 | Day St | south of Alessandro Blvd | | 23 | 1 | 3 | 0 |
| 428 | Mid County Pkwy EB Off-Ramp | West of Evan | | 27 | 1 | 3 | 1 |
| 429 | Mid County Pkwy EB On-Ramp | East of Evan | | 13 | 1 | 1 | 35 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 639 | 21 | 58 | 70 |
| 431 | Placentia Ave | Water Ave | Evans Rd | 4 | 0 | 0 | 3 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | 17 | 0 | 0 | 1 |
| 433 | Evans Rd | Rider St | Orange Ave | 1,581 | 42 | 132 | 22 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 70 | 1 | 2 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 3 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 1,444 | 40 | 129 | 30 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 10 | 0 | 1 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | 1,403 | 40 | 128 | 30 |
| 452 | San Jacinto Ave | West of Evan Rd | | 8 | 0 | 0 | 0 |
| 453 | Evans Rd | North of San Jancito Ave | | 1,288 | 34 | 121 | 28 |
| 454 | San Jacinto Ave | East of Evan Rd | | 246 | 5 | 15 | 0 |
| 455 | Evans Rd | South of San Jancito Ave | | 1,034 | 30 | 106 | 27 |
| 458 | Nason St | South of Cactus Ave | | 9 | 0 | 1 | 0 |
| 464 | Quincy | South of Eucalyptus | | 61 | 3 | 5 | 0 |
| 477 | Ellis Ave | West of Evan Rd | | 80 | 4 | 7 | 9 |
| 478 | Evans Rd | North of Ellis Ave | | 1,054 | 36 | 117 | 46 |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | 726 | 15 | 64 | 0 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | 0 | 0 | 0 | 1 |
| 482 | Ellis Ave | East of SR-215 | | 164 | 2 | 10 | 1 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | 837 | 22 | 96 | 0 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | 1 | 0 | 0 | 1 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | 1,360 | 23 | 99 | 0 |
| 488 | Nason St | North of Iris Ave | | 9 | 0 | 1 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | 2,525 | 76 | 188 | 0 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | 3 | 0 | 0 | 0 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 170 | 11 | 20 | 645 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 189 | 12 | 21 | 645 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 504 | Krameria Ave | west of Perris Blvd | | 251 | 25 | 94 | 0 |

**World Logistics Center** **2035**
Project Full Buildout 2035
Surface Street Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Daily VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8104 | 7,006 | 301 | 797 | 0 | 1820 | 1.131 | 12 | 1 | 1 | 1 | 61 | 20 | 650 | 0 | 745 | 843 |
| 10 | 1126 | 1,011 | 43 | 72 | 0 | 826 | 0.513 | 2 | 0 | 0 | 0 | 9 | 3 | 59 | 0 | 72 | 37 |
| 13 | 2846 | 1,555 | 60 | 190 | 1,041 | 345 | 0.214 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 1026 | 1200 | 257 |
| 32 | 3417 | 3,010 | 179 | 228 | 0 | 1551 | 0.964 | 5 | 0 | 0 | 1 | 36 | 12 | 186 | 0 | 240 | 232 |
| 33 | 830 | 749 | 24 | 57 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 0 | 54 | 68 |
| 35 | 1405 | 595 | 47 | 127 | 636 | 801 | 0.498 | 1 | 0 | 0 | 0 | 10 | 3 | 104 | 627 | 744 | 370 |
| 36 | 2884 | 2,377 | 142 | 365 | 0 | 1627 | 1.011 | 4 | 0 | 0 | 0 | 29 | 10 | 298 | 0 | 341 | 344 |
| 37 | 1160 | 388 | 41 | 144 | 587 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 117 | 578 | 708 | 96 |
| 38 | 3636 | 3,045 | 201 | 383 | 7 | 659 | 0.409 | 5 | 0 | 0 | 1 | 41 | 14 | 312 | 7 | 380 | 155 |
| 42 | 3083 | 1,903 | 143 | 401 | 636 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 29 | 10 | 327 | 627 | 996 | 3304 |
| 43 | 500 | 350 | 15 | 25 | 110 | 2598 | 1.614 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 108 | 134 | 216 |
| 46 | 991 | 777 | 46 | 109 | 59 | 806 | 0.501 | 1 | 0 | 0 | 0 | 9 | 3 | 89 | 58 | 161 | 81 |
| 47 | 1063 | 938 | 37 | 88 | 0 | 1995 | 1.239 | 2 | 0 | 0 | 0 | 8 | 2 | 72 | 0 | 84 | 104 |
| 48 | 1101 | 892 | 33 | 74 | 102 | 795 | 0.494 | 1 | 0 | 0 | 0 | 7 | 2 | 60 | 101 | 172 | 85 |
| 50 | 12826 | 11,199 | 540 | 1,087 | 0 | 479 | 0.298 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 | 314 |
| 51 | 82 | 75 | 2 | 5 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 3 |
| 52 | 8114 | 7,014 | 299 | 801 | 0 | 1269 | 0.788 | 12 | 1 | 1 | 1 | 61 | 20 | 653 | 0 | 748 | 590 |
| 53 | 0 | 0 | 0 | 0 | 0 | 795 | 0.494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 1865 | 1,535 | 83 | 247 | 0 | 325 | 0.202 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 | 46 |
| 55 | 20 | 19 | 1 | 0 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1865 | 1,535 | 83 | 247 | 0 | 1152 | 0.716 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 | 162 |
| 57 | 1580 | 1,267 | 86 | 227 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 | 32 |
| 58 | 556 | 493 | 26 | 37 | 0 | 172 | 0.107 | 1 | 0 | 0 | 0 | 5 | 2 | 30 | 0 | 38 | 4 |
| 59 | 1211 | 974 | 116 | 121 | 0 | 786 | 0.488 | 2 | 0 | 0 | 0 | 24 | 8 | 99 | 0 | 132 | 64 |
| 60 | 607 | 307 | 25 | 66 | 209 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 206 | 267 | 26 |
| 61 | 812 | 562 | 30 | 52 | 168 | 97 | 0.060 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 166 | 217 | 13 |
| 62 | 1721 | 1,330 | 199 | 192 | 0 | 781 | 0.485 | 2 | 0 | 0 | 0 | 40 | 13 | 157 | 0 | 213 | 103 |
| 65 | 1238 | 1,018 | 37 | 81 | 102 | 795 | 0.494 | 2 | 0 | 0 | 0 | 8 | 2 | 66 | 101 | 179 | 88 |
| 66 | 1413 | 1,167 | 47 | 97 | 102 | 812 | 0.504 | 2 | 0 | 0 | 0 | 10 | 3 | 79 | 101 | 195 | 98 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 827 | 731 | 32 | 64 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 6 | 2 | 52 | 0 | 62 | 32 |
| 69 | 1180 | 1,033 | 56 | 91 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 11 | 4 | 74 | 0 | 91 | 47 |
| 70 | 2464 | 2,169 | 130 | 165 | 0 | 795 | 0.494 | 4 | 0 | 0 | 0 | 26 | 9 | 135 | 0 | 174 | 86 |
| 71 | 687 | 620 | 42 | 25 | 0 | 803 | 0.499 | 1 | 0 | 0 | 0 | 9 | 3 | 20 | 0 | 33 | 16 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 8058 | 6,962 | 297 | 799 | 0 | 742 | 0.461 | 12 | 1 | 1 | 1 | 60 | 20 | 651 | 0 | 746 | 344 |
| 74 | 605 | 560 | 17 | 27 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 1 | 29 | 28 |
| 75 | 129 | 114 | 5 | 5 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 5 | 11 | 5 |
| 76 | 18 | 16 | 1 | 1 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 77 | 718 | 661 | 21 | 30 | 6 | 438 | 0.272 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 6 | 37 | 10 |
| 80 | 852 | 773 | 27 | 40 | 12 | 138 | 0.086 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 12 | 53 | 5 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1174 | 976 | 37 | 68 | 93 | 322 | 0.200 | 2 | 0 | 0 | 0 | 8 | 2 | 55 | 92 | 159 | 32 |
| 83 | 458 | 356 | 16 | 27 | 59 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 58 | 85 | 5 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1550 | 802 | 38 | 60 | 650 | 284 | 0.176 | 1 | 0 | 0 | 0 | 8 | 3 | 49 | 641 | 701 | 124 |
| 87 | 95 | 77 | 5 | 13 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 | 6 |
| 88 | 88 | 70 | 5 | 13 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 | 6 |
| 95 | 735 | 637 | 14 | 36 | 48 | 439 | 0.273 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 47 | 82 | 22 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 156 | 147 | 2 | 4 | 3 | 399 | 0.248 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |
| 97 | 550 | 468 | 12 | 29 | 41 | 389 | 0.242 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 40 | 68 | 16 |
| 98 | 16 | 13 | 0 | 2 | 1 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 |
| 99 | 361 | 330 | 6 | 12 | 13 | 405 | 0.252 | 1 | 0 | 0 | 0 | 1 | 0 | 10 | 13 | 25 | 6 |
| 100 | 128 | 88 | 3 | 8 | 29 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 29 | 36 | 5 |
| 101 | 915 | 728 | 24 | 65 | 98 | 313 | 0.194 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 97 | 158 | 31 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 488 | 297 | 12 | 31 | 148 | 291 | 0.181 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 146 | 175 | 32 |
| 104 | 688 | 535 | 18 | 53 | 82 | 404 | 0.251 | 1 | 0 | 0 | 0 | 4 | 1 | 43 | 81 | 130 | 33 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 14 | 13 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 107 | 710 | 554 | 19 | 56 | 81 | 388 | 0.241 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 132 | 32 |
| 108 | 15 | 12 | 1 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 109 | 81 | 67 | 4 | 10 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 9 | 5 |
| 110 | 719 | 562 | 19 | 57 | 81 | 756 | 0.470 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 133 | 62 |
| 111 | 1 | 1 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 782 | 573 | 21 | 64 | 124 | 817 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 122 | 181 | 92 |
| 113 | 55 | 18 | 3 | 10 | 24 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 24 | 33 | 16 |
| 114 | 77 | 27 | 2 | 8 | 40 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 39 | 47 | 23 |
| 115 | 758 | 590 | 21 | 60 | 87 | 851 | 0.529 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 86 | 142 | 75 |
| 116 | 3 | 0 | 0 | 0 | 3 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 117 | 26 | 24 | 1 | 1 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 118 | 821 | 624 | 23 | 66 | 108 | 765 | 0.475 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 106 | 168 | 80 |
| 119 | 24 | 7 | 1 | 3 | 13 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 16 | 8 |
| 120 | 99 | 43 | 3 | 9 | 44 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 43 | 52 | 26 |
| 121 | 840 | 656 | 24 | 65 | 95 | 825 | 0.513 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 94 | 154 | 79 |
| 122 | 29 | 6 | 1 | 3 | 19 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 19 | 21 | 10 |
| 123 | 37 | 33 | 2 | 2 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 124 | 890 | 701 | 26 | 68 | 95 | 800 | 0.497 | 1 | 0 | 0 | 0 | 5 | 2 | 55 | 94 | 158 | 78 |
| 125 | 14 | 12 | 1 | 1 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 126 | 954 | 756 | 27 | 70 | 101 | 774 | 0.481 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 100 | 165 | 80 |
| 127 | 682 | 32 | 3 | 11 | 636 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 627 | 637 | 326 |
| 128 | 15 | 14 | 0 | 1 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 129 | 1016 | 814 | 29 | 72 | 101 | 823 | 0.511 | 1 | 0 | 0 | 0 | 6 | 2 | 59 | 100 | 168 | 86 |
| 130 | 65 | 61 | 3 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 |
| 131 | 29 | 27 | 1 | 1 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 133 | 77 | 73 | 4 | 0 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 134 | 158 | 144 | 6 | 8 | 0 | 760 | 0.472 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 4 |
| 135 | 1263 | 1,040 | 39 | 82 | 102 | 816 | 0.507 | 2 | 0 | 0 | 0 | 8 | 3 | 67 | 101 | 180 | 91 |
| 136 | 49 | 42 | 3 | 4 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 2 |
| 137 | 23 | 20 | 1 | 2 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 138 | 37 | 6 | 1 | 5 | 25 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 | 5 |
| 139 | 323 | 251 | 10 | 30 | 32 | 504 | 0.313 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 32 | 59 | 19 |
| 140 | 249 | 223 | 8 | 18 | 0 | 527 | 0.327 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 17 | 6 |
| 141 | 461 | 393 | 15 | 37 | 16 | 1001 | 0.622 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 16 | 51 | 32 |
| 142 | 23 | 11 | 1 | 4 | 7 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 10 | 2 |
| 143 | 618 | 531 | 22 | 57 | 8 | 845 | 0.525 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 8 | 61 | 32 |
| 144 | 629 | 539 | 23 | 62 | 5 | 783 | 0.486 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 5 | 63 | 31 |
| 145 | 653 | 556 | 26 | 70 | 1 | 787 | 0.489 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 1 | 66 | 32 |
| 146 | 5 | 4 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 147 | 712 | 605 | 29 | 76 | 2 | 798 | 0.496 | 1 | 0 | 0 | 0 | 6 | 2 | 62 | 2 | 73 | 36 |
| 148 | 5 | 0 | 0 | 0 | 5 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 2 |
| 149 | 781 | 664 | 33 | 80 | 4 | 808 | 0.502 | 1 | 0 | 0 | 0 | 7 | 2 | 65 | 4 | 79 | 40 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 813 | 696 | 35 | 82 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 7 | 2 | 67 | 0 | 78 | 38 |
| 152 | 667 | 25 | 3 | 10 | 629 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 620 | 629 | 306 |
| 153 | 939 | 814 | 40 | 85 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 8 | 3 | 69 | 0 | 82 | 41 |
| 154 | 2 | 2 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1393 | 1,228 | 59 | 106 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 12 | 4 | 86 | 0 | 105 | 50 |
| 156 | 334 | 302 | 14 | 18 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 15 | 0 | 19 | 9 |
| 157 | 1611 | 1,415 | 73 | 123 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 15 | 5 | 100 | 0 | 123 | 61 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 158 | 459 | 380 | 10 | 27 | 42 | 1039 | 0.645 | 1 | 0 | 0 | 0 | 2 | 1 | 22 | 41 | 67 | 43 |
| 159 | 312 | 275 | 5 | 13 | 19 | 170 | 0.106 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 19 | 31 | 3 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1840 | 1,520 | 74 | 246 | 0 | 784 | 0.487 | 3 | 0 | 0 | 0 | 15 | 5 | 201 | 0 | 224 | 109 |
| 162 | 4638 | 3,857 | 189 | 592 | 0 | 1052 | 0.654 | 6 | 0 | 0 | 1 | 38 | 13 | 483 | 0 | 542 | 354 |
| 163 | 2799 | 2,337 | 115 | 347 | 0 | 350 | 0.217 | 4 | 0 | 0 | 0 | 23 | 8 | 283 | 0 | 319 | 69 |
| 164 | 73 | 63 | 5 | 5 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 | 2 |
| 165 | 7858 | 6,778 | 286 | 794 | 0 | 1541 | 0.957 | 11 | 1 | 1 | 1 | 58 | 19 | 647 | 0 | 738 | 707 |
| 168 | 555 | 451 | 24 | 80 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 0 | 73 | 34 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 2244 | 1,886 | 91 | 267 | 0 | 248 | 0.154 | 3 | 0 | 0 | 0 | 18 | 6 | 218 | 0 | 246 | 38 |
| 171 | 2968 | 2,694 | 82 | 192 | 0 | 522 | 0.324 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 | 60 |
| 172 | 2968 | 2,694 | 82 | 192 | 0 | 993 | 0.617 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 | 114 |
| 173 | 3 | 2 | 0 | 0 | 1 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 174 | 22 | 21 | 0 | 1 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 177 | 2740 | 1,655 | 128 | 370 | 587 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 26 | 9 | 302 | 578 | 918 | 633 |
| 178 | 246 | 168 | 11 | 23 | 44 | 7132 | 4.430 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 43 | 65 | 290 |
| 179 | 2986 | 1,823 | 138 | 394 | 631 | 2189 | 1.360 | 3 | 0 | 0 | 0 | 28 | 9 | 321 | 622 | 984 | 1338 |
| 180 | 59 | 46 | 3 | 6 | 4 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 4 | 10 | 41 |
| 181 | 2569 | 2,096 | 71 | 179 | 223 | 625 | 0.388 | 3 | 0 | 0 | 0 | 14 | 5 | 146 | 220 | 389 | 151 |
| 182 | 3909 | 3,183 | 107 | 286 | 333 | 349 | 0.217 | 5 | 0 | 0 | 1 | 22 | 7 | 233 | 328 | 597 | 129 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 3943 | 3,204 | 108 | 284 | 347 | 292 | 0.181 | 5 | 0 | 0 | 1 | 22 | 7 | 232 | 342 | 609 | 111 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1293 | 1,037 | 36 | 102 | 118 | 477 | 0.296 | 2 | 0 | 0 | 0 | 7 | 2 | 83 | 116 | 211 | 63 |
| 190 | 8446 | 6,955 | 162 | 514 | 815 | 6368 | 3.956 | 12 | 1 | 1 | 1 | 33 | 11 | 419 | 803 | 1280 | 5064 |
| 191 | 6588 | 5,432 | 131 | 448 | 577 | 4906 | 3.048 | 9 | 1 | 1 | 1 | 27 | 9 | 365 | 569 | 980 | 2988 |
| 192 | 1867 | 1,521 | 32 | 66 | 248 | 4358 | 2.707 | 3 | 0 | 0 | 0 | 6 | 2 | 54 | 244 | 310 | 839 |
| 194 | 400 | 305 | 26 | 69 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 0 | 64 | 14 |
| 195 | 871 | 690 | 47 | 134 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 10 | 3 | 109 | 0 | 123 | 30 |
| 196 | 1271 | 996 | 73 | 202 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 15 | 5 | 165 | 0 | 186 | 83 |
| 198 | 57 | 48 | 3 | 6 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 6 | 4 |
| 199 | 254 | 223 | 11 | 20 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 20 | 5 |
| 200 | 1580 | 1,267 | 86 | 227 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 | 184 |
| 205 | 1838 | 1,502 | 82 | 254 | 0 | 1501 | 0.932 | 2 | 0 | 0 | 0 | 17 | 6 | 207 | 0 | 232 | 217 |
| 206 | 1813 | 1,486 | 81 | 246 | 0 | 2658 | 1.651 | 2 | 0 | 0 | 0 | 16 | 5 | 201 | 0 | 225 | 372 |
| 207 | 29 | 18 | 2 | 9 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 | 13 |
| 215 | 95 | 89 | 2 | 2 | 2 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 8 |
| 216 | 452 | 359 | 11 | 36 | 46 | 2000 | 1.242 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 45 | 78 | 97 |
| 217 | 223 | 169 | 6 | 16 | 32 | 663 | 0.412 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 32 | 47 | 19 |
| 218 | 311 | 241 | 8 | 29 | 33 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 33 | 59 | 43 |
| 219 | 15 | 14 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 57 | 51 | 1 | 2 | 3 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 8 |
| 223 | 233 | 194 | 5 | 20 | 14 | 359 | 0.223 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 14 | 32 | 7 |
| 225 | 2 | 2 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 111 | 73 | 3 | 12 | 23 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 23 | 33 | 34 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 30 | 27 | 1 | 1 | 1 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |
| 230 | 54 | 52 | 1 | 1 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 231 | 202 | 152 | 4 | 13 | 33 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 33 | 45 | 54 |
| 232 | 1535 | 1,025 | 36 | 129 | 345 | 1719 | 1.068 | 2 | 0 | 0 | 0 | 7 | 2 | 105 | 340 | 457 | 488 |
| 233 | 109 | 70 | 3 | 12 | 24 | 976 | 0.606 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 24 | 34 | 21 |
| 236 | 29 | 20 | 1 | 4 | 4 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 8 | 4 |
| 237 | 1399 | 889 | 35 | 131 | 344 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 7 | 2 | 107 | 339 | 457 | 442 |
| 238 | 165 | 136 | 3 | 10 | 16 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 16 | 25 | 17 |
| 239 | 1187 | 720 | 31 | 117 | 319 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 95 | 314 | 420 | 361 |
| 240 | 2 | 1 | 0 | 0 | 1 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 996 | 634 | 26 | 94 | 242 | 989 | 0.614 | 1 | 0 | 0 | 0 | 5 | 2 | 77 | 238 | 323 | 199 |
| 243 | 34 | 23 | 1 | 3 | 7 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 10 | 0 |
| 244 | 153 | 52 | 6 | 21 | 74 | 173 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 73 | 92 | 10 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 245 | 90 | 53 | 2 | 9 | 26 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 26 | 34 | 4 |
| 246 | 454 | 187 | 14 | 55 | 198 | 273 | 0.170 | 0 | 0 | 0 | 0 | 3 | 1 | 45 | 195 | 244 | 41 |
| 247 | 739 | 530 | 18 | 63 | 128 | 87 | 0.054 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 126 | 183 | 10 |
| 250 | 140 | 104 | 3 | 11 | 22 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 22 | 32 | 27 |
| 252 | 1533 | 1,032 | 36 | 126 | 339 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 103 | 334 | 449 | 443 |
| 254 | 40 | 35 | 1 | 2 | 2 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 256 | 427 | 367 | 9 | 18 | 33 | 943 | 0.586 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 33 | 50 | 30 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1880 | 1,346 | 43 | 137 | 354 | 1783 | 1.108 | 2 | 0 | 0 | 0 | 9 | 3 | 112 | 349 | 475 | 526 |
| 261 | 205 | 162 | 4 | 13 | 26 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 26 | 38 | 28 |
| 262 | 336 | 254 | 9 | 27 | 46 | 860 | 0.534 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 45 | 70 | 38 |
| 263 | 1636 | 1,166 | 38 | 120 | 312 | 141 | 0.088 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 307 | 418 | 37 |
| 264 | 45 | 14 | 1 | 5 | 25 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 | 4 |
| 265 | 1157 | 834 | 27 | 84 | 212 | 98 | 0.061 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 209 | 286 | 17 |
| 266 | 2617 | 1,799 | 64 | 201 | 553 | 171 | 0.106 | 3 | 0 | 0 | 0 | 13 | 4 | 164 | 545 | 730 | 78 |
| 267 | 321 | 216 | 10 | 32 | 63 | 156 | 0.097 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 62 | 91 | 9 |
| 268 | 1102 | 818 | 26 | 80 | 178 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 175 | 249 | 25 |
| 269 | 801 | 482 | 23 | 77 | 219 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 216 | 286 | 435 |
| 270 | 13 | 10 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 271 | 809 | 488 | 23 | 78 | 220 | 370 | 0.230 | 1 | 0 | 0 | 0 | 5 | 2 | 64 | 217 | 288 | 66 |
| 272 | 4 | 3 | 0 | 0 | 1 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 273 | 16 | 10 | 0 | 2 | 4 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 2 |
| 274 | 837 | 508 | 23 | 81 | 225 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 222 | 295 | 226 |
| 275 | 33 | 25 | 1 | 3 | 4 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 2 |
| 276 | 881 | 543 | 25 | 83 | 230 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 227 | 302 | 30 |
| 277 | 21 | 14 | 1 | 2 | 4 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 4 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 355 | 227 | 10 | 33 | 85 | 157 | 0.098 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 84 | 114 | 11 |
| 280 | 1032 | 619 | 29 | 98 | 286 | 163 | 0.101 | 1 | 0 | 0 | 0 | 6 | 2 | 80 | 282 | 371 | 38 |
| 281 | 0 | 0 | 0 | 0 | 0 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 710 | 454 | 19 | 66 | 171 | 167 | 0.104 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 169 | 228 | 24 |
| 283 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1176 | 1,004 | 39 | 62 | 71 | 365 | 0.227 | 2 | 0 | 0 | 0 | 8 | 3 | 51 | 70 | 133 | 30 |
| 285 | 324 | 217 | 12 | 25 | 70 | 230 | 0.143 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 69 | 93 | 13 |
| 286 | 571 | 516 | 19 | 28 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 4 | 1 | 23 | 8 | 37 | 5 |
| 287 | 819 | 439 | 21 | 34 | 325 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 28 | 320 | 355 | 64 |
| 288 | 231 | 174 | 9 | 21 | 27 | 152 | 0.094 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 27 | 47 | 4 |
| 289 | 939 | 519 | 24 | 39 | 357 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 32 | 352 | 391 | 69 |
| 290 | 917 | 227 | 15 | 26 | 649 | 328 | 0.204 | 0 | 0 | 0 | 0 | 3 | 1 | 21 | 640 | 665 | 136 |
| 294 | 44 | 43 | 1 | 0 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 50 | 41 | 2 | 7 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 3 |
| 302 | 94 | 83 | 3 | 8 | 0 | 796 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 4 |
| 303 | 690 | 50 | 4 | 11 | 625 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 616 | 626 | 589 |
| 304 | 540 | 483 | 13 | 44 | 0 | 729 | 0.453 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 40 | 18 |
| 306 | 1902 | 1,019 | 60 | 203 | 620 | 818 | 0.508 | 2 | 0 | 0 | 0 | 12 | 4 | 166 | 611 | 795 | 404 |
| 307 | 2088 | 1,220 | 59 | 189 | 620 | 0 | 0.000 | 2 | 0 | 0 | 0 | 12 | 4 | 154 | 611 | 784 | 0 |
| 324 | 109 | 86 | 3 | 11 | 9 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 9 | 19 | 34 |
| 325 | 3841 | 3,002 | 74 | 268 | 497 | 2224 | 1.382 | 5 | 0 | 0 | 1 | 15 | 5 | 219 | 490 | 734 | 1015 |
| 326 | 886 | 664 | 19 | 81 | 122 | 3506 | 2.178 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 120 | 193 | 420 |
| 327 | 2845 | 2,251 | 52 | 177 | 365 | 227 | 0.141 | 4 | 0 | 0 | 0 | 11 | 3 | 144 | 360 | 523 | 74 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 6570 | 5,416 | 130 | 447 | 577 | 0 | 0.000 | 9 | 1 | 1 | 1 | 26 | 9 | 364 | 569 | 979 | 0 |
| 359 | 69 | 54 | 2 | 6 | 7 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 12 | 3 |
| 360 | 4454 | 3,734 | 86 | 281 | 353 | 247 | 0.153 | 6 | 0 | 0 | 1 | 17 | 6 | 229 | 348 | 608 | 93 |
| 361 | 4293 | 3,310 | 85 | 326 | 572 | 337 | 0.209 | 5 | 0 | 0 | 1 | 17 | 6 | 266 | 564 | 859 | 180 |
| 362 | 26 | 24 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 2598 | 2,313 | 48 | 137 | 100 | 4495 | 2.792 | 4 | 0 | 0 | 0 | 10 | 3 | 112 | 99 | 228 | 636 |
| 364 | 3649 | 2,820 | 76 | 286 | 467 | 286 | 0.178 | 5 | 0 | 0 | 0 | 15 | 5 | 233 | 460 | 720 | 128 |
| 365 | 903 | 723 | 23 | 64 | 93 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 92 | 152 | 151 |
| 366 | 10 | 5 | 0 | 1 | 4 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 5 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 992 | 678 | 16 | 36 | 262 | 388 | 0.241 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 258 | 293 | 71 |
| 376 | 1663 | 1,331 | 27 | 60 | 245 | 477 | 0.296 | 2 | 0 | 0 | 0 | 5 | 2 | 49 | 241 | 300 | 89 |
| 377 | 84 | 68 | 2 | 6 | 8 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 8 | 13 | 3 |
| 378 | 1123 | 957 | 19 | 38 | 109 | 212 | 0.132 | 2 | 0 | 0 | 0 | 4 | 1 | 31 | 107 | 145 | 19 |
| 379 | 750 | 530 | 12 | 25 | 183 | 331 | 0.206 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 180 | 205 | 42 |
| 380 | 26 | 24 | 0 | 1 | 1 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 381 | 738 | 681 | 13 | 26 | 18 | 469 | 0.291 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 18 | 44 | 13 |
| 386 | 363 | 230 | 20 | 56 | 57 | 810 | 0.503 | 0 | 0 | 0 | 0 | 4 | 1 | 46 | 56 | 108 | 54 |
| 387 | 2123 | 1,317 | 58 | 179 | 569 | 2761 | 1.715 | 2 | 0 | 0 | 0 | 12 | 4 | 146 | 561 | 725 | 1244 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 30 | 25 | 1 | 1 | 3 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 0 |
| 390 | 525 | 430 | 18 | 44 | 33 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 4 | 1 | 36 | 33 | 74 | 55 |
| 392 | 721 | 477 | 28 | 113 | 103 | 436 | 0.271 | 1 | 0 | 0 | 0 | 6 | 2 | 92 | 102 | 202 | 55 |
| 393 | 200 | 49 | 11 | 70 | 70 | 934 | 0.580 | 0 | 0 | 0 | 0 | 2 | 1 | 57 | 69 | 129 | 75 |
| 394 | 3513 | 2,613 | 109 | 340 | 451 | 1292 | 0.803 | 4 | 0 | 0 | 0 | 22 | 7 | 277 | 444 | 756 | 607 |
| 396 | 2707 | 2,125 | 73 | 216 | 293 | 2366 | 1.470 | 4 | 0 | 0 | 0 | 15 | 5 | 176 | 289 | 489 | 719 |
| 397 | 230 | 203 | 7 | 16 | 4 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 4 | 19 | 19 |
| 398 | 2704 | 2,446 | 73 | 184 | 1 | 560 | 0.348 | 4 | 0 | 0 | 0 | 15 | 5 | 150 | 1 | 176 | 61 |
| 399 | 253 | 242 | 4 | 7 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 15 |
| 400 | 1934 | 1,740 | 50 | 140 | 4 | 1704 | 1.059 | 3 | 0 | 0 | 0 | 10 | 3 | 114 | 4 | 135 | 143 |
| 401 | 0 | 0 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 11 | 11 | 0 | 0 | 0 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 406 | 752 | 668 | 59 | 18 | 7 | 395 | 0.245 | 1 | 0 | 0 | 0 | 12 | 4 | 15 | 7 | 39 | 10 |
| 407 | 1 | 1 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 0 | 0 | 0 | 0 | 0 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 188 | 176 | 7 | 5 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 | 4 |
| 410 | 1 | 0 | 0 | 0 | 1 | 884 | 0.549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 182 | 125 | 6 | 23 | 28 | 678 | 0.421 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 28 | 48 | 20 |
| 414 | 12 | 7 | 0 | 0 | 5 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 3 |
| 415 | 2342 | 1,870 | 62 | 172 | 238 | 855 | 0.531 | 3 | 0 | 0 | 0 | 13 | 4 | 140 | 235 | 395 | 210 |
| 416 | 817 | 626 | 18 | 66 | 107 | 284 | 0.176 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 105 | 165 | 29 |
| 417 | 77 | 8 | 0 | 2 | 67 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 66 | 68 | 13 |
| 419 | 482 | 367 | 9 | 30 | 76 | 343 | 0.213 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 75 | 103 | 22 |
| 420 | 37 | 3 | 0 | 1 | 33 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 33 | 33 | 6 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 762 | 101 | 6 | 15 | 640 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 631 | 645 | 332 |
| 425 | 26 | 23 | 1 | 2 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| 426 | 51 | 12 | 1 | 2 | 36 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 35 | 37 | 6 |
| 427 | 27 | 23 | 1 | 3 | 0 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 428 | 32 | 27 | 1 | 3 | 1 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 1 |
| 429 | 50 | 13 | 1 | 1 | 35 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 34 | 36 | 5 |
| 430 | 788 | 639 | 21 | 58 | 70 | 114 | 0.071 | 1 | 0 | 0 | 0 | 4 | 1 | 47 | 69 | 123 | 9 |
| 431 | 7 | 4 | 0 | 0 | 3 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 432 | 18 | 17 | 0 | 0 | 1 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 433 | 1777 | 1,581 | 42 | 132 | 22 | 1802 | 1.119 | 3 | 0 | 0 | 0 | 9 | 3 | 108 | 22 | 144 | 161 |
| 434 | 0 | 0 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 73 | 70 | 1 | 2 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 436 | 3 | 3 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 1643 | 1,444 | 40 | 129 | 30 | 2365 | 1.469 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 30 | 148 | 218 |
| 443 | 11 | 10 | 0 | 1 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 444 | 1601 | 1,403 | 40 | 128 | 30 | 905 | 0.562 | 2 | 0 | 0 | 0 | 8 | 3 | 104 | 30 | 148 | 83 |
| 452 | 8 | 8 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 1471 | 1,288 | 34 | 121 | 28 | 1563 | 0.971 | 2 | 0 | 0 | 0 | 7 | 2 | 99 | 28 | 138 | 134 |
| 454 | 266 | 246 | 5 | 15 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 | 6 |
| 455 | 1197 | 1,034 | 30 | 106 | 27 | 366 | 0.227 | 2 | 0 | 0 | 0 | 6 | 2 | 86 | 27 | 123 | 28 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 458 | 10 | 9 | 0 | 1 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 464 | 69 | 61 | 3 | 5 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 | 2 |
| 477 | 100 | 80 | 4 | 7 | 9 | 750 | 0.466 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 9 | 16 | 7 |
| 478 | 1253 | 1,054 | 36 | 117 | 46 | 253 | 0.157 | 2 | 0 | 0 | 0 | 7 | 2 | 95 | 45 | 153 | 24 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 805 | 726 | 15 | 64 | 0 | 500 | 0.311 | 1 | 0 | 0 | 0 | 3 | 1 | 52 | 0 | 58 | 18 |
| 481 | 1 | 0 | 0 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 482 | 177 | 164 | 2 | 10 | 1 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 10 | 8 |
| 483 | 955 | 837 | 22 | 96 | 0 | 589 | 0.366 | 1 | 0 | 0 | 0 | 4 | 1 | 78 | 0 | 86 | 31 |
| 484 | 2 | 1 | 0 | 0 | 1 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 485 | 1482 | 1,360 | 23 | 99 | 0 | 319 | 0.198 | 2 | 0 | 0 | 0 | 5 | 2 | 81 | 0 | 90 | 18 |
| 488 | 10 | 9 | 0 | 1 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 494 | 2789 | 2,525 | 76 | 188 | 0 | 1039 | 0.645 | 4 | 0 | 0 | 0 | 15 | 5 | 153 | 0 | 179 | 116 |
| 498 | 3 | 3 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 846 | 170 | 11 | 20 | 645 | 660 | 0.410 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 636 | 655 | 269 |
| 500 | 867 | 189 | 12 | 21 | 645 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 636 | 656 | 161 |
| 502 | 1 | 1 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 370 | 251 | 25 | 94 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 5 | 2 | 77 | 0 | 84 | 19 |
| | | | | | | | | | | | | | | | | | 37969 |

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 13 | 1 | 1 | 1 | 69 | 23 | 735 | 0 |
| 10 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 30 | 0 |
| 13 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 33 | 220 |
| 32 | 3 | 5 | 0 | 0 | 0 | 35 | 12 | 179 | 0 |
| 33 | 1 | 2 | 0 | 0 | 0 | 6 | 2 | 58 | 0 |
| 35 | 7 | 0 | 0 | 0 | 0 | 5 | 2 | 52 | 312 |
| 36 | 7 | 4 | 0 | 0 | 0 | 29 | 10 | 301 | 0 |
| 37 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 79 |
| 38 | 7 | 2 | 0 | 0 | 0 | 17 | 6 | 128 | 3 |
| 42 | 7 | 10 | 1 | 1 | 1 | 96 | 32 | 1084 | 2078 |
| 43 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 175 |
| 46 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 44 | 29 |
| 47 | 7 | 2 | 0 | 0 | 0 | 9 | 3 | 89 | 0 |
| 48 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 50 |
| 50 | 3 | 6 | 0 | 0 | 1 | 33 | 11 | 264 | 0 |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 52 | 3 | 9 | 1 | 1 | 1 | 48 | 16 | 515 | 0 |
| 53 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 0 |
| 55 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 7 | 2 | 0 | 0 | 0 | 12 | 4 | 144 | 0 |
| 57 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 28 | 0 |
| 58 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 59 | 1 | 1 | 0 | 0 | 0 | 11 | 4 | 48 | 0 |
| 60 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 20 |
| 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 62 | 1 | 1 | 0 | 0 | 0 | 20 | 6 | 76 | 0 |
| 65 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 33 | 50 |
| 66 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 40 | 51 |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 26 | 0 |
| 69 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 38 | 0 |
| 70 | 3 | 2 | 0 | 0 | 0 | 13 | 4 | 66 | 0 |
| 71 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 10 | 0 |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 3 | 5 | 0 | 0 | 1 | 28 | 9 | 300 | 0 |
| 74 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 1 |
| 75 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 |
| 76 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 77 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 2 |
| 80 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 18 |
| 83 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 86 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 113 |
| 87 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 88 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 95 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 13 |
| 96 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 97 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 10 |
| 98 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 100 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 101 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 19 |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 26 |
| 104 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 20 |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 107 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 19 |
| 108 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 109 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| 110 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 37 |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 62 |
| 113 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 12 |
| 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 19 |
| 115 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 26 | 45 |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 117 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 51 |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| 120 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 22 |
| 121 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 27 | 48 |
| 122 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| 123 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 124 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 47 |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 48 |
| 127 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 321 |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 51 |
| 130 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 131 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 134 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 135 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 34 | 51 |
| 136 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 138 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 139 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 140 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 141 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 10 |
| 142 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 143 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 4 |
| 144 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 2 |
| 145 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 28 | 0 |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 31 | 1 |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 149 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 33 | 2 |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 33 | 0 |
| 152 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 301 |
| 153 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 34 | 0 |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 0 |
| 156 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 157 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 50 | 0 |
| 158 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 |
| 159 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 98 | 0 |
| 162 | 3 | 4 | 0 | 0 | 0 | 25 | 8 | 315 | 0 |
| 163 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 62 | 0 |
| 164 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 165 | 1 | 11 | 1 | 1 | 1 | 56 | 18 | 620 | 0 |
| 168 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 31 | 0 |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 34 | 0 |
| 171 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 0 |
| 172 | 6 | 3 | 0 | 0 | 0 | 10 | 3 | 97 | 0 |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 7 | 2 | 0 | 0 | 0 | 18 | 6 | 208 | 399 |
| 178 | 7 | 1 | 0 | 0 | 0 | 10 | 3 | 83 | 192 |
| 179 | 7 | 4 | 0 | 0 | 0 | 38 | 13 | 437 | 846 |
| 180 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 20 | 16 |
| 181 | 1 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 85 |
| 182 | 1 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 71 |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 42 | 62 |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 25 | 34 |
| 190 | 7 | 46 | 3 | 3 | 5 | 130 | 43 | 1658 | 3177 |
| 191 | 7 | 27 | 2 | 2 | 3 | 81 | 27 | 1113 | 1733 |
| 192 | 7 | 7 | 0 | 0 | 1 | 18 | 6 | 146 | 662 |
| 194 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 |
| 195 | 5 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 0 |
| 196 | 5 | 1 | 0 | 0 | 0 | 7 | 2 | 73 | 0 |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 199 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 200 | 6 | 2 | 0 | 0 | 0 | 15 | 5 | 161 | 0 |
| 205 | 6 | 2 | 0 | 0 | 0 | 16 | 5 | 193 | 0 |
| 206 | 6 | 4 | 0 | 0 | 0 | 27 | 9 | 331 | 0 |
| 207 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 |
| 215 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 4 |
| 216 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 56 |
| 217 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 13 |
| 218 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 24 |
| 219 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 223 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 23 |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 230 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 231 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 40 |
| 232 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 112 | 363 |
| 233 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 |
| 236 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 237 | 7 | 1 | 0 | 0 | 0 | 7 | 2 | 103 | 328 |
| 238 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 11 |
| 239 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 82 | 270 |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 47 | 147 |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 245 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 246 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 33 |
| 247 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 250 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 18 |
| 252 | 6 | 2 | 0 | 0 | 0 | 7 | 2 | 101 | 330 |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 256 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 19 |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 3 | 2 | 0 | 0 | 0 | 10 | 3 | 124 | 386 |
| 261 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 19 |
| 262 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 24 |
| 263 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 27 |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 265 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 |
| 266 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 58 |
| 267 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 |
| 268 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 17 |
| 269 | 6 | 1 | 0 | 0 | 0 | 7 | 2 | 96 | 328 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 271 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 50 |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 274 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 170 |
| 275 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 276 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 22 |
| 277 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 |
| 280 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 29 |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 17 |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 11 | 16 |
| 285 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 286 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 |
| 287 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 58 |
| 288 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 289 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 62 |
| 290 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 130 |
| 294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 302 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 303 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 579 |
| 304 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 |
| 306 | 6 | 1 | 0 | 0 | 0 | 6 | 2 | 84 | 310 |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 16 |
| 325 | 7 | 7 | 0 | 0 | 1 | 21 | 7 | 302 | 677 |
| 326 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 144 | 262 |
| 327 | 7 | 1 | 0 | 0 | 0 | 1 | 0 | 20 | 51 |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 359 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 360 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 35 | 53 |
| 361 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 56 | 118 |
| 362 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 1 | 11 | 1 | 1 | 1 | 27 | 9 | 312 | 275 |
| 364 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 82 |
| 365 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 91 |
| 366 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 62 |
| 376 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 14 | 72 |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 378 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 14 |
| 379 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 37 |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 |
| 386 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 23 | 28 |
| 387 | 3 | 4 | 0 | 0 | 0 | 20 | 7 | 250 | 962 |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 26 | 24 |
| 392 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 27 |
| 393 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 33 | 40 |
| 394 | 3 | 3 | 0 | 0 | 0 | 18 | 6 | 223 | 357 |
| 396 | 3 | 5 | 0 | 0 | 1 | 22 | 7 | 259 | 424 |
| 397 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 4 |
| 398 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 0 |
| 399 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 0 |
| 400 | 6 | 3 | 0 | 0 | 0 | 11 | 4 | 121 | 4 |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 406 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 2 |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 410 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 12 |
| 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 415 | 3 | 2 | 0 | 0 | 0 | 7 | 2 | 74 | 125 |
| 416 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 19 |
| 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 419 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 16 |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 324 |
| 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 427 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 430 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 6 | 3 | 0 | 0 | 0 | 10 | 3 | 120 | 24 |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 6 | 4 | 0 | 0 | 0 | 12 | 4 | 155 | 43 |
| 443 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 444 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 59 | 17 |
| 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 6 | 2 | 0 | 0 | 0 | 7 | 2 | 96 | 27 |
| 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| 455 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 6 |
| 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 478 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 7 |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 |
| 483 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 0 |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 |
| 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 494 | 6 | 3 | 0 | 0 | 0 | 10 | 3 | 99 | 0 |
| 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 261 |
| 500 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 156 |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 0 |
| Total | | **294** | **19** | **17** | **30** | **1374** | **455** | **15116** | **20664** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 43 | 3 | 3 | 4 | 202 | 67 | 1987 | 3426 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 60 | 4 | 4 | 6 | 324 | 108 | 3174 | 2440 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 3 | 0 | 0 | 0 | 16 | 5 | 165 | 68 | |
| 6 | 61 | 4 | 4 | 6 | 288 | 95 | 3329 | 3172 | |
| 7 | 127 | 8 | 8 | 13 | 543 | 180 | 6460 | 11556 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **294** | **19** | **17** | **30** | **1374** | **455** | **15116** | **20664** | **37969** |

**World Logistics Center** **2035**
Project Full Buildout 2035
Surface Street Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8104 | 7,006 | 301 | 797 | 0 | 1820 | 1.131 | 3802 | 500 | 1511 | 1178 | 199 | 21 | 147 | 0 | 7359 | 8320 |
| 10 | 1126 | 1,011 | 43 | 72 | 0 | 826 | 0.513 | 549 | 72 | 218 | 170 | 28 | 3 | 13 | 0 | 1054 | 541 |
| 13 | 2846 | 1,555 | 60 | 190 | 1,041 | 345 | 0.214 | 844 | 111 | 335 | 261 | 40 | 4 | 35 | 15 | 1646 | 353 |
| 32 | 3417 | 3,010 | 179 | 228 | 0 | 1551 | 0.964 | 1634 | 215 | 649 | 506 | 118 | 13 | 42 | 0 | 3177 | 3061 |
| 33 | 830 | 749 | 24 | 57 | 0 | 2006 | 1.246 | 407 | 53 | 162 | 126 | 16 | 2 | 11 | 0 | 776 | 966 |
| 35 | 1405 | 595 | 47 | 127 | 636 | 801 | 0.498 | 323 | 42 | 128 | 100 | 31 | 3 | 23 | 9 | 661 | 329 |
| 36 | 2884 | 2,377 | 142 | 365 | 0 | 1627 | 1.011 | 1290 | 170 | 513 | 400 | 94 | 10 | 67 | 0 | 2543 | 2570 |
| 37 | 1160 | 388 | 41 | 144 | 587 | 219 | 0.136 | 211 | 28 | 84 | 65 | 27 | 3 | 27 | 9 | 452 | 62 |
| 38 | 3636 | 3,045 | 201 | 383 | 7 | 659 | 0.409 | 1653 | 217 | 657 | 512 | 133 | 14 | 71 | 0 | 3256 | 1333 |
| 42 | 3083 | 1,903 | 143 | 401 | 636 | 5338 | 3.316 | 1033 | 136 | 410 | 320 | 94 | 10 | 74 | 9 | 2087 | 6920 |
| 43 | 500 | 350 | 15 | 25 | 110 | 2598 | 1.614 | 190 | 25 | 75 | 59 | 10 | 1 | 5 | 2 | 366 | 591 |
| 46 | 991 | 777 | 46 | 109 | 59 | 806 | 0.501 | 422 | 55 | 168 | 131 | 30 | 3 | 20 | 1 | 830 | 416 |
| 47 | 1063 | 938 | 37 | 88 | 0 | 1995 | 1.239 | 509 | 67 | 202 | 158 | 24 | 3 | 16 | 0 | 979 | 1214 |
| 48 | 1101 | 892 | 33 | 74 | 102 | 795 | 0.494 | 484 | 64 | 192 | 150 | 22 | 2 | 14 | 1 | 929 | 459 |
| 50 | 12826 | 11,199 | 540 | 1,087 | 0 | 479 | 0.298 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 | 3503 |
| 51 | 82 | 75 | 2 | 5 | 0 | 975 | 0.606 | 41 | 5 | 16 | 13 | 1 | 0 | 1 | 0 | 77 | 47 |
| 52 | 8114 | 7,014 | 299 | 801 | 0 | 1269 | 0.788 | 3807 | 501 | 1513 | 1179 | 197 | 21 | 148 | 0 | 7366 | 5807 |
| 53 | 0 | 0 | 0 | 0 | 0 | 795 | 0.494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 1865 | 1,535 | 83 | 247 | 0 | 325 | 0.202 | 833 | 110 | 331 | 258 | 55 | 6 | 46 | 0 | 1638 | 331 |
| 55 | 20 | 19 | 1 | 0 | 0 | 2042 | 1.269 | 10 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 20 | 25 |
| 56 | 1865 | 1,535 | 83 | 247 | 0 | 1152 | 0.716 | 833 | 110 | 331 | 258 | 55 | 6 | 46 | 0 | 1638 | 1172 |
| 57 | 1580 | 1,267 | 86 | 227 | 0 | 246 | 0.153 | 688 | 90 | 273 | 213 | 57 | 6 | 42 | 0 | 1369 | 209 |
| 58 | 556 | 493 | 26 | 37 | 0 | 172 | 0.107 | 268 | 35 | 106 | 83 | 17 | 2 | 7 | 0 | 518 | 55 |
| 59 | 1211 | 974 | 116 | 121 | 0 | 786 | 0.488 | 529 | 70 | 210 | 164 | 77 | 8 | 22 | 0 | 1079 | 527 |
| 60 | 607 | 307 | 25 | 66 | 209 | 159 | 0.099 | 167 | 22 | 66 | 52 | 16 | 2 | 12 | 3 | 340 | 34 |
| 61 | 812 | 562 | 30 | 52 | 168 | 97 | 0.060 | 305 | 40 | 121 | 94 | 20 | 2 | 10 | 2 | 595 | 36 |
| 62 | 1721 | 1,330 | 199 | 192 | 0 | 781 | 0.485 | 722 | 95 | 287 | 224 | 131 | 14 | 35 | 0 | 1508 | 732 |
| 65 | 1238 | 1,018 | 37 | 81 | 102 | 795 | 0.494 | 553 | 73 | 220 | 171 | 24 | 3 | 15 | 1 | 1059 | 523 |
| 66 | 1413 | 1,167 | 47 | 97 | 102 | 812 | 0.504 | 633 | 83 | 252 | 196 | 31 | 3 | 18 | 1 | 1218 | 615 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 827 | 731 | 32 | 64 | 0 | 814 | 0.506 | 397 | 52 | 158 | 123 | 21 | 2 | 12 | 0 | 765 | 387 |
| 69 | 1180 | 1,033 | 56 | 91 | 0 | 819 | 0.509 | 561 | 74 | 223 | 174 | 37 | 4 | 17 | 0 | 1089 | 554 |
| 70 | 2464 | 2,169 | 130 | 165 | 0 | 795 | 0.494 | 1177 | 155 | 468 | 365 | 86 | 9 | 30 | 0 | 2290 | 1131 |
| 71 | 687 | 620 | 42 | 25 | 0 | 803 | 0.499 | 336 | 44 | 134 | 104 | 28 | 3 | 5 | 0 | 654 | 326 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 8058 | 6,962 | 297 | 799 | 0 | 742 | 0.461 | 3779 | 497 | 1502 | 1171 | 196 | 21 | 148 | 0 | 7312 | 3370 |
| 74 | 605 | 560 | 17 | 27 | 1 | 1573 | 0.977 | 304 | 40 | 121 | 94 | 11 | 1 | 5 | 0 | 576 | 563 |
| 75 | 129 | 114 | 5 | 5 | 5 | 805 | 0.500 | 62 | 8 | 25 | 19 | 3 | 0 | 1 | 0 | 118 | 59 |
| 76 | 18 | 16 | 1 | 1 | 0 | 1597 | 0.992 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 17 | 17 |
| 77 | 718 | 661 | 21 | 30 | 6 | 438 | 0.272 | 359 | 47 | 143 | 111 | 14 | 1 | 6 | 0 | 681 | 185 |
| 80 | 852 | 773 | 27 | 40 | 12 | 138 | 0.086 | 420 | 55 | 167 | 130 | 18 | 2 | 7 | 0 | 799 | 68 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1174 | 976 | 37 | 68 | 93 | 322 | 0.200 | 530 | 70 | 211 | 164 | 24 | 3 | 13 | 1 | 1015 | 203 |
| 83 | 458 | 356 | 16 | 27 | 59 | 95 | 0.059 | 193 | 25 | 77 | 60 | 11 | 1 | 5 | 1 | 373 | 22 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1550 | 802 | 38 | 60 | 650 | 284 | 0.176 | 435 | 57 | 173 | 135 | 25 | 3 | 11 | 9 | 849 | 150 |
| 87 | 95 | 77 | 5 | 13 | 0 | 800 | 0.497 | 42 | 5 | 17 | 13 | 3 | 0 | 2 | 0 | 83 | 41 |
| 88 | 88 | 70 | 5 | 13 | 0 | 809 | 0.503 | 38 | 5 | 15 | 12 | 3 | 0 | 2 | 0 | 76 | 38 |
| 95 | 735 | 637 | 14 | 36 | 48 | 439 | 0.273 | 346 | 45 | 137 | 107 | 9 | 1 | 7 | 1 | 653 | 178 |
| 96 | 156 | 147 | 2 | 4 | 3 | 399 | 0.248 | 80 | 10 | 32 | 25 | 1 | 0 | 1 | 0 | 149 | 37 |
| 97 | 550 | 468 | 12 | 29 | 41 | 389 | 0.242 | 254 | 33 | 101 | 79 | 8 | 1 | 5 | 1 | 482 | 116 |
| 98 | 16 | 13 | 0 | 2 | 1 | 160 | 0.099 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 1 |
| 99 | 361 | 330 | 6 | 12 | 13 | 405 | 0.252 | 179 | 24 | 71 | 55 | 4 | 0 | 2 | 0 | 336 | 85 |
| 100 | 128 | 88 | 3 | 8 | 29 | 227 | 0.141 | 48 | 6 | 19 | 15 | 2 | 0 | 1 | 0 | 92 | 13 |
| 101 | 915 | 728 | 24 | 65 | 98 | 313 | 0.194 | 395 | 52 | 157 | 122 | 16 | 2 | 12 | 1 | 757 | 147 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 488 | 297 | 12 | 31 | 148 | 291 | 0.181 | 161 | 21 | 64 | 50 | 8 | 1 | 6 | 2 | 313 | 57 |
| 104 | 688 | 535 | 18 | 53 | 82 | 404 | 0.251 | 290 | 38 | 115 | 90 | 12 | 1 | 10 | 1 | 558 | 140 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 14 | 13 | 0 | 1 | 0 | 1803 | 1.120 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 15 |
| 107 | 710 | 554 | 19 | 56 | 81 | 388 | 0.241 | 301 | 40 | 119 | 93 | 13 | 1 | 10 | 1 | 578 | 139 |
| 108 | 15 | 12 | 1 | 2 | 0 | 997 | 0.619 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 13 | 8 |
| 109 | 81 | 67 | 4 | 10 | 0 | 787 | 0.489 | 36 | 5 | 14 | 11 | 3 | 0 | 2 | 0 | 72 | 35 |
| 110 | 719 | 562 | 19 | 57 | 81 | 756 | 0.470 | 305 | 40 | 121 | 94 | 13 | 1 | 11 | 1 | 586 | 275 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 1 | 1 | 0 | 0 | 0 | 800 | 0.497 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 112 | 782 | 573 | 21 | 64 | 124 | 817 | 0.508 | 311 | 41 | 124 | 96 | 14 | 1 | 12 | 2 | 601 | 305 |
| 113 | 55 | 18 | 3 | 10 | 24 | 791 | 0.491 | 10 | 1 | 4 | 3 | 2 | 0 | 2 | 0 | 22 | 11 |
| 114 | 77 | 27 | 2 | 8 | 40 | 791 | 0.491 | 15 | 2 | 6 | 5 | 1 | 0 | 1 | 1 | 30 | 15 |
| 115 | 758 | 590 | 21 | 60 | 87 | 851 | 0.529 | 320 | 42 | 127 | 99 | 14 | 1 | 11 | 1 | 616 | 326 |
| 116 | 3 | 0 | 0 | 0 | 3 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117 | 26 | 24 | 1 | 1 | 0 | 757 | 0.470 | 13 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 25 | 12 |
| 118 | 821 | 624 | 23 | 66 | 108 | 765 | 0.475 | 339 | 45 | 135 | 105 | 15 | 2 | 12 | 2 | 653 | 310 |
| 119 | 24 | 7 | 1 | 3 | 13 | 782 | 0.486 | 4 | 0 | 2 | 1 | 1 | 0 | 1 | 0 | 8 | 4 |
| 120 | 99 | 43 | 3 | 9 | 44 | 814 | 0.506 | 23 | 3 | 9 | 7 | 2 | 0 | 2 | 1 | 47 | 24 |
| 121 | 840 | 656 | 24 | 65 | 95 | 825 | 0.513 | 356 | 47 | 141 | 110 | 16 | 2 | 12 | 1 | 686 | 351 |
| 122 | 29 | 6 | 1 | 3 | 19 | 782 | 0.486 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 8 | 4 |
| 123 | 37 | 33 | 2 | 2 | 0 | 791 | 0.491 | 18 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | 35 | 17 |
| 124 | 890 | 701 | 26 | 68 | 95 | 800 | 0.497 | 380 | 50 | 151 | 118 | 17 | 2 | 13 | 1 | 732 | 364 |
| 125 | 14 | 12 | 1 | 1 | 0 | 817 | 0.508 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 13 | 7 |
| 126 | 954 | 756 | 27 | 70 | 101 | 774 | 0.481 | 410 | 54 | 163 | 127 | 18 | 2 | 13 | 1 | 789 | 379 |
| 127 | 682 | 32 | 3 | 11 | 636 | 825 | 0.513 | 17 | 2 | 7 | 5 | 2 | 0 | 2 | 9 | 45 | 23 |
| 128 | 15 | 14 | 0 | 1 | 0 | 774 | 0.481 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 7 |
| 129 | 1016 | 814 | 29 | 72 | 101 | 823 | 0.511 | 442 | 58 | 176 | 137 | 19 | 2 | 13 | 1 | 848 | 434 |
| 130 | 65 | 61 | 3 | 1 | 0 | 800 | 0.497 | 33 | 4 | 13 | 10 | 2 | 0 | 0 | 0 | 63 | 31 |
| 131 | 29 | 27 | 1 | 1 | 0 | 775 | 0.481 | 15 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 28 | 13 |
| 133 | 77 | 73 | 4 | 0 | 0 | 804 | 0.499 | 40 | 5 | 16 | 12 | 3 | 0 | 0 | 0 | 76 | 38 |
| 134 | 158 | 144 | 6 | 8 | 0 | 760 | 0.472 | 78 | 10 | 31 | 24 | 4 | 0 | 1 | 0 | 150 | 71 |
| 135 | 1263 | 1,040 | 39 | 82 | 102 | 816 | 0.507 | 564 | 74 | 224 | 175 | 26 | 3 | 15 | 1 | 1083 | 549 |
| 136 | 49 | 42 | 3 | 4 | 0 | 786 | 0.488 | 23 | 3 | 9 | 7 | 2 | 0 | 1 | 0 | 45 | 22 |
| 137 | 23 | 20 | 1 | 2 | 0 | 790 | 0.491 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 21 | 10 |
| 138 | 37 | 6 | 1 | 5 | 25 | 267 | 0.166 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 8 | 1 |
| 139 | 323 | 251 | 10 | 30 | 32 | 504 | 0.313 | 136 | 18 | 54 | 42 | 7 | 1 | 6 | 0 | 264 | 83 |
| 140 | 249 | 223 | 8 | 18 | 0 | 527 | 0.327 | 121 | 16 | 48 | 37 | 5 | 1 | 3 | 0 | 232 | 76 |
| 141 | 461 | 393 | 15 | 37 | 16 | 1001 | 0.622 | 213 | 28 | 85 | 66 | 10 | 1 | 7 | 0 | 410 | 255 |
| 142 | 23 | 11 | 1 | 4 | 7 | 291 | 0.181 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 13 | 2 |
| 143 | 618 | 531 | 22 | 57 | 8 | 845 | 0.525 | 288 | 38 | 115 | 89 | 15 | 2 | 11 | 0 | 557 | 292 |
| 144 | 629 | 539 | 23 | 62 | 5 | 783 | 0.486 | 293 | 38 | 116 | 91 | 15 | 2 | 11 | 0 | 566 | 275 |
| 145 | 653 | 556 | 26 | 70 | 1 | 787 | 0.489 | 302 | 40 | 120 | 93 | 17 | 2 | 13 | 0 | 587 | 287 |
| 146 | 5 | 4 | 0 | 1 | 0 | 814 | 0.506 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 147 | 712 | 605 | 29 | 76 | 2 | 798 | 0.496 | 328 | 43 | 130 | 102 | 19 | 2 | 14 | 0 | 639 | 317 |
| 148 | 5 | 0 | 0 | 0 | 5 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 149 | 781 | 664 | 33 | 80 | 4 | 808 | 0.502 | 360 | 47 | 143 | 112 | 22 | 2 | 15 | 0 | 702 | 352 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 813 | 696 | 35 | 82 | 0 | 787 | 0.489 | 378 | 50 | 150 | 117 | 23 | 2 | 15 | 0 | 735 | 359 |
| 152 | 667 | 25 | 3 | 10 | 629 | 782 | 0.486 | 14 | 2 | 5 | 4 | 2 | 0 | 2 | 9 | 38 | 19 |
| 153 | 939 | 814 | 40 | 85 | 0 | 798 | 0.496 | 442 | 58 | 176 | 137 | 26 | 3 | 16 | 0 | 857 | 425 |
| 154 | 2 | 2 | 0 | 0 | 0 | 901 | 0.560 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 155 | 1393 | 1,228 | 59 | 106 | 0 | 775 | 0.481 | 666 | 88 | 265 | 206 | 39 | 4 | 20 | 0 | 1288 | 620 |
| 156 | 334 | 302 | 14 | 18 | 0 | 771 | 0.479 | 164 | 22 | 65 | 51 | 9 | 1 | 3 | 0 | 315 | 151 |
| 157 | 1611 | 1,415 | 73 | 123 | 0 | 804 | 0.499 | 768 | 101 | 305 | 238 | 48 | 5 | 23 | 0 | 1488 | 743 |
| 158 | 459 | 380 | 10 | 27 | 42 | 1039 | 0.645 | 206 | 27 | 82 | 64 | 7 | 1 | 5 | 1 | 392 | 253 |
| 159 | 312 | 275 | 5 | 13 | 19 | 170 | 0.106 | 149 | 20 | 59 | 46 | 3 | 0 | 2 | 0 | 281 | 30 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1840 | 1,520 | 74 | 246 | 0 | 784 | 0.487 | 825 | 109 | 328 | 256 | 49 | 5 | 45 | 0 | 1616 | 787 |
| 162 | 4638 | 3,857 | 189 | 592 | 0 | 1052 | 0.654 | 2093 | 275 | 832 | 648 | 125 | 13 | 109 | 0 | 4096 | 2677 |
| 163 | 2799 | 2,337 | 115 | 347 | 0 | 350 | 0.217 | 1268 | 167 | 504 | 393 | 76 | 8 | 64 | 0 | 2480 | 539 |
| 164 | 73 | 63 | 5 | 5 | 0 | 473 | 0.294 | 34 | 4 | 14 | 11 | 3 | 0 | 1 | 0 | 67 | 20 |
| 165 | 7858 | 6,778 | 286 | 794 | 0 | 1541 | 0.957 | 3679 | 484 | 1462 | 1140 | 189 | 20 | 147 | 0 | 7120 | 6815 |
| 168 | 555 | 451 | 24 | 80 | 0 | 758 | 0.471 | 245 | 32 | 97 | 76 | 16 | 2 | 15 | 0 | 482 | 227 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 2244 | 1,886 | 91 | 267 | 0 | 248 | 0.154 | 1024 | 135 | 407 | 317 | 60 | 6 | 49 | 0 | 1998 | 308 |
| 171 | 2968 | 2,694 | 82 | 192 | 0 | 522 | 0.324 | 1462 | 192 | 581 | 453 | 54 | 6 | 35 | 0 | 2784 | 903 |
| 172 | 2968 | 2,694 | 82 | 192 | 0 | 993 | 0.617 | 1462 | 192 | 581 | 453 | 54 | 6 | 35 | 0 | 2784 | 1717 |
| 173 | 3 | 2 | 0 | 0 | 1 | 1615 | 1.003 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 174 | 22 | 21 | 0 | 1 | 0 | 330 | 0.205 | 11 | 1 | 5 | 4 | 0 | 0 | 0 | 0 | 21 | 4 |
| 177 | 2740 | 1,655 | 128 | 370 | 587 | 1110 | 0.690 | 898 | 118 | 357 | 278 | 84 | 9 | 68 | 9 | 1822 | 1256 |
| 178 | 246 | 168 | 11 | 23 | 44 | 7132 | 4.430 | 91 | 12 | 36 | 28 | 7 | 1 | 4 | 1 | 181 | 800 |
| 179 | 2986 | 1,823 | 138 | 394 | 631 | 2189 | 1.360 | 989 | 130 | 393 | 306 | 91 | 10 | 73 | 9 | 2002 | 2722 |
| 180 | 59 | 46 | 3 | 6 | 4 | 6725 | 4.178 | 25 | 3 | 10 | 8 | 2 | 0 | 1 | 0 | 49 | 206 |
| 181 | 2569 | 2,096 | 71 | 179 | 223 | 625 | 0.388 | 1138 | 150 | 452 | 352 | 47 | 5 | 33 | 3 | 2180 | 846 |
| 182 | 3909 | 3,183 | 107 | 286 | 333 | 349 | 0.217 | 1728 | 227 | 687 | 535 | 71 | 7 | 53 | 5 | 3312 | 718 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 3943 | 3,204 | 108 | 284 | 347 | 292 | 0.181 | 1739 | 229 | 691 | 539 | 71 | 8 | 52 | 5 | 3334 | 605 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1293 | 1,037 | 36 | 102 | 118 | 477 | 0.296 | 563 | 74 | 224 | 174 | 24 | 3 | 19 | 2 | 1082 | 321 |
| 190 | 8446 | 6,955 | 162 | 514 | 815 | 6368 | 3.956 | 3775 | 497 | 1500 | 1169 | 107 | 11 | 95 | 12 | 7166 | 28347 |
| 191 | 6588 | 5,432 | 131 | 448 | 577 | 4906 | 3.048 | 2948 | 388 | 1172 | 913 | 86 | 9 | 83 | 8 | 5608 | 17090 |
| 192 | 1867 | 1,521 | 32 | 66 | 248 | 4358 | 2.707 | 825 | 109 | 328 | 256 | 21 | 2 | 12 | 4 | 1557 | 4215 |
| 194 | 400 | 305 | 26 | 69 | 0 | 355 | 0.221 | 166 | 22 | 66 | 51 | 17 | 2 | 13 | 0 | 336 | 74 |
| 195 | 871 | 690 | 47 | 134 | 0 | 397 | 0.247 | 374 | 49 | 149 | 116 | 31 | 3 | 25 | 0 | 748 | 184 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196 | 1271 | 996 | 73 | 202 | 0 | 716 | 0.445 | 541 | 71 | 215 | 167 | 48 | 5 | 37 | 0 | 1085 | 482 |
| 198 | 57 | 48 | 3 | 6 | 0 | 1009 | 0.627 | 26 | 3 | 10 | 8 | 2 | 0 | 1 | 0 | 51 | 32 |
| 199 | 254 | 223 | 11 | 20 | 0 | 378 | 0.235 | 121 | 16 | 48 | 37 | 7 | 1 | 4 | 0 | 234 | 55 |
| 200 | 1580 | 1,267 | 86 | 227 | 0 | 1403 | 0.872 | 688 | 90 | 273 | 213 | 57 | 6 | 42 | 0 | 1369 | 1193 |
| 205 | 1838 | 1,502 | 82 | 254 | 0 | 1501 | 0.932 | 815 | 107 | 324 | 253 | 54 | 6 | 47 | 0 | 1606 | 1497 |
| 206 | 1813 | 1,486 | 81 | 246 | 0 | 2658 | 1.651 | 807 | 106 | 321 | 250 | 53 | 6 | 45 | 0 | 1588 | 2621 |
| 207 | 29 | 18 | 2 | 9 | 0 | 2611 | 1.622 | 10 | 1 | 4 | 3 | 1 | 0 | 2 | 0 | 21 | 34 |
| 215 | 95 | 89 | 2 | 2 | 2 | 2937 | 1.825 | 48 | 6 | 19 | 15 | 1 | 0 | 0 | 0 | 91 | 165 |
| 216 | 452 | 359 | 11 | 36 | 46 | 2000 | 1.242 | 195 | 26 | 77 | 60 | 7 | 1 | 7 | 1 | 374 | 464 |
| 217 | 223 | 169 | 6 | 16 | 32 | 663 | 0.412 | 92 | 12 | 36 | 28 | 4 | 0 | 3 | 0 | 176 | 73 |
| 218 | 311 | 241 | 8 | 29 | 33 | 1167 | 0.725 | 131 | 17 | 52 | 41 | 5 | 1 | 5 | 0 | 252 | 183 |
| 219 | 15 | 14 | 0 | 0 | 1 | 2672 | 1.660 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 23 |
| 221 | 57 | 51 | 1 | 2 | 3 | 2622 | 1.629 | 28 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 52 | 85 |
| 223 | 233 | 194 | 5 | 20 | 14 | 359 | 0.223 | 105 | 14 | 42 | 33 | 3 | 0 | 4 | 0 | 201 | 45 |
| 225 | 2 | 2 | 0 | 0 | 0 | 1243 | 0.772 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 226 | 111 | 73 | 3 | 12 | 23 | 1643 | 1.021 | 40 | 5 | 16 | 12 | 2 | 0 | 2 | 0 | 78 | 79 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 30 | 27 | 1 | 1 | 1 | 1122 | 0.697 | 15 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 28 | 19 |
| 230 | 54 | 52 | 1 | 1 | 0 | 1007 | 0.626 | 28 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 53 | 33 |
| 231 | 202 | 152 | 4 | 13 | 33 | 1968 | 1.223 | 82 | 11 | 33 | 26 | 3 | 0 | 2 | 0 | 157 | 193 |
| 232 | 1535 | 1,025 | 36 | 129 | 345 | 1719 | 1.068 | 556 | 73 | 221 | 172 | 24 | 3 | 24 | 5 | 1078 | 1151 |
| 233 | 109 | 70 | 3 | 12 | 24 | 976 | 0.606 | 38 | 5 | 15 | 12 | 2 | 0 | 2 | 0 | 75 | 45 |
| 236 | 29 | 20 | 1 | 4 | 4 | 794 | 0.493 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | 21 | 11 |
| 237 | 1399 | 889 | 35 | 131 | 344 | 1556 | 0.967 | 482 | 63 | 192 | 149 | 23 | 2 | 24 | 5 | 942 | 910 |
| 238 | 165 | 136 | 3 | 10 | 16 | 1120 | 0.696 | 74 | 10 | 29 | 23 | 2 | 0 | 2 | 0 | 140 | 97 |
| 239 | 1187 | 720 | 31 | 117 | 319 | 1385 | 0.860 | 391 | 51 | 155 | 121 | 20 | 2 | 22 | 5 | 767 | 660 |
| 240 | 2 | 1 | 0 | 0 | 1 | 240 | 0.149 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 996 | 634 | 26 | 94 | 242 | 989 | 0.614 | 344 | 45 | 137 | 107 | 17 | 2 | 17 | 4 | 673 | 413 |
| 243 | 34 | 23 | 1 | 3 | 7 | 64 | 0.040 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | 24 | 1 |
| 244 | 153 | 52 | 6 | 21 | 74 | 173 | 0.107 | 28 | 4 | 11 | 9 | 4 | 0 | 4 | 1 | 61 | 7 |
| 245 | 90 | 53 | 2 | 9 | 26 | 181 | 0.112 | 29 | 4 | 11 | 9 | 1 | 0 | 2 | 0 | 56 | 6 |
| 246 | 454 | 187 | 14 | 55 | 198 | 273 | 0.170 | 101 | 13 | 40 | 31 | 9 | 1 | 10 | 3 | 210 | 36 |
| 247 | 739 | 530 | 18 | 63 | 128 | 87 | 0.054 | 288 | 38 | 114 | 89 | 12 | 1 | 12 | 2 | 556 | 30 |
| 250 | 140 | 104 | 3 | 11 | 22 | 1366 | 0.849 | 56 | 7 | 22 | 17 | 2 | 0 | 2 | 0 | 108 | 92 |
| 252 | 1533 | 1,032 | 36 | 126 | 339 | 1588 | 0.986 | 560 | 74 | 223 | 174 | 24 | 3 | 23 | 5 | 1084 | 1070 |
| 254 | 40 | 35 | 1 | 2 | 2 | 424 | 0.263 | 19 | 2 | 8 | 6 | 1 | 0 | 0 | 0 | 36 | 9 |
| 256 | 427 | 367 | 9 | 18 | 33 | 943 | 0.586 | 199 | 26 | 79 | 62 | 6 | 1 | 3 | 0 | 377 | 221 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1880 | 1,346 | 43 | 137 | 354 | 1783 | 1.108 | 731 | 96 | 290 | 226 | 28 | 3 | 25 | 5 | 1405 | 1556 |
| 261 | 205 | 162 | 4 | 13 | 26 | 1181 | 0.734 | 88 | 12 | 35 | 27 | 3 | 0 | 2 | 0 | 167 | 123 |
| 262 | 336 | 254 | 9 | 27 | 46 | 860 | 0.534 | 138 | 18 | 55 | 43 | 6 | 1 | 5 | 1 | 266 | 142 |
| 263 | 1636 | 1,166 | 38 | 120 | 312 | 141 | 0.088 | 633 | 83 | 251 | 196 | 25 | 3 | 22 | 5 | 1218 | 107 |
| 264 | 45 | 14 | 1 | 5 | 25 | 224 | 0.139 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 16 | 2 |
| 265 | 1157 | 834 | 27 | 84 | 212 | 98 | 0.061 | 453 | 60 | 180 | 140 | 18 | 2 | 16 | 3 | 871 | 53 |
| 266 | 2617 | 1,799 | 64 | 201 | 553 | 171 | 0.106 | 976 | 128 | 388 | 302 | 42 | 4 | 37 | 8 | 1887 | 200 |
| 267 | 321 | 216 | 10 | 32 | 63 | 156 | 0.097 | 117 | 15 | 47 | 36 | 7 | 1 | 6 | 1 | 230 | 22 |
| 268 | 1102 | 818 | 26 | 80 | 178 | 159 | 0.099 | 444 | 58 | 176 | 138 | 17 | 2 | 15 | 3 | 853 | 84 |
| 269 | 801 | 482 | 23 | 77 | 219 | 2450 | 1.522 | 262 | 34 | 104 | 81 | 15 | 2 | 14 | 3 | 515 | 784 |
| 270 | 13 | 10 | 0 | 1 | 2 | 620 | 0.385 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 4 |
| 271 | 809 | 488 | 23 | 78 | 220 | 370 | 0.230 | 265 | 35 | 105 | 82 | 15 | 2 | 14 | 3 | 521 | 120 |
| 272 | 4 | 3 | 0 | 0 | 1 | 1246 | 0.774 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 2 |
| 273 | 16 | 10 | 0 | 2 | 4 | 625 | 0.388 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 4 |
| 274 | 837 | 508 | 23 | 81 | 225 | 1231 | 0.765 | 276 | 36 | 110 | 85 | 15 | 2 | 15 | 3 | 542 | 414 |
| 275 | 33 | 25 | 1 | 3 | 4 | 377 | 0.234 | 14 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | 26 | 6 |
| 276 | 881 | 543 | 25 | 83 | 230 | 159 | 0.099 | 295 | 39 | 117 | 91 | 16 | 2 | 15 | 3 | 579 | 57 |
| 277 | 21 | 14 | 1 | 2 | 4 | 1074 | 0.667 | 8 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 15 | 10 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 355 | 227 | 10 | 33 | 85 | 157 | 0.098 | 123 | 16 | 49 | 38 | 7 | 1 | 6 | 1 | 241 | 24 |
| 280 | 1032 | 619 | 29 | 98 | 286 | 163 | 0.101 | 336 | 44 | 134 | 104 | 19 | 2 | 18 | 4 | 661 | 67 |
| 281 | 0 | 0 | 0 | 0 | 0 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 710 | 454 | 19 | 66 | 171 | 167 | 0.104 | 246 | 32 | 98 | 76 | 13 | 1 | 12 | 2 | 482 | 50 |
| 283 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1176 | 1,004 | 39 | 62 | 71 | 365 | 0.227 | 545 | 72 | 217 | 169 | 26 | 3 | 11 | 1 | 1043 | 236 |
| 285 | 324 | 217 | 12 | 25 | 70 | 230 | 0.143 | 118 | 15 | 47 | 36 | 8 | 1 | 5 | 1 | 231 | 33 |
| 286 | 571 | 516 | 19 | 28 | 8 | 209 | 0.130 | 280 | 37 | 111 | 87 | 13 | 1 | 5 | 0 | 534 | 69 |
| 287 | 819 | 439 | 21 | 34 | 325 | 292 | 0.181 | 238 | 31 | 95 | 74 | 14 | 1 | 6 | 5 | 464 | 84 |
| 288 | 231 | 174 | 9 | 21 | 27 | 152 | 0.094 | 94 | 12 | 38 | 29 | 6 | 1 | 4 | 0 | 184 | 17 |
| 289 | 939 | 519 | 24 | 39 | 357 | 285 | 0.177 | 282 | 37 | 112 | 87 | 16 | 2 | 7 | 5 | 548 | 97 |
| 290 | 917 | 227 | 15 | 26 | 649 | 328 | 0.204 | 123 | 16 | 49 | 38 | 10 | 1 | 5 | 9 | 252 | 51 |
| 294 | 44 | 43 | 1 | 0 | 0 | 824 | 0.512 | 23 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | 44 | 22 |
| 301 | 50 | 41 | 2 | 7 | 0 | 774 | 0.481 | 22 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | 44 | 21 |
| 302 | 94 | 83 | 3 | 8 | 0 | 796 | 0.494 | 45 | 6 | 18 | 14 | 2 | 0 | 1 | 0 | 86 | 43 |
| 303 | 690 | 50 | 4 | 11 | 625 | 1514 | 0.941 | 27 | 4 | 11 | 8 | 3 | 0 | 2 | 9 | 64 | 60 |
| 304 | 540 | 483 | 13 | 44 | 0 | 729 | 0.453 | 262 | 34 | 104 | 81 | 9 | 1 | 8 | 0 | 500 | 226 |
| 306 | 1902 | 1,019 | 60 | 203 | 620 | 818 | 0.508 | 553 | 73 | 220 | 171 | 40 | 4 | 37 | 9 | 1107 | 563 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 307 | 2088 | 1,220 | 59 | 189 | 620 | 0 | 0.000 | 662 | 87 | 263 | 205 | 39 | 4 | 35 | 9 | 1304 | 0 |
| 324 | 109 | 86 | 3 | 11 | 9 | 2925 | 1.817 | 47 | 6 | 19 | 14 | 2 | 0 | 2 | 0 | 90 | 164 |
| 325 | 3841 | 3,002 | 74 | 268 | 497 | 2224 | 1.382 | 1629 | 214 | 647 | 505 | 49 | 5 | 49 | 7 | 3107 | 4292 |
| 326 | 886 | 664 | 19 | 81 | 122 | 3506 | 2.178 | 360 | 47 | 143 | 112 | 13 | 1 | 15 | 2 | 693 | 1510 |
| 327 | 2845 | 2,251 | 52 | 177 | 365 | 227 | 0.141 | 1222 | 161 | 486 | 378 | 34 | 4 | 33 | 5 | 2322 | 327 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 6570 | 5,416 | 130 | 447 | 577 | 0 | 0.000 | 2939 | 387 | 1168 | 911 | 86 | 9 | 83 | 8 | 5591 | 0 |
| 359 | 69 | 54 | 2 | 6 | 7 | 339 | 0.211 | 29 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 57 | 12 |
| 360 | 4454 | 3,734 | 86 | 281 | 353 | 247 | 0.153 | 2027 | 267 | 805 | 628 | 57 | 6 | 52 | 5 | 3846 | 590 |
| 361 | 4293 | 3,310 | 85 | 326 | 572 | 337 | 0.209 | 1796 | 236 | 714 | 557 | 56 | 6 | 60 | 8 | 3434 | 719 |
| 362 | 26 | 24 | 0 | 1 | 1 | 338 | 0.210 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 5 |
| 363 | 2598 | 2,313 | 48 | 137 | 100 | 4495 | 2.792 | 1255 | 165 | 499 | 389 | 32 | 3 | 25 | 1 | 2370 | 6618 |
| 364 | 3649 | 2,820 | 76 | 286 | 467 | 286 | 0.178 | 1531 | 201 | 608 | 474 | 50 | 5 | 53 | 7 | 2929 | 520 |
| 365 | 903 | 723 | 23 | 64 | 93 | 1602 | 0.995 | 392 | 52 | 156 | 122 | 15 | 2 | 12 | 1 | 751 | 748 |
| 366 | 10 | 5 | 0 | 1 | 4 | 1742 | 1.082 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 6 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 992 | 678 | 16 | 36 | 262 | 388 | 0.241 | 368 | 48 | 146 | 114 | 11 | 1 | 7 | 4 | 699 | 168 |
| 376 | 1663 | 1,331 | 27 | 60 | 245 | 477 | 0.296 | 722 | 95 | 287 | 224 | 18 | 2 | 11 | 4 | 1363 | 404 |
| 377 | 84 | 68 | 2 | 6 | 8 | 339 | 0.211 | 37 | 5 | 15 | 11 | 1 | 0 | 1 | 0 | 71 | 15 |
| 378 | 1123 | 957 | 19 | 38 | 109 | 212 | 0.132 | 519 | 68 | 206 | 161 | 13 | 1 | 7 | 2 | 978 | 129 |
| 379 | 750 | 530 | 12 | 25 | 183 | 331 | 0.206 | 288 | 38 | 114 | 89 | 8 | 1 | 5 | 3 | 545 | 112 |
| 380 | 26 | 24 | 0 | 1 | 1 | 283 | 0.176 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 4 |
| 381 | 738 | 681 | 13 | 26 | 18 | 469 | 0.291 | 370 | 49 | 147 | 114 | 9 | 1 | 5 | 0 | 694 | 202 |
| 386 | 363 | 230 | 20 | 56 | 57 | 810 | 0.503 | 125 | 16 | 50 | 39 | 13 | 1 | 10 | 1 | 255 | 128 |
| 387 | 2123 | 1,317 | 58 | 179 | 569 | 2761 | 1.715 | 715 | 94 | 284 | 221 | 38 | 4 | 33 | 8 | 1398 | 2398 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 30 | 25 | 1 | 1 | 3 | 189 | 0.117 | 14 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 26 | 3 |
| 390 | 525 | 430 | 18 | 44 | 33 | 1189 | 0.739 | 233 | 31 | 93 | 72 | 12 | 1 | 8 | 0 | 451 | 333 |
| 392 | 721 | 477 | 28 | 113 | 103 | 436 | 0.271 | 259 | 34 | 103 | 80 | 18 | 2 | 21 | 1 | 519 | 141 |
| 393 | 200 | 49 | 11 | 70 | 70 | 934 | 0.580 | 27 | 3 | 11 | 8 | 7 | 1 | 13 | 1 | 71 | 41 |
| 394 | 3513 | 2,613 | 109 | 340 | 451 | 1292 | 0.803 | 1418 | 187 | 564 | 439 | 72 | 8 | 63 | 7 | 2757 | 2212 |
| 396 | 2707 | 2,125 | 73 | 216 | 293 | 2366 | 1.470 | 1153 | 152 | 458 | 357 | 48 | 5 | 40 | 4 | 2218 | 3260 |
| 397 | 230 | 203 | 7 | 16 | 4 | 1588 | 0.986 | 110 | 14 | 44 | 34 | 5 | 0 | 3 | 0 | 211 | 208 |
| 398 | 2704 | 2,446 | 73 | 184 | 1 | 560 | 0.348 | 1328 | 175 | 528 | 411 | 48 | 5 | 34 | 0 | 2528 | 880 |
| 399 | 253 | 242 | 4 | 7 | 0 | 3389 | 2.105 | 131 | 17 | 52 | 41 | 3 | 0 | 1 | 0 | 246 | 517 |
| 400 | 1934 | 1,740 | 50 | 140 | 4 | 1704 | 1.059 | 944 | 124 | 375 | 293 | 33 | 4 | 26 | 0 | 1799 | 1904 |
| 401 | 0 | 0 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 11 | 11 | 0 | 0 | 0 | 1010 | 0.627 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 7 |
| 406 | 752 | 668 | 59 | 18 | 7 | 395 | 0.245 | 363 | 48 | 144 | 112 | 39 | 4 | 3 | 0 | 713 | 175 |
| 407 | 1 | 1 | 0 | 0 | 0 | 756 | 0.470 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 408 | 0 | 0 | 0 | 0 | 0 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 188 | 176 | 7 | 5 | 0 | 1137 | 0.706 | 96 | 13 | 38 | 30 | 5 | 0 | 1 | 0 | 182 | 128 |
| 410 | 1 | 0 | 0 | 0 | 1 | 884 | 0.549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 182 | 125 | 6 | 23 | 28 | 678 | 0.421 | 68 | 9 | 27 | 21 | 4 | 0 | 4 | 0 | 134 | 56 |
| 414 | 12 | 7 | 0 | 0 | 5 | 895 | 0.556 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 7 | 4 |
| 415 | 2342 | 1,870 | 62 | 172 | 238 | 855 | 0.531 | 1015 | 134 | 403 | 314 | 41 | 4 | 32 | 3 | 1947 | 1034 |
| 416 | 817 | 626 | 18 | 66 | 107 | 284 | 0.176 | 340 | 45 | 135 | 105 | 12 | 1 | 12 | 2 | 652 | 115 |
| 417 | 77 | 8 | 0 | 2 | 67 | 303 | 0.188 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 9 | 2 |
| 419 | 482 | 367 | 9 | 30 | 76 | 343 | 0.213 | 199 | 26 | 79 | 62 | 6 | 1 | 6 | 1 | 379 | 81 |
| 420 | 37 | 3 | 0 | 1 | 33 | 300 | 0.186 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 1 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 762 | 101 | 6 | 15 | 640 | 828 | 0.514 | 55 | 7 | 22 | 17 | 4 | 0 | 3 | 9 | 117 | 60 |
| 425 | 26 | 23 | 1 | 2 | 0 | 203 | 0.126 | 12 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 24 | 3 |
| 426 | 51 | 12 | 1 | 2 | 36 | 276 | 0.171 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 1 | 14 | 2 |
| 427 | 27 | 23 | 1 | 3 | 0 | 654 | 0.406 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | 24 | 10 |
| 428 | 32 | 27 | 1 | 3 | 1 | 293 | 0.182 | 15 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | 28 | 5 |
| 429 | 50 | 13 | 1 | 1 | 35 | 219 | 0.136 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 1 | 14 | 2 |
| 430 | 788 | 639 | 21 | 58 | 70 | 114 | 0.071 | 347 | 46 | 138 | 107 | 14 | 1 | 11 | 1 | 665 | 47 |
| 431 | 7 | 4 | 0 | 0 | 3 | 524 | 0.326 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 1 |
| 432 | 18 | 17 | 0 | 0 | 1 | 629 | 0.391 | 9 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 17 | 7 |
| 433 | 1777 | 1,581 | 42 | 132 | 22 | 1802 | 1.119 | 858 | 113 | 341 | 266 | 28 | 3 | 24 | 0 | 1633 | 1828 |
| 434 | 0 | 0 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 73 | 70 | 1 | 2 | 0 | 1537 | 0.955 | 38 | 5 | 15 | 12 | 1 | 0 | 0 | 0 | 71 | 68 |
| 436 | 3 | 3 | 0 | 0 | 0 | 178 | 0.111 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 1643 | 1,444 | 40 | 129 | 30 | 2365 | 1.469 | 784 | 103 | 311 | 243 | 26 | 3 | 24 | 0 | 1495 | 2196 |
| 443 | 11 | 10 | 0 | 1 | 0 | 1588 | 0.986 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 10 |
| 444 | 1601 | 1,403 | 40 | 128 | 30 | 905 | 0.562 | 761 | 100 | 303 | 236 | 26 | 3 | 24 | 0 | 1453 | 817 |
| 452 | 8 | 8 | 0 | 0 | 0 | 815 | 0.506 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 4 |
| 453 | 1471 | 1,288 | 34 | 121 | 28 | 1563 | 0.971 | 699 | 92 | 278 | 217 | 22 | 2 | 22 | 0 | 1333 | 1294 |
| 454 | 266 | 246 | 5 | 15 | 0 | 661 | 0.411 | 134 | 18 | 53 | 41 | 3 | 0 | 3 | 0 | 252 | 103 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 455 | 1197 | 1,034 | 30 | 106 | 27 | 366 | 0.227 | 561 | 74 | 223 | 174 | 20 | 2 | 20 | 0 | 1074 | 244 |
| 458 | 10 | 9 | 0 | 1 | 0 | 237 | 0.147 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 9 | 1 |
| 464 | 69 | 61 | 3 | 5 | 0 | 702 | 0.436 | 33 | 4 | 13 | 10 | 2 | 0 | 1 | 0 | 64 | 28 |
| 477 | 100 | 80 | 4 | 7 | 9 | 750 | 0.466 | 43 | 6 | 17 | 13 | 3 | 0 | 1 | 0 | 84 | 39 |
| 478 | 1253 | 1,054 | 36 | 117 | 46 | 253 | 0.157 | 572 | 75 | 227 | 177 | 24 | 3 | 22 | 1 | 1100 | 173 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 805 | 726 | 15 | 64 | 0 | 500 | 0.311 | 394 | 52 | 157 | 122 | 10 | 1 | 12 | 0 | 747 | 232 |
| 481 | 1 | 0 | 0 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 177 | 164 | 2 | 10 | 1 | 1353 | 0.841 | 89 | 12 | 35 | 28 | 1 | 0 | 2 | 0 | 167 | 140 |
| 483 | 955 | 837 | 22 | 96 | 0 | 589 | 0.366 | 454 | 60 | 181 | 141 | 15 | 2 | 18 | 0 | 869 | 318 |
| 484 | 2 | 1 | 0 | 0 | 1 | 684 | 0.425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 485 | 1482 | 1,360 | 23 | 99 | 0 | 319 | 0.198 | 738 | 97 | 293 | 229 | 15 | 2 | 18 | 0 | 1392 | 276 |
| 488 | 10 | 9 | 0 | 1 | 0 | 1441 | 0.895 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 9 | 8 |
| 494 | 2789 | 2,525 | 76 | 188 | 0 | 1039 | 0.645 | 1370 | 180 | 545 | 425 | 50 | 5 | 35 | 0 | 2610 | 1685 |
| 498 | 3 | 3 | 0 | 0 | 0 | 792 | 0.492 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 1 |
| 499 | 846 | 170 | 11 | 20 | 645 | 660 | 0.410 | 92 | 12 | 37 | 29 | 7 | 1 | 4 | 9 | 191 | 78 |
| 500 | 867 | 189 | 12 | 21 | 645 | 395 | 0.245 | 103 | 13 | 41 | 32 | 8 | 1 | 4 | 9 | 211 | 52 |
| 502 | 1 | 1 | 0 | 0 | 0 | 855 | 0.531 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 370 | 251 | 25 | 94 | 0 | 360 | 0.224 | 136 | 18 | 54 | 42 | 16 | 2 | 17 | 0 | 286 | 64 |

Total 185735

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2-GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) | Road Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 4299 | 566 | 1708 | 1332 | 225 | 24 | 166 | 0 | A |
| 10 | 3 | 282 | 37 | 112 | 87 | 15 | 2 | 7 | 0 | A |
| 13 | 6 | 181 | 24 | 72 | 56 | 8 | 1 | 8 | 3 | A |
| 32 | 3 | 1574 | 207 | 626 | 488 | 114 | 12 | 41 | 0 | A |
| 33 | 1 | 507 | 67 | 201 | 157 | 20 | 2 | 13 | 0 | M |
| 35 | 7 | 161 | 21 | 64 | 50 | 15 | 2 | 12 | 5 | A |
| 36 | 7 | 1304 | 172 | 518 | 404 | 95 | 10 | 68 | 0 | A |
| 37 | 7 | 29 | 4 | 11 | 9 | 4 | 0 | 4 | 1 | A |
| 38 | 7 | 677 | 89 | 269 | 210 | 54 | 6 | 29 | 0 | A |
| 42 | 7 | 3425 | 451 | 1361 | 1061 | 313 | 33 | 246 | 31 | A |
| 43 | 7 | 307 | 40 | 122 | 95 | 16 | 2 | 7 | 3 | A |
| 46 | 7 | 211 | 28 | 84 | 65 | 15 | 2 | 10 | 0 | A |
| 47 | 7 | 631 | 83 | 251 | 195 | 30 | 3 | 20 | 0 | A |
| 48 | 6 | 239 | 31 | 95 | 74 | 11 | 1 | 7 | 1 | A |
| 50 | 3 | 1809 | 238 | 719 | 560 | 106 | 11 | 60 | 0 | A |
| 51 | 7 | 25 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | A |
| 52 | 3 | 3001 | 395 | 1193 | 930 | 156 | 17 | 117 | 0 | A |
| 53 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 54 | 6 | 168 | 22 | 67 | 52 | 11 | 1 | 9 | 0 | A |
| 55 | 6 | 13 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 56 | 7 | 596 | 78 | 237 | 185 | 39 | 4 | 33 | 0 | A |
| 57 | 7 | 105 | 14 | 42 | 33 | 9 | 1 | 6 | 0 | A |
| 58 | 1 | 29 | 4 | 11 | 9 | 2 | 0 | 1 | 0 | M |
| 59 | 1 | 258 | 34 | 103 | 80 | 37 | 4 | 11 | 0 | M |
| 60 | 1 | 16 | 2 | 7 | 5 | 2 | 0 | 1 | 0 | M |
| 61 | 1 | 18 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | M |
| 62 | 1 | 350 | 46 | 139 | 108 | 64 | 7 | 17 | 0 | M |
| 65 | 3 | 273 | 36 | 108 | 85 | 12 | 1 | 7 | 1 | A |
| 66 | 3 | 319 | 42 | 127 | 99 | 16 | 2 | 9 | 1 | A |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 68 | 7 | 201 | 26 | 80 | 62 | 11 | 1 | 6 | 0 | A |
| 69 | 3 | 285 | 38 | 113 | 88 | 19 | 2 | 9 | 0 | A |
| 70 | 3 | 581 | 77 | 231 | 180 | 42 | 4 | 15 | 0 | A |
| 71 | 1 | 168 | 22 | 67 | 52 | 14 | 1 | 2 | 0 | M |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 73 | 3 | 1742 | 229 | 692 | 540 | 90 | 10 | 68 | 0 | A |
| 74 | 6 | 297 | 39 | 118 | 92 | 11 | 1 | 5 | 0 | A |
| 75 | 1 | 31 | 4 | 12 | 10 | 2 | 0 | 0 | 0 | M |
| 76 | 1 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 77 | 5 | 98 | 13 | 39 | 30 | 4 | 0 | 2 | 0 | A |
| 80 | 5 | 36 | 5 | 14 | 11 | 2 | 0 | 1 | 0 | A |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 82 | 1 | 106 | 14 | 42 | 33 | 5 | 1 | 3 | 0 | M |
| 83 | 5 | 11 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 86 | 1 | 77 | 10 | 31 | 24 | 4 | 0 | 2 | 2 | M |
| 87 | 1 | 21 | 3 | 8 | 6 | 2 | 0 | 1 | 0 | M |
| 88 | 1 | 19 | 3 | 8 | 6 | 2 | 0 | 1 | 0 | M |
| 95 | 6 | 94 | 12 | 37 | 29 | 3 | 0 | 2 | 0 | A |
| 96 | 8 | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | A |
| 97 | 5 | 61 | 8 | 24 | 19 | 2 | 0 | 1 | 0 | A |
| 98 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 99 | 5 | 45 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | A |
| 100 | 1 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 101 | 1 | 77 | 10 | 31 | 24 | 3 | 0 | 2 | 0 | M |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 103 | 1 | 29 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | M |
| 104 | 1 | 73 | 10 | 29 | 23 | 3 | 0 | 2 | 0 | M |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 106 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 107 | 1 | 72 | 10 | 29 | 22 | 3 | 0 | 2 | 0 | M |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 109 | 5 | 18 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | A |
| 110 | 6 | 143 | 19 | 57 | 44 | 6 | 1 | 5 | 1 | A |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 112 | 6 | 158 | 21 | 63 | 49 | 7 | 1 | 6 | 1 | A |
| 113 | 5 | 5 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | A |
| 114 | 1 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | M |
| 115 | 6 | 169 | 22 | 67 | 52 | 7 | 1 | 6 | 1 | A |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 117 | 6 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 118 | 6 | 161 | 21 | 64 | 50 | 7 | 1 | 6 | 1 | A |
| 119 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 120 | 1 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | M |
| 121 | 6 | 182 | 24 | 73 | 57 | 8 | 1 | 6 | 1 | A |
| 122 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 123 | 1 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 124 | 6 | 189 | 25 | 75 | 59 | 9 | 1 | 6 | 1 | A |
| 125 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 126 | 6 | 197 | 26 | 78 | 61 | 9 | 1 | 6 | 1 | A |
| 127 | 1 | 9 | 1 | 4 | 3 | 1 | 0 | 1 | 5 | M |
| 128 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 129 | 6 | 226 | 30 | 90 | 70 | 10 | 1 | 7 | 1 | A |
| 130 | 6 | 16 | 2 | 7 | 5 | 1 | 0 | 0 | 0 | A |
| 131 | 6 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 133 | 3 | 20 | 3 | 8 | 6 | 1 | 0 | 0 | 0 | A |
| 134 | 1 | 37 | 5 | 15 | 11 | 2 | 0 | 1 | 0 | M |
| 135 | 3 | 286 | 38 | 114 | 89 | 13 | 1 | 8 | 1 | A |
| 136 | 6 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| 137 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 139 | 1 | 43 | 6 | 17 | 13 | 2 | 0 | 2 | 0 | M |
| 140 | 1 | 40 | 5 | 16 | 12 | 2 | 0 | 1 | 0 | M |
| 141 | 1 | 133 | 17 | 53 | 41 | 6 | 1 | 4 | 0 | M |
| 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 143 | 3 | 151 | 20 | 60 | 47 | 8 | 1 | 6 | 0 | A |
| 144 | 3 | 142 | 19 | 57 | 44 | 7 | 1 | 6 | 0 | A |
| 145 | 3 | 148 | 19 | 59 | 46 | 8 | 1 | 6 | 0 | A |
| 146 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 147 | 6 | 163 | 21 | 65 | 50 | 9 | 1 | 7 | 0 | A |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 149 | 6 | 181 | 24 | 72 | 56 | 11 | 1 | 7 | 0 | A |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 151 | 1 | 185 | 24 | 73 | 57 | 11 | 1 | 7 | 0 | M |
| 152 | 1 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 4 | M |
| 153 | 1 | 219 | 29 | 87 | 68 | 13 | 1 | 8 | 0 | M |
| 154 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 155 | 3 | 321 | 42 | 128 | 99 | 19 | 2 | 9 | 0 | A |
| 156 | 3 | 79 | 10 | 31 | 24 | 4 | 0 | 2 | 0 | A |
| 157 | 3 | 384 | 50 | 152 | 119 | 24 | 3 | 11 | 0 | A |
| 158 | 6 | 133 | 18 | 53 | 41 | 4 | 0 | 3 | 0 | A |
| 159 | 6 | 16 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | A |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 161 | 3 | 402 | 53 | 160 | 124 | 24 | 3 | 22 | 0 | A |
| 162 | 3 | 1368 | 180 | 544 | 424 | 81 | 9 | 71 | 0 | A |
| 163 | 3 | 276 | 36 | 110 | 85 | 16 | 2 | 14 | 0 | A |
| 164 | 3 | 10 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| 165 | 1 | 3522 | 463 | 1399 | 1091 | 181 | 19 | 140 | 0 | M |
| 168 | 1 | 115 | 15 | 46 | 36 | 7 | 1 | 7 | 0 | M |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 170 | 3 | 158 | 21 | 63 | 49 | 9 | 1 | 8 | 0 | A |
| 171 | 3 | 474 | 62 | 188 | 147 | 18 | 2 | 11 | 0 | A |
| 172 | 6 | 902 | 119 | 358 | 279 | 33 | 4 | 22 | 0 | A |
| 173 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 174 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 177 | 7 | 619 | 82 | 246 | 192 | 58 | 6 | 47 | 6 | A |
| 178 | 7 | 404 | 53 | 161 | 125 | 32 | 3 | 19 | 3 | A |
| 179 | 7 | 1345 | 177 | 535 | 417 | 124 | 13 | 99 | 12 | A |
| 180 | 7 | 104 | 14 | 41 | 32 | 8 | 1 | 5 | 0 | A |
| 181 | 1 | 442 | 58 | 176 | 137 | 18 | 2 | 13 | 1 | M |
| 182 | 1 | 375 | 49 | 149 | 116 | 15 | 2 | 11 | 1 | M |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 184 | 1 | 315 | 42 | 125 | 98 | 13 | 1 | 10 | 1 | M |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 186 | 1 | 167 | 22 | 66 | 52 | 7 | 1 | 6 | 1 | M |
| 190 | 7 | 14932 | 1965 | 5934 | 4626 | 423 | 45 | 375 | 47 | A |
| 191 | 7 | 8985 | 1182 | 3571 | 2783 | 263 | 28 | 252 | 25 | A |
| 192 | 7 | 2235 | 294 | 888 | 692 | 57 | 6 | 33 | 10 | A |
| 194 | 5 | 37 | 5 | 15 | 11 | 4 | 0 | 3 | 0 | A |
| 195 | 5 | 92 | 12 | 37 | 29 | 8 | 1 | 6 | 0 | A |
| 196 | 5 | 240 | 32 | 96 | 74 | 21 | 2 | 17 | 0 | A |
| 198 | 5 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | A |
| 199 | 5 | 28 | 4 | 11 | 9 | 2 | 0 | 1 | 0 | A |
| 200 | 6 | 599 | 79 | 238 | 186 | 49 | 5 | 37 | 0 | A |
| 205 | 6 | 760 | 100 | 302 | 235 | 50 | 5 | 44 | 0 | A |
| 206 | 6 | 1332 | 175 | 529 | 413 | 88 | 9 | 75 | 0 | A |
| 207 | 6 | 16 | 2 | 6 | 5 | 2 | 0 | 3 | 0 | A |
| 215 | 3 | 88 | 12 | 35 | 27 | 2 | 0 | 1 | 0 | A |
| 216 | 6 | 242 | 32 | 96 | 75 | 9 | 1 | 8 | 1 | A |
| 217 | 3 | 38 | 5 | 15 | 12 | 2 | 0 | 1 | 0 | A |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 7 | 95 | 12 | 38 | 29 | 4 | 0 | 4 | 0 | A |
| 219 | 6 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 221 | 6 | 45 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | A |
| 223 | 6 | 23 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 225 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 226 | 7 | 40 | 5 | 16 | 13 | 2 | 0 | 2 | 0 | A |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 229 | 6 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 230 | 6 | 18 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | A |
| 231 | 6 | 101 | 13 | 40 | 31 | 3 | 0 | 3 | 1 | A |
| 232 | 7 | 594 | 78 | 236 | 184 | 25 | 3 | 25 | 5 | A |
| 233 | 7 | 23 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 236 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 237 | 7 | 466 | 61 | 185 | 144 | 22 | 2 | 23 | 5 | A |
| 238 | 6 | 51 | 7 | 20 | 16 | 1 | 0 | 1 | 0 | A |
| 239 | 6 | 336 | 44 | 134 | 104 | 18 | 2 | 19 | 4 | A |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 242 | 1 | 211 | 28 | 84 | 65 | 11 | 1 | 11 | 2 | M |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 244 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 245 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 246 | 1 | 17 | 2 | 7 | 5 | 2 | 0 | 2 | 0 | M |
| 247 | 1 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | M |
| 250 | 5 | 48 | 6 | 19 | 15 | 2 | 0 | 2 | 0 | A |
| 252 | 6 | 553 | 73 | 220 | 171 | 23 | 2 | 23 | 5 | A |
| 254 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 256 | 6 | 117 | 15 | 46 | 36 | 3 | 0 | 2 | 0 | A |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 260 | 3 | 809 | 106 | 322 | 251 | 31 | 3 | 28 | 6 | A |
| 261 | 5 | 65 | 8 | 26 | 20 | 2 | 0 | 2 | 0 | A |
| 262 | 1 | 74 | 10 | 29 | 23 | 3 | 0 | 3 | 0 | M |
| 263 | 1 | 55 | 7 | 22 | 17 | 2 | 0 | 2 | 0 | M |
| 264 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 265 | 1 | 28 | 4 | 11 | 9 | 1 | 0 | 1 | 0 | M |
| 266 | 1 | 104 | 14 | 41 | 32 | 4 | 0 | 4 | 1 | M |
| 267 | 1 | 11 | 1 | 5 | 4 | 1 | 0 | 1 | 0 | M |
| 268 | 1 | 44 | 6 | 17 | 14 | 2 | 0 | 1 | 0 | M |
| 269 | 6 | 398 | 52 | 158 | 123 | 23 | 2 | 22 | 5 | A |
| 270 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 271 | 6 | 61 | 8 | 24 | 19 | 3 | 0 | 3 | 1 | A |
| 272 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 273 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 274 | 6 | 211 | 28 | 84 | 65 | 12 | 1 | 11 | 2 | A |
| 275 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 276 | 6 | 29 | 4 | 12 | 9 | 2 | 0 | 2 | 0 | A |
| 277 | 1 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 279 | 1 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | M |
| 280 | 1 | 34 | 4 | 14 | 11 | 2 | 0 | 2 | 0 | M |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 282 | 1 | 26 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | M |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 284 | 1 | 124 | 16 | 49 | 38 | 6 | 1 | 3 | 0 | M |
| 285 | 1 | 17 | 2 | 7 | 5 | 1 | 0 | 1 | 0 | M |
| 286 | 1 | 36 | 5 | 14 | 11 | 2 | 0 | 1 | 0 | M |
| 287 | 1 | 43 | 6 | 17 | 13 | 3 | 0 | 1 | 1 | M |
| 288 | 1 | 9 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | M |
| 289 | 1 | 50 | 7 | 20 | 15 | 3 | 0 | 1 | 1 | M |
| 290 | 1 | 25 | 3 | 10 | 8 | 2 | 0 | 1 | 2 | M |
| 294 | 7 | 12 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 301 | 6 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | A |
| 302 | 6 | 22 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 303 | 6 | 26 | 3 | 10 | 8 | 2 | 0 | 2 | 9 | A |
| 304 | 6 | 119 | 16 | 47 | 37 | 4 | 0 | 4 | 0 | A |
| 306 | 6 | 281 | 37 | 112 | 87 | 20 | 2 | 19 | 5 | A |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 324 | 7 | 85 | 11 | 34 | 26 | 4 | 0 | 4 | 0 | A |
| 325 | 7 | 2251 | 296 | 895 | 697 | 67 | 7 | 68 | 10 | A |
| 326 | 7 | 785 | 103 | 312 | 243 | 27 | 3 | 33 | 4 | A |
| 327 | 7 | 172 | 23 | 68 | 53 | 5 | 1 | 5 | 1 | A |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 359 | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 360 | 1 | 311 | 41 | 124 | 96 | 9 | 1 | 8 | 1 | M |
| 361 | 1 | 376 | 49 | 149 | 117 | 12 | 1 | 13 | 2 | M |
| 362 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 363 | 1 | 3505 | 461 | 1393 | 1086 | 88 | 9 | 71 | 4 | M |
| 364 | 1 | 272 | 36 | 108 | 84 | 9 | 1 | 9 | 1 | M |
| 365 | 6 | 391 | 51 | 155 | 121 | 15 | 2 | 12 | 1 | A |
| 366 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 375 | 1 | 89 | 12 | 35 | 27 | 3 | 0 | 2 | 1 | M |
| 376 | 1 | 214 | 28 | 85 | 66 | 5 | 1 | 3 | 1 | M |
| 377 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 378 | 1 | 68 | 9 | 27 | 21 | 2 | 0 | 1 | 0 | M |
| 379 | 1 | 59 | 8 | 24 | 18 | 2 | 0 | 1 | 1 | M |
| 380 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 381 | 1 | 108 | 14 | 43 | 33 | 2 | 0 | 1 | 0 | M |
| | 386 | 6 | 63 | 8 | 25 | 19 | 7 | 1 | 5 | 0 | A |
| | 387 | 3 | 1226 | 161 | 487 | 380 | 66 | 7 | 57 | 14 | A |
| | 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 389 | 7 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| | 390 | 7 | 172 | 23 | 69 | 53 | 9 | 1 | 6 | 0 | A |
| | 392 | 7 | 70 | 9 | 28 | 22 | 5 | 1 | 6 | 0 | A |
| | 393 | 7 | 15 | 2 | 6 | 5 | 4 | 0 | 7 | 1 | A |
| | 394 | 3 | 1138 | 150 | 452 | 353 | 58 | 6 | 50 | 5 | A |
| | 396 | 3 | 1695 | 223 | 674 | 525 | 71 | 8 | 59 | 6 | A |
| | 397 | 7 | 109 | 14 | 43 | 34 | 5 | 0 | 3 | 0 | A |
| | 398 | 6 | 462 | 61 | 184 | 143 | 17 | 2 | 12 | 0 | A |
| | 399 | 7 | 277 | 36 | 110 | 86 | 6 | 1 | 3 | 0 | A |
| | 400 | 6 | 1000 | 132 | 397 | 310 | 35 | 4 | 27 | 0 | A |
| | 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 405 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| | 406 | 7 | 89 | 12 | 35 | 28 | 10 | 1 | 1 | 0 | A |
| | 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 409 | 7 | 67 | 9 | 27 | 21 | 3 | 0 | 1 | 0 | A |
| | 410 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 413 | 6 | 29 | 4 | 11 | 9 | 2 | 0 | 2 | 0 | A |
| | 414 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| | 415 | 3 | 539 | 71 | 214 | 167 | 22 | 2 | 17 | 2 | A |
| | 416 | 1 | 60 | 8 | 24 | 19 | 2 | 0 | 2 | 0 | M |
| | 417 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 419 | 1 | 42 | 6 | 17 | 13 | 1 | 0 | 1 | 0 | M |
| | 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 424 | 1 | 28 | 4 | 11 | 9 | 2 | 0 | 1 | 5 | M |
| | 425 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | M |
| | 426 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 427 | 5 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| | 428 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| | 429 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 430 | 1 | 25 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | M |
| | 431 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 432 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| | 433 | 6 | 961 | 126 | 382 | 298 | 31 | 3 | 27 | 0 | A |
| | 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 435 | 6 | 36 | 5 | 14 | 11 | 1 | 0 | 0 | 0 | A |
| | 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 442 | 6 | 1151 | 152 | 458 | 357 | 39 | 4 | 35 | 1 | A |
| | 443 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| | 444 | 6 | 428 | 56 | 170 | 133 | 15 | 2 | 13 | 0 | A |
| | 452 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| | 453 | 6 | 679 | 89 | 270 | 210 | 22 | 2 | 22 | 0 | A |
| | 454 | 1 | 55 | 7 | 22 | 17 | 1 | 0 | 1 | 0 | M |
| | 455 | 6 | 128 | 17 | 51 | 40 | 5 | 0 | 4 | 0 | A |
| | 458 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 464 | 5 | 14 | 2 | 6 | 4 | 1 | 0 | 0 | 0 | A |
| | 477 | 1 | 20 | 3 | 8 | 6 | 1 | 0 | 1 | 0 | M |
| | 478 | 1 | 90 | 12 | 36 | 28 | 4 | 0 | 3 | 0 | M |
| | 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 480 | 6 | 122 | 16 | 49 | 38 | 3 | 0 | 4 | 0 | A |
| | 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 482 | 6 | 75 | 10 | 30 | 23 | 1 | 0 | 2 | 0 | A |
| | 483 | 1 | 166 | 22 | 66 | 51 | 5 | 1 | 6 | 0 | M |
| | 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 485 | 1 | 146 | 19 | 58 | 45 | 3 | 0 | 4 | 0 | M |
| | 488 | 6 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | A |
| | 494 | 6 | 885 | 116 | 352 | 274 | 32 | 3 | 22 | 0 | A |
| | 498 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| | 499 | 1 | 38 | 5 | 15 | 12 | 3 | 0 | 2 | 4 | M |
| | 500 | 1 | 25 | 3 | 10 | 8 | 2 | 0 | 1 | 2 | M |
| | 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| | 504 | 1 | 30 | 4 | 12 | 9 | 4 | 0 | 4 | 0 | M |
| Total | | **1177** | **96295** | **12672** | **38268** | **29830** | **4468** | **474** | **3423** | **304** | |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 14235 | 1873 | 5657 | 4410 | 657 | 70 | 450 | 50 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 19618 | 2582 | 7796 | 6077 | 1055 | 112 | 719 | 36 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 821 | 108 | 326 | 254 | 52 | 5 | 37 | 1 | |
| 6 | 19982 | 2629 | 7941 | 6190 | 936 | 99 | 754 | 47 | |
| 7 | 41620 | 5477 | 16540 | 12893 | 1767 | 188 | 1463 | 170 | |
| 8 | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **96295** | **12672** | **38268** | **29830** | **4468** | **474** | **3423** | **304** | **185735** |

**World Logistics Center**
**Project Full Buildout 2035**
**Entrained Road Dust**
Surface Streets

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1820 | 1.13 | 7,006 | 7921 | 301 | 340 | 797 | 901 | 0 | 0 | 9162 | 3.21 | 0.035 | 0.0001 | 0.8 | 0.0003 | 3.1 |
| 10 | A | 826 | 0.51 | 1,011 | 519 | 43 | 22 | 72 | 37 | 0 | 0 | 578 | 2.88 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 13 | A | 345 | 0.21 | 1,555 | 333 | 60 | 13 | 190 | 41 | 1,041 | 223 | 610 | 10.57 | 0.035 | 0.0003 | 0.2 | 0.0012 | 0.7 |
| 32 | A | 1551 | 0.96 | 3,010 | 2900 | 179 | 172 | 228 | 220 | 0 | 0 | 3292 | 2.96 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.0 |
| 33 | M | 2006 | 1.25 | 749 | 933 | 24 | 30 | 57 | 71 | 0 | 0 | 1034 | 2.89 | 0.32 | 0.0006 | 0.6 | 0.0023 | 2.4 |
| 35 | A | 801 | 0.50 | 595 | 296 | 47 | 23 | 127 | 63 | 636 | 316 | 699 | 12.68 | 0.035 | 0.0003 | 0.2 | 0.0014 | 1.0 |
| 36 | A | 1627 | 1.01 | 2,377 | 2402 | 142 | 144 | 365 | 369 | 0 | 0 | 2915 | 3.52 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 37 | A | 219 | 0.14 | 388 | 53 | 41 | 6 | 144 | 20 | 587 | 80 | 158 | 14.14 | 0.035 | 0.0004 | 0.1 | 0.0016 | 0.2 |
| 38 | A | 659 | 0.41 | 3,045 | 1247 | 201 | 82 | 383 | 157 | 7 | 3 | 1489 | 3.38 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 42 | A | 5338 | 3.32 | 1,903 | 6310 | 143 | 474 | 401 | 1330 | 636 | 2109 | 10223 | 7.90 | 0.035 | 0.0002 | 2.2 | 0.0009 | 8.8 |
| 43 | A | 2598 | 1.61 | 350 | 565 | 15 | 24 | 25 | 40 | 110 | 178 | 807 | 7.36 | 0.035 | 0.0002 | 0.2 | 0.0008 | 0.6 |
| 46 | A | 806 | 0.50 | 777 | 389 | 46 | 23 | 109 | 55 | 59 | 30 | 496 | 4.61 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.2 |
| 47 | A | 1995 | 1.24 | 938 | 1162 | 37 | 46 | 88 | 109 | 0 | 0 | 1317 | 3.05 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 48 | A | 795 | 0.49 | 892 | 441 | 33 | 16 | 74 | 37 | 102 | 50 | 544 | 4.84 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 50 | A | 479 | 0.30 | 11,199 | 3332 | 540 | 161 | 1,087 | 323 | 0 | 0 | 3817 | 3.09 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 51 | A | 975 | 0.61 | 75 | 45 | 2 | 1 | 5 | 3 | 0 | 0 | 50 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 52 | A | 1269 | 0.79 | 7,014 | 5529 | 299 | 236 | 801 | 631 | 0 | 0 | 6396 | 3.21 | 0.035 | 0.0001 | 0.5 | 0.0003 | 2.2 |
| 53 | A | 795 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 54 | A | 325 | 0.20 | 1,535 | 310 | 83 | 17 | 247 | 50 | 0 | 0 | 377 | 3.56 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 55 | A | 2042 | 1.27 | 19 | 24 | 1 | 1 | 0 | 0 | 0 | 0 | 25 | 2.31 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 56 | A | 1152 | 0.72 | 1,535 | 1099 | 83 | 59 | 247 | 177 | 0 | 0 | 1335 | 3.56 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 57 | A | 246 | 0.15 | 1,267 | 194 | 86 | 13 | 227 | 35 | 0 | 0 | 241 | 3.70 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 58 | M | 172 | 0.11 | 493 | 53 | 26 | 3 | 37 | 4 | 0 | 0 | 59 | 2.93 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.1 |
| 59 | M | 786 | 0.49 | 974 | 476 | 116 | 57 | 121 | 59 | 0 | 0 | 591 | 3.43 | 0.32 | 0.0007 | 0.4 | 0.0027 | 1.6 |
| 60 | M | 159 | 0.10 | 307 | 30 | 25 | 2 | 66 | 7 | 209 | 21 | 60 | 10.59 | 0.32 | 0.0021 | 0.1 | 0.0087 | 0.5 |
| 61 | M | 97 | 0.06 | 562 | 34 | 30 | 2 | 52 | 3 | 168 | 10 | 49 | 7.25 | 0.32 | 0.0014 | 0.1 | 0.0059 | 0.3 |
| 62 | M | 781 | 0.49 | 1,330 | 645 | 199 | 97 | 192 | 93 | 0 | 0 | 835 | 3.61 | 0.32 | 0.0007 | 0.6 | 0.0029 | 2.4 |
| 65 | A | 795 | 0.49 | 1,018 | 503 | 37 | 18 | 81 | 40 | 102 | 50 | 611 | 4.60 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 66 | A | 812 | 0.50 | 1,167 | 589 | 47 | 24 | 97 | 49 | 102 | 51 | 713 | 4.43 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 67 | M | 778 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 68 | A | 814 | 0.51 | 731 | 370 | 32 | 16 | 64 | 32 | 0 | 0 | 418 | 3.01 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 69 | A | 819 | 0.51 | 1,033 | 526 | 56 | 28 | 91 | 46 | 0 | 0 | 600 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 70 | A | 795 | 0.49 | 2,169 | 1071 | 130 | 64 | 165 | 81 | 0 | 0 | 1217 | 2.96 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 71 | M | 803 | 0.50 | 620 | 309 | 42 | 21 | 25 | 12 | 0 | 0 | 343 | 2.69 | 0.32 | 0.0005 | 0.2 | 0.0021 | 0.7 |
| 72 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 73 | A | 742 | 0.46 | 6,962 | 3209 | 297 | 137 | 799 | 368 | 0 | 0 | 3714 | 3.21 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 74 | A | 1573 | 0.98 | 560 | 547 | 17 | 17 | 27 | 26 | 1 | 1 | 591 | 2.69 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 75 | M | 805 | 0.50 | 114 | 57 | 5 | 3 | 5 | 3 | 5 | 3 | 65 | 3.46 | 0.32 | 0.0007 | 0.0 | 0.0028 | 0.2 |
| 76 | M | 1597 | 0.99 | 16 | 16 | 1 | 1 | 1 | 1 | 0 | 0 | 18 | 2.86 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 77 | A | 438 | 0.27 | 661 | 180 | 21 | 6 | 30 | 8 | 6 | 2 | 195 | 2.81 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 80 | A | 138 | 0.09 | 773 | 66 | 27 | 2 | 40 | 3 | 12 | 1 | 73 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 81 | M | 407 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 82 | M | 322 | 0.20 | 976 | 195 | 37 | 7 | 68 | 14 | 93 | 19 | 235 | 4.47 | 0.32 | 0.0009 | 0.2 | 0.0036 | 0.8 |
| 83 | A | 95 | 0.06 | 356 | 21 | 16 | 1 | 27 | 2 | 59 | 3 | 27 | 5.54 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 85 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 86 | M | 284 | 0.18 | 802 | 141 | 38 | 7 | 60 | 11 | 650 | 115 | 273 | 11.44 | 0.32 | 0.0023 | 0.6 | 0.0094 | 2.6 |
| 87 | M | 800 | 0.50 | 77 | 38 | 5 | 2 | 13 | 6 | 0 | 0 | 47 | 3.63 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.1 |
| 88 | M | 809 | 0.50 | 70 | 35 | 5 | 3 | 13 | 7 | 0 | 0 | 44 | 3.75 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.1 |
| 95 | A | 439 | 0.27 | 637 | 174 | 14 | 4 | 36 | 10 | 48 | 13 | 200 | 4.05 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 96 | A | 399 | 0.25 | 147 | 36 | 2 | 0 | 4 | 1 | 3 | 1 | 39 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 97 | A | 389 | 0.24 | 468 | 113 | 12 | 3 | 29 | 7 | 41 | 10 | 133 | 4.29 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 98 | A | 160 | 0.10 | 13 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 4.65 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 99 | A | 405 | 0.25 | 330 | 83 | 6 | 2 | 12 | 3 | 13 | 3 | 91 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 100 | M | 227 | 0.14 | 88 | 12 | 3 | 0 | 8 | 1 | 29 | 4 | 18 | 7.60 | 0.32 | 0.0015 | 0.0 | 0.0062 | 0.1 |
| 101 | M | 313 | 0.19 | 728 | 142 | 24 | 5 | 65 | 13 | 98 | 19 | 178 | 5.17 | 0.32 | 0.0010 | 0.2 | 0.0042 | 0.7 |
| 102 | M | 246 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 103 | M | 291 | 0.18 | 297 | 54 | 12 | 2 | 31 | 6 | 148 | 27 | 88 | 9.23 | 0.32 | 0.0018 | 0.2 | 0.0075 | 0.7 |
| 104 | M | 404 | 0.25 | 535 | 134 | 18 | 5 | 53 | 13 | 82 | 21 | 173 | 5.48 | 0.32 | 0.0011 | 0.2 | 0.0044 | 0.8 |
| 105 | M | 195 | 0.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 106 | M | 1803 | 1.12 | 13 | 15 | 0 | 0 | 1 | 1 | 0 | 0 | 16 | 2.82 | 0.32 | 0.0006 | 0.0 | 0.0022 | 0.0 |
| 107 | M | 388 | 0.24 | 554 | 134 | 19 | 5 | 56 | 13 | 81 | 20 | 171 | 5.39 | 0.32 | 0.0011 | 0.2 | 0.0043 | 0.7 |
| 108 | M | 997 | 0.62 | 12 | 7 | 1 | 1 | 2 | 1 | 0 | 0 | 9 | 3.65 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.0 |
| 109 | A | 787 | 0.49 | 67 | 33 | 4 | 2 | 10 | 5 | 0 | 0 | 40 | 3.49 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 110 | A | 756 | 0.47 | 562 | 264 | 19 | 9 | 57 | 27 | 81 | 38 | 338 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.2 |
| 111 | A | 800 | 0.50 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 112 | A | 817 | 0.51 | 573 | 291 | 21 | 11 | 64 | 32 | 124 | 63 | 397 | 6.36 | 0.035 | 0.0002 | 0.1 | 0.0007 | 0.3 |
| 113 | A | 791 | 0.49 | 18 | 9 | 3 | 1 | 10 | 5 | 24 | 12 | 27 | 13.29 | 0.035 | 0.0004 | 0.0 | 0.0015 | 0.0 |
| 114 | M | 791 | 0.49 | 27 | 13 | 2 | 1 | 8 | 4 | 40 | 20 | 38 | 14.19 | 0.32 | 0.0029 | 0.1 | 0.0117 | 0.4 |
| 115 | A | 851 | 0.53 | 590 | 312 | 21 | 11 | 60 | 32 | 87 | 46 | 401 | 5.41 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 116 | M | 819 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 2 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 117 | A | 757 | 0.47 | 24 | 11 | 1 | 0 | 1 | 0 | 0 | 0 | 12 | 2.63 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 118 | A | 765 | 0.48 | 624 | 297 | 23 | 11 | 66 | 31 | 108 | 51 | 390 | 5.78 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.2 |
| 119 | A | 782 | 0.49 | 7 | 3 | 1 | 0 | 3 | 1 | 13 | 6 | 12 | 14.92 | 0.035 | 0.0004 | 0.0 | 0.0016 | 0.0 |
| 120 | M | 814 | 0.51 | 43 | 22 | 3 | 2 | 9 | 5 | 44 | 22 | 50 | 12.50 | 0.32 | 0.0025 | 0.1 | 0.0103 | 0.5 |
| 121 | A | 825 | 0.51 | 656 | 336 | 24 | 12 | 65 | 33 | 95 | 49 | 431 | 5.36 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 122 | A | 782 | 0.49 | 6 | 3 | 1 | 0 | 3 | 1 | 19 | 9 | 14 | 17.08 | 0.035 | 0.0005 | 0.0 | 0.0019 | 0.0 |
| 123 | M | 791 | 0.49 | 33 | 16 | 2 | 1 | 2 | 1 | 0 | 0 | 18 | 2.84 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 124 | A | 800 | 0.50 | 701 | 348 | 26 | 13 | 68 | 34 | 95 | 47 | 442 | 5.22 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 125 | A | 817 | 0.51 | 12 | 6 | 1 | 1 | 1 | 1 | 0 | 0 | 7 | 3.07 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 126 | A | 774 | 0.48 | 756 | 363 | 27 | 13 | 70 | 34 | 101 | 49 | 459 | 5.17 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.3 |
| 127 | M | 825 | 0.51 | 32 | 16 | 3 | 2 | 11 | 6 | 636 | 326 | 350 | 22.00 | 0.32 | 0.0045 | 1.6 | 0.0183 | 6.4 |
| 128 | A | 774 | 0.48 | 14 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 2.77 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 129 | A | 823 | 0.51 | 814 | 416 | 29 | 15 | 72 | 37 | 101 | 52 | 519 | 5.01 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 130 | A | 800 | 0.50 | 61 | 30 | 3 | 1 | 1 | 0 | 0 | 0 | 32 | 2.44 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 131 | A | 775 | 0.48 | 27 | 13 | 1 | 0 | 1 | 0 | 0 | 0 | 14 | 2.58 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 133 | A | 804 | 0.50 | 73 | 36 | 4 | 2 | 0 | 0 | 0 | 0 | 38 | 2.31 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 134 | M | 760 | 0.47 | 144 | 68 | 6 | 3 | 8 | 4 | 0 | 0 | 75 | 2.75 | 0.32 | 0.0005 | 0.0 | 0.0022 | 0.2 |
| 135 | A | 816 | 0.51 | 1,040 | 527 | 39 | 20 | 82 | 42 | 102 | 52 | 640 | 4.57 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 136 | A | 786 | 0.49 | 42 | 21 | 3 | 1 | 4 | 2 | 0 | 0 | 24 | 3.13 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 137 | A | 790 | 0.49 | 20 | 10 | 1 | 0 | 2 | 1 | 0 | 0 | 11 | 3.12 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 138 | M | 267 | 0.17 | 6 | 1 | 1 | 0 | 5 | 1 | 25 | 4 | 6 | 17.79 | 0.32 | 0.0036 | 0.0 | 0.0147 | 0.1 |
| 139 | M | 504 | 0.31 | 251 | 79 | 10 | 3 | 30 | 9 | 32 | 10 | 101 | 5.22 | 0.32 | 0.0010 | 0.1 | 0.0042 | 0.4 |
| 140 | M | 527 | 0.33 | 223 | 73 | 8 | 3 | 18 | 6 | 0 | 0 | 82 | 2.94 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.2 |
| 141 | M | 1001 | 0.62 | 393 | 244 | 15 | 9 | 37 | 23 | 16 | 10 | 287 | 3.75 | 0.32 | 0.0007 | 0.2 | 0.0030 | 0.9 |
| 142 | M | 291 | 0.18 | 11 | 2 | 1 | 0 | 4 | 1 | 7 | 1 | 4 | 10.38 | 0.32 | 0.0021 | 0.0 | 0.0085 | 0.0 |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 143 | A | 845 | 0.52 | 531 | 279 | 22 | 12 | 57 | 30 | 8 | 4 | 324 | 3.42 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 144 | A | 783 | 0.49 | 539 | 262 | 23 | 11 | 62 | 30 | 5 | 2 | 306 | 3.37 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 145 | A | 787 | 0.49 | 556 | 272 | 26 | 13 | 70 | 34 | 1 | 0 | 319 | 3.33 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 146 | A | 814 | 0.51 | 4 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 4.05 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 147 | A | 798 | 0.50 | 605 | 300 | 29 | 14 | 76 | 38 | 2 | 1 | 353 | 3.36 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 148 | A | 731 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 2 | 23.25 | 0.035 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 149 | A | 808 | 0.50 | 664 | 333 | 33 | 17 | 80 | 40 | 4 | 2 | 392 | 3.37 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 150 | A | 793 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 151 | M | 787 | 0.49 | 696 | 340 | 35 | 17 | 82 | 40 | 0 | 0 | 397 | 3.25 | 0.32 | 0.0006 | 0.3 | 0.0026 | 1.0 |
| 152 | M | 782 | 0.49 | 25 | 12 | 3 | 1 | 10 | 5 | 629 | 306 | 324 | 22.21 | 0.32 | 0.0045 | 1.5 | 0.0184 | 6.0 |
| 153 | M | 798 | 0.50 | 814 | 404 | 40 | 20 | 85 | 42 | 0 | 0 | 465 | 3.15 | 0.32 | 0.0006 | 0.3 | 0.0025 | 1.2 |
| 154 | A | 901 | 0.56 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 155 | A | 775 | 0.48 | 1,228 | 591 | 59 | 28 | 106 | 51 | 0 | 0 | 671 | 3.01 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 156 | A | 771 | 0.48 | 302 | 145 | 14 | 7 | 18 | 9 | 0 | 0 | 160 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 157 | A | 804 | 0.50 | 1,415 | 707 | 73 | 36 | 123 | 61 | 0 | 0 | 805 | 3.02 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 158 | A | 1039 | 0.65 | 380 | 245 | 10 | 6 | 27 | 17 | 42 | 27 | 296 | 4.70 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 159 | A | 170 | 0.11 | 275 | 29 | 5 | 1 | 13 | 1 | 19 | 2 | 33 | 3.87 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 160 | A | 717 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 161 | A | 784 | 0.49 | 1,520 | 740 | 74 | 36 | 246 | 120 | 0 | 0 | 896 | 3.56 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 162 | A | 1052 | 0.65 | 3,857 | 2521 | 189 | 124 | 592 | 387 | 0 | 0 | 3031 | 3.50 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 163 | A | 350 | 0.22 | 2,337 | 508 | 115 | 25 | 347 | 75 | 0 | 0 | 609 | 3.47 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.2 |
| 164 | A | 473 | 0.29 | 63 | 19 | 5 | 1 | 5 | 1 | 0 | 0 | 21 | 3.03 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 165 | M | 1541 | 0.96 | 6,778 | 6488 | 286 | 274 | 794 | 760 | 0 | 0 | 7522 | 3.23 | 0.32 | 0.0006 | 4.8 | 0.0026 | 19.4 |
| 168 | M | 758 | 0.47 | 451 | 212 | 24 | 11 | 80 | 38 | 0 | 0 | 261 | 3.67 | 0.32 | 0.0007 | 0.2 | 0.0029 | 0.8 |
| 169 | A | 931 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 170 | A | 248 | 0.15 | 1,886 | 291 | 91 | 14 | 267 | 41 | 0 | 0 | 346 | 3.42 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 171 | A | 522 | 0.32 | 2,694 | 874 | 82 | 27 | 192 | 62 | 0 | 0 | 962 | 2.85 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 172 | A | 993 | 0.62 | 2,694 | 1662 | 82 | 51 | 192 | 118 | 0 | 0 | 1831 | 2.85 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.6 |
| 173 | A | 1615 | 1.00 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 9.17 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.0 |
| 174 | A | 330 | 0.21 | 21 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 177 | A | 1110 | 0.69 | 1,655 | 1141 | 128 | 88 | 370 | 255 | 587 | 405 | 1889 | 8.12 | 0.035 | 0.0002 | 0.4 | 0.0009 | 1.7 |
| 178 | A | 7132 | 4.43 | 168 | 744 | 11 | 49 | 23 | 102 | 44 | 195 | 1090 | 6.96 | 0.035 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| 179 | A | 2189 | 1.36 | 1,823 | 2479 | 138 | 188 | 394 | 536 | 631 | 858 | 4060 | 8.02 | 0.035 | 0.0002 | 0.9 | 0.0009 | 3.5 |
| 180 | A | 6725 | 4.18 | 46 | 192 | 3 | 13 | 6 | 25 | 4 | 17 | 246 | 4.72 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 181 | M | 625 | 0.39 | 2,096 | 814 | 71 | 28 | 179 | 69 | 223 | 87 | 997 | 4.73 | 0.32 | 0.0009 | 0.9 | 0.0038 | 3.8 |
| 182 | M | 349 | 0.22 | 3,183 | 690 | 107 | 23 | 286 | 62 | 333 | 72 | 847 | 4.73 | 0.32 | 0.0009 | 0.8 | 0.0038 | 3.2 |
| 183 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 184 | M | 292 | 0.18 | 3,204 | 581 | 108 | 20 | 284 | 52 | 347 | 63 | 715 | 4.78 | 0.32 | 0.0009 | 0.7 | 0.0038 | 2.8 |
| 185 | M | 287 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 186 | M | 477 | 0.30 | 1,037 | 307 | 36 | 11 | 102 | 30 | 118 | 35 | 383 | 4.91 | 0.32 | 0.0010 | 0.4 | 0.0040 | 1.5 |
| 190 | A | 6368 | 3.96 | 6,955 | 27513 | 162 | 641 | 514 | 2033 | 815 | 3224 | 33411 | 4.82 | 0.035 | 0.0001 | 4.2 | 0.0005 | 17.3 |
| 191 | A | 4906 | 3.05 | 5,432 | 16555 | 131 | 399 | 448 | 1365 | 577 | 1759 | 20078 | 4.70 | 0.035 | 0.0001 | 2.5 | 0.0005 | 10.1 |
| 192 | A | 4358 | 2.71 | 1,521 | 4118 | 32 | 87 | 66 | 179 | 248 | 671 | 5054 | 5.34 | 0.035 | 0.0001 | 0.7 | 0.0006 | 2.9 |
| 194 | A | 355 | 0.22 | 305 | 67 | 26 | 6 | 69 | 15 | 0 | 0 | 88 | 4.02 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 195 | A | 397 | 0.25 | 690 | 170 | 47 | 12 | 134 | 33 | 0 | 0 | 215 | 3.80 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 196 | A | 716 | 0.44 | 996 | 443 | 73 | 32 | 202 | 90 | 0 | 0 | 565 | 3.86 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.2 |
| 198 | A | 1009 | 0.63 | 48 | 30 | 3 | 2 | 6 | 4 | 0 | 0 | 36 | 3.33 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 199 | A | 378 | 0.23 | 223 | 52 | 11 | 3 | 20 | 5 | 0 | 0 | 60 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 200 | A | 1403 | 0.87 | 1,267 | 1104 | 86 | 75 | 227 | 198 | 0 | 0 | 1377 | 3.70 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 205 | A | 1501 | 0.93 | 1,502 | 1401 | 82 | 76 | 254 | 237 | 0 | 0 | 1714 | 3.62 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.7 |
| 206 | A | 2658 | 1.65 | 1,486 | 2454 | 81 | 134 | 246 | 406 | 0 | 0 | 2994 | 3.59 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 207 | A | 2611 | 1.62 | 18 | 29 | 2 | 3 | 9 | 15 | 0 | 0 | 47 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 215 | A | 2937 | 1.82 | 89 | 162 | 2 | 4 | 2 | 4 | 2 | 4 | 173 | 2.85 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 216 | A | 2000 | 1.24 | 359 | 446 | 11 | 14 | 36 | 45 | 46 | 57 | 562 | 5.13 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.3 |
| 217 | A | 663 | 0.41 | 169 | 70 | 6 | 2 | 16 | 7 | 32 | 13 | 92 | 5.95 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 218 | A | 1167 | 0.72 | 241 | 175 | 8 | 6 | 29 | 21 | 33 | 24 | 225 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 219 | A | 2672 | 1.66 | 14 | 23 | 0 | 0 | 0 | 0 | 1 | 2 | 25 | 3.54 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 221 | A | 2622 | 1.63 | 51 | 83 | 1 | 2 | 2 | 3 | 3 | 5 | 93 | 3.64 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 223 | A | 359 | 0.22 | 194 | 43 | 5 | 1 | 20 | 4 | 14 | 3 | 52 | 4.30 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 225 | M | 1243 | 0.77 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 226 | A | 1643 | 1.02 | 73 | 75 | 3 | 3 | 12 | 12 | 23 | 23 | 113 | 7.64 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 227 | M | 1154 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 229 | A | 1122 | 0.70 | 27 | 19 | 1 | 1 | 1 | 1 | 1 | 1 | 21 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 230 | A | 1007 | 0.63 | 52 | 33 | 1 | 1 | 1 | 1 | 0 | 0 | 34 | 2.37 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 231 | A | 1968 | 1.22 | 152 | 186 | 4 | 5 | 13 | 16 | 33 | 40 | 247 | 6.27 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.2 |
| 232 | A | 1719 | 1.07 | 1,025 | 1095 | 36 | 38 | 129 | 138 | 345 | 368 | 1639 | 7.77 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.4 |
| 233 | A | 976 | 0.61 | 70 | 42 | 3 | 2 | 12 | 7 | 24 | 15 | 66 | 7.94 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 236 | A | 794 | 0.49 | 20 | 10 | 1 | 0 | 4 | 2 | 4 | 2 | 14 | 6.49 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 237 | A | 1556 | 0.97 | 889 | 859 | 35 | 34 | 131 | 127 | 344 | 333 | 1352 | 8.31 | 0.035 | 0.0002 | 0.3 | 0.0009 | 1.2 |
| 238 | A | 1120 | 0.70 | 136 | 95 | 3 | 2 | 10 | 7 | 16 | 11 | 115 | 4.82 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 239 | A | 1385 | 0.86 | 720 | 619 | 31 | 27 | 117 | 101 | 319 | 274 | 1021 | 8.85 | 0.035 | 0.0002 | 0.2 | 0.0010 | 1.0 |
| 240 | A | 240 | 0.15 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 12.69 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 241 | A | 843 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 242 | M | 989 | 0.61 | 634 | 390 | 26 | 16 | 94 | 58 | 242 | 149 | 612 | 8.26 | 0.32 | 0.0016 | 1.0 | 0.0067 | 4.1 |
| 243 | M | 64 | 0.04 | 23 | 1 | 1 | 0 | 3 | 0 | 7 | 0 | 1 | 7.43 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.0 |
| 244 | M | 173 | 0.11 | 52 | 6 | 6 | 1 | 21 | 2 | 74 | 8 | 16 | 13.80 | 0.32 | 0.0028 | 0.0 | 0.0113 | 0.2 |
| 245 | M | 181 | 0.11 | 53 | 6 | 2 | 0 | 9 | 1 | 26 | 3 | 10 | 9.27 | 0.32 | 0.0019 | 0.0 | 0.0076 | 0.1 |
| 246 | M | 273 | 0.17 | 187 | 32 | 14 | 2 | 55 | 9 | 198 | 34 | 77 | 12.61 | 0.32 | 0.0025 | 0.2 | 0.0104 | 0.8 |
| 247 | M | 87 | 0.05 | 530 | 29 | 18 | 1 | 63 | 3 | 128 | 7 | 40 | 6.69 | 0.32 | 0.0013 | 0.1 | 0.0054 | 0.2 |
| 250 | A | 1366 | 0.85 | 104 | 88 | 3 | 3 | 11 | 9 | 22 | 19 | 119 | 6.28 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 252 | A | 1588 | 0.99 | 1,032 | 1018 | 36 | 36 | 126 | 124 | 339 | 334 | 1512 | 7.67 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.3 |
| 254 | A | 424 | 0.26 | 35 | 9 | 1 | 0 | 2 | 1 | 2 | 1 | 11 | 3.75 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 256 | A | 943 | 0.59 | 367 | 215 | 9 | 5 | 18 | 11 | 33 | 19 | 250 | 4.24 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 258 | A | 472 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 260 | A | 1783 | 1.11 | 1,346 | 1491 | 43 | 48 | 137 | 152 | 354 | 392 | 2082 | 6.89 | 0.035 | 0.0002 | 0.4 | 0.0007 | 1.6 |
| 261 | A | 1181 | 0.73 | 162 | 119 | 4 | 3 | 13 | 10 | 26 | 19 | 150 | 5.49 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 262 | M | 860 | 0.53 | 254 | 136 | 9 | 5 | 27 | 14 | 46 | 25 | 180 | 5.89 | 0.32 | 0.0012 | 0.2 | 0.0048 | 0.9 |
| 263 | M | 141 | 0.09 | 1,166 | 102 | 38 | 3 | 120 | 11 | 312 | 27 | 143 | 6.94 | 0.32 | 0.0014 | 0.2 | 0.0056 | 0.8 |
| 264 | M | 224 | 0.14 | 14 | 2 | 1 | 0 | 5 | 1 | 25 | 3 | 6 | 15.01 | 0.32 | 0.0030 | 0.0 | 0.0124 | 0.1 |
| 265 | M | 98 | 0.06 | 834 | 51 | 27 | 2 | 84 | 5 | 212 | 13 | 70 | 6.78 | 0.32 | 0.0013 | 0.1 | 0.0055 | 0.4 |
| 266 | M | 171 | 0.11 | 1,799 | 191 | 64 | 7 | 201 | 21 | 553 | 59 | 278 | 7.42 | 0.32 | 0.0015 | 0.4 | 0.0060 | 1.7 |
| 267 | M | 156 | 0.10 | 216 | 21 | 10 | 1 | 32 | 3 | 63 | 6 | 31 | 7.34 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.2 |
| 268 | M | 159 | 0.10 | 818 | 81 | 26 | 3 | 80 | 8 | 178 | 18 | 109 | 6.32 | 0.32 | 0.0013 | 0.1 | 0.0051 | 0.6 |
| 269 | A | 2450 | 1.52 | 482 | 734 | 23 | 35 | 77 | 117 | 219 | 333 | 1219 | 8.93 | 0.035 | 0.0002 | 0.3 | 0.0010 | 1.2 |
| 270 | A | 620 | 0.39 | 10 | 4 | 0 | 0 | 1 | 0 | 2 | 1 | 5 | 6.12 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 271 | A | 370 | 0.23 | 488 | 112 | 23 | 5 | 78 | 18 | 220 | 51 | 186 | 8.90 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.2 |
| 272 | A | 1246 | 0.77 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 7.41 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 273 | M | 625 | 0.39 | 10 | 4 | 0 | 0 | 2 | 1 | 4 | 2 | 6 | 8.61 | 0.32 | 0.0017 | 0.0 | 0.0070 | 0.0 |
| 274 | A | 1231 | 0.76 | 508 | 388 | 23 | 18 | 81 | 62 | 225 | 172 | 640 | 8.83 | 0.035 | 0.0002 | 0.2 | 0.0010 | 0.6 |
| 275 | M | 377 | 0.23 | 25 | 6 | 1 | 0 | 3 | 1 | 4 | 1 | 8 | 5.67 | 0.32 | 0.0011 | 0.0 | 0.0046 | 0.0 |
| 276 | A | 159 | 0.10 | 543 | 54 | 25 | 2 | 83 | 8 | 230 | 23 | 87 | 8.65 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 277 | M | 1074 | 0.67 | 14 | 9 | 1 | 1 | 2 | 1 | 4 | 3 | 14 | 7.24 | 0.32 | 0.0014 | 0.0 | 0.0059 | 0.1 |
| 278 | M | 239 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 279 | M | 157 | 0.10 | 227 | 22 | 10 | 1 | 33 | 3 | 85 | 8 | 35 | 8.18 | 0.32 | 0.0016 | 0.1 | 0.0067 | 0.2 |
| 280 | M | 163 | 0.10 | 619 | 63 | 29 | 3 | 98 | 10 | 286 | 29 | 104 | 8.99 | 0.32 | 0.0018 | 0.2 | 0.0073 | 0.8 |
| 281 | M | 280 | 0.17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 282 | M | 167 | 0.10 | 454 | 47 | 19 | 2 | 66 | 7 | 171 | 18 | 74 | 8.20 | 0.32 | 0.0016 | 0.1 | 0.0067 | 0.5 |
| 283 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 284 | M | 365 | 0.23 | 1,004 | 228 | 39 | 9 | 62 | 14 | 71 | 16 | 267 | 4.03 | 0.32 | 0.0008 | 0.2 | 0.0032 | 0.9 |
| 285 | M | 230 | 0.14 | 217 | 31 | 12 | 2 | 25 | 4 | 70 | 10 | 46 | 7.56 | 0.32 | 0.0015 | 0.1 | 0.0061 | 0.3 |
| 286 | M | 209 | 0.13 | 516 | 67 | 19 | 2 | 28 | 4 | 8 | 1 | 74 | 3.01 | 0.32 | 0.0006 | 0.0 | 0.0024 | 0.2 |
| 287 | M | 292 | 0.18 | 439 | 80 | 21 | 4 | 34 | 6 | 325 | 59 | 149 | 11.00 | 0.32 | 0.0022 | 0.3 | 0.0090 | 1.3 |
| 288 | M | 152 | 0.09 | 174 | 16 | 9 | 1 | 21 | 2 | 27 | 3 | 22 | 5.61 | 0.32 | 0.0011 | 0.0 | 0.0045 | 0.1 |
| 289 | M | 285 | 0.18 | 519 | 92 | 24 | 4 | 39 | 7 | 357 | 63 | 166 | 10.65 | 0.32 | 0.0021 | 0.4 | 0.0087 | 1.4 |
| 290 | M | 328 | 0.20 | 227 | 46 | 15 | 3 | 26 | 5 | 649 | 132 | 187 | 17.41 | 0.32 | 0.0035 | 0.7 | 0.0144 | 2.7 |
| 294 | A | 824 | 0.51 | 43 | 22 | 1 | 1 | 0 | 0 | 0 | 0 | 23 | 2.21 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 301 | A | 774 | 0.48 | 41 | 20 | 2 | 1 | 7 | 3 | 0 | 0 | 24 | 3.62 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 302 | A | 796 | 0.49 | 83 | 41 | 3 | 1 | 8 | 4 | 0 | 0 | 46 | 3.06 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 303 | A | 1514 | 0.94 | 50 | 47 | 4 | 4 | 11 | 10 | 625 | 588 | 649 | 21.43 | 0.035 | 0.0006 | 0.4 | 0.0024 | 1.5 |
| 304 | A | 729 | 0.45 | 483 | 219 | 13 | 6 | 44 | 20 | 0 | 0 | 245 | 3.00 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 306 | A | 818 | 0.51 | 1,019 | 518 | 60 | 30 | 203 | 103 | 620 | 315 | 967 | 10.15 | 0.035 | 0.0003 | 0.3 | 0.0011 | 1.1 |
| 307 | M | 0 | 0.00 | 1,220 | 0 | 59 | 0 | 189 | 0 | 620 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 324 | A | 2925 | 1.82 | 86 | 156 | 3 | 5 | 11 | 20 | 9 | 16 | 198 | 4.94 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 325 | A | 2224 | 1.38 | 3,002 | 4147 | 74 | 102 | 268 | 370 | 497 | 687 | 5307 | 5.60 | 0.035 | 0.0001 | 0.8 | 0.0006 | 3.2 |
| 326 | A | 3506 | 2.18 | 664 | 1446 | 19 | 41 | 81 | 176 | 122 | 266 | 1930 | 5.99 | 0.035 | 0.0002 | 0.3 | 0.0006 | 1.2 |
| 327 | A | 227 | 0.14 | 2,251 | 317 | 52 | 7 | 177 | 25 | 365 | 51 | 401 | 5.50 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 340 | A | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 351 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 358 | A | 0 | 0.00 | 5,416 | 0 | 130 | 0 | 447 | 0 | 577 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 359 | M | 339 | 0.21 | 54 | 11 | 2 | 0 | 6 | 1 | 7 | 1 | 15 | 5.21 | 0.32 | 0.0010 | 0.0 | 0.0042 | 0.1 |
| 360 | M | 247 | 0.15 | 3,734 | 573 | 86 | 13 | 281 | 43 | 353 | 54 | 683 | 4.48 | 0.32 | 0.0009 | 0.6 | 0.0036 | 2.5 |
| 361 | M | 337 | 0.21 | 3,310 | 693 | 85 | 18 | 326 | 68 | 572 | 120 | 899 | 5.74 | 0.32 | 0.0011 | 1.0 | 0.0046 | 4.2 |
| 362 | M | 338 | 0.21 | 24 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 3.31 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 363 | M | 4495 | 2.79 | 2,313 | 6459 | 48 | 134 | 137 | 383 | 100 | 279 | 7255 | 3.51 | 0.32 | 0.0007 | 5.0 | 0.0028 | 20.4 |
| 364 | M | 286 | 0.18 | 2,820 | 501 | 76 | 14 | 286 | 51 | 467 | 83 | 648 | 5.66 | 0.32 | 0.0011 | 0.7 | 0.0046 | 3.0 |
| 365 | A | 1602 | 1.00 | 723 | 720 | 23 | 23 | 64 | 64 | 93 | 93 | 899 | 5.08 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 366 | A | 1742 | 1.08 | 5 | 5 | 0 | 0 | 1 | 1 | 4 | 4 | 11 | 11.54 | 0.035 | 0.0003 | 0.0 | 0.0013 | 0.0 |
| 367 | A | 1054 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 375 | M | 388 | 0.24 | 678 | 163 | 16 | 4 | 36 | 9 | 262 | 63 | 239 | 8.11 | 0.32 | 0.0016 | 0.4 | 0.0066 | 1.6 |
| 376 | M | 477 | 0.30 | 1,331 | 394 | 27 | 8 | 60 | 18 | 245 | 73 | 493 | 5.65 | 0.32 | 0.0011 | 0.6 | 0.0046 | 2.2 |
| 377 | M | 339 | 0.21 | 68 | 14 | 2 | 0 | 6 | 1 | 8 | 2 | 18 | 4.91 | 0.32 | 0.0010 | 0.0 | 0.0040 | 0.1 |
| 378 | M | 212 | 0.13 | 957 | 126 | 19 | 3 | 38 | 5 | 109 | 14 | 148 | 4.56 | 0.32 | 0.0009 | 0.1 | 0.0037 | 0.5 |
| 379 | M | 331 | 0.21 | 530 | 109 | 12 | 2 | 25 | 5 | 183 | 38 | 154 | 7.66 | 0.32 | 0.0015 | 0.2 | 0.0062 | 1.0 |
| 380 | M | 283 | 0.18 | 24 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 3.31 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 381 | M | 469 | 0.29 | 681 | 198 | 13 | 4 | 26 | 8 | 18 | 5 | 215 | 3.05 | 0.32 | 0.0006 | 0.1 | 0.0024 | 0.5 |
| 386 | A | 810 | 0.50 | 230 | 116 | 20 | 10 | 56 | 28 | 57 | 29 | 183 | 7.12 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 387 | A | 2761 | 1.72 | 1,317 | 2259 | 58 | 99 | 179 | 307 | 569 | 976 | 3641 | 8.70 | 0.035 | 0.0002 | 0.8 | 0.0009 | 3.4 |
| 388 | A | 175 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 389 | A | 189 | 0.12 | 25 | 3 | 1 | 0 | 1 | 0 | 3 | 0 | 4 | 4.68 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 390 | A | 1189 | 0.74 | 430 | 318 | 18 | 13 | 44 | 32 | 33 | 24 | 388 | 4.38 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.2 |
| 392 | A | 436 | 0.27 | 477 | 129 | 28 | 8 | 113 | 31 | 103 | 28 | 195 | 6.79 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 393 | A | 934 | 0.58 | 49 | 28 | 11 | 6 | 70 | 41 | 70 | 41 | 116 | 13.08 | 0.035 | 0.0004 | 0.0 | 0.0014 | 0.2 |
| 394 | A | 1292 | 0.80 | 2,613 | 2097 | 109 | 87 | 340 | 273 | 451 | 362 | 2820 | 5.88 | 0.035 | 0.0002 | 0.4 | 0.0006 | 1.8 |
| 396 | A | 2366 | 1.47 | 2,125 | 3123 | 73 | 107 | 216 | 317 | 293 | 431 | 3979 | 5.28 | 0.035 | 0.0001 | 0.6 | 0.0006 | 2.3 |
| 397 | A | 1588 | 0.99 | 203 | 200 | 7 | 7 | 16 | 16 | 4 | 4 | 227 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 398 | A | 560 | 0.35 | 2,446 | 851 | 73 | 25 | 184 | 64 | 1 | 0 | 941 | 2.89 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 399 | A | 3389 | 2.11 | 242 | 509 | 4 | 8 | 7 | 15 | 0 | 0 | 533 | 2.45 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 400 | A | 1704 | 1.06 | 1,740 | 1842 | 50 | 53 | 140 | 148 | 4 | 4 | 2047 | 2.96 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.6 |
| 401 | M | 790 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 402 | M | 1199 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 404 | M | 768 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 405 | M | 1010 | 0.63 | 11 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 406 | A | 395 | 0.25 | 668 | 164 | 59 | 14 | 18 | 4 | 7 | 2 | 185 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 407 | A | 756 | 0.47 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 408 | A | 1072 | 0.67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 409 | A | 1137 | 0.71 | 176 | 124 | 7 | 5 | 5 | 4 | 0 | 0 | 133 | 2.52 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 410 | A | 884 | 0.55 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 23.25 | 0.035 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 411 | A | 2332 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 412 | A | 141 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 413 | A | 678 | 0.42 | 125 | 53 | 6 | 3 | 23 | 10 | 28 | 12 | 77 | 6.71 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 414 | A | 895 | 0.56 | 7 | 4 | 0 | 0 | 0 | 0 | 5 | 3 | 7 | 10.93 | 0.035 | 0.0003 | 0.0 | 0.0012 | 0.0 |
| 415 | A | 855 | 0.53 | 1,870 | 993 | 62 | 33 | 172 | 91 | 238 | 126 | 1244 | 5.08 | 0.035 | 0.0001 | 0.2 | 0.0005 | 0.7 |
| 416 | M | 284 | 0.18 | 626 | 110 | 18 | 3 | 66 | 12 | 107 | 19 | 144 | 5.75 | 0.32 | 0.0011 | 0.2 | 0.0046 | 0.7 |
| 417 | M | 303 | 0.19 | 8 | 2 | 0 | 0 | 2 | 0 | 67 | 13 | 14 | 20.76 | 0.32 | 0.0042 | 0.1 | 0.0172 | 0.2 |
| 419 | M | 343 | 0.21 | 367 | 78 | 9 | 2 | 30 | 6 | 76 | 16 | 103 | 6.12 | 0.32 | 0.0012 | 0.1 | 0.0050 | 0.5 |
| 420 | M | 300 | 0.19 | 3 | 1 | 0 | 0 | 1 | 0 | 33 | 6 | 7 | 21.23 | 0.32 | 0.0043 | 0.0 | 0.0176 | 0.1 |
| 421 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 424 | M | 828 | 0.51 | 101 | 52 | 6 | 3 | 15 | 8 | 640 | 329 | 392 | 20.09 | 0.32 | 0.0041 | 1.6 | 0.0166 | 6.5 |
| 425 | M | 203 | 0.13 | 23 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 3.00 | 0.32 | 0.0006 | 0.0 | 0.0024 | 0.0 |
| 426 | M | 276 | 0.17 | 12 | 2 | 1 | 0 | 2 | 0 | 36 | 6 | 9 | 17.48 | 0.32 | 0.0035 | 0.0 | 0.0144 | 0.1 |
| 427 | A | 654 | 0.41 | 23 | 9 | 1 | 0 | 3 | 1 | 0 | 0 | 11 | 3.33 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 428 | M | 293 | 0.18 | 27 | 5 | 1 | 0 | 3 | 1 | 1 | 0 | 6 | 3.80 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.0 |
| 429 | M | 219 | 0.14 | 13 | 2 | 1 | 0 | 1 | 0 | 35 | 5 | 7 | 17.18 | 0.32 | 0.0035 | 0.0 | 0.0142 | 0.1 |
| 430 | M | 114 | 0.07 | 639 | 45 | 21 | 1 | 58 | 4 | 70 | 5 | 56 | 4.81 | 0.32 | 0.0009 | 0.1 | 0.0039 | 0.2 |
| 431 | M | 524 | 0.33 | 4 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 11.18 | 0.32 | 0.0022 | 0.0 | 0.0092 | 0.0 |
| 432 | M | 629 | 0.39 | 17 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 3.30 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 433 | A | 1802 | 1.12 | 1,581 | 1770 | 42 | 47 | 132 | 148 | 22 | 25 | 1989 | 3.19 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.7 |
| 434 | A | 1269 | 0.79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 435 | A | 1537 | 0.95 | 70 | 67 | 1 | 1 | 2 | 2 | 0 | 0 | 70 | 2.44 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 436 | M | 178 | 0.11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 441 | A | 1192 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 442 | A | 2365 | 1.47 | 1,444 | 2121 | 40 | 59 | 129 | 190 | 30 | 44 | 2414 | 3.36 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.9 |
| 443 | A | 1588 | 0.99 | 10 | 10 | 0 | 0 | 1 | 1 | 0 | 0 | 11 | 3.00 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 444 | A | 905 | 0.56 | 1,403 | 789 | 40 | 22 | 128 | 72 | 30 | 17 | 900 | 3.38 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 452 | M | 815 | 0.51 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 453 | A | 1563 | 0.97 | 1,288 | 1251 | 34 | 33 | 121 | 117 | 28 | 27 | 1428 | 3.40 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 454 | M | 661 | 0.41 | 246 | 101 | 5 | 2 | 15 | 6 | 0 | 0 | 109 | 2.74 | 0.32 | 0.0005 | 0.1 | 0.0022 | 0.2 |
| 455 | A | 366 | 0.23 | 1,034 | 235 | 30 | 7 | 106 | 24 | 27 | 6 | 272 | 3.55 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 458 | M | 237 | 0.15 | 9 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3.09 | 0.32 | 0.0006 | 0.0 | 0.0025 | 0.0 |
| 464 | A | 702 | 0.44 | 61 | 27 | 3 | 1 | 5 | 2 | 0 | 0 | 30 | 2.98 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 477 | M | 750 | 0.47 | 80 | 37 | 4 | 2 | 7 | 3 | 9 | 4 | 47 | 4.84 | 0.32 | 0.0010 | 0.0 | 0.0039 | 0.2 |
| 478 | M | 253 | 0.16 | 1,054 | 166 | 36 | 6 | 117 | 18 | 46 | 7 | 197 | 3.90 | 0.32 | 0.0008 | 0.2 | 0.0031 | 0.6 |
| 479 | M | 461 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 480 | A | 500 | 0.31 | 726 | 226 | 15 | 5 | 64 | 20 | 0 | 0 | 250 | 2.96 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 481 | M | 377 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 482 | A | 1353 | 0.84 | 164 | 138 | 2 | 2 | 10 | 8 | 1 | 1 | 149 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 483 | M | 589 | 0.37 | 837 | 306 | 22 | 8 | 96 | 35 | 0 | 0 | 349 | 3.18 | 0.32 | 0.0006 | 0.2 | 0.0025 | 0.9 |
| 484 | M | 684 | 0.42 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 12.69 | 0.32 | 0.0026 | 0.0 | 0.0104 | 0.0 |
| 485 | M | 319 | 0.20 | 1,360 | 270 | 23 | 5 | 99 | 20 | 0 | 0 | 294 | 2.83 | 0.32 | 0.0006 | 0.2 | 0.0023 | 0.7 |
| 488 | A | 1441 | 0.90 | 9 | 8 | 0 | 0 | 1 | 1 | 0 | 0 | 9 | 3.09 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 494 | A | 1039 | 0.65 | 2,525 | 1630 | 76 | 49 | 188 | 121 | 0 | 0 | 1800 | 2.87 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.6 |
| 498 | M | 792 | 0.49 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 499 | M | 660 | 0.41 | 170 | 70 | 11 | 5 | 20 | 8 | 645 | 264 | 347 | 18.51 | 0.32 | 0.0038 | 1.3 | 0.0153 | 5.3 |
| 500 | M | 395 | 0.25 | 189 | 46 | 12 | 3 | 21 | 5 | 645 | 158 | 213 | 18.12 | 0.32 | 0.0037 | 0.8 | 0.0150 | 3.2 |
| 502 | A | 855 | 0.53 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 503 | A | 820 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 504 | M | 360 | 0.22 | 251 | 56 | 25 | 6 | 94 | 21 | 0 | 0 | 83 | 4.81 | 0.32 | 0.0010 | 0.1 | 0.0039 | 0.3 |
| | | | | **227822** | **177426** | **9364** | **6771** | **24444** | **18539** | **28843** | **20967** | **223704** | | **Totals:** | | **59.1** | | **240.7** |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 830 | 80 | 210 | 2,450 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 650 | 80 | 220 | 2,490 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 680 | 80 | 230 | 2,520 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 740 | 90 | 240 | 2,570 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 770 | 90 | 250 | 2,620 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 790 | 90 | 260 | 2,630 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 810 | 90 | 260 | 2,640 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 830 | 90 | 270 | 2,670 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 920 | 100 | 310 | 2,860 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 950 | 100 | 310 | 2,890 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 1,030 | 100 | 320 | 2,910 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,440 | 130 | 420 | 3,230 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,500 | 140 | 460 | 3,360 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,540 | 140 | 480 | 3,480 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,540 | 140 | 480 | 3,490 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,610 | 150 | 490 | 3,500 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 2,230 | 180 | 590 | 3,780 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 2,490 | 190 | 620 | 3,830 |
| FRWY19 | SR60 | Market St to Main St | 2,630 | 200 | 670 | 3,950 |
| FRWY20 | SR60 | Main St to SR-91 | 3,010 | 230 | 760 | 4,200 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 5,080 | 340 | 1,200 | 6,960 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 5,210 | 350 | 1,250 | 7,120 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 5,350 | 360 | 1,290 | 7,190 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 5,890 | 380 | 1,370 | 7,420 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 7,110 | 430 | 1,510 | 7,770 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 7,720 | 400 | 1,420 | 7,330 |
| FRWY27 | SR60 | I-215 to Day St | 8,150 | 460 | 1,650 | 8,410 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 8,170 | 490 | 1,720 | 8,410 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 8,130 | 510 | 1,770 | 8,440 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 9,210 | 540 | 1,830 | 8,520 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 10,110 | 590 | 1,900 | 9,200 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 10,910 | 630 | 1,940 | 9,200 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 12,070 | 690 | 2,070 | 9,320 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,650 | 690 | 2,030 | 8,920 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 6,820 | 300 | 820 | 2,470 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 6,830 | 230 | 670 | 1,540 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 6,800 | 220 | 640 | 1,510 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 393 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 393 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 393 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 393 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 393 |
| FRWY75 | SR91 | I-15 to McKinley St | 1,160 | 90 | 330 | 2,010 |
| FRWY76 | SR91 | McKinley St to Pierce St | 1,320 | 100 | 360 | 2,090 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 1,320 | 100 | 360 | 2,090 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 1,410 | 100 | 370 | 2,100 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,530 | 100 | 390 | 2,120 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,610 | 100 | 400 | 2,150 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,680 | 110 | 410 | 2,170 |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY82 | SR91 | Adam St to Madison St | 1,730 | 110 | 430 | 2,200 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,740 | 110 | 430 | 2,210 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,660 | 90 | 380 | 2,010 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,640 | 90 | 380 | 2,000 |
| FRWY86 | SR91 | 14th St to University Ave | 1,660 | 80 | 340 | 1,860 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,790 | 90 | 350 | 1,880 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 2,930 | 100 | 300 | 1,090 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 2,040 | 70 | 250 | 1,040 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 1,610 | 60 | 220 | 1,000 |
| FRWY106 | I-10 | 22nd St to S 8th St | 1,500 | 60 | 210 | 990 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 1,410 | 50 | 200 | 970 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 1,330 | 50 | 190 | 960 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 1,230 | 50 | 150 | 920 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 1,230 | 50 | 150 | 920 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 1,210 | 50 | 150 | 910 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 1,200 | 40 | 150 | 910 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 1,020 | 40 | 120 | 790 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 1,020 | 40 | 120 | 790 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 1,390 | 20 | 130 | 250 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,620 | 30 | 140 | 250 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,800 | 30 | 160 | 260 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,850 | 40 | 160 | 270 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,440 | 30 | 120 | 270 |
| FRWY167 | I-215 | Redlands Ave to D St | 480 | 10 | 50 | 310 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 620 | 20 | 70 | 400 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 590 | 20 | 70 | 390 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 320 | 10 | 40 | 330 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 330 | 10 | 50 | 390 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 750 | 30 | 80 | 420 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 470 | 20 | 70 | 440 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 710 | 30 | 90 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 760 | 30 | 100 | 590 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 380 | 30 | 90 | 880 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 370 | 20 | 90 | 870 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 340 | 20 | 90 | 870 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 300 | 20 | 70 | 810 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 270 | 20 | 70 | 800 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 1,200 | 60 | 180 | 780 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 1,140 | 60 | 180 | 800 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 1,070 | 60 | 160 | 710 |
| FRWY142 | SR-215 | Mill St to 2rd St | 1,080 | 60 | 160 | 700 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 1,020 | 50 | 140 | 640 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 890 | 40 | 110 | 580 |

**World Logistics Center** **2035**
Project Full Buildout 2035
Freeway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3570 | 830 | 80 | 210 | 2,450 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 16 | 5 | 171 | 2414 | 2609 | 2551 |
| FRWY2 | 3440 | 650 | 80 | 220 | 2,490 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 16 | 5 | 179 | 2454 | 2656 | 3553 |
| FRWY3 | 3510 | 680 | 80 | 230 | 2,520 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 16 | 5 | 188 | 2483 | 2694 | 2907 |
| FRWY4 | 3640 | 740 | 90 | 240 | 2,570 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 18 | 6 | 196 | 2533 | 2754 | 3160 |
| FRWY5 | 3730 | 770 | 90 | 250 | 2,620 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 18 | 6 | 204 | 2582 | 2812 | 2484 |
| FRWY6 | 3770 | 790 | 90 | 260 | 2,630 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2592 | 2830 | 3669 |
| FRWY7 | 3800 | 810 | 90 | 260 | 2,640 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2602 | 2840 | 2911 |
| FRWY8 | 3860 | 830 | 90 | 270 | 2,670 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 18 | 6 | 220 | 2631 | 2877 | 2747 |
| FRWY9 | 4190 | 920 | 100 | 310 | 2,860 | 1792 | 1.113 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2819 | 3100 | 3451 |
| FRWY10 | 4250 | 950 | 100 | 310 | 2,890 | 1665 | 1.034 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2848 | 3130 | 3237 |
| FRWY11 | 4360 | 1,030 | 100 | 320 | 2,910 | 849 | 0.527 | 2 | 0 | 0 | 0 | 20 | 7 | 261 | 2868 | 3158 | 1665 |
| FRWY12 | 5220 | 1,440 | 130 | 420 | 3,230 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 26 | 9 | 342 | 3183 | 3564 | 5090 |
| FRWY13 | 5460 | 1,500 | 140 | 460 | 3,360 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 28 | 9 | 375 | 3311 | 3727 | 3911 |
| FRWY14 | 5640 | 1,540 | 140 | 480 | 3,480 | 2444 | 1.518 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3430 | 3862 | 5863 |
| FRWY15 | 5650 | 1,540 | 140 | 480 | 3,490 | 1608 | 0.999 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3439 | 3872 | 3868 |
| FRWY16 | 5750 | 1,610 | 150 | 490 | 3,500 | 2722 | 1.691 | 3 | 0 | 0 | 0 | 30 | 10 | 400 | 3449 | 3893 | 6582 |
| FRWY17 | 6780 | 2,230 | 180 | 590 | 3,780 | 3198 | 1.987 | 4 | 0 | 0 | 0 | 37 | 12 | 481 | 3725 | 4259 | 8462 |
| FRWY18 | 7130 | 2,490 | 190 | 620 | 3,830 | 2509 | 1.559 | 4 | 0 | 0 | 0 | 39 | 13 | 506 | 3774 | 4336 | 6759 |
| FRWY19 | 7450 | 2,630 | 200 | 670 | 3,950 | 910 | 0.565 | 4 | 0 | 0 | 0 | 41 | 13 | 546 | 3893 | 4498 | 2543 |
| FRWY20 | 8200 | 3,010 | 230 | 760 | 4,200 | 774 | 0.481 | 5 | 0 | 0 | 1 | 47 | 15 | 620 | 4139 | 4827 | 2321 |
| FRWY21 | 13580 | 5,080 | 340 | 1,200 | 6,960 | 1798 | 1.117 | 8 | 1 | 0 | 1 | 69 | 23 | 978 | 6859 | 7940 | 8868 |
| FRWY22 | 13930 | 5,210 | 350 | 1,250 | 7,120 | 1035 | 0.643 | 9 | 1 | 1 | 1 | 71 | 24 | 1019 | 7017 | 8141 | 5234 |
| FRWY23 | 14190 | 5,350 | 360 | 1,290 | 7,190 | 1042 | 0.647 | 9 | 1 | 1 | 1 | 73 | 24 | 1052 | 7086 | 8246 | 5337 |
| FRWY24 | 15060 | 5,890 | 380 | 1,370 | 7,420 | 2260 | 1.404 | 10 | 1 | 1 | 1 | 77 | 26 | 1117 | 7312 | 8544 | 11995 |
| FRWY25 | 16820 | 7,110 | 430 | 1,510 | 7,770 | 1305 | 0.811 | 12 | 1 | 1 | 1 | 87 | 29 | 1231 | 7657 | 9019 | 7312 |
| FRWY26 | 16870 | 7,720 | 400 | 1,420 | 7,330 | 977 | 0.607 | 13 | 1 | 1 | 1 | 81 | 27 | 1158 | 7224 | 8505 | 5162 |
| FRWY27 | 18670 | 8,150 | 460 | 1,650 | 8,410 | 1186 | 0.737 | 14 | 1 | 1 | 1 | 93 | 31 | 1345 | 8288 | 9774 | 7201 |
| FRWY28 | 18790 | 8,170 | 490 | 1,720 | 8,410 | 1642 | 1.020 | 14 | 1 | 1 | 1 | 99 | 33 | 1402 | 8288 | 9840 | 10037 |
| FRWY29 | 18850 | 8,130 | 510 | 1,770 | 8,440 | 1636 | 1.016 | 13 | 1 | 1 | 1 | 103 | 34 | 1443 | 8318 | 9915 | 10077 |
| FRWY30 | 20100 | 9,210 | 540 | 1,830 | 8,520 | 1555 | 0.966 | 15 | 1 | 1 | 2 | 110 | 36 | 1492 | 8397 | 10053 | 9711 |
| FRWY31 | 21800 | 10,110 | 590 | 1,900 | 9,200 | 3384 | 2.102 | 17 | 1 | 1 | 2 | 120 | 40 | 1549 | 9067 | 10796 | 22695 |
| FRWY32 | 22680 | 10,910 | 630 | 1,940 | 9,200 | 1112 | 0.691 | 18 | 1 | 1 | 2 | 128 | 42 | 1582 | 9067 | 10841 | 7489 |
| FRWY33 | 24150 | 12,070 | 690 | 2,070 | 9,320 | 1935 | 1.202 | 20 | 1 | 1 | 2 | 140 | 46 | 1688 | 9185 | 11084 | 13323 |
| FRWY34 | 24290 | 12,650 | 690 | 2,030 | 8,920 | 1675 | 1.041 | 21 | 1 | 1 | 2 | 140 | 46 | 1655 | 8791 | 10658 | 11090 |
| FRWY35 | 10410 | 6,820 | 300 | 820 | 2,470 | 1143 | 0.710 | 11 | 1 | 1 | 1 | 61 | 20 | 669 | 2434 | 3198 | 2271 |
| FRWY36 | 9270 | 6,830 | 230 | 670 | 1,540 | 9120 | 5.665 | 11 | 1 | 1 | 1 | 47 | 15 | 546 | 1518 | 2140 | 12124 |
| FRWY37 | 9170 | 6,800 | 220 | 640 | 1,510 | 3802 | 2.362 | 11 | 1 | 1 | 1 | 45 | 15 | 522 | 1488 | 2083 | 4920 |
| FRWY294 | 393 | 0 | 0 | 0 | 393 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 704 |
| FRWY295 | 393 | 0 | 0 | 0 | 393 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 252 |
| FRWY296 | 393 | 0 | 0 | 0 | 393 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 436 |
| FRWY297 | 393 | 0 | 0 | 0 | 393 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 362 |
| FRWY299 | 393 | 0 | 0 | 0 | 393 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 398 |
| FRWY75 | 3590 | 1,160 | 90 | 330 | 2,010 | 2861 | 1.777 | 2 | 0 | 0 | 0 | 18 | 6 | 269 | 1981 | 2277 | 4046 |
| FRWY76 | 3870 | 1,320 | 100 | 360 | 2,090 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 | 3701 |
| FRWY77 | 3870 | 1,320 | 100 | 360 | 2,090 | 450 | 0.280 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 | 666 |
| FRWY78 | 3980 | 1,410 | 100 | 370 | 2,100 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 20 | 7 | 302 | 2070 | 2401 | 2064 |
| FRWY79 | 4140 | 1,530 | 100 | 390 | 2,120 | 1713 | 1.064 | 3 | 0 | 0 | 0 | 20 | 7 | 318 | 2089 | 2437 | 2594 |
| FRWY80 | 4260 | 1,610 | 100 | 400 | 2,150 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 20 | 7 | 326 | 2119 | 2475 | 2619 |
| FRWY81 | 4370 | 1,680 | 110 | 410 | 2,170 | 2512 | 1.560 | 3 | 0 | 0 | 0 | 22 | 7 | 334 | 2139 | 2506 | 3911 |
| FRWY82 | 4470 | 1,730 | 110 | 430 | 2,200 | 1674 | 1.040 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2168 | 2552 | 2654 |
| FRWY83 | 4490 | 1,740 | 110 | 430 | 2,210 | 1819 | 1.130 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2178 | 2562 | 2895 |
| FRWY84 | 4140 | 1,660 | 90 | 380 | 2,010 | 1182 | 0.734 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1981 | 2318 | 1702 |
| FRWY85 | 4110 | 1,640 | 90 | 380 | 2,000 | 2360 | 1.466 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1971 | 2308 | 3384 |
| FRWY86 | 3940 | 1,660 | 80 | 340 | 1,860 | 783 | 0.486 | 3 | 0 | 0 | 0 | 16 | 5 | 277 | 1833 | 2135 | 1039 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY87 | 4110 | 1,790 | 90 | 350 | 1,880 | 1370 | 0.851 | 3 | 0 | 0 | 0 | 18 | 6 | 285 | 1853 | 2166 | 1843 |
| FRWY101 | 4420 | 2,930 | 100 | 300 | 1,090 | 1703 | 1.058 | 5 | 0 | 0 | 1 | 20 | 7 | 245 | 1074 | 1352 | 1430 |
| FRWY102 | 3950 | 2,520 | 90 | 280 | 1,060 | 925 | 0.575 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 | 748 |
| FRWY103 | 3950 | 2,520 | 90 | 280 | 1,060 | 1770 | 1.100 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 | 1432 |
| FRWY104 | 3400 | 2,040 | 70 | 250 | 1,040 | 3182 | 1.977 | 3 | 0 | 0 | 0 | 14 | 5 | 204 | 1025 | 1252 | 2474 |
| FRWY105 | 2890 | 1,610 | 60 | 220 | 1,000 | 1010 | 0.627 | 3 | 0 | 0 | 0 | 12 | 4 | 179 | 986 | 1184 | 743 |
| FRWY106 | 2760 | 1,500 | 60 | 210 | 990 | 1305 | 0.811 | 2 | 0 | 0 | 0 | 12 | 4 | 171 | 976 | 1166 | 945 |
| FRWY107 | 2630 | 1,410 | 50 | 200 | 970 | 1655 | 1.028 | 2 | 0 | 0 | 0 | 10 | 3 | 163 | 956 | 1135 | 1167 |
| FRWY108 | 2530 | 1,330 | 50 | 190 | 960 | 4341 | 2.697 | 2 | 0 | 0 | 0 | 10 | 3 | 155 | 946 | 1117 | 3013 |
| FRWY109 | 2350 | 1,230 | 50 | 150 | 920 | 1728 | 1.073 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 | 1122 |
| FRWY110 | 2350 | 1,230 | 50 | 150 | 920 | 2788 | 1.732 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 | 1810 |
| FRWY111 | 2320 | 1,210 | 50 | 150 | 910 | 7717 | 4.794 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 897 | 1035 | 4962 |
| FRWY112 | 2300 | 1,200 | 40 | 150 | 910 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 8 | 3 | 122 | 897 | 1032 | 888 |
| FRWY113 | 1970 | 1,020 | 40 | 120 | 790 | 3380 | 2.100 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 | 1867 |
| FRWY114 | 1970 | 1,020 | 40 | 120 | 790 | 3719 | 2.310 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 | 2054 |
| FRWY129 | 1790 | 1,390 | 20 | 130 | 250 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 106 | 246 | 361 | 1003 |
| FRWY130 | 2040 | 1,620 | 30 | 140 | 250 | 3830 | 2.379 | 3 | 0 | 0 | 0 | 6 | 2 | 114 | 246 | 372 | 885 |
| FRWY131 | 2250 | 1,800 | 30 | 160 | 260 | 2967 | 1.843 | 3 | 0 | 0 | 0 | 6 | 2 | 130 | 256 | 398 | 734 |
| FRWY132 | 2320 | 1,850 | 40 | 160 | 270 | 1163 | 0.722 | 3 | 0 | 0 | 0 | 8 | 3 | 130 | 266 | 411 | 297 |
| FRWY133 | 1860 | 1,440 | 30 | 120 | 270 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 266 | 375 | 1058 |
| FRWY167 | 850 | 480 | 10 | 50 | 310 | 1471 | 0.914 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 306 | 350 | 320 |
| FRWY168 | 1110 | 620 | 20 | 70 | 400 | 916 | 0.569 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 394 | 458 | 261 |
| FRWY169 | 1070 | 590 | 20 | 70 | 390 | 4924 | 3.059 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 384 | 448 | 1370 |
| FRWY171 | 700 | 320 | 10 | 40 | 330 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 325 | 361 | 481 |
| FRWY172 | 780 | 330 | 10 | 50 | 390 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 384 | 428 | 799 |
| FRWY173 | 1280 | 750 | 30 | 80 | 420 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 414 | 489 | 759 |
| FRWY174 | 1000 | 470 | 20 | 70 | 440 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 434 | 497 | 350 |
| FRWY175 | 1370 | 710 | 30 | 90 | 540 | 1547 | 0.961 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 532 | 615 | 591 |
| FRWY176 | 1480 | 760 | 30 | 100 | 590 | 1359 | 0.844 | 1 | 0 | 0 | 0 | 6 | 2 | 82 | 581 | 673 | 568 |
| FRWY134 | 1380 | 380 | 30 | 90 | 880 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 867 | 950 | 817 |
| FRWY135 | 1350 | 370 | 20 | 90 | 870 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 | 996 |
| FRWY136 | 1320 | 340 | 20 | 90 | 870 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 | 604 |
| FRWY137 | 1200 | 300 | 20 | 70 | 810 | 1516 | 0.942 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 798 | 861 | 811 |
| FRWY138 | 1160 | 270 | 20 | 70 | 800 | 2485 | 1.544 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 788 | 851 | 1314 |
| FRWY139 | 2220 | 1,200 | 60 | 180 | 780 | 1950 | 1.211 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 769 | 934 | 1132 |
| FRWY140 | 2180 | 1,140 | 60 | 180 | 800 | 1581 | 0.982 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 788 | 954 | 937 |
| FRWY141 | 2000 | 1,070 | 60 | 160 | 710 | 1447 | 0.899 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 700 | 849 | 763 |
| FRWY142 | 2000 | 1,080 | 60 | 160 | 700 | 938 | 0.583 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 690 | 839 | 489 |
| FRWY143 | 1850 | 1,020 | 50 | 140 | 640 | 2032 | 1.262 | 2 | 0 | 0 | 0 | 10 | 3 | 114 | 631 | 760 | 960 |
| FRWY144 | 1620 | 890 | 40 | 110 | 580 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 8 | 3 | 90 | 572 | 674 | 1306 |
| | | | | | | | | | | | | | | | | | **312110** |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 6 | 1 | 0 | 0 | 0 | 16 | 5 | 167 | 2361 |
| FRWY2 | 6 | 1 | 0 | 0 | 0 | 22 | 7 | 240 | 3282 |
| FRWY3 | 6 | 1 | 0 | 0 | 0 | 18 | 6 | 202 | 2680 |
| FRWY4 | 6 | 1 | 0 | 0 | 0 | 21 | 7 | 225 | 2906 |
| FRWY5 | 6 | 1 | 0 | 0 | 0 | 16 | 5 | 180 | 2281 |
| FRWY6 | 6 | 2 | 0 | 0 | 0 | 24 | 8 | 275 | 3360 |
| FRWY7 | 6 | 1 | 0 | 0 | 0 | 19 | 6 | 217 | 2667 |
| FRWY8 | 6 | 1 | 0 | 0 | 0 | 17 | 6 | 210 | 2512 |
| FRWY9 | 6 | 2 | 0 | 0 | 0 | 23 | 7 | 281 | 3138 |
| FRWY10 | 6 | 2 | 0 | 0 | 0 | 21 | 7 | 261 | 2946 |
| FRWY11 | 6 | 1 | 0 | 0 | 0 | 11 | 4 | 138 | 1513 |
| FRWY12 | 7 | 3 | 0 | 0 | 0 | 38 | 12 | 489 | 4546 |
| FRWY13 | 7 | 3 | 0 | 0 | 0 | 30 | 10 | 394 | 3474 |
| FRWY14 | 7 | 4 | 0 | 0 | 0 | 43 | 14 | 594 | 5207 |
| FRWY15 | 7 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3436 |
| FRWY16 | 7 | 5 | 0 | 0 | 0 | 51 | 17 | 676 | 5833 |
| FRWY17 | 7 | 7 | 0 | 0 | 1 | 73 | 24 | 956 | 7401 |
| FRWY18 | 7 | 6 | 0 | 0 | 1 | 60 | 20 | 788 | 5883 |
| FRWY19 | 7 | 2 | 0 | 0 | 0 | 23 | 8 | 309 | 2201 |
| FRWY20 | 7 | 2 | 0 | 0 | 0 | 22 | 7 | 298 | 1990 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY21 | 6 | 9 | 1 | 1 | 1 | 77 | 26 | 1093 | 7661 |
| FRWY22 | 6 | 6 | 0 | 0 | 1 | 46 | 15 | 655 | 4511 |
| FRWY23 | 6 | 6 | 0 | 0 | 1 | 47 | 16 | 681 | 4587 |
| FRWY24 | 6 | 14 | 1 | 1 | 1 | 108 | 36 | 1568 | 10266 |
| FRWY25 | 6 | 10 | 1 | 1 | 1 | 71 | 23 | 998 | 6208 |
| FRWY26 | 6 | 8 | 0 | 0 | 1 | 49 | 16 | 703 | 4384 |
| FRWY27 | 7 | 10 | 1 | 1 | 1 | 69 | 23 | 991 | 6106 |
| FRWY28 | 7 | 14 | 1 | 1 | 1 | 101 | 34 | 1431 | 8454 |
| FRWY29 | 7 | 14 | 1 | 1 | 1 | 105 | 35 | 1467 | 8453 |
| FRWY30 | 7 | 15 | 1 | 1 | 2 | 106 | 35 | 1441 | 8111 |
| FRWY31 | 7 | 35 | 2 | 2 | 4 | 252 | 83 | 3257 | 19060 |
| FRWY32 | 7 | 12 | 1 | 1 | 1 | 88 | 29 | 1093 | 6263 |
| FRWY33 | 7 | 24 | 2 | 1 | 2 | 168 | 56 | 2029 | 11041 |
| FRWY34 | 7 | 22 | 1 | 1 | 2 | 146 | 48 | 1722 | 9147 |
| FRWY35 | 7 | 8 | 1 | 0 | 1 | 43 | 14 | 475 | 1728 |
| FRWY36 | 7 | 64 | 4 | 4 | 7 | 264 | 88 | 3095 | 8598 |
| FRWY37 | 7 | 27 | 2 | 2 | 3 | 105 | 35 | 1233 | 3515 |
| FRWY294 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 704 |
| FRWY295 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 252 |
| FRWY296 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 436 |
| FRWY297 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 362 |
| FRWY299 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 398 |
| FRWY75 | 3 | 3 | 0 | 0 | 0 | 32 | 11 | 478 | 3521 |
| FRWY76 | 3 | 3 | 0 | 0 | 0 | 32 | 10 | 456 | 3199 |
| FRWY77 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 82 | 576 |
| FRWY78 | 3 | 2 | 0 | 0 | 0 | 17 | 6 | 259 | 1779 |
| FRWY79 | 3 | 3 | 0 | 0 | 0 | 22 | 7 | 338 | 2223 |
| FRWY80 | 3 | 3 | 0 | 0 | 0 | 21 | 7 | 345 | 2242 |
| FRWY81 | 3 | 4 | 0 | 0 | 0 | 35 | 12 | 522 | 3337 |
| FRWY82 | 3 | 3 | 0 | 0 | 0 | 23 | 8 | 365 | 2255 |
| FRWY83 | 3 | 3 | 0 | 0 | 0 | 25 | 8 | 396 | 2461 |
| FRWY84 | 3 | 2 | 0 | 0 | 0 | 13 | 4 | 228 | 1454 |
| FRWY85 | 3 | 4 | 0 | 0 | 0 | 27 | 9 | 454 | 2890 |
| FRWY86 | 3 | 1 | 0 | 0 | 0 | 8 | 3 | 135 | 892 |
| FRWY87 | 3 | 3 | 0 | 0 | 0 | 16 | 5 | 243 | 1577 |
| FRWY101 | 7 | 5 | 0 | 0 | 1 | 21 | 7 | 259 | 1136 |
| FRWY102 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 131 | 600 |
| FRWY103 | 7 | 5 | 0 | 0 | 0 | 20 | 7 | 251 | 1149 |
| FRWY104 | 7 | 7 | 0 | 0 | 1 | 28 | 9 | 403 | 2026 |
| FRWY105 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 113 | 618 |
| FRWY106 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 139 | 791 |
| FRWY107 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 168 | 983 |
| FRWY108 | 7 | 6 | 0 | 0 | 1 | 27 | 9 | 418 | 2551 |
| FRWY109 | 7 | 2 | 0 | 0 | 0 | 11 | 4 | 131 | 973 |
| FRWY110 | 7 | 4 | 0 | 0 | 0 | 18 | 6 | 212 | 1570 |
| FRWY111 | 7 | 10 | 1 | 1 | 1 | 49 | 16 | 586 | 4299 |
| FRWY112 | 7 | 2 | 0 | 0 | 0 | 7 | 2 | 105 | 771 |
| FRWY113 | 7 | 4 | 0 | 0 | 0 | 17 | 6 | 205 | 1635 |
| FRWY114 | 7 | 4 | 0 | 0 | 0 | 19 | 6 | 226 | 1799 |
| FRWY129 | 7 | 6 | 0 | 0 | 1 | 11 | 4 | 295 | 685 |
| FRWY130 | 7 | 6 | 0 | 0 | 1 | 14 | 5 | 272 | 586 |
| FRWY131 | 7 | 5 | 0 | 0 | 1 | 11 | 4 | 240 | 472 |
| FRWY132 | 7 | 2 | 0 | 0 | 0 | 6 | 2 | 94 | 192 |
| FRWY133 | 7 | 7 | 0 | 0 | 1 | 17 | 6 | 276 | 751 |
| FRWY167 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 279 |
| FRWY168 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 32 | 224 |
| FRWY169 | 7 | 3 | 0 | 0 | 0 | 12 | 4 | 175 | 1176 |
| FRWY171 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 43 | 433 |
| FRWY172 | 7 | 1 | 0 | 0 | 0 | 4 | 1 | 76 | 716 |
| FRWY173 | 7 | 2 | 0 | 0 | 0 | 9 | 3 | 101 | 643 |
| FRWY174 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 40 | 306 |
| FRWY175 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 71 | 511 |
| FRWY176 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 69 | 491 |
| FRWY134 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 746 |
| FRWY135 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 78 | 911 |
| FRWY136 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 47 | 553 |
| FRWY137 | 6 | 0 | 0 | 0 | 0 | 4 | 1 | 54 | 752 |
| FRWY138 | 6 | 1 | 0 | 0 | 0 | 6 | 2 | 88 | 1217 |
| FRWY139 | 6 | 2 | 0 | 0 | 0 | 15 | 5 | 178 | 931 |
| FRWY140 | 3 | 2 | 0 | 0 | 0 | 12 | 4 | 144 | 774 |
| FRWY141 | 3 | 2 | 0 | 0 | 0 | 11 | 4 | 117 | 629 |
| FRWY142 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 76 | 402 |
| FRWY143 | 3 | 2 | 0 | 0 | 0 | 13 | 4 | 144 | 796 |
| FRWY144 | 3 | 3 | 0 | 0 | 0 | 16 | 5 | 174 | 1107 |
| **Total** | | **490** | **31** | **29** | **51** | **3155** | **1046** | **41855** | **265454** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2_DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 45 | 3 | 3 | 5 | 335 | 111 | 4956 | 34266 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 72 | 5 | 4 | 7 | 641 | 213 | 8603 | 72373 | |
| 7 | 373 | 24 | 22 | 39 | 2178 | 722 | 28295 | 158815 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **490** | **31** | **29** | **51** | **3155** | **1046** | **41855** | **265454** | **312110** |

**World Logistics Center** **2035**
Project Full Buildout 2035
Freeway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3570 | 830 | 80 | 210 | 2,450 | 1574 | 0.978 | 450 | 59 | 179 | 140 | 53 | 6 | 39 | 36 | 961 | 940 |
| FRWY2 | 3440 | 650 | 80 | 220 | 2,490 | 2153 | 1.337 | 353 | 46 | 140 | 109 | 53 | 6 | 41 | 36 | 784 | 1048 |
| FRWY3 | 3510 | 680 | 80 | 230 | 2,520 | 1737 | 1.079 | 369 | 49 | 147 | 114 | 53 | 6 | 42 | 37 | 816 | 880 |
| FRWY4 | 3640 | 740 | 90 | 240 | 2,570 | 1847 | 1.147 | 402 | 53 | 160 | 124 | 59 | 6 | 44 | 37 | 886 | 1016 |
| FRWY5 | 3730 | 770 | 90 | 250 | 2,620 | 1422 | 0.883 | 418 | 55 | 166 | 129 | 59 | 6 | 46 | 38 | 918 | 811 |
| FRWY6 | 3770 | 790 | 90 | 260 | 2,630 | 2087 | 1.296 | 429 | 56 | 170 | 133 | 59 | 6 | 48 | 38 | 940 | 1219 |
| FRWY7 | 3800 | 810 | 90 | 260 | 2,640 | 1650 | 1.025 | 440 | 58 | 175 | 136 | 59 | 6 | 48 | 38 | 960 | 984 |
| FRWY8 | 3860 | 830 | 90 | 270 | 2,670 | 1537 | 0.955 | 450 | 59 | 179 | 140 | 59 | 6 | 50 | 39 | 983 | 938 |
| FRWY9 | 4190 | 920 | 100 | 310 | 2,860 | 1792 | 1.113 | 499 | 66 | 198 | 155 | 66 | 7 | 57 | 41 | 1090 | 1213 |
| FRWY10 | 4250 | 950 | 100 | 310 | 2,890 | 1665 | 1.034 | 516 | 68 | 205 | 160 | 66 | 7 | 57 | 42 | 1120 | 1159 |
| FRWY11 | 4360 | 1,030 | 100 | 320 | 2,910 | 849 | 0.527 | 559 | 74 | 222 | 173 | 66 | 7 | 59 | 42 | 1202 | 634 |
| FRWY12 | 5220 | 1,440 | 130 | 420 | 3,230 | 2299 | 1.428 | 782 | 103 | 311 | 242 | 86 | 9 | 78 | 47 | 1656 | 2365 |
| FRWY13 | 5460 | 1,500 | 140 | 460 | 3,360 | 1689 | 1.049 | 814 | 107 | 324 | 252 | 92 | 10 | 85 | 49 | 1733 | 1818 |
| FRWY14 | 5640 | 1,540 | 140 | 480 | 3,480 | 2444 | 1.518 | 836 | 110 | 332 | 259 | 92 | 10 | 89 | 50 | 1778 | 2700 |
| FRWY15 | 5650 | 1,540 | 140 | 480 | 3,490 | 1608 | 0.999 | 836 | 110 | 332 | 259 | 92 | 10 | 89 | 51 | 1778 | 1776 |
| FRWY16 | 5750 | 1,610 | 150 | 490 | 3,500 | 2722 | 1.691 | 874 | 115 | 347 | 271 | 99 | 11 | 90 | 51 | 1857 | 3141 |
| FRWY17 | 6780 | 2,230 | 180 | 590 | 3,780 | 3198 | 1.987 | 1210 | 159 | 481 | 375 | 119 | 13 | 109 | 55 | 2521 | 5007 |
| FRWY18 | 7130 | 2,490 | 190 | 620 | 3,830 | 2509 | 1.559 | 1351 | 178 | 537 | 419 | 125 | 13 | 114 | 56 | 2794 | 4354 |
| FRWY19 | 7450 | 2,630 | 200 | 670 | 3,950 | 910 | 0.565 | 1427 | 188 | 567 | 442 | 132 | 14 | 124 | 57 | 2952 | 1669 |
| FRWY20 | 8200 | 3,010 | 230 | 760 | 4,200 | 774 | 0.481 | 1634 | 215 | 649 | 506 | 152 | 16 | 140 | 61 | 3373 | 1622 |
| FRWY21 | 13580 | 5,080 | 340 | 1,200 | 6,960 | 1798 | 1.117 | 2757 | 363 | 1096 | 854 | 224 | 24 | 222 | 101 | 5640 | 6300 |
| FRWY22 | 13930 | 5,210 | 350 | 1,250 | 7,120 | 1035 | 0.643 | 2828 | 372 | 1124 | 876 | 231 | 25 | 231 | 103 | 5789 | 3722 |
| FRWY23 | 14190 | 5,350 | 360 | 1,290 | 7,190 | 1042 | 0.647 | 2904 | 382 | 1154 | 899 | 238 | 25 | 238 | 104 | 5944 | 3848 |
| FRWY24 | 15060 | 5,890 | 380 | 1,370 | 7,420 | 2260 | 1.404 | 3197 | 421 | 1270 | 990 | 251 | 27 | 253 | 108 | 6516 | 9148 |
| FRWY25 | 16820 | 7,110 | 430 | 1,510 | 7,770 | 1305 | 0.811 | 3859 | 508 | 1534 | 1195 | 284 | 30 | 279 | 113 | 7801 | 6324 |
| FRWY26 | 16870 | 7,720 | 400 | 1,420 | 7,330 | 977 | 0.607 | 4190 | 551 | 1665 | 1298 | 264 | 28 | 262 | 106 | 8365 | 5077 |
| FRWY27 | 18670 | 8,150 | 460 | 1,650 | 8,410 | 1186 | 0.737 | 4423 | 582 | 1758 | 1370 | 304 | 32 | 305 | 122 | 8896 | 6554 |
| FRWY28 | 18790 | 8,170 | 490 | 1,720 | 8,410 | 1642 | 1.020 | 4434 | 584 | 1762 | 1374 | 323 | 34 | 318 | 122 | 8950 | 9130 |
| FRWY29 | 18850 | 8,130 | 510 | 1,770 | 8,440 | 1636 | 1.016 | 4412 | 581 | 1754 | 1367 | 337 | 36 | 327 | 122 | 8935 | 9081 |
| FRWY30 | 20100 | 9,210 | 540 | 1,830 | 8,520 | 1555 | 0.966 | 4999 | 658 | 1986 | 1548 | 356 | 38 | 338 | 123 | 10047 | 9705 |
| FRWY31 | 21800 | 10,110 | 590 | 1,900 | 9,200 | 3384 | 2.102 | 5487 | 722 | 2181 | 1700 | 389 | 41 | 351 | 133 | 11004 | 23133 |
| FRWY32 | 22680 | 10,910 | 630 | 1,940 | 9,200 | 1112 | 0.691 | 5921 | 779 | 2353 | 1834 | 416 | 44 | 358 | 133 | 11839 | 8178 |
| FRWY33 | 24150 | 12,070 | 690 | 2,070 | 9,320 | 1935 | 1.202 | 6551 | 862 | 2603 | 2029 | 455 | 48 | 382 | 135 | 13066 | 15706 |
| FRWY34 | 24290 | 12,650 | 690 | 2,030 | 8,920 | 1675 | 1.041 | 6866 | 903 | 2728 | 2127 | 455 | 48 | 375 | 129 | 13632 | 14185 |
| FRWY35 | 10410 | 6,820 | 300 | 820 | 2,470 | 1143 | 0.710 | 3701 | 487 | 1471 | 1147 | 198 | 21 | 151 | 36 | 7212 | 5121 |
| FRWY36 | 9270 | 6,830 | 230 | 670 | 1,540 | 9120 | 5.665 | 3707 | 488 | 1473 | 1148 | 152 | 16 | 124 | 22 | 7130 | 40395 |
| FRWY37 | 9170 | 6,800 | 220 | 640 | 1,510 | 3802 | 2.362 | 3691 | 486 | 1467 | 1143 | 145 | 15 | 118 | 22 | 7087 | 16738 |
| FRWY294 | 393 | 0 | 0 | 0 | 393 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| FRWY295 | 393 | 0 | 0 | 0 | 393 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| FRWY296 | 393 | 0 | 0 | 0 | 393 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| FRWY297 | 393 | 0 | 0 | 0 | 393 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| FRWY299 | 393 | 0 | 0 | 0 | 393 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| FRWY75 | 3590 | 1,160 | 90 | 330 | 2,010 | 2861 | 1.777 | 630 | 83 | 250 | 195 | 59 | 6 | 61 | 29 | 1313 | 2334 |
| FRWY76 | 3870 | 1,320 | 100 | 360 | 2,090 | 2500 | 1.553 | 716 | 94 | 285 | 222 | 66 | 7 | 66 | 30 | 1487 | 2309 |
| FRWY77 | 3870 | 1,320 | 100 | 360 | 2,090 | 450 | 0.280 | 716 | 94 | 285 | 222 | 66 | 7 | 66 | 30 | 1487 | 416 |
| FRWY78 | 3980 | 1,410 | 100 | 370 | 2,100 | 1384 | 0.860 | 765 | 101 | 304 | 237 | 66 | 7 | 68 | 30 | 1579 | 1357 |
| FRWY79 | 4140 | 1,530 | 100 | 390 | 2,120 | 1713 | 1.064 | 830 | 109 | 330 | 257 | 66 | 7 | 72 | 31 | 1703 | 1812 |
| FRWY80 | 4260 | 1,610 | 100 | 400 | 2,150 | 1703 | 1.058 | 874 | 115 | 347 | 271 | 66 | 7 | 74 | 31 | 1785 | 1888 |
| FRWY81 | 4370 | 1,680 | 110 | 410 | 2,170 | 2512 | 1.560 | 912 | 120 | 362 | 282 | 73 | 8 | 76 | 31 | 1864 | 2909 |
| FRWY82 | 4470 | 1,730 | 110 | 430 | 2,200 | 1674 | 1.040 | 939 | 124 | 373 | 291 | 73 | 8 | 79 | 32 | 1918 | 1995 |
| FRWY83 | 4490 | 1,740 | 110 | 430 | 2,210 | 1819 | 1.130 | 944 | 124 | 375 | 293 | 73 | 8 | 79 | 32 | 1928 | 2179 |
| FRWY84 | 4140 | 1,660 | 90 | 380 | 2,010 | 1182 | 0.734 | 901 | 119 | 358 | 279 | 59 | 6 | 70 | 29 | 1822 | 1338 |
| FRWY85 | 4110 | 1,640 | 90 | 380 | 2,000 | 2360 | 1.466 | 890 | 117 | 354 | 276 | 59 | 6 | 70 | 29 | 1802 | 2641 |
| FRWY86 | 3940 | 1,660 | 80 | 340 | 1,860 | 783 | 0.486 | 901 | 119 | 358 | 279 | 53 | 6 | 63 | 27 | 1805 | 878 |
| FRWY87 | 4110 | 1,790 | 90 | 350 | 1,880 | 1370 | 0.851 | 971 | 128 | 386 | 301 | 59 | 6 | 65 | 27 | 1944 | 1654 |
| FRWY101 | 4420 | 2,930 | 100 | 300 | 1,090 | 1703 | 1.058 | 1590 | 209 | 632 | 493 | 66 | 7 | 55 | 16 | 3068 | 3246 |
| FRWY102 | 3950 | 2,520 | 90 | 280 | 1,060 | 925 | 0.575 | 1368 | 180 | 544 | 424 | 59 | 6 | 52 | 15 | 2648 | 1521 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 3950 | 2,520 | 90 | 280 | 1,060 | 1770 | 1.100 | 1368 | 180 | 544 | 424 | 59 | 6 | 52 | 15 | 2648 | 2911 |
| FRWY104 | 3400 | 2,040 | 70 | 250 | 1,040 | 3182 | 1.977 | 1107 | 146 | 440 | 343 | 46 | 5 | 46 | 15 | 2148 | 4246 |
| FRWY105 | 2890 | 1,610 | 60 | 220 | 1,000 | 1010 | 0.627 | 874 | 115 | 347 | 271 | 40 | 4 | 41 | 14 | 1706 | 1070 |
| FRWY106 | 2760 | 1,500 | 60 | 210 | 990 | 1305 | 0.811 | 814 | 107 | 324 | 252 | 40 | 4 | 39 | 14 | 1594 | 1292 |
| FRWY107 | 2630 | 1,410 | 50 | 200 | 970 | 1655 | 1.028 | 765 | 101 | 304 | 237 | 33 | 4 | 37 | 14 | 1495 | 1537 |
| FRWY108 | 2530 | 1,330 | 50 | 190 | 960 | 4341 | 2.697 | 722 | 95 | 287 | 224 | 33 | 4 | 35 | 14 | 1413 | 3810 |
| FRWY109 | 2350 | 1,230 | 50 | 150 | 920 | 1728 | 1.073 | 668 | 88 | 265 | 207 | 33 | 4 | 28 | 13 | 1305 | 1401 |
| FRWY110 | 2350 | 1,230 | 50 | 150 | 920 | 2788 | 1.732 | 668 | 88 | 265 | 207 | 33 | 4 | 28 | 13 | 1305 | 2260 |
| FRWY111 | 2320 | 1,210 | 50 | 150 | 910 | 7717 | 4.794 | 657 | 86 | 261 | 203 | 33 | 4 | 28 | 13 | 1285 | 6160 |
| FRWY112 | 2300 | 1,200 | 40 | 150 | 910 | 1384 | 0.860 | 651 | 86 | 259 | 202 | 26 | 3 | 28 | 13 | 1268 | 1090 |
| FRWY113 | 1970 | 1,020 | 40 | 120 | 790 | 3380 | 2.100 | 554 | 73 | 220 | 171 | 26 | 3 | 22 | 11 | 1081 | 2269 |
| FRWY114 | 1970 | 1,020 | 40 | 120 | 790 | 3719 | 2.310 | 554 | 73 | 220 | 171 | 26 | 3 | 22 | 11 | 1081 | 2497 |
| FRWY129 | 1790 | 1,390 | 20 | 130 | 250 | 4476 | 2.781 | 754 | 99 | 300 | 234 | 13 | 1 | 24 | 4 | 1429 | 3975 |
| FRWY130 | 2040 | 1,620 | 30 | 140 | 250 | 3830 | 2.379 | 879 | 116 | 349 | 272 | 20 | 2 | 26 | 4 | 1668 | 3969 |
| FRWY131 | 2250 | 1,800 | 30 | 160 | 260 | 2967 | 1.843 | 977 | 129 | 388 | 303 | 20 | 2 | 30 | 4 | 1852 | 3413 |
| FRWY132 | 2320 | 1,850 | 40 | 160 | 270 | 1163 | 0.722 | 1004 | 132 | 399 | 311 | 26 | 3 | 30 | 4 | 1909 | 1379 |
| FRWY133 | 1860 | 1,440 | 30 | 120 | 270 | 4541 | 2.821 | 782 | 103 | 311 | 242 | 20 | 2 | 22 | 4 | 1485 | 4189 |
| FRWY167 | 850 | 480 | 10 | 50 | 310 | 1471 | 0.914 | 261 | 34 | 104 | 81 | 7 | 1 | 9 | 4 | 500 | 457 |
| FRWY168 | 1110 | 620 | 20 | 70 | 400 | 916 | 0.569 | 336 | 44 | 134 | 104 | 13 | 1 | 13 | 6 | 652 | 371 |
| FRWY169 | 1070 | 590 | 20 | 70 | 390 | 4924 | 3.059 | 320 | 42 | 127 | 99 | 13 | 1 | 13 | 6 | 622 | 1903 |
| FRWY171 | 700 | 320 | 10 | 40 | 330 | 2145 | 1.333 | 174 | 23 | 69 | 54 | 7 | 1 | 7 | 5 | 339 | 451 |
| FRWY172 | 780 | 330 | 10 | 50 | 390 | 3000 | 1.864 | 179 | 24 | 71 | 55 | 7 | 1 | 9 | 6 | 352 | 655 |
| FRWY173 | 1280 | 750 | 30 | 80 | 420 | 2501 | 1.554 | 407 | 54 | 162 | 126 | 20 | 2 | 15 | 6 | 791 | 1229 |
| FRWY174 | 1000 | 470 | 20 | 70 | 440 | 1135 | 0.705 | 255 | 34 | 101 | 79 | 13 | 1 | 13 | 6 | 503 | 355 |
| FRWY175 | 1370 | 710 | 30 | 90 | 540 | 1547 | 0.961 | 385 | 51 | 153 | 119 | 20 | 2 | 17 | 8 | 755 | 725 |
| FRWY176 | 1480 | 760 | 30 | 100 | 590 | 1359 | 0.844 | 412 | 54 | 164 | 128 | 20 | 2 | 18 | 9 | 807 | 682 |
| FRWY134 | 1380 | 380 | 30 | 90 | 880 | 1385 | 0.860 | 206 | 27 | 82 | 64 | 20 | 2 | 17 | 13 | 430 | 370 |
| FRWY135 | 1350 | 370 | 20 | 90 | 870 | 1711 | 1.063 | 201 | 26 | 80 | 62 | 13 | 1 | 17 | 13 | 413 | 439 |
| FRWY136 | 1320 | 340 | 20 | 90 | 870 | 1038 | 0.645 | 185 | 24 | 73 | 57 | 13 | 1 | 17 | 13 | 383 | 247 |
| FRWY137 | 1200 | 300 | 20 | 70 | 810 | 1516 | 0.942 | 163 | 21 | 65 | 50 | 13 | 1 | 13 | 12 | 339 | 319 |
| FRWY138 | 1160 | 270 | 20 | 70 | 800 | 2485 | 1.544 | 147 | 19 | 58 | 45 | 13 | 1 | 13 | 12 | 309 | 476 |
| FRWY139 | 2220 | 1,200 | 60 | 180 | 780 | 1950 | 1.211 | 651 | 86 | 259 | 202 | 40 | 4 | 33 | 11 | 1286 | 1558 |
| FRWY140 | 2180 | 1,140 | 60 | 180 | 800 | 1581 | 0.982 | 619 | 81 | 246 | 192 | 40 | 4 | 33 | 12 | 1226 | 1204 |
| FRWY141 | 2000 | 1,070 | 60 | 160 | 710 | 1447 | 0.899 | 581 | 76 | 231 | 180 | 40 | 4 | 30 | 10 | 1151 | 1035 |
| FRWY142 | 2000 | 1,080 | 60 | 160 | 700 | 938 | 0.583 | 586 | 77 | 233 | 182 | 40 | 4 | 30 | 10 | 1161 | 677 |
| FRWY143 | 1850 | 1,020 | 50 | 140 | 640 | 2032 | 1.262 | 554 | 73 | 220 | 171 | 33 | 4 | 26 | 9 | 1090 | 1375 |
| FRWY144 | 1620 | 890 | 40 | 110 | 580 | 3119 | 1.938 | 483 | 64 | 192 | 150 | 26 | 3 | 20 | 8 | 946 | 1833 |
| | | | | | | | | | | | | | | | | | 319977 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 6 | 440 | 58 | 175 | 136 | 52 | 5 | 38 | 35 |
| FRWY2 | 6 | 472 | 62 | 188 | 146 | 71 | 7 | 54 | 48 |
| FRWY3 | 6 | 398 | 52 | 158 | 123 | 57 | 6 | 46 | 39 |
| FRWY4 | 6 | 461 | 61 | 183 | 143 | 68 | 7 | 51 | 43 |
| FRWY5 | 6 | 369 | 49 | 147 | 114 | 52 | 6 | 41 | 34 |
| FRWY6 | 6 | 556 | 73 | 221 | 172 | 77 | 8 | 62 | 49 |
| FRWY7 | 6 | 451 | 59 | 179 | 140 | 61 | 6 | 49 | 39 |
| FRWY8 | 6 | 430 | 57 | 171 | 133 | 57 | 6 | 48 | 37 |
| FRWY9 | 6 | 556 | 73 | 221 | 172 | 73 | 8 | 64 | 46 |
| FRWY10 | 6 | 533 | 70 | 212 | 165 | 68 | 7 | 59 | 43 |
| FRWY11 | 6 | 295 | 39 | 117 | 91 | 35 | 4 | 31 | 22 |
| FRWY12 | 7 | 1116 | 147 | 444 | 346 | 123 | 13 | 111 | 67 |
| FRWY13 | 7 | 854 | 112 | 339 | 265 | 97 | 10 | 89 | 51 |
| FRWY14 | 7 | 1269 | 167 | 504 | 393 | 140 | 15 | 135 | 77 |
| FRWY15 | 7 | 835 | 110 | 332 | 259 | 92 | 10 | 89 | 51 |
| FRWY16 | 7 | 1478 | 194 | 587 | 458 | 167 | 18 | 153 | 86 |
| FRWY17 | 7 | 2404 | 316 | 956 | 745 | 236 | 25 | 216 | 109 |
| FRWY18 | 7 | 2106 | 277 | 837 | 652 | 195 | 21 | 178 | 87 |
| FRWY19 | 7 | 807 | 106 | 321 | 250 | 75 | 8 | 70 | 32 |
| FRWY20 | 7 | 785 | 103 | 312 | 243 | 73 | 8 | 67 | 29 |
| FRWY21 | 6 | 3080 | 405 | 1224 | 954 | 251 | 27 | 247 | 113 |
| FRWY22 | 6 | 1818 | 239 | 723 | 563 | 148 | 16 | 148 | 66 |
| FRWY23 | 6 | 1880 | 247 | 747 | 582 | 154 | 16 | 154 | 67 |
| FRWY24 | 6 | 4488 | 591 | 1784 | 1390 | 352 | 37 | 355 | 151 |
| FRWY25 | 6 | 3128 | 412 | 1243 | 969 | 230 | 24 | 226 | 91 |
| FRWY26 | 6 | 2543 | 335 | 1011 | 788 | 160 | 17 | 159 | 64 |
| FRWY27 | 7 | 3259 | 429 | 1295 | 1010 | 224 | 24 | 224 | 90 |
| FRWY28 | 7 | 4523 | 595 | 1797 | 1401 | 330 | 35 | 324 | 124 |
| FRWY29 | 7 | 4484 | 590 | 1782 | 1389 | 342 | 36 | 332 | 124 |
| FRWY30 | 7 | 4829 | 635 | 1919 | 1496 | 344 | 37 | 326 | 119 |
| FRWY31 | 7 | 11535 | 1518 | 4584 | 3573 | 818 | 87 | 737 | 280 |
| FRWY32 | 7 | 4090 | 538 | 1626 | 1267 | 287 | 30 | 247 | 92 |
| FRWY33 | 7 | 7874 | 1036 | 3129 | 2439 | 547 | 58 | 459 | 162 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY34 | 7 | 7144 | 940 | 2839 | 2213 | 474 | 50 | 390 | 135 |
| FRWY35 | 7 | 2628 | 346 | 1044 | 814 | 141 | 15 | 107 | 25 |
| FRWY36 | 7 | 21001 | 2764 | 8346 | 6506 | 860 | 91 | 701 | 126 |
| FRWY37 | 7 | 8717 | 1147 | 3464 | 2700 | 343 | 36 | 279 | 52 |
| FRWY294 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| FRWY295 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| FRWY296 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| FRWY297 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| FRWY299 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| FRWY75 | 3 | 1119 | 147 | 445 | 347 | 106 | 11 | 108 | 52 |
| FRWY76 | 3 | 1113 | 146 | 442 | 345 | 102 | 11 | 103 | 47 |
| FRWY77 | 3 | 200 | 26 | 80 | 62 | 18 | 2 | 19 | 8 |
| FRWY78 | 3 | 658 | 87 | 261 | 204 | 57 | 6 | 59 | 26 |
| FRWY79 | 3 | 884 | 116 | 351 | 274 | 70 | 7 | 77 | 33 |
| FRWY80 | 3 | 924 | 122 | 367 | 286 | 70 | 7 | 78 | 33 |
| FRWY81 | 3 | 1423 | 187 | 565 | 441 | 113 | 12 | 118 | 49 |
| FRWY82 | 3 | 976 | 128 | 388 | 302 | 75 | 8 | 83 | 33 |
| FRWY83 | 3 | 1067 | 140 | 424 | 331 | 82 | 9 | 90 | 36 |
| FRWY84 | 3 | 662 | 87 | 263 | 205 | 44 | 5 | 52 | 21 |
| FRWY85 | 3 | 1305 | 172 | 519 | 404 | 87 | 9 | 103 | 42 |
| FRWY86 | 3 | 438 | 58 | 174 | 136 | 26 | 3 | 31 | 13 |
| FRWY87 | 3 | 827 | 109 | 329 | 256 | 51 | 5 | 55 | 23 |
| FRWY101 | 7 | 1682 | 221 | 669 | 521 | 70 | 7 | 59 | 17 |
| FRWY102 | 7 | 786 | 103 | 312 | 243 | 34 | 4 | 30 | 9 |
| FRWY103 | 7 | 1504 | 198 | 598 | 466 | 65 | 7 | 57 | 17 |
| FRWY104 | 7 | 2189 | 288 | 870 | 678 | 91 | 10 | 91 | 30 |
| FRWY105 | 7 | 548 | 72 | 218 | 170 | 25 | 3 | 25 | 9 |
| FRWY106 | 7 | 660 | 87 | 262 | 204 | 32 | 3 | 31 | 12 |
| FRWY107 | 7 | 787 | 104 | 313 | 244 | 34 | 4 | 38 | 14 |
| FRWY108 | 7 | 1947 | 256 | 774 | 603 | 89 | 9 | 95 | 38 |
| FRWY109 | 7 | 717 | 94 | 285 | 222 | 35 | 4 | 30 | 14 |
| FRWY110 | 7 | 1156 | 152 | 459 | 358 | 57 | 6 | 48 | 23 |
| FRWY111 | 7 | 3148 | 414 | 1251 | 975 | 158 | 17 | 133 | 63 |
| FRWY112 | 7 | 560 | 74 | 223 | 173 | 23 | 2 | 24 | 11 |
| FRWY113 | 7 | 1162 | 153 | 462 | 360 | 55 | 6 | 47 | 24 |
| FRWY114 | 7 | 1279 | 168 | 508 | 396 | 61 | 6 | 51 | 26 |
| FRWY129 | 7 | 2098 | 276 | 834 | 650 | 37 | 4 | 67 | 10 |
| FRWY130 | 7 | 2092 | 275 | 831 | 648 | 47 | 5 | 61 | 9 |
| FRWY131 | 7 | 1801 | 237 | 716 | 558 | 36 | 4 | 54 | 7 |
| FRWY132 | 7 | 725 | 95 | 288 | 225 | 19 | 2 | 21 | 3 |
| FRWY133 | 7 | 2205 | 290 | 876 | 683 | 56 | 6 | 62 | 11 |
| FRWY167 | 7 | 238 | 31 | 95 | 74 | 6 | 1 | 8 | 4 |
| FRWY168 | 7 | 191 | 25 | 76 | 59 | 8 | 1 | 7 | 3 |
| FRWY169 | 7 | 979 | 129 | 389 | 303 | 40 | 4 | 40 | 17 |
| FRWY171 | 7 | 231 | 30 | 92 | 72 | 9 | 1 | 10 | 6 |
| FRWY172 | 7 | 334 | 44 | 133 | 103 | 12 | 1 | 17 | 11 |
| FRWY173 | 7 | 632 | 83 | 251 | 196 | 31 | 3 | 23 | 9 |
| FRWY174 | 7 | 180 | 24 | 71 | 56 | 9 | 1 | 9 | 4 |
| FRWY175 | 7 | 370 | 49 | 147 | 115 | 19 | 2 | 16 | 8 |
| FRWY176 | 7 | 348 | 46 | 138 | 108 | 17 | 2 | 16 | 7 |
| FRWY134 | 6 | 177 | 23 | 71 | 55 | 17 | 2 | 14 | 11 |
| FRWY135 | 6 | 213 | 28 | 85 | 66 | 14 | 1 | 18 | 13 |
| FRWY136 | 6 | 119 | 16 | 47 | 37 | 9 | 1 | 11 | 8 |
| FRWY137 | 6 | 153 | 20 | 61 | 48 | 12 | 1 | 12 | 11 |
| FRWY138 | 6 | 226 | 30 | 90 | 70 | 20 | 2 | 20 | 18 |
| FRWY139 | 6 | 789 | 104 | 314 | 244 | 48 | 5 | 40 | 14 |
| FRWY140 | 3 | 608 | 80 | 241 | 188 | 39 | 4 | 33 | 11 |
| FRWY141 | 3 | 522 | 69 | 207 | 162 | 36 | 4 | 27 | 9 |
| FRWY142 | 3 | 342 | 45 | 136 | 106 | 23 | 2 | 17 | 6 |
| FRWY143 | 3 | 699 | 92 | 278 | 216 | 42 | 4 | 33 | 12 |
| FRWY144 | 3 | 936 | 123 | 372 | 290 | 51 | 5 | 39 | 16 |
| **Total** | | **160566** | **21130** | **63810** | **49740** | **10261** | **1089** | **9477** | **3904** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 14702 | 1935 | 5842 | 4554 | 1091 | 116 | 1122 | 504 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 23576 | 3102 | 9369 | 7303 | 2086 | 221 | 1948 | 1064 | |
| 7 | 122289 | 16093 | 48598 | 37882 | 7084 | 752 | 6407 | 2336 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **160566** | **21130** | **63810** | **49740** | **10261** | **1089** | **9477** | **3904** | **319977** |

**World Logistics Center**
**Project Full Buildout 2035**
**Entrained Road Dust**
Freeways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | F | 1574 | 0.98 | 830 | 812 | 80 | 78 | 210 | 205 | 2,450 | 2396 | 3491 | 17.27 | 0.022 | 0.0003 | 1.1 | 0.0012 | 4.4 |
| FRWY2 | F | 2153 | 1.34 | 650 | 869 | 80 | 107 | 220 | 294 | 2,490 | 3330 | 4601 | 18.11 | 0.022 | 0.0003 | 1.5 | 0.0013 | 6.0 |
| FRWY3 | F | 1737 | 1.08 | 680 | 734 | 80 | 86 | 230 | 248 | 2,520 | 2719 | 3787 | 18.00 | 0.022 | 0.0003 | 1.2 | 0.0013 | 4.9 |
| FRWY4 | F | 1847 | 1.15 | 740 | 849 | 90 | 103 | 240 | 275 | 2,570 | 2949 | 4176 | 17.76 | 0.022 | 0.0003 | 1.3 | 0.0013 | 5.4 |
| FRWY5 | F | 1422 | 0.88 | 770 | 680 | 90 | 80 | 250 | 221 | 2,620 | 2314 | 3295 | 17.69 | 0.022 | 0.0003 | 1.0 | 0.0013 | 4.2 |
| FRWY6 | F | 2087 | 1.30 | 790 | 1024 | 90 | 117 | 260 | 337 | 2,630 | 3410 | 4888 | 17.61 | 0.022 | 0.0003 | 1.5 | 0.0013 | 6.2 |
| FRWY7 | F | 1650 | 1.03 | 810 | 830 | 90 | 92 | 260 | 267 | 2,640 | 2706 | 3895 | 17.54 | 0.022 | 0.0003 | 1.2 | 0.0013 | 4.9 |
| FRWY8 | F | 1537 | 0.95 | 830 | 792 | 90 | 86 | 270 | 258 | 2,670 | 2549 | 3686 | 17.49 | 0.022 | 0.0003 | 1.1 | 0.0013 | 4.7 |
| FRWY9 | F | 1792 | 1.11 | 920 | 1024 | 100 | 111 | 310 | 345 | 2,860 | 3184 | 4664 | 17.34 | 0.022 | 0.0003 | 1.4 | 0.0013 | 5.8 |
| FRWY10 | F | 1665 | 1.03 | 950 | 983 | 100 | 103 | 310 | 321 | 2,890 | 2989 | 4396 | 17.28 | 0.022 | 0.0003 | 1.3 | 0.0012 | 5.5 |
| FRWY11 | F | 849 | 0.53 | 1,030 | 543 | 100 | 53 | 320 | 169 | 2,910 | 1535 | 2300 | 17.01 | 0.022 | 0.0003 | 0.7 | 0.0012 | 2.8 |
| FRWY12 | F | 2299 | 1.43 | 1,440 | 2057 | 130 | 186 | 420 | 600 | 3,230 | 4613 | 7455 | 16.06 | 0.022 | 0.0003 | 2.1 | 0.0012 | 8.6 |
| FRWY13 | F | 1689 | 1.05 | 1,500 | 1574 | 140 | 147 | 460 | 483 | 3,360 | 3525 | 5729 | 16.03 | 0.022 | 0.0003 | 1.6 | 0.0012 | 6.6 |
| FRWY14 | F | 2444 | 1.52 | 1,540 | 2338 | 140 | 213 | 480 | 729 | 3,480 | 5283 | 8563 | 16.07 | 0.022 | 0.0003 | 2.4 | 0.0012 | 9.9 |
| FRWY15 | F | 1608 | 1.00 | 1,540 | 1538 | 140 | 140 | 480 | 479 | 3,490 | 3486 | 5644 | 16.08 | 0.022 | 0.0003 | 1.6 | 0.0012 | 6.5 |
| FRWY16 | F | 2722 | 1.69 | 1,610 | 2722 | 150 | 254 | 490 | 829 | 3,500 | 5918 | 9723 | 15.90 | 0.022 | 0.0003 | 2.7 | 0.0011 | 11.1 |
| FRWY17 | F | 3198 | 1.99 | 2,230 | 4430 | 180 | 358 | 590 | 1172 | 3,780 | 7509 | 13469 | 14.83 | 0.022 | 0.0003 | 3.5 | 0.0011 | 14.4 |
| FRWY18 | F | 2509 | 1.56 | 2,490 | 3881 | 190 | 296 | 620 | 966 | 3,830 | 5970 | 11113 | 14.40 | 0.022 | 0.0003 | 2.8 | 0.0010 | 11.5 |
| FRWY19 | F | 910 | 0.57 | 2,630 | 1487 | 200 | 113 | 670 | 379 | 3,950 | 2233 | 4212 | 14.29 | 0.022 | 0.0003 | 1.1 | 0.0010 | 4.3 |
| FRWY20 | F | 774 | 0.48 | 3,010 | 1447 | 230 | 111 | 760 | 365 | 4,200 | 2019 | 3943 | 13.94 | 0.022 | 0.0002 | 1.0 | 0.0010 | 4.0 |
| FRWY21 | F | 1798 | 1.12 | 5,080 | 5674 | 340 | 380 | 1,200 | 1340 | 6,960 | 7774 | 15168 | 13.89 | 0.022 | 0.0002 | 3.7 | 0.0010 | 15.2 |
| FRWY22 | F | 1035 | 0.64 | 5,210 | 3350 | 350 | 225 | 1,250 | 804 | 7,120 | 4578 | 8956 | 13.88 | 0.022 | 0.0002 | 2.2 | 0.0010 | 8.9 |
| FRWY23 | F | 1042 | 0.65 | 5,350 | 3463 | 360 | 233 | 1,290 | 835 | 7,190 | 4654 | 9185 | 13.79 | 0.022 | 0.0002 | 2.2 | 0.0010 | 9.1 |
| FRWY24 | F | 2260 | 1.40 | 5,890 | 8269 | 380 | 533 | 1,370 | 1923 | 7,420 | 10417 | 21143 | 13.50 | 0.022 | 0.0002 | 5.0 | 0.0010 | 20.5 |
| FRWY25 | F | 1305 | 0.81 | 7,110 | 5764 | 430 | 349 | 1,510 | 1224 | 7,770 | 6299 | 13636 | 12.84 | 0.022 | 0.0002 | 3.1 | 0.0009 | 12.6 |
| FRWY26 | F | 977 | 0.61 | 7,720 | 4685 | 400 | 243 | 1,420 | 862 | 7,330 | 4449 | 10239 | 12.20 | 0.022 | 0.0002 | 2.2 | 0.0009 | 9.0 |
| FRWY27 | F | 1186 | 0.74 | 8,150 | 6005 | 460 | 339 | 1,650 | 1216 | 8,410 | 6196 | 13755 | 12.58 | 0.022 | 0.0002 | 3.0 | 0.0009 | 12.4 |
| FRWY28 | F | 1642 | 1.02 | 8,170 | 8334 | 490 | 500 | 1,720 | 1754 | 8,410 | 8578 | 19166 | 12.55 | 0.022 | 0.0002 | 4.2 | 0.0009 | 17.3 |
| FRWY29 | F | 1636 | 1.02 | 8,130 | 8263 | 510 | 518 | 1,770 | 1799 | 8,440 | 8578 | 19157 | 12.58 | 0.022 | 0.0002 | 4.2 | 0.0009 | 17.3 |
| FRWY30 | F | 1555 | 0.97 | 9,210 | 8897 | 540 | 522 | 1,830 | 1768 | 8,520 | 8230 | 19416 | 12.05 | 0.022 | 0.0002 | 4.1 | 0.0009 | 16.8 |
| FRWY31 | F | 3384 | 2.10 | 10,110 | 21253 | 590 | 1240 | 1,900 | 3994 | 9,200 | 19340 | 45828 | 11.98 | 0.022 | 0.0002 | 9.7 | 0.0009 | 39.4 |
| FRWY32 | F | 1112 | 0.69 | 10,910 | 7536 | 630 | 435 | 1,940 | 1340 | 9,200 | 6355 | 15667 | 11.62 | 0.022 | 0.0002 | 3.2 | 0.0008 | 13.0 |
| FRWY33 | F | 1935 | 1.20 | 12,070 | 14509 | 690 | 829 | 2,070 | 2488 | 9,320 | 11203 | 29029 | 11.21 | 0.022 | 0.0002 | 5.7 | 0.0008 | 23.3 |
| FRWY34 | F | 1675 | 1.04 | 12,650 | 13163 | 690 | 718 | 2,030 | 2112 | 8,920 | 9282 | 25274 | 10.79 | 0.022 | 0.0002 | 4.8 | 0.0008 | 19.5 |
| FRWY35 | F | 1143 | 0.71 | 6,820 | 4843 | 300 | 213 | 820 | 582 | 2,470 | 1754 | 7392 | 8.00 | 0.022 | 0.0001 | 1.0 | 0.0006 | 4.2 |
| FRWY36 | F | 9120 | 5.67 | 6,830 | 38695 | 230 | 1303 | 670 | 3796 | 1,540 | 8725 | 52519 | 6.42 | 0.022 | 0.0001 | 5.9 | 0.0005 | 23.9 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY37 | F | 3802 | 2.36 | 6,800 | 16061 | 220 | 520 | 640 | 1512 | 1,510 | 3566 | 21658 | 6.36 | 0.022 | 0.0001 | 2.4 | 0.0005 | 9.8 |
| FRWY294 | F | 2926 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 714 | 714 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.2 |
| FRWY295 | F | 1049 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 256 | 256 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| FRWY296 | F | 1811 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 442 | 442 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| FRWY297 | F | 1505 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 367 | 367 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| FRWY299 | F | 1654 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 404 | 404 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| FRWY75 | F | 2861 | 1.78 | 1,160 | 2062 | 90 | 160 | 330 | 587 | 2,010 | 3572 | 6380 | 14.93 | 0.022 | 0.0003 | 1.7 | 0.0011 | 6.9 |
| FRWY76 | F | 2500 | 1.55 | 1,320 | 2050 | 100 | 155 | 360 | 559 | 2,090 | 3246 | 6010 | 14.52 | 0.022 | 0.0003 | 1.5 | 0.0010 | 6.3 |
| FRWY77 | F | 450 | 0.28 | 1,320 | 369 | 100 | 28 | 360 | 101 | 2,090 | 584 | 1082 | 14.52 | 0.022 | 0.0003 | 0.3 | 0.0010 | 1.1 |
| FRWY78 | F | 1384 | 0.86 | 1,410 | 1212 | 100 | 86 | 370 | 318 | 2,100 | 1805 | 3422 | 14.26 | 0.022 | 0.0003 | 0.9 | 0.0010 | 3.5 |
| FRWY79 | F | 1713 | 1.06 | 1,530 | 1628 | 100 | 106 | 390 | 415 | 2,120 | 2256 | 4406 | 13.94 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.4 |
| FRWY80 | F | 1703 | 1.06 | 1,610 | 1703 | 100 | 106 | 400 | 423 | 2,150 | 2275 | 4507 | 13.77 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.5 |
| FRWY81 | F | 2512 | 1.56 | 1,680 | 2622 | 110 | 172 | 410 | 640 | 2,170 | 3386 | 6819 | 13.61 | 0.022 | 0.0002 | 1.6 | 0.0010 | 6.7 |
| FRWY82 | F | 1674 | 1.04 | 1,730 | 1799 | 110 | 114 | 430 | 447 | 2,200 | 2288 | 4648 | 13.54 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.5 |
| FRWY83 | F | 1819 | 1.13 | 1,740 | 1966 | 110 | 124 | 430 | 486 | 2,210 | 2497 | 5074 | 13.53 | 0.022 | 0.0002 | 1.2 | 0.0010 | 4.9 |
| FRWY84 | F | 1182 | 0.73 | 1,660 | 1219 | 90 | 66 | 380 | 279 | 2,010 | 1476 | 3040 | 13.34 | 0.022 | 0.0002 | 0.7 | 0.0010 | 2.9 |
| FRWY85 | F | 2360 | 1.47 | 1,640 | 2404 | 90 | 132 | 380 | 557 | 2,000 | 2932 | 6026 | 13.37 | 0.022 | 0.0002 | 1.4 | 0.0010 | 5.8 |
| FRWY86 | F | 783 | 0.49 | 1,660 | 807 | 80 | 39 | 340 | 165 | 1,860 | 905 | 1916 | 13.00 | 0.022 | 0.0002 | 0.4 | 0.0009 | 1.8 |
| FRWY87 | F | 1370 | 0.85 | 1,790 | 1523 | 90 | 77 | 350 | 298 | 1,880 | 1600 | 3498 | 12.69 | 0.022 | 0.0002 | 0.8 | 0.0009 | 3.2 |
| FRWY101 | F | 1703 | 1.06 | 2,930 | 3100 | 100 | 106 | 300 | 317 | 1,090 | 1153 | 4676 | 8.07 | 0.022 | 0.0001 | 0.7 | 0.0006 | 2.7 |
| FRWY102 | F | 925 | 0.57 | 2,520 | 1448 | 90 | 52 | 280 | 161 | 1,060 | 609 | 2270 | 8.56 | 0.022 | 0.0001 | 0.3 | 0.0006 | 1.4 |
| FRWY103 | F | 1770 | 1.10 | 2,520 | 2771 | 90 | 99 | 280 | 308 | 1,060 | 1166 | 4343 | 8.56 | 0.022 | 0.0001 | 0.6 | 0.0006 | 2.6 |
| FRWY104 | F | 3182 | 1.98 | 2,040 | 4032 | 70 | 138 | 250 | 494 | 1,040 | 2056 | 6721 | 9.37 | 0.022 | 0.0002 | 1.1 | 0.0007 | 4.5 |
| FRWY105 | F | 1010 | 0.63 | 1,610 | 1010 | 60 | 38 | 220 | 138 | 1,000 | 627 | 1813 | 10.24 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.3 |
| FRWY106 | F | 1305 | 0.81 | 1,500 | 1216 | 60 | 49 | 210 | 170 | 990 | 803 | 2237 | 10.51 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.7 |
| FRWY107 | F | 1655 | 1.03 | 1,410 | 1450 | 50 | 51 | 200 | 206 | 970 | 997 | 2704 | 10.72 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.1 |
| FRWY108 | F | 4341 | 2.70 | 1,330 | 3587 | 50 | 135 | 190 | 512 | 960 | 2589 | 6823 | 10.94 | 0.022 | 0.0002 | 1.3 | 0.0008 | 5.3 |
| FRWY109 | F | 1728 | 1.07 | 1,230 | 1320 | 50 | 54 | 150 | 161 | 920 | 988 | 2523 | 11.09 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.0 |
| FRWY110 | F | 2788 | 1.73 | 1,230 | 2130 | 50 | 87 | 150 | 260 | 920 | 1593 | 4070 | 11.09 | 0.022 | 0.0002 | 0.8 | 0.0008 | 3.2 |
| FRWY111 | F | 7717 | 4.79 | 1,210 | 5801 | 50 | 240 | 150 | 719 | 910 | 4362 | 11122 | 11.11 | 0.022 | 0.0002 | 2.2 | 0.0008 | 8.8 |
| FRWY112 | F | 1384 | 0.86 | 1,200 | 1032 | 40 | 34 | 150 | 129 | 910 | 782 | 1977 | 11.17 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.6 |
| FRWY113 | F | 3380 | 2.10 | 1,020 | 2142 | 40 | 84 | 120 | 252 | 790 | 1659 | 4136 | 11.26 | 0.022 | 0.0002 | 0.8 | 0.0008 | 3.3 |
| FRWY114 | F | 3719 | 2.31 | 1,020 | 2356 | 40 | 92 | 120 | 277 | 790 | 1825 | 4551 | 11.26 | 0.022 | 0.0002 | 0.9 | 0.0008 | 3.7 |
| FRWY129 | F | 4476 | 2.78 | 1,390 | 3865 | 20 | 56 | 130 | 361 | 250 | 695 | 4977 | 5.82 | 0.022 | 0.0001 | 0.5 | 0.0004 | 2.0 |
| FRWY130 | F | 3830 | 2.38 | 1,620 | 3854 | 30 | 71 | 140 | 333 | 250 | 595 | 4854 | 5.43 | 0.022 | 0.0001 | 0.5 | 0.0004 | 1.9 |
| FRWY131 | F | 2967 | 1.84 | 1,800 | 3318 | 30 | 55 | 160 | 295 | 260 | 479 | 4147 | 5.30 | 0.022 | 0.0001 | 0.4 | 0.0004 | 1.6 |
| FRWY132 | F | 1163 | 0.72 | 1,850 | 1337 | 40 | 29 | 160 | 116 | 270 | 195 | 1676 | 5.31 | 0.022 | 0.0001 | 0.2 | 0.0004 | 0.6 |
| FRWY133 | F | 4541 | 2.82 | 1,440 | 4062 | 30 | 85 | 120 | 339 | 270 | 762 | 5247 | 5.87 | 0.022 | 0.0001 | 0.5 | 0.0004 | 2.2 |
| FRWY167 | F | 1471 | 0.91 | 480 | 439 | 10 | 9 | 50 | 46 | 310 | 283 | 777 | 10.44 | 0.022 | 0.0002 | 0.1 | 0.0007 | 0.6 |
| FRWY168 | F | 916 | 0.57 | 620 | 353 | 20 | 11 | 70 | 40 | 400 | 228 | 632 | 10.41 | 0.022 | 0.0002 | 0.1 | 0.0007 | 0.5 |
| FRWY169 | F | 4924 | 3.06 | 590 | 1805 | 20 | 61 | 70 | 214 | 390 | 1193 | 3273 | 10.52 | 0.022 | 0.0002 | 0.6 | 0.0008 | 2.5 |
| FRWY171 | F | 2145 | 1.33 | 320 | 426 | 10 | 13 | 40 | 53 | 330 | 440 | 933 | 12.69 | 0.022 | 0.0002 | 0.2 | 0.0009 | 0.8 |
| FRWY172 | F | 3000 | 1.86 | 330 | 615 | 10 | 19 | 50 | 93 | 390 | 727 | 1454 | 13.35 | 0.022 | 0.0002 | 0.3 | 0.0010 | 1.4 |
| FRWY173 | F | 2501 | 1.55 | 750 | 1165 | 30 | 47 | 80 | 124 | 420 | 653 | 1989 | 9.74 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.4 |
| FRWY174 | F | 1135 | 0.71 | 470 | 331 | 20 | 14 | 70 | 49 | 440 | 310 | 705 | 12.17 | 0.022 | 0.0002 | 0.2 | 0.0009 | 0.6 |
| FRWY175 | F | 1547 | 0.96 | 710 | 682 | 30 | 29 | 90 | 86 | 540 | 519 | 1317 | 11.16 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY176 | F | 1359 | 0.84 | 760 | 642 | 30 | 25 | 100 | 84 | 590 | 498 | 1249 | 11.27 | 0.022 | 0.0002 | 0.2 | 0.0008 | 1.0 |
| FRWY134 | F | 1385 | 0.86 | 380 | 327 | 30 | 26 | 90 | 77 | 880 | 757 | 1187 | 16.30 | 0.022 | 0.0003 | 0.3 | 0.0012 | 1.4 |
| FRWY135 | F | 1711 | 1.06 | 370 | 393 | 20 | 21 | 90 | 96 | 870 | 925 | 1435 | 16.43 | 0.022 | 0.0003 | 0.4 | 0.0012 | 1.7 |
| FRWY136 | F | 1038 | 0.64 | 340 | 219 | 20 | 13 | 90 | 58 | 870 | 561 | 851 | 16.76 | 0.022 | 0.0003 | 0.3 | 0.0012 | 1.0 |
| FRWY137 | F | 1516 | 0.94 | 300 | 283 | 20 | 19 | 70 | 66 | 810 | 763 | 1130 | 17.01 | 0.022 | 0.0003 | 0.3 | 0.0012 | 1.4 |
| FRWY138 | F | 2485 | 1.54 | 270 | 417 | 20 | 31 | 70 | 108 | 800 | 1235 | 1791 | 17.34 | 0.022 | 0.0003 | 0.6 | 0.0013 | 2.2 |
| FRWY139 | F | 1950 | 1.21 | 1,200 | 1454 | 60 | 73 | 180 | 218 | 780 | 945 | 2689 | 10.43 | 0.022 | 0.0002 | 0.5 | 0.0007 | 2.0 |
| FRWY140 | F | 1581 | 0.98 | 1,140 | 1120 | 60 | 59 | 180 | 177 | 800 | 786 | 2141 | 10.77 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.7 |
| FRWY141 | F | 1447 | 0.90 | 1,070 | 962 | 60 | 54 | 160 | 144 | 710 | 638 | 1798 | 10.50 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.4 |
| FRWY142 | F | 938 | 0.58 | 1,080 | 629 | 60 | 35 | 160 | 93 | 700 | 408 | 1165 | 10.40 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.9 |
| FRWY143 | F | 2032 | 1.26 | 1,020 | 1288 | 50 | 63 | 140 | 177 | 640 | 808 | 2335 | 10.26 | 0.022 | 0.0002 | 0.4 | 0.0007 | 1.7 |
| FRWY144 | F | 3119 | 1.94 | 890 | 1724 | 40 | 78 | 110 | 213 | 580 | 1124 | 3139 | 10.43 | 0.022 | 0.0002 | 0.6 | 0.0007 | 2.3 |
| | | | | | | | | | | | | | | | **Totals:** | **133.6** | | **544.3** |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 393 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 393 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 393 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 393 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 393 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 393 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 393 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 393 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 393 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 393 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 393 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 393 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 393 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 393 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 393 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 393 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 393 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 393 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 393 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 393 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 393 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 393 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 393 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 393 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 393 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 393 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 393 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 393 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 393 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 393 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 393 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 393 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 393 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 393 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 393 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 393 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 393 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 393 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 393 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 393 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 393 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 393 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 393 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 393 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 393 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 393 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 393 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 393 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 393 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 393 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 393 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 393 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 393 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 786 |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 786 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 786 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 786 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 786 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 786 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 786 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 393 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 393 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 393 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 393 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 393 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 393 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 393 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 393 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 393 |

**World Logistics Center** **2035**
Project Full Buildout 2035
Freeway to Port
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.3% | 6.7% | 81.5% | 98.6% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 393 | 0 | 0 | 0 | 393 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 446 |
| 229 | 393 | 0 | 0 | 0 | 393 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 279 |
| 228 | 393 | 0 | 0 | 0 | 393 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 125 |
| 227 | 393 | 0 | 0 | 0 | 393 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 200 |
| 226 | 393 | 0 | 0 | 0 | 393 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 515 |
| 225 | 393 | 0 | 0 | 0 | 393 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 248 |
| 224 | 393 | 0 | 0 | 0 | 393 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 656 |
| 223 | 393 | 0 | 0 | 0 | 393 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 285 |
| 222 | 393 | 0 | 0 | 0 | 393 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 297 |
| 221 | 393 | 0 | 0 | 0 | 393 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 277 |
| 220 | 393 | 0 | 0 | 0 | 393 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 351 |
| 219 | 393 | 0 | 0 | 0 | 393 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 594 |
| 218 | 393 | 0 | 0 | 0 | 393 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 650 |
| 217 | 393 | 0 | 0 | 0 | 393 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 743 |
| 216 | 393 | 0 | 0 | 0 | 393 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 602 |
| 215 | 393 | 0 | 0 | 0 | 393 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 348 |
| 214 | 393 | 0 | 0 | 0 | 393 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 376 |
| 213 | 393 | 0 | 0 | 0 | 393 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 590 |
| 212 | 393 | 0 | 0 | 0 | 393 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 565 |
| 211 | 393 | 0 | 0 | 0 | 393 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 425 |
| 210 | 393 | 0 | 0 | 0 | 393 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 902 |
| 209 | 393 | 0 | 0 | 0 | 393 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 478 |
| 263 | 393 | 0 | 0 | 0 | 393 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 496 |
| 264 | 393 | 0 | 0 | 0 | 393 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 240 |
| 265 | 393 | 0 | 0 | 0 | 393 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 173 |
| 266 | 393 | 0 | 0 | 0 | 393 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 162 |
| 267 | 393 | 0 | 0 | 0 | 393 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 159 |
| 268 | 393 | 0 | 0 | 0 | 393 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 243 |
| 269 | 393 | 0 | 0 | 0 | 393 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 464 |
| 270 | 393 | 0 | 0 | 0 | 393 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 433 |
| 271 | 393 | 0 | 0 | 0 | 393 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 255 |
| 272 | 393 | 0 | 0 | 0 | 393 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 163 |
| 273 | 393 | 0 | 0 | 0 | 393 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 60 |
| 274 | 393 | 0 | 0 | 0 | 393 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 415 |
| 275 | 393 | 0 | 0 | 0 | 393 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 425 |
| 276 | 393 | 0 | 0 | 0 | 393 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 427 |
| 277 | 393 | 0 | 0 | 0 | 393 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 253 |
| 278 | 393 | 0 | 0 | 0 | 393 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 425 |
| 279 | 393 | 0 | 0 | 0 | 393 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 445 |
| 280 | 393 | 0 | 0 | 0 | 393 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 363 |
| 281 | 393 | 0 | 0 | 0 | 393 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 515 |
| 282 | 393 | 0 | 0 | 0 | 393 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 274 |
| 283 | 393 | 0 | 0 | 0 | 393 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 352 |
| 284 | 393 | 0 | 0 | 0 | 393 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 356 |
| 285 | 393 | 0 | 0 | 0 | 393 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 432 |
| 286 | 393 | 0 | 0 | 0 | 393 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 384 |
| 287 | 393 | 0 | 0 | 0 | 393 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 300 |
| 288 | 393 | 0 | 0 | 0 | 393 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 352 |
| 289 | 393 | 0 | 0 | 0 | 393 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 550 |
| 290 | 393 | 0 | 0 | 0 | 393 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 1138 |
| 291 | 393 | 0 | 0 | 0 | 393 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 714 |
| 292 | 393 | 0 | 0 | 0 | 393 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 1300 |
| 293 | 393 | 0 | 0 | 0 | 393 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 369 |
| 262 | 786 | 0 | 0 | 0 | 786 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 816 |
| 261 | 786 | 0 | 0 | 0 | 786 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 411 |
| 260 | 786 | 0 | 0 | 0 | 786 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 640 |
| 259 | 786 | 0 | 0 | 0 | 786 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 1217 |
| 258 | 786 | 0 | 0 | 0 | 786 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 1079 |
| 257 | 786 | 0 | 0 | 0 | 786 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 941 |
| 256 | 786 | 0 | 0 | 0 | 786 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 693 |
| 255 | 393 | 0 | 0 | 0 | 393 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 361 |
| 254 | 393 | 0 | 0 | 0 | 393 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 391 |
| 253 | 393 | 0 | 0 | 0 | 393 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 736 |
| 252 | 393 | 0 | 0 | 0 | 393 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 560 |
| 251 | 393 | 0 | 0 | 0 | 393 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 518 |
| 250 | 393 | 0 | 0 | 0 | 393 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 831 |
| 249 | 393 | 0 | 0 | 0 | 393 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 174 |
| 248 | 393 | 0 | 0 | 0 | 393 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 291 |
| 247 | 393 | 0 | 0 | 0 | 393 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 505 |
| | | | | | | | | | | | | | | | | | 32752 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 446 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 279 |
| 228 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 |
| 227 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 |
| 226 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 515 |
| 225 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 248 |
| 224 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 656 |
| 223 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 285 |
| 222 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 297 |
| 221 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 277 |
| 220 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 351 |
| 219 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 594 |
| 218 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 650 |
| 217 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 743 |
| 216 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 602 |
| 215 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 214 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 376 |
| 213 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 590 |
| 212 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 565 |
| 211 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 210 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 902 |
| 209 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 478 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 496 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 240 |
| 265 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 |
| 266 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 |
| 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 159 |
| 268 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 243 |
| 269 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 464 |
| 270 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 433 |
| 271 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 255 |
| 272 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| 273 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 274 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 415 |
| 275 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 276 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 427 |
| 277 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 253 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 445 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 363 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 515 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 274 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 356 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 432 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 384 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 550 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1138 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 714 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1300 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 369 |
| 262 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 816 |
| 261 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 411 |
| 260 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 640 |
| 259 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1217 |
| 258 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1079 |
| 257 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 941 |
| 256 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 693 |
| 255 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 361 |
| 254 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 391 |
| 253 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 736 |
| 252 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 560 |
| 251 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 518 |
| 250 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 831 |
| 249 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 174 |
| 248 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 291 |
| 247 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 505 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **32752** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11626 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21126 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **32752** | **32752** |

**World Logistics Center** **2035**
Project Full Buildout 2035
Freeway to Port
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 393 | 0 | 0 | 0 | 393 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 229 | 393 | 0 | 0 | 0 | 393 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 228 | 393 | 0 | 0 | 0 | 393 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 227 | 393 | 0 | 0 | 0 | 393 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 3 |
| 226 | 393 | 0 | 0 | 0 | 393 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 225 | 393 | 0 | 0 | 0 | 393 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 224 | 393 | 0 | 0 | 0 | 393 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| 223 | 393 | 0 | 0 | 0 | 393 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 222 | 393 | 0 | 0 | 0 | 393 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 221 | 393 | 0 | 0 | 0 | 393 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 220 | 393 | 0 | 0 | 0 | 393 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 219 | 393 | 0 | 0 | 0 | 393 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 9 |
| 218 | 393 | 0 | 0 | 0 | 393 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| 217 | 393 | 0 | 0 | 0 | 393 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 11 |
| 216 | 393 | 0 | 0 | 0 | 393 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 9 |
| 215 | 393 | 0 | 0 | 0 | 393 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 214 | 393 | 0 | 0 | 0 | 393 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 213 | 393 | 0 | 0 | 0 | 393 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 9 |
| 212 | 393 | 0 | 0 | 0 | 393 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 211 | 393 | 0 | 0 | 0 | 393 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 210 | 393 | 0 | 0 | 0 | 393 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 13 |
| 209 | 393 | 0 | 0 | 0 | 393 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 263 | 393 | 0 | 0 | 0 | 393 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 264 | 393 | 0 | 0 | 0 | 393 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 265 | 393 | 0 | 0 | 0 | 393 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 3 |
| 266 | 393 | 0 | 0 | 0 | 393 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 267 | 393 | 0 | 0 | 0 | 393 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 268 | 393 | 0 | 0 | 0 | 393 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 269 | 393 | 0 | 0 | 0 | 393 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 270 | 393 | 0 | 0 | 0 | 393 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 271 | 393 | 0 | 0 | 0 | 393 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 272 | 393 | 0 | 0 | 0 | 393 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 273 | 393 | 0 | 0 | 0 | 393 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 1 |
| 274 | 393 | 0 | 0 | 0 | 393 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 275 | 393 | 0 | 0 | 0 | 393 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 276 | 393 | 0 | 0 | 0 | 393 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 277 | 393 | 0 | 0 | 0 | 393 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 278 | 393 | 0 | 0 | 0 | 393 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 279 | 393 | 0 | 0 | 0 | 393 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 280 | 393 | 0 | 0 | 0 | 393 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 281 | 393 | 0 | 0 | 0 | 393 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 282 | 393 | 0 | 0 | 0 | 393 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 283 | 393 | 0 | 0 | 0 | 393 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 284 | 393 | 0 | 0 | 0 | 393 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 285 | 393 | 0 | 0 | 0 | 393 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 286 | 393 | 0 | 0 | 0 | 393 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 287 | 393 | 0 | 0 | 0 | 393 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 288 | 393 | 0 | 0 | 0 | 393 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 289 | 393 | 0 | 0 | 0 | 393 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 290 | 393 | 0 | 0 | 0 | 393 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 17 |
| 291 | 393 | 0 | 0 | 0 | 393 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| 292 | 393 | 0 | 0 | 0 | 393 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 19 |
| 293 | 393 | 0 | 0 | 0 | 393 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 262 | 786 | 0 | 0 | 0 | 786 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 12 |
| 261 | 786 | 0 | 0 | 0 | 786 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 6 |
| 260 | 786 | 0 | 0 | 0 | 786 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 9 |
| 259 | 786 | 0 | 0 | 0 | 786 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 18 |
| 258 | 786 | 0 | 0 | 0 | 786 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 16 |
| 257 | 786 | 0 | 0 | 0 | 786 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 14 |
| 256 | 786 | 0 | 0 | 0 | 786 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 10 |
| 255 | 393 | 0 | 0 | 0 | 393 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 254 | 393 | 0 | 0 | 0 | 393 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 253 | 393 | 0 | 0 | 0 | 393 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 11 |
| 252 | 393 | 0 | 0 | 0 | 393 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 251 | 393 | 0 | 0 | 0 | 393 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 250 | 393 | 0 | 0 | 0 | 393 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 12 |
| 249 | 393 | 0 | 0 | 0 | 393 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 3 |
| 248 | 393 | 0 | 0 | 0 | 393 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 247 | 393 | 0 | 0 | 0 | 393 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| | | | | | | | | | | | | | | | | | 482 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 228 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 227 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 226 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 225 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 224 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 223 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 222 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 221 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 220 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 219 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 218 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 217 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 216 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 215 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 214 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 213 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 212 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 211 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 210 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 209 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 265 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 266 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 268 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 269 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 270 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 271 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 272 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 273 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 274 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 275 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 276 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 277 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 262 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 261 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 260 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 259 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 258 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 257 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 256 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 255 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 254 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 253 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 252 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 251 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 250 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 249 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 248 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 247 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **482** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **482** | **482** |

**World Logistics Center**
**Project Full Buildout 2035**
**Entrained Road Dust**
Freeway to Port

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | F | 1854 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 453 | 453 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 229 | F | 1159 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 283 | 283 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 228 | F | 520 | 0.32 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 127 | 127 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 227 | F | 833 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 203 | 203 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 226 | F | 2141 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 523 | 523 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 225 | F | 1032 | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 252 | 252 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 224 | F | 2726 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 666 | 666 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.1 |
| 223 | F | 1185 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 289 | 289 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 222 | F | 1233 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 301 | 301 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 221 | F | 1153 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 281 | 281 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 220 | F | 1458 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 356 | 356 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 219 | F | 2467 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 602 | 602 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 218 | F | 2700 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 659 | 659 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.1 |
| 217 | F | 3089 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 754 | 754 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.3 |
| 216 | F | 2502 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 611 | 611 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.0 |
| 215 | F | 1445 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 353 | 353 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 214 | F | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 382 | 382 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 213 | F | 2452 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 599 | 599 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 212 | F | 2347 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 573 | 573 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 211 | F | 1767 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 431 | 431 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 210 | F | 3749 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 915 | 915 | 23.25 | 0.022 | 0.0004 | 0.4 | 0.0017 | 1.5 |
| 209 | F | 1985 | 1.23 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 485 | 485 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 263 | F | 2061 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 503 | 503 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 264 | F | 997 | 0.62 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 243 | 243 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 265 | F | 720 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 176 | 176 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 266 | F | 675 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 267 | F | 659 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 161 | 161 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 268 | F | 1012 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 247 | 247 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 269 | F | 1929 | 1.20 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 471 | 471 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 270 | F | 1798 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 439 | 439 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 271 | F | 1058 | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 258 | 258 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 272 | F | 676 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 273 | F | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 61 | 61 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 274 | F | 1725 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 421 | 421 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 275 | F | 1766 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 431 | 431 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 276 | F | 1776 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 434 | 434 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 277 | F | 1050 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 256 | 256 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 278 | F | 1765 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 431 | 431 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 279 | F | 1851 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 452 | 452 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 280 | F | 1510 | 0.94 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 369 | 369 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 281 | F | 2140 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 522 | 522 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 282 | F | 1138 | 0.71 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 278 | 278 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 283 | F | 1464 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 357 | 357 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 284 | F | 1480 | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 361 | 361 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 285 | F | 1797 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 439 | 439 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 286 | F | 1596 | 0.99 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 390 | 390 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 287 | F | 1247 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 304 | 304 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 288 | F | 1463 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 357 | 357 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 289 | F | 2284 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 558 | 558 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 290 | F | 4728 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 1154 | 1154 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 2.0 |
| 291 | F | 2967 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 724 | 724 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.2 |
| 292 | F | 5404 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 1319 | 1319 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 2.2 |
| 293 | F | 1533 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 374 | 374 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 262 | F | 1695 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 828 | 828 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.4 |
| 261 | F | 854 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 417 | 417 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 260 | F | 1330 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 649 | 649 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.1 |
| 259 | F | 2529 | 1.57 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 1235 | 1235 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 2.1 |
| 258 | F | 2243 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 1095 | 1095 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 1.9 |
| 257 | F | 1956 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 955 | 955 | 23.25 | 0.022 | 0.0004 | 0.4 | 0.0017 | 1.6 |
| 256 | F | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 704 | 704 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.2 |
| 255 | F | 1501 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 366 | 366 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 254 | F | 1627 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 397 | 397 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 253 | F | 3060 | 1.90 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 747 | 747 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.3 |
| 252 | F | 2329 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 569 | 569 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 251 | F | 2154 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 526 | 526 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 250 | F | 3452 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 843 | 843 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.4 |
| 249 | F | 722 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 176 | 176 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 248 | F | 1211 | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 296 | 296 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 247 | F | 2097 | 1.30 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 512 | 512 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| | | | | | | | | | | | | | | | **Totals:** | **13.8** | | **56.2** |

**World Logistics Center**
Project Full Buildout 2035
Total Vehicle Miles Traveled

**Segment Vehicle Speed (mph)**

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT |
|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 1 | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| 2 | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| 3 | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| 4 | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| 5 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| 6 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| 7 | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| 8 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 9 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Total VMT per Source**

| | Gas | Diesel | Total |
|---|---|---|---|
| Area | 11644 | 2384 | 14029 |
| Internal | 96475 | 35224 | 131699 |
| Surface | 185735 | 37969 | 223704 |
| Freeways | 319977 | 312110 | 632086 |
| Freeways to Ports | 482 | 32752 | 33233 |
| Total | **614312** | **420438** | **1034751** |

**TOTAL VMT Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 67 | 7 | 25 | 5 | 104 |
| 0 | (miles) | 6058 | 797 | 2408 | 1877 | 325 | 35 | 119 | 25 | 11644 |
| 1 | | 63391 | 8342 | 25192 | 19637 | 4071 | 432 | 2394 | 419 | 123878 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 171 |
| 3 | | 34320 | 4516 | 13639 | 10632 | 2146 | 228 | 1841 | 540 | 67861 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 821 | 108 | 326 | 254 | 52 | 5 | 37 | 1 | 1605 |
| 6 | | 43557 | 5732 | 17310 | 13493 | 3022 | 321 | 2702 | 1111 | 87249 |
| 7 | | 163908 | 21570 | 65138 | 50775 | 8851 | 940 | 7870 | 2506 | 321557 |
| 8 | | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 37 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 | 311 |
| Total | (miles) | **312076** | **41068** | **124020** | **96674** | **18468** | **1960** | **14963** | **5083** | **614312** |

**TOTAL VMT Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 21 | 7 | 109 | 356 | 492 |
| 0 | (miles) | 19 | 1 | 1 | 2 | 100 | 33 | 526 | 1702 | 2384 |
| 1 | | 194 | 12 | 11 | 20 | 1252 | 415 | 10572 | 28484 | 40960 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11626 | 11626 |
| 3 | | 105 | 7 | 6 | 11 | 660 | 219 | 8130 | 36706 | 45843 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 3 | 0 | 0 | 0 | 16 | 5 | 165 | 68 | 257 |
| 6 | | 133 | 8 | 8 | 14 | 929 | 308 | 11932 | 75545 | 88878 |
| 7 | | 500 | 32 | 30 | 52 | 2721 | 902 | 34755 | 170370 | 209363 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21126 | 21126 |
| Total | (miles) | **953** | **60** | **56** | **98** | **5678** | **1883** | **66081** | **345629** | **420438** |
| Grand total VMT | | **313029** | **41128** | **124077** | **96773** | **24146** | **3843** | **81044** | **350712** | **1034751** |

**VMT: Area Source, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 67 | 7 | 25 | 5 | 104 |
| 0 | (miles) | 6058 | 797 | 2408 | 1877 | 325 | 35 | 119 | 25 | 11644 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **6058** | **797** | **2408** | **1877** | **325** | **35** | **119** | **25** | **11644** |

**VMT: Area Source, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 21 | 7 | 109 | 356 | 492 |
| 0 | (miles) | 19 | 1 | 1 | 2 | 100 | 33 | 526 | 1702 | 2384 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **19** | **1** | **1** | **2** | **100** | **33** | **526** | **1702** | **2384** |
| Grand total VMT | | **6077** | **798** | **2409** | **1879** | **425** | **68** | **645** | **1727** | **14029** |

**VMT: Internal, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 49156 | 6469 | 19535 | 15227 | 3414 | 362 | 1944 | 369 | 96475 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **49156** | **6469** | **19535** | **15227** | **3414** | **362** | **1944** | **369** | **96475** |

**VMT: Internal, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 150 | 9 | 9 | 16 | 1050 | 348 | 8584 | 25058 | 35224 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **150** | **9** | **9** | **16** | **1050** | **348** | **8584** | **25058** | **35224** |
| Grand total VMT | | **49306** | **6478** | **19544** | **15243** | **4464** | **710** | **10528** | **25426** | **131699** |

**VMT: Surface, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 14235 | 1873 | 5657 | 4410 | 657 | 70 | 450 | 50 | 27403 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 19618 | 2582 | 7796 | 6077 | 1055 | 112 | 719 | 36 | 37995 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 821 | 108 | 326 | 254 | 52 | 5 | 37 | 1 | 1605 |
| 6 | | 19982 | 2629 | 7941 | 6190 | 936 | 99 | 754 | 47 | 38578 |
| 7 | | 41620 | 5477 | 16540 | 12893 | 1767 | 188 | 1463 | 170 | 80117 |
| 8 | | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 37 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **96295** | **12672** | **38268** | **29830** | **4468** | **474** | **3423** | **304** | **185735** |

**VMT: Surface, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 43 | 3 | 3 | 4 | 202 | 67 | 1987 | 3426 | 5736 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 60 | 4 | 4 | 6 | 324 | 108 | 3174 | 2440 | 6120 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | 3 | 0 | 0 | 0 | 16 | 5 | 165 | 68 | 257 |
| 6 | | 61 | 4 | 4 | 6 | 288 | 95 | 3329 | 3172 | 6959 |
| 7 | | 127 | 8 | 8 | 13 | 543 | 180 | 6460 | 11556 | 18895 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **294** | **19** | **17** | **30** | **1374** | **455** | **15116** | **20664** | **37969** |
| Grand total VMT | | **96589** | **12691** | **38286** | **29861** | **5841** | **930** | **18539** | **20967** | **223704** |

**VMT: Freeways, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 14702 | 1935 | 5842 | 4554 | 1091 | 116 | 1122 | 504 | 29866 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 23576 | 3102 | 9369 | 7303 | 2086 | 221 | 1948 | 1064 | 48671 |
| 7 | | 122289 | 16093 | 48598 | 37882 | 7084 | 752 | 6407 | 2336 | 241440 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **160566** | **21130** | **63810** | **49740** | **10261** | **1089** | **9477** | **3904** | **319977** |

**VMT: Freeways, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 45 | 3 | 3 | 5 | 335 | 111 | 4956 | 34266 | 39724 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 72 | 5 | 4 | 7 | 641 | 213 | 8603 | 72373 | 81919 |
| 7 | | 373 | 24 | 22 | 39 | 2178 | 722 | 28295 | 158815 | 190467 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **490** | **31** | **29** | **51** | **3155** | **1046** | **41855** | **265454** | **312110** |
| Grand total VMT | | **161056** | **21161** | **63839** | **49791** | **13416** | **2135** | **51332** | **269357** | **632086** |

**VMT: Freeways to Ports, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 171 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 | 311 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **482** | **482** |

**VMT: Freeways to Ports, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11626 | 11626 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21126 | 21126 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **32752** | **32752** |
| Grand total VMT | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **33233** | **33233** |

# World Logistics Center

## Project Full Buildout 2035

## Emissions Estimates

**Emissions Summary: Pounds per day**

| Source | ROG | NOx | CO | SOx | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 7 | 59 | 71 | | 0.2 | | | | 0.1 | | | | 28698 | | 1.5 | 0.2 |
| Internal | 20 | 185 | 182 | | 0.7 | | | | 0.7 | | | | 170611 | | 1.1 | 1.5 |
| Surface | 18 | 91 | 201 | | 0.7 | | | | 0.7 | | | | 195798 | | 1.1 | 2.6 |
| Freeways | 71 | 653 | 787 | | 4.2 | | | | 4.0 | | | | 1134234 | | 4.4 | 7.2 |
| Freeways to Ports | 3 | 42 | 46 | | 0.4 | | | | 0.3 | | | | 99931 | | 0.2 | 0.4 |
| **Total** | **120** | **1031** | **1286** | | **6.2** | **172** | **943** | **1120** | **5.9** | **66** | **231** | **303** | **1629272** | **3.6** | **8.4** | **11.9** |

**Emissions Summary: tons per year**

| Source | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 1.34 | 10.84 | 12.95 | | 0.03 | | | | 0.03 | | | | 5237 | | 0.28 | 0.03 |
| Internal | 3.60 | 33.76 | 33.15 | | 0.13 | | | | 0.12 | | | | 31137 | | 0.21 | 0.28 |
| Surface | 3.26 | 16.70 | 36.61 | | 0.13 | | | | 0.13 | | | | 35733 | | 0.20 | 0.47 |
| Freeways | 13.01 | 119.12 | 143.63 | | 0.77 | | | | 0.73 | | | | 206998 | | 0.81 | 1.32 |
| Freeways to Ports | 0.60 | 7.69 | 8.38 | | 0.07 | | | | 0.06 | | | | 18237 | | 0.04 | 0.07 |
| **Total** | **21.81** | **188.11** | **234.71** | | **1.13** | **31.31** | **172.04** | **204.48** | **1.07** | **12.07** | **42.23** | **55.37** | **297342** | **0.66** | **1.54** | **2.17** |

**World Logistics Center** 2035 **ROG**

**Project Full Buildout 2035**

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1497 | 0.2303 | 0.1963 | 0.3025 | 10.9138 | 9.4577 | 21.0552 | 10.4371 |
| 0 | 0.0595 | 0.1160 | 0.0766 | 0.1155 | 0.3495 | 0.1462 | 0.1864 | 1.0108 |
| 1 | 0.0242 | 0.0477 | 0.0311 | 0.0472 | 0.2081 | 0.0869 | 0.1092 | 0.5342 |
| 2 | 0.0160 | 0.0312 | 0.0206 | 0.0312 | 0.1152 | 0.0243 | 0.0599 | 0.2754 |
| 3 | 0.0189 | 0.0372 | 0.0243 | 0.0368 | 0.1480 | 0.0617 | 0.0768 | 0.3483 |
| 4 | 0.0147 | 0.0281 | 0.0189 | 0.0289 | 0.0951 | 0.0397 | 0.0503 | 0.2630 |
| 5 | 0.0285 | 0.0560 | 0.0366 | 0.0554 | 0.2081 | 0.0869 | 0.1092 | 0.5342 |
| 6 | 0.0212 | 0.0416 | 0.0272 | 0.0412 | 0.1480 | 0.0617 | 0.0768 | 0.3483 |
| 7 | 0.0172 | 0.0337 | 0.0221 | 0.0336 | 0.1294 | 0.0539 | 0.0672 | 0.3025 |
| 8 | 0.0346 | 0.0680 | 0.0446 | 0.0673 | 0.2081 | 0.0869 | 0.1092 | 0.5342 |
| 9 | 0.0152 | 0.0294 | 0.0195 | 0.0296 | 0.1040 | 0.0434 | 0.0545 | 0.2627 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.4398 | 1.3699 | 1.3095 | 0.5264 | 3.1731 | 3.1731 | 0.1629 | 0.5193 |
| 0 | 0.0323 | 0.1045 | 0.0959 | 0.0387 | 0.2808 | 0.2728 | 0.1372 | 0.3221 |
| 1 | 0.0046 | 0.0175 | 0.0134 | 0.0054 | 0.0718 | 0.0648 | 0.0727 | 0.1704 |
| 2 | 0.0024 | 0.0109 | 0.0071 | 0.0029 | 0.0334 | 0.0277 | 0.0215 | 0.0502 |
| 3 | 0.0032 | 0.0130 | 0.0094 | 0.0038 | 0.0452 | 0.0393 | 0.0395 | 0.0924 |
| 4 | 0.0023 | 0.0110 | 0.0067 | 0.0027 | 0.0273 | 0.0214 | 0.0117 | 0.0273 |
| 5 | 0.0057 | 0.0221 | 0.0169 | 0.0068 | 0.0718 | 0.0648 | 0.0727 | 0.1704 |
| 6 | 0.0038 | 0.0148 | 0.0111 | 0.0045 | 0.0452 | 0.0393 | 0.0395 | 0.0924 |
| 7 | 0.0028 | 0.0116 | 0.0081 | 0.0033 | 0.0382 | 0.0325 | 0.0291 | 0.0681 |
| 8 | 0.0076 | 0.0290 | 0.0224 | 0.0090 | 0.0718 | 0.0648 | 0.0727 | 0.1704 |
| 9 | 0.0023 | 0.0110 | 0.0067 | 0.0027 | 0.0301 | 0.0242 | 0.0158 | 0.0370 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.440 | 0.088 | 0.032 | 0.008 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| LDT1 | DSL | 1.370 | 0.274 | 0.104 | 0.029 | 0.022 | 0.018 | 0.015 | 0.013 | 0.012 | 0.011 | 0.011 | 0.011 |
| LDT2 | DSL | 1.310 | 0.262 | 0.096 | 0.022 | 0.017 | 0.013 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 |
| LHDT1 | DSL | 3.173 | 0.756 | 0.281 | 0.072 | 0.055 | 0.045 | 0.038 | 0.033 | 0.030 | 0.027 | 0.027 | 0.029 |
| LHDT2 | DSL | 3.173 | 0.744 | 0.273 | 0.065 | 0.049 | 0.039 | 0.033 | 0.028 | 0.024 | 0.021 | 0.020 | 0.021 |
| MDV | DSL | 0.526 | 0.105 | 0.039 | 0.009 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| MH | DSL | 4.054 | 0.811 | 0.299 | 0.076 | 0.059 | 0.048 | 0.040 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 |
| OBUS | DSL | 0.437 | 0.340 | 0.194 | 0.103 | 0.076 | 0.056 | 0.041 | 0.030 | 0.022 | 0.016 | 0.014 | 0.014 |
| SBUS | DSL | 0.201 | 0.278 | 0.156 | 0.081 | 0.060 | 0.045 | 0.033 | 0.025 | 0.018 | 0.014 | 0.012 | 0.012 |
| T6 | DSL | 0.163 | 0.241 | 0.137 | 0.073 | 0.054 | 0.040 | 0.029 | 0.021 | 0.016 | 0.012 | 0.010 | 0.010 |
| T7 | DSL | 0.519 | 0.565 | 0.322 | 0.170 | 0.126 | 0.092 | 0.068 | 0.050 | 0.037 | 0.027 | 0.023 | 0.023 |
| UBUS | DSL | 32.491 | 6.498 | 2.487 | 0.757 | 0.586 | 0.458 | 0.374 | 0.333 | 0.335 | 0.381 | 0.470 | 0.603 |
| LDA | GAS | 0.150 | 0.030 | 0.013 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| LDT1 | GAS | 0.230 | 0.046 | 0.020 | 0.010 | 0.008 | 0.007 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 |
| LDT2 | GAS | 0.196 | 0.039 | 0.017 | 0.009 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 |
| LHDT1 | GAS | 10.914 | 0.046 | 0.019 | 0.010 | 0.008 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 |
| LHDT2 | GAS | 9.458 | 0.025 | 0.010 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| MCY | GAS | 62.093 | 12.419 | 5.483 | 2.989 | 2.386 | 2.005 | 1.774 | 1.651 | 1.617 | 1.666 | 1.805 | 2.056 |
| MDV | GAS | 0.303 | 0.061 | 0.026 | 0.014 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 | 0.008 |
| MH | GAS | 0.457 | 0.091 | 0.038 | 0.020 | 0.015 | 0.013 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 |
| OBUS | GAS | 15.694 | 0.069 | 0.029 | 0.015 | 0.012 | 0.010 | 0.008 | 0.008 | 0.007 | 0.008 | 0.008 | 0.009 |
| SBUS | GAS | 15.415 | 0.058 | 0.024 | 0.013 | 0.010 | 0.008 | 0.007 | 0.006 | 0.006 | 0.006 | 0.007 | 0.008 |
| T6 | GAS | 21.055 | 0.074 | 0.031 | 0.016 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 | 0.009 | 0.010 |
| T7 | GAS | 10.437 | 2.087 | 0.873 | 0.451 | 0.352 | 0.289 | 0.251 | 0.229 | 0.221 | 0.225 | 0.242 | 0.274 |
| UBUS | GAS | 1.074 | 0.215 | 0.090 | 0.046 | 0.036 | 0.030 | 0.026 | 0.024 | 0.023 | 0.023 | 0.025 | 0.028 |
| T7 | NG | 0.017 | 0.309 | 0.163 | 0.081 | 0.061 | 0.046 | 0.035 | 0.027 | 0.021 | 0.016 | 0.015 | 0.015 |
| UBUS | NG | 3.082 | 0.616 | 0.234 | 0.072 | 0.057 | 0.047 | 0.039 | 0.034 | 0.033 | 0.034 | 0.038 | 0.045 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**EMFAC2014 Running Losses Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | GAS | | 0.140 | 0.047 | 0.028 | 0.023 | 0.020 | 0.018 | 0.016 | 0.014 | 0.013 | 0.012 | 0.011 |
| LDT1 | GAS | | 0.288 | 0.096 | 0.058 | 0.048 | 0.041 | 0.036 | 0.032 | 0.029 | 0.026 | 0.024 | 0.022 |
| LDT2 | GAS | | 0.180 | 0.060 | 0.036 | 0.030 | 0.026 | 0.022 | 0.020 | 0.018 | 0.016 | 0.015 | 0.014 |
| LHDT1 | GAS | | 0.990 | 0.330 | 0.198 | 0.165 | 0.141 | 0.124 | 0.110 | 0.099 | 0.090 | 0.083 | 0.076 |
| LHDT2 | GAS | | 0.408 | 0.136 | 0.082 | 0.068 | 0.058 | 0.051 | 0.045 | 0.041 | 0.037 | 0.034 | 0.031 |
| MCY | GAS | | 0.238 | 0.079 | 0.048 | 0.040 | 0.034 | 0.030 | 0.026 | 0.024 | 0.022 | 0.020 | 0.018 |
| MDV | GAS | | 0.269 | 0.090 | 0.054 | 0.045 | 0.038 | 0.034 | 0.030 | 0.027 | 0.024 | 0.022 | 0.021 |
| MH | GAS | | 1.057 | 0.352 | 0.211 | 0.176 | 0.151 | 0.132 | 0.117 | 0.106 | 0.096 | 0.088 | 0.081 |
| OBUS | GAS | | 0.557 | 0.186 | 0.111 | 0.093 | 0.080 | 0.070 | 0.062 | 0.056 | 0.051 | 0.046 | 0.043 |
| SBUS | GAS | | 0.653 | 0.218 | 0.131 | 0.109 | 0.093 | 0.082 | 0.073 | 0.065 | 0.059 | 0.054 | 0.050 |
| HHDT | GAS | | 0.466 | 0.155 | 0.093 | 0.078 | 0.067 | 0.058 | 0.052 | 0.047 | 0.042 | 0.039 | 0.036 |
| MHDT | GAS | | 0.415 | 0.138 | 0.083 | 0.069 | 0.059 | 0.052 | 0.046 | 0.041 | 0.038 | 0.035 | 0.032 |
| UBUS | GAS | | 0.683 | 0.228 | 0.137 | 0.114 | 0.098 | 0.085 | 0.076 | 0.068 | 0.062 | 0.057 | 0.053 |

**EMFAC2014 Total Emission Factors (grams/mile)**

| | | idle | 5mph | 15mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.440 | 0.088 | 0.032 | 0.008 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| LDT1 | DSL | 1.370 | 0.274 | 0.104 | 0.029 | 0.022 | 0.018 | 0.015 | 0.013 | 0.012 | 0.011 | 0.011 | 0.011 |
| LDT2 | DSL | 1.310 | 0.262 | 0.096 | 0.022 | 0.017 | 0.013 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 |
| LHDT1 | DSL | 3.173 | 0.756 | 0.281 | 0.072 | 0.055 | 0.045 | 0.038 | 0.033 | 0.030 | 0.027 | 0.027 | 0.029 |
| LHDT2 | DSL | 3.173 | 0.744 | 0.273 | 0.065 | 0.049 | 0.039 | 0.033 | 0.028 | 0.024 | 0.021 | 0.020 | 0.021 |
| MDV | DSL | 0.526 | 0.105 | 0.039 | 0.009 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| MH | DSL | 4.054 | 0.811 | 0.299 | 0.076 | 0.059 | 0.048 | 0.040 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBUS | DSL | 0.437 | 0.340 | 0.194 | 0.103 | 0.076 | 0.056 | 0.041 | 0.030 | 0.022 | 0.016 | 0.014 | 0.014 |
| SBUS | DSL | 0.201 | 0.278 | 0.156 | 0.081 | 0.060 | 0.045 | 0.033 | 0.025 | 0.018 | 0.014 | 0.012 | 0.012 |
| T6 | DSL | 0.163 | 0.241 | 0.137 | 0.073 | 0.054 | 0.040 | 0.029 | 0.021 | 0.016 | 0.012 | 0.010 | 0.010 |
| T7 | DSL | 0.519 | 0.565 | 0.322 | 0.170 | 0.126 | 0.092 | 0.068 | 0.050 | 0.037 | 0.027 | 0.023 | 0.023 |
| UBUS | DSL | 32.491 | 6.498 | 2.487 | 0.757 | 0.586 | 0.458 | 0.374 | 0.333 | 0.335 | 0.381 | 0.470 | 0.603 |
| LDA | GAS | 0.150 | 0.170 | 0.060 | 0.035 | 0.028 | 0.024 | 0.021 | 0.019 | 0.017 | 0.016 | 0.015 | 0.015 |
| LDT1 | GAS | 0.230 | 0.334 | 0.116 | 0.068 | 0.056 | 0.048 | 0.042 | 0.037 | 0.034 | 0.031 | 0.029 | 0.028 |
| LDT2 | GAS | 0.196 | 0.219 | 0.077 | 0.045 | 0.037 | 0.031 | 0.027 | 0.024 | 0.022 | 0.021 | 0.020 | 0.019 |
| LHDT1 | GAS | 10.914 | 1.037 | 0.349 | 0.208 | 0.173 | 0.148 | 0.129 | 0.115 | 0.104 | 0.095 | 0.088 | 0.082 |
| LHDT2 | GAS | 9.458 | 0.432 | 0.146 | 0.087 | 0.072 | 0.062 | 0.054 | 0.048 | 0.043 | 0.040 | 0.037 | 0.035 |
| MCY | GAS | 62.093 | 12.657 | 5.562 | 3.036 | 2.425 | 2.039 | 1.804 | 1.678 | 1.641 | 1.688 | 1.825 | 2.074 |
| MDV | GAS | 0.303 | 0.329 | 0.115 | 0.067 | 0.055 | 0.047 | 0.041 | 0.037 | 0.034 | 0.031 | 0.030 | 0.029 |
| MH | GAS | 0.457 | 1.149 | 0.391 | 0.231 | 0.192 | 0.164 | 0.143 | 0.128 | 0.115 | 0.106 | 0.099 | 0.093 |
| OBUS | GAS | 15.694 | 0.627 | 0.215 | 0.127 | 0.105 | 0.089 | 0.078 | 0.070 | 0.063 | 0.058 | 0.055 | 0.052 |
| SBUS | GAS | 15.415 | 0.711 | 0.242 | 0.143 | 0.119 | 0.101 | 0.089 | 0.079 | 0.071 | 0.066 | 0.061 | 0.058 |
| T6 | GAS | 21.055 | 0.540 | 0.186 | 0.109 | 0.090 | 0.077 | 0.067 | 0.060 | 0.054 | 0.050 | 0.047 | 0.046 |
| T7 | GAS | 10.437 | 2.502 | 1.011 | 0.534 | 0.421 | 0.348 | 0.303 | 0.275 | 0.263 | 0.263 | 0.277 | 0.306 |
| UBUS | GAS | 1.074 | 0.897 | 0.317 | 0.183 | 0.150 | 0.127 | 0.111 | 0.099 | 0.091 | 0.085 | 0.082 | 0.081 |
| T7 | NG | 0.017 | 0.309 | 0.163 | 0.081 | 0.061 | 0.046 | 0.035 | 0.027 | 0.021 | 0.016 | 0.015 | 0.015 |
| UBUS | NG | 3.082 | 0.616 | 0.234 | 0.072 | 0.057 | 0.047 | 0.039 | 0.034 | 0.033 | 0.034 | 0.038 | 0.045 |

# World Logistics Center ROG

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 4 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 1 | 3 | 1 | 2 | 2 | 2 | 0 | 2 | 11 | 24 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 8 | 13 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 16 | 24 |
| 7 | 6 | 2 | 3 | 4 | 3 | 0 | 3 | 27 | 48 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **14** | **4** | **7** | **8** | **9** | **1** | **10** | **68** | **120** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 4 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1** | **0** | **0** | **0** | **2** | **0** | **1** | **2** | **7** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 3 | 1 | 1 | 2 | 2 | 0 | 2 | 10 | 20 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **1** | **1** | **2** | **2** | **0** | **2** | **10** | **20** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 |
| 7 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 7 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4** | **1** | **2** | **2** | **2** | **0** | **2** | **4** | **18** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 10 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 16 | 20 |
| 7 | 5 | 1 | 2 | 3 | 2 | 0 | 3 | 25 | 41 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **6** | **2** | **3** | **4** | **3** | **0** | **4** | **48** | **71** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **3** |

**World Logistics Center** **NOx**

**Project Full Buildout 2035**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1990 | 0.2936 | 0.2602 | 0.4129 | 0.9846 | 0.8503 | 1.9278 | 25.6157 |
| 0 | 0.0307 | 0.0453 | 0.0402 | 0.0625 | 0.1112 | 0.0534 | 0.1360 | 3.9329 |
| 1 | 0.0216 | 0.0310 | 0.0280 | 0.0441 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |
| 2 | 0.0199 | 0.0288 | 0.0258 | 0.0415 | 0.0759 | 0.0260 | 0.0901 | 2.6057 |
| 3 | 0.0201 | 0.0288 | 0.0260 | 0.0412 | 0.0811 | 0.0382 | 0.0969 | 2.8035 |
| 4 | 0.0210 | 0.0305 | 0.0272 | 0.0447 | 0.0756 | 0.0351 | 0.0889 | 2.5813 |
| 5 | 0.0230 | 0.0333 | 0.0300 | 0.0468 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |
| 6 | 0.0206 | 0.0296 | 0.0267 | 0.0422 | 0.0811 | 0.0382 | 0.0969 | 2.8035 |
| 7 | 0.0198 | 0.0284 | 0.0256 | 0.0409 | 0.0778 | 0.0365 | 0.0927 | 2.6815 |
| 8 | 0.0250 | 0.0364 | 0.0326 | 0.0506 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |
| 9 | 0.0203 | 0.0295 | 0.0264 | 0.0425 | 0.0753 | 0.0349 | 0.0888 | 2.5725 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.2386 | 0.9976 | 0.7254 | 0.2813 | 37.4075 | 30.3010 | 17.9382 | 16.4222 |
| 0 | 0.0271 | 0.1524 | 0.0809 | 0.0317 | 0.3479 | 0.1844 | 4.4190 | 8.8153 |
| 1 | 0.0104 | 0.0993 | 0.0292 | 0.0117 | 0.2934 | 0.1138 | 1.3563 | 2.7096 |
| 2 | 0.0077 | 0.0997 | 0.0201 | 0.0084 | 0.3514 | 0.0975 | 0.3104 | 0.6351 |
| 3 | 0.0087 | 0.0986 | 0.0235 | 0.0096 | 0.3207 | 0.1009 | 0.5738 | 1.1554 |
| 4 | 0.0075 | 0.0967 | 0.0195 | 0.0082 | 0.3596 | 0.0943 | 0.1938 | 0.4045 |
| 5 | 0.0119 | 0.1083 | 0.0337 | 0.0135 | 0.2934 | 0.1138 | 1.3563 | 2.7096 |
| 6 | 0.0094 | 0.0977 | 0.0259 | 0.0105 | 0.3207 | 0.1009 | 0.5738 | 1.1554 |
| 7 | 0.0081 | 0.0965 | 0.0216 | 0.0089 | 0.3362 | 0.0986 | 0.4126 | 0.8372 |
| 8 | 0.0141 | 0.1169 | 0.0405 | 0.0161 | 0.2934 | 0.1138 | 1.3563 | 2.7096 |
| 9 | 0.0075 | 0.1039 | 0.0195 | 0.0082 | 0.3699 | 0.0980 | 0.2421 | 0.4982 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.239 | 0.048 | 0.027 | 0.014 | 0.012 | 0.010 | 0.009 | 0.009 | 0.008 | 0.008 | 0.008 | 0.008 |
| LDT1 | DSL | 0.998 | 0.200 | 0.152 | 0.117 | 0.108 | 0.099 | 0.098 | 0.099 | 0.096 | 0.100 | 0.104 | 0.097 |
| LDT2 | DSL | 0.725 | 0.145 | 0.081 | 0.041 | 0.034 | 0.029 | 0.026 | 0.024 | 0.022 | 0.020 | 0.019 | 0.019 |
| LHDT1 | DSL | 37.407 | 0.478 | 0.348 | 0.293 | 0.300 | 0.321 | 0.336 | 0.351 | 0.370 | 0.360 | 0.369 | 0.408 |
| LHDT2 | DSL | 30.301 | 0.304 | 0.184 | 0.114 | 0.105 | 0.101 | 0.099 | 0.098 | 0.098 | 0.094 | 0.095 | 0.102 |
| MDV | DSL | 0.281 | 0.056 | 0.032 | 0.016 | 0.013 | 0.012 | 0.011 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 |
| MH | DSL | 54.035 | 10.807 | 6.084 | 3.247 | 2.780 | 2.461 | 2.231 | 2.061 | 1.933 | 1.837 | 1.804 | 1.821 |
| OBUS | DSL | 15.949 | 12.510 | 5.701 | 1.737 | 1.079 | 0.728 | 0.521 | 0.389 | 0.301 | 0.239 | 0.215 | 0.215 |
| SBUS | DSL | 24.285 | 8.954 | 4.294 | 1.586 | 1.131 | 0.879 | 0.724 | 0.623 | 0.553 | 0.503 | 0.484 | 0.484 |
| T6 | DSL | 17.938 | 9.693 | 4.419 | 1.356 | 0.847 | 0.574 | 0.413 | 0.310 | 0.242 | 0.194 | 0.175 | 0.175 |
| T7 | DSL | 16.422 | 19.298 | 8.815 | 2.710 | 1.697 | 1.155 | 0.837 | 0.635 | 0.498 | 0.404 | 0.368 | 0.365 |
| UBUS | DSL | 256.574 | 51.315 | 27.550 | 20.173 | 19.964 | 19.862 | 19.865 | 19.971 | 20.181 | 20.493 | 20.908 | 21.427 |
| LDA | GAS | 0.199 | 0.040 | 0.031 | 0.025 | 0.023 | 0.022 | 0.021 | 0.020 | 0.020 | 0.020 | 0.020 | 0.021 |
| LDT1 | GAS | 0.294 | 0.059 | 0.045 | 0.036 | 0.033 | 0.031 | 0.030 | 0.029 | 0.028 | 0.029 | 0.030 | 0.030 |
| LDT2 | GAS | 0.260 | 0.052 | 0.040 | 0.033 | 0.030 | 0.028 | 0.027 | 0.026 | 0.026 | 0.026 | 0.026 | 0.027 |
| LHDT1 | GAS | 0.985 | 0.146 | 0.111 | 0.091 | 0.085 | 0.081 | 0.078 | 0.076 | 0.075 | 0.076 | 0.077 | 0.080 |
| LHDT2 | GAS | 0.850 | 0.069 | 0.053 | 0.044 | 0.040 | 0.038 | 0.037 | 0.035 | 0.035 | 0.035 | 0.036 | 0.037 |
| MCY | GAS | 7.584 | 1.517 | 1.243 | 1.090 | 1.044 | 1.013 | 0.996 | 0.991 | 0.997 | 1.013 | 1.040 | 1.078 |
| MDV | GAS | 0.413 | 0.083 | 0.063 | 0.051 | 0.047 | 0.044 | 0.042 | 0.041 | 0.041 | 0.041 | 0.043 | 0.045 |
| MH | GAS | 1.218 | 0.244 | 0.187 | 0.153 | 0.142 | 0.133 | 0.127 | 0.124 | 0.122 | 0.123 | 0.125 | 0.130 |
| OBUS | GAS | 1.408 | 0.165 | 0.126 | 0.103 | 0.096 | 0.090 | 0.086 | 0.084 | 0.083 | 0.083 | 0.085 | 0.088 |
| SBUS | GAS | 1.386 | 0.150 | 0.115 | 0.094 | 0.087 | 0.082 | 0.079 | 0.077 | 0.076 | 0.076 | 0.077 | 0.080 |
| T6 | GAS | 1.928 | 0.177 | 0.136 | 0.111 | 0.103 | 0.097 | 0.093 | 0.090 | 0.089 | 0.089 | 0.091 | 0.094 |
| T7 | GAS | 25.616 | 5.123 | 3.933 | 3.216 | 2.979 | 2.803 | 2.681 | 2.606 | 2.572 | 2.581 | 2.632 | 2.727 |
| UBUS | GAS | 3.696 | 0.739 | 0.567 | 0.464 | 0.430 | 0.404 | 0.387 | 0.376 | 0.371 | 0.373 | 0.380 | 0.394 |
| T7 | NG | 17.137 | 1.802 | 1.071 | 0.639 | 0.541 | 0.474 | 0.427 | 0.392 | 0.365 | 0.346 | 0.338 | 0.338 |
| UBUS | NG | 17.817 | 3.563 | 1.969 | 1.283 | 1.209 | 1.158 | 1.124 | 1.103 | 1.093 | 1.092 | 1.105 | 1.129 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center NOx

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 13 | 20 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 33 | 40 |
| 1 | 3 | 1 | 2 | 2 | 2 | 0 | 32 | 173 | 214 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 |
| 3 | 2 | 0 | 1 | 1 | 1 | 0 | 11 | 97 | 112 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 6 | 2 | 0 | 1 | 1 | 1 | 0 | 16 | 199 | 220 |
| 7 | 7 | 1 | 4 | 5 | 4 | 0 | 33 | 329 | 382 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 25 |
| **Total** | **14** | **3** | **7** | **9** | **9** | **1** | **102** | **886** | **1031** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 13 | 20 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 33 | 40 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **2** | **0** | **10** | **46** | **59** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 2 | 0 | 1 | 1 | 1 | 0 | 26 | 152 | 185 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2** | **0** | **1** | **1** | **1** | **0** | **26** | **152** | **185** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 21 | 29 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 6 | 13 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 6 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 8 | 15 |
| 7 | 2 | 0 | 1 | 1 | 1 | 0 | 6 | 22 | 33 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4** | **1** | **2** | **3** | **2** | **0** | **21** | **58** | **91** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 90 | 99 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 1 | 1 | 1 | 0 | 11 | 191 | 205 |
| 7 | 5 | 1 | 3 | 3 | 3 | 0 | 27 | 306 | 349 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **7** | **1** | **4** | **4** | **4** | **0** | **45** | **587** | **653** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 25 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **42** | **42** |

## World Logistics Center

**N2O**

**Project Full Buildout 2035**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 0 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 1 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 2 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 3 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 4 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 5 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 6 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 7 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 8 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 9 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 0 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 1 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 2 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 3 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 4 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 5 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 6 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 7 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 8 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 9 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |

Source: United States Environmental Protection Agency. April 4, 2014. Emission Factors for Greenhouse Gas Inventories. www.epa.gov/climateleadership/documents/emission-factors.pdf. N2O for Gasoline Vehicles is from Table 3; diesel vehicles from Table 4.

# World Logistics Center N2O

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.002 | 0.004 | 0.008 |
| 0 | 0.048 | 0.012 | 0.035 | 0.027 | 0.011 | 0.001 | 0.009 | 0.019 | 0.162 |
| 1 | 0.502 | 0.121 | 0.366 | 0.285 | 0.133 | 0.017 | 0.182 | 0.313 | 1.921 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.128 | 0.128 |
| 3 | 0.272 | 0.066 | 0.198 | 0.154 | 0.070 | 0.009 | 0.140 | 0.404 | 1.313 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.007 | 0.002 | 0.005 | 0.004 | 0.002 | 0.000 | 0.003 | 0.001 | 0.022 |
| 6 | 0.345 | 0.083 | 0.251 | 0.196 | 0.099 | 0.013 | 0.206 | 0.831 | 2.024 |
| 7 | 1.299 | 0.313 | 0.946 | 0.738 | 0.290 | 0.037 | 0.599 | 1.873 | 6.095 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.232 | 0.232 |
| **Total** | **2.474** | **0.596** | **1.801** | **1.405** | **0.607** | **0.078** | **1.141** | **3.804** | **11.905** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.002 | 0.004 | 0.008 |
| 0 | 0.048 | 0.012 | 0.035 | 0.027 | 0.011 | 0.001 | 0.009 | 0.019 | 0.162 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.048** | **0.012** | **0.035** | **0.027** | **0.013** | **0.002** | **0.011** | **0.023** | **0.170** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.390 | 0.094 | 0.284 | 0.221 | 0.112 | 0.014 | 0.148 | 0.275 | 1.538 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.390** | **0.094** | **0.284** | **0.221** | **0.112** | **0.014** | **0.148** | **0.275** | **1.538** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.113 | 0.027 | 0.082 | 0.064 | 0.022 | 0.003 | 0.034 | 0.038 | 0.382 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.156 | 0.037 | 0.113 | 0.088 | 0.035 | 0.004 | 0.055 | 0.027 | 0.515 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.007 | 0.002 | 0.005 | 0.004 | 0.002 | 0.000 | 0.003 | 0.001 | 0.022 |
| 6 | 0.158 | 0.038 | 0.115 | 0.090 | 0.031 | 0.004 | 0.057 | 0.035 | 0.529 |
| 7 | 0.330 | 0.080 | 0.240 | 0.187 | 0.058 | 0.007 | 0.111 | 0.127 | 1.141 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.763** | **0.184** | **0.556** | **0.433** | **0.146** | **0.019** | **0.261** | **0.227** | **2.589** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.117 | 0.028 | 0.085 | 0.066 | 0.036 | 0.005 | 0.085 | 0.377 | 0.798 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.187 | 0.045 | 0.136 | 0.106 | 0.068 | 0.009 | 0.148 | 0.796 | 1.495 |
| 7 | 0.969 | 0.234 | 0.706 | 0.550 | 0.232 | 0.030 | 0.488 | 1.746 | 4.954 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.273** | **0.307** | **0.927** | **0.723** | **0.336** | **0.043** | **0.721** | **2.918** | **7.248** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.128 | 0.128 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.232 | 0.232 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.360** | **0.360** |

**World Logistics Center** **CO**

**Project Full Buildout 2035**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 2.9675 | 4.0134 | 3.8381 | 4.9658 | 128.0241 | 129.7210 | 323.8834 | 273.1047 |
| 0 | 0.4959 | 0.6725 | 0.6424 | 0.8240 | 0.3240 | 0.1916 | 0.3742 | 45.4559 |
| 1 | 0.3498 | 0.4623 | 0.4516 | 0.5866 | 0.2726 | 0.1610 | 0.3144 | 38.2070 |
| 2 | 0.2611 | 0.3447 | 0.3366 | 0.4398 | 0.2009 | 0.3875 | 0.2292 | 27.8681 |
| 3 | 0.3004 | 0.3962 | 0.3875 | 0.5042 | 0.2332 | 0.1368 | 0.2670 | 32.4491 |
| 4 | 0.2287 | 0.3009 | 0.2942 | 0.3871 | 0.1751 | 0.1020 | 0.1979 | 24.1850 |
| 5 | 0.3806 | 0.5072 | 0.4920 | 0.6351 | 0.2726 | 0.1610 | 0.3144 | 38.2070 |
| 6 | 0.3235 | 0.4268 | 0.4175 | 0.5431 | 0.2332 | 0.1368 | 0.2670 | 32.4491 |
| 7 | 0.2794 | 0.3673 | 0.3598 | 0.4699 | 0.2162 | 0.1267 | 0.2470 | 30.0340 |
| 8 | 0.4150 | 0.5571 | 0.5370 | 0.6903 | 0.2726 | 0.1610 | 0.3144 | 38.2070 |
| 9 | 0.2444 | 0.3236 | 0.3151 | 0.4112 | 0.1872 | 0.1092 | 0.2126 | 25.9227 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 13.1622 | 13.7401 | 13.0714 | 15.2546 | 26.3000 | 26.3000 | 1.2211 | 1.9336 |
| 0 | 0.9646 | 1.0450 | 0.9598 | 1.1187 | 1.2859 | 1.2126 | 0.7217 | 1.8981 |
| 1 | 0.1354 | 0.1752 | 0.1338 | 0.1562 | 0.3331 | 0.2893 | 0.3826 | 1.0052 |
| 2 | 0.0722 | 0.1194 | 0.0710 | 0.0830 | 0.1660 | 0.1260 | 0.1130 | 0.2961 |
| 3 | 0.0947 | 0.1339 | 0.0934 | 0.1091 | 0.2148 | 0.1763 | 0.2079 | 0.5451 |
| 4 | 0.0684 | 0.1324 | 0.0668 | 0.0783 | 0.1464 | 0.0995 | 0.0614 | 0.1611 |
| 5 | 0.1703 | 0.2183 | 0.1687 | 0.1969 | 0.3331 | 0.2893 | 0.3826 | 1.0052 |
| 6 | 0.1117 | 0.1497 | 0.1103 | 0.1288 | 0.2148 | 0.1763 | 0.2079 | 0.5451 |
| 7 | 0.0820 | 0.1224 | 0.0806 | 0.0943 | 0.1852 | 0.1468 | 0.1532 | 0.4018 |
| 8 | 0.2255 | 0.2842 | 0.2237 | 0.2610 | 0.3331 | 0.2893 | 0.3826 | 1.0052 |
| 9 | 0.0682 | 0.1262 | 0.0669 | 0.0783 | 0.1550 | 0.1110 | 0.0833 | 0.2182 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 13.1622 | 2.6324 | 0.9646 | 0.2255 | 0.1703 | 0.1354 | 0.1117 | 0.0947 | 0.0820 | 0.0722 | 0.0682 | 0.0684 |
| LDT1 | DSL | 13.7401 | 2.7480 | 1.0450 | 0.2842 | 0.2183 | 0.1752 | 0.1497 | 0.1339 | 0.1224 | 0.1194 | 0.1262 | 0.1324 |
| LDT2 | DSL | 13.0714 | 2.6143 | 0.9598 | 0.2237 | 0.1687 | 0.1338 | 0.1103 | 0.0934 | 0.0806 | 0.0710 | 0.0669 | 0.0668 |
| LHDT1 | DSL | 26.3000 | 3.4550 | 1.2859 | 0.3331 | 0.2593 | 0.2148 | 0.1852 | 0.1660 | 0.1550 | 0.1464 | 0.1520 | 0.1756 |
| LHDT2 | DSL | 26.3000 | 3.3035 | 1.2126 | 0.2893 | 0.2199 | 0.1763 | 0.1468 | 0.1260 | 0.1110 | 0.0995 | 0.0963 | 0.1007 |
| MDV | DSL | 15.2546 | 3.0509 | 1.1187 | 0.2610 | 0.1969 | 0.1562 | 0.1288 | 0.1091 | 0.0943 | 0.0830 | 0.0783 | 0.0783 |
| MH | DSL | 10.7915 | 2.1583 | 0.8448 | 0.2509 | 0.2012 | 0.1678 | 0.1446 | 0.1282 | 0.1172 | 0.1106 | 0.1102 | 0.1152 |
| OBUS | DSL | 1.7411 | 1.9000 | 1.0837 | 0.5746 | 0.4234 | 0.3120 | 0.2299 | 0.1694 | 0.1249 | 0.0920 | 0.0790 | 0.0790 |
| SBUS | DSL | 1.5607 | 1.2458 | 0.7078 | 0.3750 | 0.2776 | 0.2058 | 0.1530 | 0.1142 | 0.0857 | 0.0648 | 0.0566 | 0.0566 |
| T6 | DSL | 1.2211 | 1.2668 | 0.7217 | 0.3826 | 0.2821 | 0.2079 | 0.1532 | 0.1130 | 0.0833 | 0.0614 | 0.0527 | 0.0527 |
| T7 | DSL | 1.9336 | 3.3259 | 1.8981 | 1.0052 | 0.7404 | 0.5451 | 0.4018 | 0.2961 | 0.2182 | 0.1611 | 0.1383 | 0.1381 |
| UBUS | DSL | 65.7364 | 13.1473 | 8.0177 | 4.4591 | 3.6899 | 3.0547 | 2.5508 | 2.1768 | 1.9320 | 1.8160 | 1.8297 | 1.9726 |
| LDA | GAS | 2.9675 | 0.5935 | 0.4959 | 0.4150 | 0.3806 | 0.3498 | 0.3235 | 0.3004 | 0.2794 | 0.2611 | 0.2444 | 0.2287 |
| LDT1 | GAS | 4.0134 | 0.8027 | 0.6725 | 0.5571 | 0.5072 | 0.4623 | 0.4268 | 0.3962 | 0.3673 | 0.3447 | 0.3236 | 0.3009 |
| LDT2 | GAS | 3.8381 | 0.7676 | 0.6424 | 0.5370 | 0.4920 | 0.4516 | 0.4175 | 0.3875 | 0.3598 | 0.3366 | 0.3151 | 0.2942 |
| LHDT1 | GAS | 128.0241 | 0.3890 | 0.3240 | 0.2726 | 0.2514 | 0.2332 | 0.2162 | 0.2009 | 0.1872 | 0.1751 | 0.1634 | 0.1536 |
| LHDT2 | GAS | 129.7210 | 0.2299 | 0.1916 | 0.1610 | 0.1482 | 0.1368 | 0.1267 | 0.1175 | 0.1092 | 0.1020 | 0.0954 | 0.0894 |
| MCY | GAS | 207.3420 | 41.4684 | 25.9881 | 19.0331 | 17.0601 | 15.7214 | 14.8930 | 14.5272 | 14.6417 | 15.3262 | 16.7687 | 19.3133 |
| MDV | GAS | 4.9658 | 0.9932 | 0.8240 | 0.6903 | 0.6351 | 0.5866 | 0.5431 | 0.5042 | 0.4699 | 0.4398 | 0.4112 | 0.3871 |
| MH | GAS | 2.7961 | 0.5592 | 0.4651 | 0.3910 | 0.3599 | 0.3322 | 0.3075 | 0.2854 | 0.2656 | 0.2478 | 0.2319 | 0.2175 |
| OBUS | GAS | 130.3089 | 0.3999 | 0.3326 | 0.2796 | 0.2574 | 0.2376 | 0.2199 | 0.2041 | 0.1899 | 0.1772 | 0.1658 | 0.1556 |
| SBUS | GAS | 128.7328 | 0.3346 | 0.2782 | 0.2339 | 0.2153 | 0.1988 | 0.1840 | 0.1707 | 0.1589 | 0.1483 | 0.1387 | 0.1301 |
| T6 | GAS | 323.8834 | 0.4497 | 0.3742 | 0.3144 | 0.2894 | 0.2670 | 0.2470 | 0.2292 | 0.2126 | 0.1979 | 0.1851 | 0.1734 |
| T7 | GAS | 273.1047 | 54.6209 | 45.4559 | 38.2070 | 35.1648 | 32.4491 | 30.0340 | 27.8681 | 25.9227 | 24.1850 | 22.6275 | 21.2256 |
| UBUS | GAS | 7.9605 | 1.5921 | 1.3240 | 1.1131 | 1.0247 | 0.9459 | 0.8755 | 0.8125 | 0.7561 | 0.7055 | 0.6601 | 0.6193 |
| T7 | NG | 2.3341 | 44.8048 | 25.5542 | 13.5476 | 9.9847 | 7.3592 | 5.4243 | 3.9986 | 2.9480 | 2.1740 | 1.8671 | 1.8671 |
| UBUS | NG | 207.8220 | 41.5644 | 15.9509 | 4.3984 | 3.4431 | 2.8091 | 2.3651 | 2.0476 | 1.8223 | 1.6695 | 1.6305 | 1.6822 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.0 | 0.0 | 0.0 | 0.0 | 20.2 | 2.4 | 17.9 | 4.7 | 45.1 |
| 0 | 6.6 | 1.2 | 3.4 | 3.4 | 0.5 | 0.1 | 0.9 | 9.6 | 25.8 |
| 1 | 48.8 | 8.5 | 25.0 | 25.3 | 3.4 | 0.4 | 10.6 | 98.2 | 220.2 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.1 | 18.1 |
| 3 | 22.7 | 3.9 | 11.6 | 11.8 | 1.4 | 0.2 | 4.8 | 82.6 | 139.0 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0.7 | 0.1 | 0.4 | 0.4 | 0.0 | 0.0 | 0.2 | 0.2 | 2.0 |
| 6 | 31.0 | 5.4 | 15.9 | 16.1 | 2.0 | 0.2 | 7.0 | 169.9 | 247.6 |
| 7 | 100.9 | 17.4 | 51.6 | 52.5 | 5.3 | 0.6 | 16.0 | 316.2 | 560.4 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.9 | 27.9 |
| **Total** | **210.8** | **36.6** | **107.9** | **109.5** | **32.8** | **3.9** | **57.4** | **727.3** | **1286.1** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.0 | 0.0 | 0.0 | 0.0 | 20.2 | 2.4 | 17.9 | 4.7 | 45.1 |
| 0 | 6.6 | 1.2 | 3.4 | 3.4 | 0.5 | 0.1 | 0.9 | 9.6 | 25.8 |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **6.6** | **1.2** | **3.4** | **3.4** | **20.7** | **2.5** | **18.8** | **14.3** | **70.9** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | 37.9 | 6.6 | 19.4 | 19.7 | 2.8 | 0.3 | 8.6 | 86.4 | 181.6 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **37.9** | **6.6** | **19.4** | **19.7** | **2.8** | **0.3** | **8.6** | **86.4** | **181.6** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | 11.0 | 1.9 | 5.6 | 5.7 | 0.5 | 0.1 | 2.0 | 11.8 | 38.6 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 13.0 | 2.3 | 6.6 | 6.7 | 0.7 | 0.1 | 1.9 | 5.5 | 36.8 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0.7 | 0.1 | 0.4 | 0.4 | 0.0 | 0.0 | 0.2 | 0.2 | 2.0 |
| 6 | 14.2 | 2.5 | 7.3 | 7.4 | 0.6 | 0.1 | 2.0 | 7.1 | 41.2 |
| 7 | 25.6 | 4.4 | 13.1 | 13.3 | 1.1 | 0.1 | 3.0 | 21.4 | 82.1 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **64.5** | **11.2** | **33.0** | **33.5** | **3.0** | **0.3** | **9.0** | **46.1** | **200.6** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 9.7 | 1.7 | 5.0 | 5.1 | 0.7 | 0.1 | 2.9 | 77.1 | 102.2 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 16.8 | 2.9 | 8.6 | 8.7 | 1.4 | 0.1 | 5.1 | 162.8 | 206.4 |
| 7 | 75.2 | 13.0 | 38.5 | 39.2 | 4.3 | 0.4 | 13.0 | 294.7 | 478.3 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **101.8** | **17.6** | **52.1** | **52.9** | **6.3** | **0.7** | **21.0** | **534.6** | **787.0** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.1 | 18.1 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.9 | 27.9 |
| **Total** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **45.9** | **45.9** |

**World Logistics Center**

**Project Full Buildout 2035**

# PM10

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0337 | 0.0384 | 0.0343 | 0.0369 | 0.0377 | 0.0379 | 0.0380 | 0.0384 |
| 0 | 0.0028 | 0.0033 | 0.0029 | 0.0031 | 0.0032 | 0.0032 | 0.0032 | 0.0032 |
| 1 | 0.0009 | 0.0011 | 0.0009 | 0.0010 | 0.0016 | 0.0016 | 0.0016 | 0.0017 |
| 2 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |
| 3 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0010 | 0.0010 | 0.0011 | 0.0011 |
| 4 | 0.0009 | 0.0010 | 0.0009 | 0.0010 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |
| 5 | 0.0011 | 0.0013 | 0.0012 | 0.0012 | 0.0016 | 0.0016 | 0.0016 | 0.0017 |
| 6 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | 0.0010 | 0.0010 | 0.0011 | 0.0011 |
| 7 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0009 | 0.0009 | 0.0009 | 0.0009 |
| 8 | 0.0015 | 0.0017 | 0.0015 | 0.0016 | 0.0016 | 0.0016 | 0.0016 | 0.0017 |
| 9 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0126 | 0.1178 | 0.0456 | 0.0158 | 0.4679 | 0.5071 | 0.0018 | 0.0031 |
| 0 | 0.0020 | 0.0156 | 0.0075 | 0.0026 | 0.0152 | 0.0143 | 0.0046 | 0.0087 |
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0028 | 0.0052 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0025 | 0.0046 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0030 | 0.0055 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0026 | 0.0049 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.013 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | DSL | 0.118 | 0.024 | 0.016 | 0.010 | 0.008 | 0.007 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| LDT2 | DSL | 0.046 | 0.009 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| LHDT1 | DSL | 0.468 | 0.022 | 0.015 | 0.011 | 0.009 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 | 0.007 |
| LHDT2 | DSL | 0.507 | 0.018 | 0.014 | 0.010 | 0.009 | 0.008 | 0.008 | 0.007 | 0.007 | 0.006 | 0.006 | 0.006 |
| MDV | DSL | 0.016 | 0.003 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | DSL | 0.426 | 0.085 | 0.059 | 0.040 | 0.036 | 0.034 | 0.033 | 0.033 | 0.035 | 0.038 | 0.042 | 0.048 |
| OBUS | DSL | 0.001 | 0.007 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| SBUS | DSL | 0.005 | 0.010 | 0.008 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| T6 | DSL | 0.002 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| T7 | DSL | 0.003 | 0.011 | 0.009 | 0.007 | 0.006 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| UBUS | DSL | 9.612 | 1.922 | 0.964 | 0.409 | 0.320 | 0.256 | 0.215 | 0.199 | 0.207 | 0.240 | 0.297 | 0.378 |
| LDA | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT2 | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT1 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.068 | 0.014 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MDV | GAS | 0.037 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | GAS | 0.037 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.033 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.037 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.010 | 0.006 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 |
| UBUS | NG | 0.030 | 0.006 | 0.004 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| Source | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0370 | 0.0370 | 0.0370 | 0.0760 | 0.0890 | 0.0370 | 0.1300 | 0.0620 |
| Tires | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.012 | 0.02 |
| Total | **0.045** | **0.045** | **0.045** | **0.084** | **0.097** | **0.045** | **0.142** | **0.082** |

| Source | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.037 | 0.037 | 0.037 | 0.076 | 0.089 | 0.037 | 0.130 | 0.062 |
| Tires | 0.008 | 0.008 | 0.008 | 0.012 | 0.012 | 0.008 | 0.012 | 0.036 |
| Total | **0.045** | **0.045** | **0.045** | **0.088** | **0.101** | **0.045** | **0.142** | **0.098** |

**Paved Road Dust Emissions (pounds/day)**

| Source | PM10 |
|---|---|
| Freeways | 544 |
| Freeways to Ports | 56 |
| Internal | 102 |
| Surface | 241 |
| **Total** | **943** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 30.895 | 4.066 | 12.278 | 17.865 | 3.941 | 0.194 | 4.674 | 0.917 | 74.831 |
| Diesel | 0.094 | 0.006 | 0.006 | 0.019 | 1.262 | 0.186 | 20.644 | 74.518 | 96.734 |
| Total | **30.990** | **4.072** | **12.284** | **17.885** | **5.203** | **0.380** | **25.318** | **75.435** | **171.565** |

# World Logistics Center

# PM10 Exhaust

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 |
| 0 | 0.04 | 0.01 | 0.02 | 0.01 | 0.01 | 0.00 | 0.01 | 0.03 | 0.12 |
| 1 | 0.13 | 0.02 | 0.05 | 0.04 | 0.04 | 0.01 | 0.09 | 0.44 | 0.83 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 3 | 0.06 | 0.01 | 0.02 | 0.02 | 0.02 | 0.00 | 0.06 | 0.48 | 0.67 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.08 | 0.01 | 0.03 | 0.03 | 0.02 | 0.01 | 0.09 | 0.99 | 1.25 |
| 7 | 0.26 | 0.04 | 0.10 | 0.09 | 0.07 | 0.02 | 0.24 | 2.08 | 2.89 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.23 |
| **Total** | **0.56** | **0.08** | **0.23** | **0.19** | **0.18** | **0.05** | **0.50** | **4.38** | **6.18** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 |
| 0 | 0.04 | 0.01 | 0.02 | 0.01 | 0.01 | 0.00 | 0.01 | 0.03 | 0.12 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.04** | **0.01** | **0.02** | **0.01** | **0.03** | **0.01** | **0.01** | **0.04** | **0.16** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.10 | 0.02 | 0.04 | 0.03 | 0.04 | 0.01 | 0.08 | 0.38 | 0.70 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.10** | **0.02** | **0.04** | **0.03** | **0.04** | **0.01** | **0.08** | **0.38** | **0.70** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.05 | 0.13 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.03 | 0.13 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.04 | 0.14 |
| 7 | 0.07 | 0.01 | 0.03 | 0.02 | 0.01 | 0.00 | 0.05 | 0.14 | 0.33 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.16** | **0.02** | **0.07** | **0.06** | **0.04** | **0.01** | **0.11** | **0.27** | **0.74** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.04 | 0.45 | 0.54 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.04 | 0.01 | 0.02 | 0.01 | 0.02 | 0.00 | 0.06 | 0.95 | 1.11 |
| 7 | 0.19 | 0.03 | 0.08 | 0.07 | 0.05 | 0.01 | 0.20 | 1.94 | 2.57 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.26** | **0.04** | **0.10** | **0.09** | **0.08** | **0.02** | **0.30** | **3.33** | **4.22** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.23 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.36** | **0.36** |

**World Logistics Center**
**Project Full Buildout 2035**

# PM2.5

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0310 | 0.0353 | 0.0316 | 0.0339 | 0.0346 | 0.0348 | 0.0349 | 0.0353 |
| 0 | 0.0026 | 0.0030 | 0.0027 | 0.0029 | 0.0029 | 0.0029 | 0.0029 | 0.0029 |
| 1 | 0.0009 | 0.0010 | 0.0009 | 0.0009 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| 2 | 0.0007 | 0.0008 | 0.0007 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0008 |
| 3 | 0.0007 | 0.0008 | 0.0007 | 0.0007 | 0.0010 | 0.0010 | 0.0010 | 0.0010 |
| 4 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | 0.0007 | 0.0008 | 0.0008 | 0.0008 |
| 5 | 0.0010 | 0.0012 | 0.0011 | 0.0011 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| 6 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0010 | 0.0010 | 0.0010 | 0.0010 |
| 7 | 0.0007 | 0.0007 | 0.0007 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |
| 8 | 0.0013 | 0.0015 | 0.0014 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| 9 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0007 | 0.0007 | 0.0007 | 0.0007 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0120 | 0.1127 | 0.0436 | 0.0151 | 0.4477 | 0.4852 | 0.0017 | 0.0030 |
| 0 | 0.0019 | 0.0149 | 0.0071 | 0.0024 | 0.0145 | 0.0137 | 0.0044 | 0.0083 |
| 1 | 0.0011 | 0.0068 | 0.0042 | 0.0014 | 0.0103 | 0.0099 | 0.0036 | 0.0067 |
| 2 | 0.0008 | 0.0054 | 0.0031 | 0.0011 | 0.0071 | 0.0068 | 0.0027 | 0.0050 |
| 3 | 0.0009 | 0.0058 | 0.0035 | 0.0012 | 0.0082 | 0.0079 | 0.0030 | 0.0057 |
| 4 | 0.0008 | 0.0057 | 0.0030 | 0.0010 | 0.0065 | 0.0060 | 0.0024 | 0.0044 |
| 5 | 0.0012 | 0.0080 | 0.0046 | 0.0016 | 0.0103 | 0.0099 | 0.0036 | 0.0067 |
| 6 | 0.0010 | 0.0062 | 0.0038 | 0.0013 | 0.0082 | 0.0079 | 0.0030 | 0.0057 |
| 7 | 0.0009 | 0.0055 | 0.0033 | 0.0011 | 0.0076 | 0.0073 | 0.0028 | 0.0053 |
| 8 | 0.0014 | 0.0096 | 0.0052 | 0.0018 | 0.0103 | 0.0099 | 0.0036 | 0.0067 |
| 9 | 0.0008 | 0.0056 | 0.0030 | 0.0010 | 0.0068 | 0.0064 | 0.0025 | 0.0047 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.012 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | DSL | 0.113 | 0.023 | 0.015 | 0.010 | 0.008 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.006 | 0.006 |
| LDT2 | DSL | 0.044 | 0.009 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| LHDT1 | DSL | 0.448 | 0.021 | 0.014 | 0.010 | 0.009 | 0.008 | 0.008 | 0.007 | 0.007 | 0.006 | 0.006 | 0.007 |
| LHDT2 | DSL | 0.485 | 0.017 | 0.014 | 0.010 | 0.009 | 0.008 | 0.007 | 0.007 | 0.006 | 0.006 | 0.006 | 0.006 |
| MDV | DSL | 0.015 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | DSL | 0.408 | 0.082 | 0.056 | 0.038 | 0.034 | 0.032 | 0.031 | 0.032 | 0.033 | 0.036 | 0.040 | 0.046 |
| OBUS | DSL | 0.001 | 0.007 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| SBUS | DSL | 0.005 | 0.009 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| T6 | DSL | 0.002 | 0.006 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| T7 | DSL | 0.003 | 0.011 | 0.008 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 |
| UBUS | DSL | 9.196 | 1.839 | 0.922 | 0.392 | 0.307 | 0.245 | 0.206 | 0.191 | 0.198 | 0.230 | 0.284 | 0.362 |
| LDA | GAS | 0.031 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT2 | GAS | 0.032 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT1 | GAS | 0.035 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.064 | 0.013 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MDV | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.031 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.009 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 |
| UBUS | NG | 0.029 | 0.006 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0050 |
| Total | **0.018** | **0.018** | **0.018** | **0.035** | **0.04** | **0.018** | **0.059** | **0.031** |

| | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0030 | 0.0020 | 0.0030 | 0.0090 |
| Total | **0.018** | **0.018** | **0.018** | **0.036** | **0.041** | **0.018** | **0.059** | **0.035** |

**PM2.5 Paved Road Dust Emissions (pounds/day)**

| Source | PM.5 |
|---|---|
| Freeways | 133.6 |
| Freeways to Ports | 13.8 |
| Internal | 24.9 |
| Surface | 59.1 |
| **Total** | **231.4** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 12.358 | 1.626 | 4.911 | 7.444 | 1.625 | 0.078 | 1.942 | 0.347 | 30.331 |
| Diesel | 0.038 | 0.002 | 0.002 | 0.008 | 0.512 | 0.075 | 8.577 | 26.613 | 35.828 |
| Total | **12.396** | **1.629** | **4.913** | **7.452** | **2.137** | **0.152** | **10.519** | **26.960** | **66.159** |

**Black Carbon Emissions (pounds/day)**

Percent of diesel PM2.5 exhaust

| | |
|---|---|
| LDT1, LDT2, MDT: | 64% |
| LHDT1, LHDT2, MHDT, HHDT: | 77% |

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.06 | 0.32 | 0.41 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.35 | 0.41 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.06 | 0.73 | 0.80 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.17 | 1.53 | 1.74 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.17 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.08** | **0.03** | **0.33** | **3.19** | **3.63** |

# World Logistics Center

# PM2.5 Exhaust

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 |
| 0 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.03 | 0.11 |
| 1 | 0.12 | 0.02 | 0.05 | 0.04 | 0.04 | 0.01 | 0.09 | 0.42 | 0.79 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 3 | 0.05 | 0.01 | 0.02 | 0.02 | 0.02 | 0.00 | 0.06 | 0.46 | 0.64 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.07 | 0.01 | 0.03 | 0.02 | 0.02 | 0.01 | 0.09 | 0.94 | 1.19 |
| 7 | 0.24 | 0.04 | 0.10 | 0.08 | 0.06 | 0.02 | 0.23 | 1.99 | 2.75 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.22 |
| **Total** | **0.52** | **0.08** | **0.21** | **0.18** | **0.17** | **0.05** | **0.47** | **4.19** | **5.87** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 |
| 0 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.03 | 0.11 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.03** | **0.01** | **0.01** | **0.01** | **0.03** | **0.01** | **0.01** | **0.03** | **0.15** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.09 | 0.01 | 0.04 | 0.03 | 0.03 | 0.01 | 0.07 | 0.37 | 0.66 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.09** | **0.01** | **0.04** | **0.03** | **0.03** | **0.01** | **0.07** | **0.37** | **0.66** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.05 | 0.13 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.03 | 0.12 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.04 | 0.13 |
| 7 | 0.06 | 0.01 | 0.02 | 0.02 | 0.01 | 0.00 | 0.04 | 0.13 | 0.31 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.15** | **0.02** | **0.06** | **0.05** | **0.03** | **0.01** | **0.11** | **0.26** | **0.70** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.04 | 0.43 | 0.52 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.04 | 0.01 | 0.02 | 0.01 | 0.02 | 0.00 | 0.06 | 0.90 | 1.06 |
| 7 | 0.18 | 0.03 | 0.07 | 0.06 | 0.05 | 0.01 | 0.19 | 1.85 | 2.44 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.24** | **0.04** | **0.10** | **0.08** | **0.07** | **0.02** | **0.29** | **3.19** | **4.02** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.22 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.35** | **0.35** |

**World Logistics Center**

**Project Full Buildout 2035**

# CO2

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 3151.3810 | 3539.8960 | 3370.4717 | 4231.7673 | 4509.5151 | 5123.8689 | 13420.8100 | 18985.1977 |
| 0 | 360.3466 | 405.5420 | 385.9368 | 483.7691 | 892.1424 | 1004.9327 | 2157.2506 | 2323.7023 |
| 1 | 183.1925 | 205.4274 | 195.8404 | 246.6428 | 710.1030 | 795.2833 | 1324.4372 | 1766.1960 |
| 2 | 169.2526 | 189.6230 | 180.8702 | 228.1153 | 639.5716 | 174.6830 | 971.3985 | 1520.2813 |
| 3 | 163.4551 | 183.2048 | 174.6830 | 220.1118 | 644.8191 | 718.8495 | 1123.7341 | 1612.8300 |
| 4 | 203.2465 | 227.3523 | 216.9627 | 274.0432 | 710.6853 | 747.5542 | 883.5345 | 1473.1782 |
| 5 | 205.2380 | 230.4990 | 219.5730 | 275.9718 | 710.1030 | 795.2833 | 1324.4372 | 1766.1960 |
| 6 | 169.8350 | 190.3840 | 181.5287 | 228.7196 | 644.8191 | 718.8495 | 1123.7341 | 1612.8300 |
| 7 | 163.2344 | 182.7987 | 174.3531 | 219.9131 | 642.4504 | 702.4339 | 1045.4427 | 1554.5049 |
| 8 | 238.6178 | 268.2854 | 255.4291 | 320.5703 | 710.1030 | 795.2833 | 1324.4372 | 1766.1960 |
| 9 | 182.1262 | 204.0849 | 194.6029 | 245.2685 | 674.5501 | 714.9994 | 908.6548 | 1501.3620 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 2437.4237 | 2775.9443 | 3002.8027 | 3748.4086 | 3660.6293 | 5784.6785 | 6449.2555 | 5628.1587 |
| 0 | 334.2596 | 390.8871 | 419.6972 | 540.2930 | 626.4062 | 706.0581 | 1574.9960 | 2083.4866 |
| 1 | 179.7443 | 206.8979 | 225.1510 | 296.9169 | 473.6384 | 536.6931 | 1269.8275 | 1679.2306 |
| 2 | 170.4553 | 194.4461 | 212.1323 | 283.4191 | 408.6306 | 448.3928 | 1061.8214 | 1394.3491 |
| 3 | 162.4733 | 185.8715 | 202.5688 | 267.2475 | 430.5056 | 484.1028 | 1145.5655 | 1509.6512 |
| 4 | 207.6848 | 235.0766 | 257.8908 | 344.4363 | 447.5106 | 481.1703 | 1001.1120 | 1312.0070 |
| 5 | 198.9332 | 230.7086 | 249.6763 | 327.4281 | 473.6384 | 536.6931 | 1269.8275 | 1679.2306 |
| 6 | 168.1891 | 192.8463 | 210.1029 | 277.6936 | 430.5056 | 484.1028 | 1145.5655 | 1509.6512 |
| 7 | 162.8834 | 185.6021 | 202.8305 | 268.5346 | 418.8432 | 466.4497 | 1100.2045 | 1447.2531 |
| 8 | 229.7619 | 268.1064 | 288.9341 | 379.2802 | 473.6384 | 536.6931 | 1269.8275 | 1679.2306 |
| 9 | 184.8046 | 210.7388 | 229.7936 | 306.9240 | 428.4743 | 464.9295 | 1028.7400 | 1348.4166 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2437.4 | 487.5 | 334.3 | 229.8 | 198.9 | 179.7 | 168.2 | 162.5 | 162.9 | 170.5 | 184.8 | 207.7 |
| LDT1 | DSL | 2775.9 | 555.2 | 390.9 | 268.1 | 230.7 | 206.9 | 192.8 | 185.9 | 185.6 | 194.4 | 210.7 | 235.1 |
| LDT2 | DSL | 3002.8 | 600.6 | 419.7 | 288.9 | 249.7 | 225.2 | 210.1 | 202.6 | 202.8 | 212.1 | 229.8 | 257.9 |
| LHDT1 | DSL | 3660.6 | 1141.9 | 626.4 | 473.6 | 430.2 | 430.5 | 418.8 | 408.6 | 428.5 | 447.5 | 451.9 | 458.0 |
| LHDT2 | DSL | 5784.7 | 1193.7 | 706.1 | 536.7 | 484.0 | 484.1 | 466.4 | 448.4 | 464.9 | 481.2 | 482.8 | 484.2 |
| MDV | DSL | 3748.4 | 749.7 | 540.3 | 379.3 | 327.4 | 296.9 | 277.7 | 267.2 | 268.5 | 283.4 | 306.9 | 344.4 |
| MH | DSL | 10053.1 | 2010.6 | 1499.0 | 1103.4 | 1035.7 | 979.5 | 934.8 | 901.7 | 880.1 | 870.0 | 871.4 | 884.3 |
| OBUS | DSL | 6149.5 | 2438.0 | 1813.6 | 1462.3 | 1384.6 | 1323.0 | 1272.5 | 1229.9 | 1193.2 | 1161.1 | 1146.5 | 1146.5 |
| SBUS | DSL | 6552.9 | 2140.8 | 1593.9 | 1282.8 | 1213.2 | 1158.2 | 1113.0 | 1075.0 | 1042.5 | 1014.2 | 1001.4 | 1001.4 |
| T6 | DSL | 6449.3 | 2117.4 | 1575.0 | 1269.8 | 1200.6 | 1145.6 | 1100.2 | 1061.8 | 1028.7 | 1001.1 | 988.5 | 988.6 |
| T7 | DSL | 5628.2 | 2800.7 | 2083.5 | 1679.2 | 1584.9 | 1509.7 | 1447.3 | 1394.3 | 1348.4 | 1312.0 | 1295.8 | 1295.6 |
| UBUS | DSL | 19371.5 | 3874.3 | 2888.5 | 2126.1 | 1995.7 | 1887.4 | 1801.4 | 1737.5 | 1695.8 | 1676.3 | 1679.1 | 1704.0 |
| LDA | GAS | 3151.4 | 630.3 | 360.3 | 238.6 | 205.2 | 183.2 | 169.8 | 163.5 | 163.2 | 169.3 | 182.1 | 203.2 |
| LDT1 | GAS | 3539.9 | 708.0 | 405.5 | 268.3 | 230.5 | 205.4 | 190.4 | 183.2 | 182.8 | 189.6 | 204.1 | 227.4 |
| LDT2 | GAS | 3370.5 | 674.1 | 385.9 | 255.4 | 219.6 | 195.8 | 181.5 | 174.7 | 174.4 | 180.9 | 194.6 | 217.0 |
| LHDT1 | GAS | 4509.5 | 1306.0 | 892.1 | 710.1 | 644.6 | 644.8 | 642.5 | 639.6 | 674.6 | 710.7 | 721.1 | 730.9 |
| LHDT2 | GAS | 5123.9 | 1376.3 | 1004.9 | 795.3 | 718.8 | 718.8 | 702.4 | 685.9 | 715.0 | 747.6 | 755.4 | 762.8 |
| MCY | GAS | 2835.6 | 567.1 | 323.8 | 214.6 | 184.7 | 165.0 | 153.0 | 147.2 | 147.1 | 152.5 | 164.0 | 183.2 |
| MDV | GAS | 4231.8 | 846.4 | 483.8 | 320.6 | 276.0 | 246.6 | 228.7 | 220.1 | 219.9 | 228.1 | 245.3 | 274.0 |
| MH | GAS | 18494.7 | 3698.9 | 2176.6 | 1336.3 | 1228.0 | 1133.7 | 1054.8 | 980.0 | 916.8 | 891.5 | 897.1 | 913.7 |
| OBUS | GAS | 9400.9 | 3665.4 | 2156.9 | 1324.2 | 1216.9 | 1123.5 | 1045.2 | 971.2 | 908.5 | 883.4 | 888.9 | 905.4 |
| SBUS | GAS | 4480.3 | 1756.6 | 1033.6 | 634.6 | 583.2 | 538.4 | 500.9 | 465.4 | 435.4 | 423.4 | 426.0 | 433.9 |
| T6 | GAS | 13420.8 | 3666.4 | 2157.3 | 1324.4 | 1217.1 | 1123.7 | 1045.4 | 971.4 | 908.7 | 883.5 | 889.0 | 905.5 |
| T7 | GAS | 18985.2 | 3797.0 | 2323.7 | 1766.2 | 1681.6 | 1612.8 | 1554.5 | 1520.3 | 1501.4 | 1473.2 | 1452.5 | 1448.5 |
| UBUS | GAS | 18441.4 | 3688.3 | 2170.3 | 1332.4 | 1224.5 | 1130.5 | 1051.7 | 977.2 | 914.1 | 888.9 | 894.5 | 911.1 |
| T7 | NG | 5663.3 | 4967.8 | 3696.7 | 2978.6 | 2819.2 | 2692.9 | 2589.3 | 2502.1 | 2427.1 | 2361.7 | 2332.0 | 2332.0 |
| UBUS | NG | 14566.3 | 2913.3 | 2172.0 | 1598.7 | 1500.6 | 1419.2 | 1354.5 | 1306.5 | 1275.2 | 1260.5 | 1262.6 | 1281.3 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**World Logistics Center** **CO2**

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 835 | 168 | 2273 | 4624 | 7900 |
| 0 | 4817 | 712 | 2045 | 2000 | 776 | 128 | 2389 | 7931 | 20798 |
| 1 | 25625 | 3776 | 10860 | 10668 | 7665 | 1246 | 36508 | 106857 | 203203 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36234 | 36234 |
| 3 | 12379 | 1823 | 5244 | 5155 | 3670 | 593 | 25041 | 123824 | 177730 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 372 | 55 | 158 | 155 | 97 | 16 | 569 | 255 | 1676 |
| 6 | 16324 | 2404 | 6917 | 6798 | 5168 | 836 | 36751 | 254846 | 330044 |
| 7 | 59041 | 8687 | 24999 | 24596 | 15017 | 2378 | 102224 | 551021 | 787963 |
| 8 | 10 | 2 | 4 | 4 | 1 | 0 | 3 | 3 | 28 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63697 | 63697 |
| **Total** | **118567** | **17459** | **50226** | **49376** | **33229** | **5365** | **205757** | **1149293** | **1629272** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 835 | 168 | 2273 | 4624 | 7900 |
| 0 | 4817 | 712 | 2045 | 2000 | 776 | 128 | 2389 | 7931 | 20798 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4817** | **712** | **2045** | **2000** | **1612** | **296** | **4662** | **12555** | **28698** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 19870 | 2928 | 8421 | 8273 | 6427 | 1045 | 29645 | 94003 | 170611 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **19870** | **2928** | **8421** | **8273** | **6427** | **1045** | **29645** | **94003** | **170611** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 5754 | 848 | 2439 | 2396 | 1237 | 201 | 6863 | 12854 | 32592 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 7076 | 1042 | 2998 | 2947 | 1804 | 292 | 9776 | 8232 | 34166 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 372 | 55 | 158 | 155 | 97 | 16 | 569 | 255 | 1676 |
| 6 | 7488 | 1103 | 3173 | 3119 | 1601 | 259 | 10253 | 10702 | 37697 |
| 7 | 14992 | 2206 | 6348 | 6245 | 2998 | 475 | 19001 | 37374 | 89639 |
| 8 | 10 | 2 | 4 | 4 | 1 | 0 | 3 | 3 | 28 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **35693** | **5255** | **15119** | **14865** | **7738** | **1242** | **46465** | **69420** | **195798** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 5303 | 781 | 2246 | 2208 | 1866 | 302 | 15265 | 115593 | 143564 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 8835 | 1301 | 3744 | 3679 | 3567 | 577 | 26499 | 244144 | 292346 |
| 7 | 44050 | 6481 | 18651 | 18351 | 12019 | 1903 | 83223 | 513647 | 698324 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **58188** | **8564** | **24641** | **24238** | **17451** | **2781** | **124986** | **873384** | **1134234** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36234 | 36234 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63697 | 63697 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **99931** | **99931** |

**World Logistics Center** **CH4**

**Project Full Buildout 2035**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0605 | 0.0930 | 0.0793 | 0.1222 | 4.4101 | 3.8217 | 8.5080 | 4.2174 |
| 0 | 0.0051 | 0.0081 | 0.0068 | 0.0104 | 0.0078 | 0.0042 | 0.0125 | 0.3526 |
| 1 | 0.0017 | 0.0026 | 0.0022 | 0.0035 | 0.0041 | 0.0021 | 0.0065 | 0.1824 |
| 2 | 0.0013 | 0.0020 | 0.0017 | 0.0027 | 0.0021 | 0.0017 | 0.0033 | 0.0927 |
| 3 | 0.0013 | 0.0021 | 0.0017 | 0.0028 | 0.0026 | 0.0014 | 0.0042 | 0.1168 |
| 4 | 0.0016 | 0.0024 | 0.0021 | 0.0033 | 0.0021 | 0.0011 | 0.0032 | 0.0910 |
| 5 | 0.0021 | 0.0033 | 0.0027 | 0.0043 | 0.0041 | 0.0021 | 0.0065 | 0.1824 |
| 6 | 0.0015 | 0.0023 | 0.0019 | 0.0031 | 0.0026 | 0.0014 | 0.0042 | 0.1168 |
| 7 | 0.0013 | 0.0020 | 0.0017 | 0.0027 | 0.0023 | 0.0012 | 0.0036 | 0.1013 |
| 8 | 0.0026 | 0.0042 | 0.0035 | 0.0055 | 0.0041 | 0.0021 | 0.0065 | 0.1824 |
| 9 | 0.0014 | 0.0022 | 0.0018 | 0.0029 | 0.0020 | 0.0011 | 0.0032 | 0.0894 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0204 | 0.0636 | 0.0608 | 0.0244 | 0.1474 | 0.1474 | 0.0076 | 0.0241 |
| 0 | 0.0015 | 0.0049 | 0.0045 | 0.0018 | 0.0130 | 0.0127 | 0.0064 | 0.0150 |
| 1 | 0.0002 | 0.0008 | 0.0006 | 0.0003 | 0.0033 | 0.0030 | 0.0034 | 0.0079 |
| 2 | 0.0001 | 0.0005 | 0.0003 | 0.0001 | 0.0016 | 0.0013 | 0.0010 | 0.0023 |
| 3 | 0.0001 | 0.0006 | 0.0004 | 0.0002 | 0.0021 | 0.0018 | 0.0018 | 0.0043 |
| 4 | 0.0001 | 0.0005 | 0.0003 | 0.0001 | 0.0013 | 0.0010 | 0.0005 | 0.0013 |
| 5 | 0.0003 | 0.0010 | 0.0008 | 0.0003 | 0.0033 | 0.0030 | 0.0034 | 0.0079 |
| 6 | 0.0002 | 0.0007 | 0.0005 | 0.0002 | 0.0021 | 0.0018 | 0.0018 | 0.0043 |
| 7 | 0.0001 | 0.0005 | 0.0004 | 0.0002 | 0.0018 | 0.0015 | 0.0014 | 0.0032 |
| 8 | 0.0004 | 0.0013 | 0.0010 | 0.0004 | 0.0033 | 0.0030 | 0.0034 | 0.0079 |
| 9 | 0.0001 | 0.0005 | 0.0003 | 0.0001 | 0.0014 | 0.0011 | 0.0007 | 0.0017 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.0204 | 0.0041 | 0.0015 | 0.0004 | 0.0003 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| LDT1 | DSL | 0.0636 | 0.0127 | 0.0049 | 0.0013 | 0.0010 | 0.0008 | 0.0007 | 0.0006 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| LDT2 | DSL | 0.0608 | 0.0122 | 0.0045 | 0.0010 | 0.0008 | 0.0006 | 0.0005 | 0.0004 | 0.0004 | 0.0003 | 0.0003 | 0.0003 |
| LHDT1 | DSL | 0.1474 | 0.0351 | 0.0130 | 0.0033 | 0.0026 | 0.0021 | 0.0018 | 0.0016 | 0.0014 | 0.0013 | 0.0013 | 0.0013 |
| LHDT2 | DSL | 0.1474 | 0.0346 | 0.0127 | 0.0030 | 0.0023 | 0.0018 | 0.0015 | 0.0013 | 0.0011 | 0.0010 | 0.0009 | 0.0010 |
| MDV | DSL | 0.0244 | 0.0049 | 0.0018 | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 |
| MH | DSL | 0.1883 | 0.0377 | 0.0139 | 0.0035 | 0.0027 | 0.0022 | 0.0018 | 0.0016 | 0.0014 | 0.0013 | 0.0013 | 0.0013 |
| OBUS | DSL | 0.0203 | 0.0158 | 0.0090 | 0.0048 | 0.0035 | 0.0026 | 0.0019 | 0.0014 | 0.0010 | 0.0008 | 0.0007 | 0.0007 |
| SBUS | DSL | 0.0093 | 0.0129 | 0.0072 | 0.0038 | 0.0028 | 0.0021 | 0.0015 | 0.0011 | 0.0009 | 0.0006 | 0.0006 | 0.0006 |
| T6 | DSL | 0.0076 | 0.0112 | 0.0064 | 0.0034 | 0.0025 | 0.0018 | 0.0014 | 0.0010 | 0.0007 | 0.0005 | 0.0005 | 0.0005 |
| T7 | DSL | 0.0241 | 0.0262 | 0.0150 | 0.0079 | 0.0058 | 0.0043 | 0.0032 | 0.0023 | 0.0017 | 0.0013 | 0.0011 | 0.0011 |
| UBUS | DSL | 1.5092 | 0.3018 | 0.1155 | 0.0351 | 0.0272 | 0.0213 | 0.0174 | 0.0155 | 0.0156 | 0.0177 | 0.0218 | 0.0280 |
| LDA | GAS | 0.0605 | 0.0121 | 0.0051 | 0.0026 | 0.0021 | 0.0017 | 0.0015 | 0.0013 | 0.0013 | 0.0013 | 0.0014 | 0.0016 |
| LDT1 | GAS | 0.0930 | 0.0186 | 0.0081 | 0.0042 | 0.0033 | 0.0026 | 0.0023 | 0.0021 | 0.0020 | 0.0020 | 0.0022 | 0.0024 |
| LDT2 | GAS | 0.0793 | 0.0159 | 0.0068 | 0.0035 | 0.0027 | 0.0022 | 0.0019 | 0.0017 | 0.0017 | 0.0017 | 0.0018 | 0.0021 |
| LHDT1 | GAS | 4.4101 | 0.0187 | 0.0078 | 0.0041 | 0.0032 | 0.0026 | 0.0023 | 0.0021 | 0.0020 | 0.0021 | 0.0022 | 0.0025 |
| LHDT2 | GAS | 3.8217 | 0.0099 | 0.0042 | 0.0021 | 0.0017 | 0.0014 | 0.0012 | 0.0011 | 0.0011 | 0.0011 | 0.0012 | 0.0013 |
| MCY | GAS | 13.5142 | 2.7028 | 1.1917 | 0.6488 | 0.5176 | 0.4349 | 0.3846 | 0.3579 | 0.3504 | 0.3609 | 0.3908 | 0.4451 |
| MDV | GAS | 0.1222 | 0.0244 | 0.0104 | 0.0055 | 0.0043 | 0.0035 | 0.0031 | 0.0028 | 0.0027 | 0.0027 | 0.0029 | 0.0033 |
| MH | GAS | 0.1848 | 0.0370 | 0.0154 | 0.0080 | 0.0062 | 0.0051 | 0.0044 | 0.0041 | 0.0039 | 0.0040 | 0.0043 | 0.0049 |
| OBUS | GAS | 6.3416 | 0.0281 | 0.0117 | 0.0061 | 0.0047 | 0.0039 | 0.0034 | 0.0031 | 0.0030 | 0.0030 | 0.0033 | 0.0037 |
| SBUS | GAS | 6.2289 | 0.0235 | 0.0098 | 0.0051 | 0.0039 | 0.0032 | 0.0028 | 0.0026 | 0.0025 | 0.0025 | 0.0027 | 0.0031 |
| T6 | GAS | 8.5080 | 0.0300 | 0.0125 | 0.0065 | 0.0051 | 0.0042 | 0.0036 | 0.0033 | 0.0032 | 0.0032 | 0.0035 | 0.0039 |
| T7 | GAS | 4.2174 | 0.8435 | 0.3526 | 0.1824 | 0.1421 | 0.1168 | 0.1013 | 0.0927 | 0.0894 | 0.0910 | 0.0978 | 0.1108 |
| UBUS | GAS | 0.4339 | 0.0868 | 0.0362 | 0.0188 | 0.0146 | 0.0120 | 0.0104 | 0.0095 | 0.0092 | 0.0094 | 0.0101 | 0.0114 |
| T7 | NG | 0.4585 | 12.8153 | 7.2343 | 3.8087 | 2.8128 | 2.0782 | 1.5365 | 1.1373 | 0.8435 | 0.6277 | 0.5426 | 0.5426 |
| UBUS | NG | 54.1845 | 10.8369 | 4.0086 | 1.0332 | 0.7978 | 0.6395 | 0.5303 | 0.4568 | 0.4118 | 0.3911 | 0.4034 | 0.4439 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CH4

Project Full Buildout 2035

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.660 | 0.062 | 0.463 | 0.067 | 1.254 |
| 0 | 0.068 | 0.014 | 0.036 | 0.043 | 0.008 | 0.001 | 0.011 | 0.075 | 0.257 |
| 1 | 0.234 | 0.049 | 0.122 | 0.152 | 0.045 | 0.005 | 0.113 | 0.664 | 1.384 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.094 | 0.094 |
| 3 | 0.100 | 0.021 | 0.052 | 0.066 | 0.015 | 0.002 | 0.050 | 0.485 | 0.791 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.004 | 0.001 | 0.002 | 0.002 | 0.001 | 0.000 | 0.002 | 0.002 | 0.013 |
| 6 | 0.139 | 0.029 | 0.073 | 0.091 | 0.022 | 0.002 | 0.073 | 0.999 | 1.427 |
| 7 | 0.462 | 0.095 | 0.241 | 0.302 | 0.055 | 0.005 | 0.166 | 1.744 | 3.069 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.141 | 0.141 |
| **Total** | **1.007** | **0.208** | **0.526** | **0.656** | **0.807** | **0.078** | **0.877** | **4.273** | **8.432** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.660 | 0.062 | 0.463 | 0.067 | 1.254 |
| 0 | 0.068 | 0.014 | 0.036 | 0.043 | 0.008 | 0.001 | 0.011 | 0.075 | 0.257 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.068** | **0.014** | **0.036** | **0.043** | **0.669** | **0.064** | **0.474** | **0.143** | **1.511** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.181 | 0.038 | 0.095 | 0.118 | 0.038 | 0.004 | 0.092 | 0.584 | 1.150 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.181** | **0.038** | **0.095** | **0.118** | **0.038** | **0.004** | **0.092** | **0.584** | **1.150** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.052 | 0.011 | 0.027 | 0.034 | 0.007 | 0.001 | 0.021 | 0.080 | 0.234 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.057 | 0.012 | 0.030 | 0.037 | 0.008 | 0.001 | 0.019 | 0.032 | 0.197 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.004 | 0.001 | 0.002 | 0.002 | 0.001 | 0.000 | 0.002 | 0.002 | 0.013 |
| 6 | 0.064 | 0.013 | 0.033 | 0.042 | 0.007 | 0.001 | 0.020 | 0.042 | 0.222 |
| 7 | 0.117 | 0.024 | 0.061 | 0.077 | 0.011 | 0.001 | 0.031 | 0.118 | 0.440 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.295** | **0.061** | **0.154** | **0.192** | **0.033** | **0.003** | **0.093** | **0.274** | **1.106** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.043 | 0.009 | 0.022 | 0.028 | 0.008 | 0.001 | 0.030 | 0.453 | 0.594 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.075 | 0.016 | 0.039 | 0.049 | 0.015 | 0.002 | 0.053 | 0.957 | 1.206 |
| 7 | 0.344 | 0.071 | 0.180 | 0.225 | 0.044 | 0.004 | 0.135 | 1.626 | 2.629 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.463** | **0.095** | **0.241** | **0.302** | **0.067** | **0.007** | **0.218** | **3.036** | **4.429** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.094 | 0.094 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.141 | 0.141 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.235** | **0.235** |

# E.8 - Mobile Spreadsheets: Phases 1 and 2, 2035 Mitigated

# World Logistics Center

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Trip and Vehicle Miles Traveled Calculation

**2035**

## World Logistics Center

**Vehicle Fleet Mix**

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Vehicle VMT for South Coast Air Basin per EMFAC2011 @ All Speeds**

| GAS Vehicle Class | VMT (miles/day) |
|---|---|
| LDA-GAS | 208,917,637 |
| LDT1-GAS | 27,492,480 |
| LDT2-GAS | 83,024,800 |
| MDT-GAS | 64,718,278 |
| LHDT1-GAS | 15,357,888 |
| LHDT2-GAS | 1,630,290 |
| MHDT-GAS | 1,411,975 |
| HHDT-GAS | 272,774 |
| Subtotal | 402,826,122 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 637,835 |
| LDT1-DSL | 40,323 |
| LDT2-DSL | 37,706 |
| MDT-DSL | 65,898 |
| LHDT1-DSL | 4,722,049 |
| LHDT2-DSL | 1,565,487 |
| MHDT-DSL | 6,235,756 |
| HHDT-DSL | 18,547,545 |
| Subtotal | 31,852,599 |
| | |
| Grand Total | 434,678,722 |

| Vehicle Class | | VMT-GAS | VMT-DSL | VMT-Total | % VMT-Total | %GAS | %DSL |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 208,917,637 | 637,835 | 209,555,472 | 54.44% | 99.7% | 0.30% |
| LDT1 | Pass Car | 27,492,480 | 40,323 | 27,532,803 | 7.15% | 99.9% | 0.15% |
| LDT2 | Pass Car | 83,024,800 | 37,706 | 83,062,506 | 21.58% | 100.0% | 0.05% |
| MDT | Pass Car | 64,718,278 | 65,898 | 64,784,176 | 16.83% | 99.9% | 0.10% |
| Subtotal | | 384,153,195 | 781,762 | 384,934,958 | 100.00% | 99.8% | 0.20% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 15,357,888 | 4,722,049 | 20,079,937 | 86.27% | 76.5% | 23.52% |
| LHDT2 | Light Heavy Truck | 1,630,290 | 1,565,487 | 3,195,778 | 13.73% | 51.0% | 48.99% |
| Subtotal | | 16,988,179 | 6,287,536 | 23,275,715 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1,411,975 | 6,235,756 | 7,647,730 | 100% | 18.5% | 81.54% |
| HHDT | Heavy Heavy Truck | 272,774 | 18,547,545 | 18,820,319 | 100% | 1.4% | 98.55% |

## World Logistics Center

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

Area Source Trip Distribution

| | Building Size (sq-ft) | |
|---|---|---|
| High Cube Warehouse | 40,400,000 | Sq-feet |
| Light Logistics | 200,000 | Sq-feet |
| Utilities Service Station | 30,800 | Sq-feet |
| Gas Station w/Convenience Store | 12 | Pumps |
| Convenience Store | 3,000 | Sq-feet |
| Fire Station | 1 | Sq-feet |

**Trip Generation**

| | trips/day (Non-PCE) | Source |
|---|---|---|
| High Cube Warehouse | 67872 | Traffic Impact Analysis Report |
| Light Logistics | 712 | prepared by Parsons Brinckerhoff, Inc. |
| Utilities Service Station | 248 | September 2014 |
| Gas Station w/Convenience Store | 219 | |
| Convenience Store | 354 | |
| Fire Station | 137 | |
| Total | 69542 | |

**Vehicle Fleet for High Cube Warehouse**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 79.6% | 54.44% | 0.30% | 90 | 29322 | 29411 |
| LDT1 | | 7.15% | 0.15% | 6 | 3859 | 3864 |
| LDT2 | | 21.58% | 0.05% | 5 | 11653 | 11658 |
| MDT | | 16.83% | 0.10% | 9 | 9083 | 9093 |
| SubTotal | | 100.00% | 0.20% | 110 | 53916 | 54026 |
| LHDT1 (2 axle truck) | 3.5% | 86.27% | 23.52% | 482 | 1567 | 2049 |
| LHDT2 | | 13.73% | 48.99% | 160 | 166 | 326 |
| Subtotal | | 100.0% | | 642 | 1734 | 2376 |
| MHDT (3 axle truck) | 4.6% | 100.00% | 81.54% | 2546 | 576 | 3122 |
| HHDT (4+ axle truck) | 12.3% | 100.00% | 98.55% | 8227 | 121 | 8348 |
| Total | 100.0% | | | 11524 | 56348 | 67872 |

**Vehicle Fleet for Light Logistics**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 80.3% | 54.44% | 0.30% | 1 | 310 | 311 |
| LDT1 | | 7.15% | 0.15% | 0 | 41 | 41 |
| LDT2 | | 21.58% | 0.05% | 0 | 123 | 123 |
| MDT | | 16.83% | 0.10% | 0 | 96 | 96 |
| SubTotal | | 100.00% | 0.20% | 1 | 571 | 572 |
| LHDT1 (2 axle truck) | 5.2% | 86.27% | 23.52% | 8 | 24 | 32 |
| LHDT2 | | 13.73% | 48.99% | 2 | 3 | 5 |
| Subtotal | | 100.0% | | 10 | 27 | 37 |
| MHDT (3 axle truck) | 4.5% | 100.0% | 81.54% | 26 | 6 | 32 |
| HHDT (4+ axle truck) | 10.0% | 100.0% | 98.55% | 70 | 1 | 71 |
| Total | 100.0% | | | 107 | 605 | 712 |

**Vehicle Fleet for Utilities Service Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 77.3% | 54.44% | 0.30% | 0.3 | 104 | 104 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 14 | 14 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 41 | 41 |
| MDT | | 16.83% | 0.10% | 0.0 | 32 | 32 |
| SubTotal | | 100.00% | 0.20% | 0.4 | 191 | 192 |
| LHDT1 (2 axle truck) | 11.3% | 86.27% | 23.52% | 6 | 19 | 24 |
| LHDT2 | | 13.73% | 48.99% | 2 | 2 | 4 |
| Subtotal | | 100.00% | | 8 | 21 | 28 |
| MHDT (3 axle truck) | 2.4% | 100.00% | 81.54% | 5 | 1 | 6 |
| HHDT (4+ axle truck) | 8.9% | 100.00% | 98.55% | 22 | 0 | 22 |
| Total | 100.0% | | | 35 | 213 | 248 |

**Vehicle Fleet for Gas Station with Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 50.7% | 54.44% | 0.30% | 0.2 | 60 | 60 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 8 | 8 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 24 | 24 |
| MDT | | 16.83% | 0.10% | 0.0 | 19 | 19 |
| SubTotal | | 100.00% | 0.20% | 0.2 | 111 | 111 |
| LHDT1 (2 axle truck) | 1.8% | 86.27% | 23.52% | 0.8 | 3 | 3 |
| LHDT2 | | 13.73% | 48.99% | 0.3 | 0 | 1 |
| Subtotal | | 100.00% | | 1.1 | 3 | 4 |
| MHDT (3 axle truck) | 7.8% | 100.00% | 81.54% | 13.9 | 3 | 17 |
| HHDT (4+ axle truck) | 39.7% | 100.00% | 98.55% | 85.7 | 1 | 87 |
| Total | 100.0% | | | 100.9 | 118 | 219 |

**Vehicle Fleet for Convenience Store**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 52.0% | 54.44% | 0.30% | 0.5 | 100 | 100 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 13 | 13 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 40 | 40 |
| MDT | | 16.83% | 0.10% | 0.0 | 31 | 31 |
| SubTotal | | 100.00% | 0.20% | 0.6 | 184 | 184 |
| LHDT1 (2 axle truck) | 1.7% | 86.27% | 23.52% | 1.2 | 4 | 5 |
| LHDT2 | | 13.73% | 48.99% | 0.4 | 0 | 1 |
| Subtotal | | 100.00% | | 1.6 | 4 | 6 |
| MHDT (3 axle truck) | 7.9% | 100.00% | 81.54% | 22.8 | 5 | 28 |
| HHDT (4+ axle truck) | 38.4% | 100.00% | 98.55% | 134.0 | 2 | 136 |
| Total | 100.0% | | | 159.0 | 195 | 354 |

**Vehicle Fleet for Fire Station**

| Vehicle Class | PB 2013 Vehicle Distribution | EMFAC2011 Vehicle Mix | EMFAC2011 % Diesel | Number of Daily Diesel Trips | Number of Daily Non-Diesel Trips | Total Number of Daily Trips |
|---|---|---|---|---|---|---|
| LDA (Passenger Car) | 100.0% | 54.44% | 0.30% | 0.2 | 74 | 75 |
| LDT1 | | 7.15% | 0.15% | 0.0 | 10 | 10 |
| LDT2 | | 21.58% | 0.05% | 0.0 | 30 | 30 |
| MDT | | 16.83% | 0.10% | 0.0 | 23 | 23 |
| SubTotal | | 100.00% | 0.20% | 0.2 | 137 | 137 |
| LHDT1 (2 axle truck) | 0.0% | 86.27% | 23.52% | 0.0 | 0 | 0 |
| LHDT2 | | 13.73% | 48.99% | 0.0 | 0 | 0 |
| Subtotal | | 100.00% | | 0.0 | 0 | 0 |
| MHDT (3 axle truck) | 0.0% | 100.00% | 81.54% | 0.0 | 0 | 0 |
| HHDT (4+ axle truck) | 0.0% | 100.00% | 98.55% | 0.0 | 0 | 0 |
| Total | 100.0% | | | 0.2 | 137 | 137 |

**Vehicle Summary (Phase Summary)**

| Vehicle Class | Daily Diesel Trips | Daily Non Diesel Trips | Total Daily Trips |
|---|---|---|---|
| LDA | 92 | 29971 | 30062 |
| LDT1 | 6 | 3944 | 3950 |
| LDT2 | 5 | 11911 | 11916 |
| MDT | 9 | 9284 | 9294 |
| LHDT1 | 497 | 1617 | 2114 |
| LHDT2 | 165 | 172 | 336 |
| MHDT | 2613 | 592 | 3205 |
| HHDT | 8539 | 126 | 8664 |
| Total | 11927 | 57615 | 69542 |

Trip Generation from PB 2013 Traffic Study
Vehicle Fleet Mix taken from EMFAC2011 for the SoCAB in **2035** and the project Traffic Study
% Diesel taken from EMAC2011 for the SoCAB in **2035**

# World Logistics Center

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Area Source: Diesel Trip Distribution by Land Use and Building

## Land Use

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 40,400,000 |
| Light Logistics | 200,000 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

## Vehicle Allocation - Number of Daily Diesel Trips

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 90 | 6 | 5 | 9 | 482 | 160 | 2546 | 8227 | 11524 |
| Light Logistics | 1 | 0 | 0 | 0 | 8 | 2 | 26 | 70 | 107 |
| Utilities Service Station | 0 | 0 | 0 | 0 | 6 | 2 | 5 | 22 | 35 |
| Gas Station w/Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 86 | 101 |
| Convenience Store | 0 | 0 | 0 | 0 | 1 | 0 | 23 | 134 | 159 |
| Fire Station | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | |
| Total | 92 | 6 | 5 | 9 | 497 | 165 | 2613 | 8539 | 11927 |

# World Logistics Center

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Area Source: Non-Diesel Trip Distribution by Land Use and Building

**Land Use:**

| Building | Size (sq-ft) |
|---|---|
| High Cube Warehouse | 40,400,000 |
| Light Logistics | 200,000 |
| Utilities Service Station | 30,800 |
| Gas Station w/Convenience Store | 12 |
| Convenience Store | 3,000 |
| Fire Station | 1 |
| | |
| Total | |

**Vehicle Allocation - Number of Daily Non-Diesel Trips**

| Building | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| High Cube | 29322 | 3859 | 11653 | 9083 | 1567 | 166 | 576 | 121 | 56348 |
| Light Logistics | 310 | 41 | 123 | 96 | 24 | 3 | 6 | 1 | 605 |
| Utilities Service Station | 104 | 14 | 41 | 32 | 19 | 2 | 1 | 0 | 213 |
| Gas Station w/Convenience Store | 60 | 8 | 24 | 19 | 3 | 0 | 3 | 1 | 118 |
| Convenience Store | 100 | 13 | 40 | 31 | 4 | 0 | 5 | 2 | 195 |
| Fire Station | 74 | 10 | 30 | 23 | 0 | 0 | 0 | 0 | 137 |
| | | | | | | | | | |
| Total | 29971 | 3944 | 11911 | 9284 | 1617 | 172 | 592 | 126 | 57615 |

# World Logistics Center

## Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

Area Source Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 90 | 330 | 0.21 | 18.4 |
| | **LDT1** | 15 | 6 | 330 | 0.21 | 1.2 |
| | **LDT2** | 15 | 5 | 330 | 0.21 | 1.1 |
| | **MDT** | 15 | 9 | 330 | 0.21 | 1.9 |
| | **LHDT1** | 15 | 482 | 330 | 0.21 | 98.8 |
| | **LHDT2** | 15 | 160 | 330 | 0.21 | 32.8 |
| | **MHDT** | 15 | 2546 | 330 | 0.21 | 521.9 |
| | **HHDT** | 15 | 8227 | 330 | 0.21 | 1686.6 |
| **Travel at Light Logistics** | **LDA** | 15 | 1 | 175 | 0.11 | 0.1 |
| | **LDT1** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LDT2** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **MDT** | 15 | 0 | 175 | 0.11 | 0.0 |
| | **LHDT1** | 15 | 8 | 175 | 0.11 | 0.8 |
| | **LHDT2** | 15 | 2 | 175 | 0.11 | 0.3 |
| | **MHDT** | 15 | 26 | 175 | 0.11 | 2.8 |
| | **HHDT** | 15 | 70 | 175 | 0.11 | 7.6 |
| **Travel at Utility** | **LDA** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT1** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LDT2** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **MDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| | **LHDT1** | 15 | 6 | 100 | 0.06 | 0.4 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 5 | 100 | 0.06 | 0.3 |
| | **HHDT** | 15 | 22 | 100 | 0.06 | 1.4 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 14 | 50 | 0.03 | 0.4 |
| | **HHDT** | 15 | 86 | 50 | 0.03 | 2.7 |
| **Travel at Convenience Store** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 1 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **HHDT** | 15 | 134 | 50 | 0.03 | 4.2 |
| **Travel at Fire Station** | **LDA** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 19 | 1 | 1 | 2 | 100 | 33 | 526 | 1702 | **2384** |

## Diesel Truck Idling

| Building/Location | Truck Type | Idle time: Idling Time (min) | # Idling Vehicles/Day | 5 minutes Total Idling Time (minutes) | |
|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 241 | 1205 | |
| | **LHDT2** | 5 | 80 | 399 | |
| | **MHDT** | 5 | 1273 | 6364 | |
| | **HHDT** | 5 | 4114 | 20568 | |
| **Idle at Light Logistics** | **LHDT1** | 5 | 4 | 19 | |
| | **LHDT2** | 5 | 1 | 6 | |
| | **MHDT** | 5 | 13 | 65 | |
| | **HHDT** | 5 | 35 | 175 | |
| **Idle at Utility** | **LHDT1** | 5 | 3 | 14 | |
| | **LHDT2** | 5 | 1 | 5 | |
| | **MHDT** | 5 | 2 | 12 | |
| | **HHDT** | 5 | 11 | 54 | |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 0 | 2 | |
| | **LHDT2** | 5 | 0 | 1 | |
| | **MHDT** | 5 | 7 | 35 | |
| | **HHDT** | 5 | 43 | 214 | |
| **Idle at Convenience Store** | **LHDT1** | 5 | 1 | 3 | |
| | **LHDT2** | 5 | 0 | 1 | |
| | **MHDT** | 5 | 11 | 57 | |
| | **HHDT** | 5 | 67 | 335 | |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 | |
| | **LHDT2** | 5 | 0 | 0 | |
| | **MHDT** | 5 | 0 | 0 | |
| | **HHDT** | 5 | 0 | 0 | |
| **Total DSL (hrs)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** | **Total** |
| | 20.7 | 6.9 | 108.9 | 355.8 | 492.3 |

# World Logistics Center

## Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

Area Source Non-Diesel Vehicle Miles Traveled

### Onsite Running

| Link | Truck Type | Average Speed (mph) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Vehicle Miles Traveled |
|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 29322 | 330 | 0.21 | 6011.0 |
| | **LDT1** | 15 | 3859 | 330 | 0.21 | 791.0 |
| | **LDT2** | 15 | 11653 | 330 | 0.21 | 2388.8 |
| | **MDT** | 15 | 9083 | 330 | 0.21 | 1862.1 |
| | **LHDT1** | 15 | 1567 | 330 | 0.21 | 321.3 |
| | **LHDT2** | 15 | 166 | 330 | 0.21 | 34.1 |
| | **MHDT** | 15 | 576 | 330 | 0.21 | 118.2 |
| | **HHDT** | 15 | 121 | 330 | 0.21 | 24.8 |
| **Travel at Light Logistics** | **LDA** | 15 | 310 | 175 | 0.11 | 33.7 |
| | **LDT1** | 15 | 41 | 175 | 0.11 | 4.4 |
| | **LDT2** | 15 | 123 | 175 | 0.11 | 13.4 |
| | **MDT** | 15 | 96 | 175 | 0.11 | 10.4 |
| | **LHDT1** | 15 | 24 | 175 | 0.11 | 2.7 |
| | **LHDT2** | 15 | 3 | 175 | 0.11 | 0.3 |
| | **MHDT** | 15 | 6 | 175 | 0.11 | 0.6 |
| | **HHDT** | 15 | 1 | 175 | 0.11 | 0.1 |
| **Travel at Utility** | **LDA** | 15 | 104 | 100 | 0.06 | 6.5 |
| | **LDT1** | 15 | 14 | 100 | 0.06 | 0.9 |
| | **LDT2** | 15 | 41 | 100 | 0.06 | 2.6 |
| | **MDT** | 15 | 32 | 100 | 0.06 | 2.0 |
| | **LHDT1** | 15 | 19 | 100 | 0.06 | 1.2 |
| | **LHDT2** | 15 | 2 | 100 | 0.06 | 0.1 |
| | **MHDT** | 15 | 1 | 100 | 0.06 | 0.1 |
| | **HHDT** | 15 | 0 | 100 | 0.06 | 0.0 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 60 | 50 | 0.03 | 1.9 |
| | **LDT1** | 15 | 8 | 50 | 0.03 | 0.2 |
| | **LDT2** | 15 | 24 | 50 | 0.03 | 0.7 |
| | **MDT** | 15 | 19 | 50 | 0.03 | 0.6 |
| | **LHDT1** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 3 | 50 | 0.03 | 0.1 |
| | **HHDT** | 15 | 1 | 50 | 0.03 | 0.0 |
| **Travel at Convenience Store** | **LDA** | 15 | 100 | 50 | 0.03 | 3.1 |
| | **LDT1** | 15 | 13 | 50 | 0.03 | 0.4 |
| | **LDT2** | 15 | 40 | 50 | 0.03 | 1.2 |
| | **MDT** | 15 | 31 | 50 | 0.03 | 1.0 |
| | **LHDT1** | 15 | 4 | 50 | 0.03 | 0.1 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 5 | 50 | 0.03 | 0.2 |
| | **HHDT** | 15 | 2 | 50 | 0.03 | 0.1 |
| **Travel at Fire Station** | **LDA** | 15 | 74 | 50 | 0.03 | 2.3 |
| | **LDT1** | 15 | 10 | 50 | 0.03 | 0.3 |
| | **LDT2** | 15 | 30 | 50 | 0.03 | 0.9 |
| | **MDT** | 15 | 23 | 50 | 0.03 | 0.7 |
| | **LHDT1** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **LHDT2** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **MHDT** | 15 | 0 | 50 | 0.03 | 0.0 |
| | **HHDT** | 15 | 0 | 50 | 0.03 | 0.0 |

| **Total Vehicle Miles Traveled** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | Total |
|---|---|---|---|---|---|---|---|---|---|
| 15 mph | 6058 | 797 | 2408 | 1877 | 325 | 35 | 119 | 25 | **11644** |

## Non-Diesel Truck Idling

| Building/Location | Truck Type | Idle time: Idling Time (min) | # Idling Vehicles/Day | 5 minutes Total Idling Time (minutes) |
|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 5 | 784 | 3919 |
| | **LHDT2** | 5 | 83 | 416 |
| | **MHDT** | 5 | 288 | 1441 |
| | **HHDT** | 5 | 60 | 302 |
| **Idle at Light Logistics** | **LHDT1** | 5 | 12 | 61 |
| | **LHDT2** | 5 | 1 | 6 |
| | **MHDT** | 5 | 3 | 15 |
| | **HHDT** | 5 | 1 | 3 |
| **Idle at Utility** | **LHDT1** | 5 | 9 | 46 |
| | **LHDT2** | 5 | 1 | 5 |
| | **MHDT** | 5 | 1 | 3 |
| | **HHDT** | 5 | 0 | 1 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 5 | 1 | 7 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 2 | 8 |
| | **HHDT** | 5 | 1 | 3 |
| **Idle at Convenience Store** | **LHDT1** | 5 | 2 | 10 |
| | **LHDT2** | 5 | 0 | 1 |
| | **MHDT** | 5 | 3 | 13 |
| | **HHDT** | 5 | 1 | 5 |
| **Idle at Firestation** | **LHDT1** | 5 | 0 | 0 |
| | **LHDT2** | 5 | 0 | 0 |
| | **MHDT** | 5 | 0 | 0 |
| | **HHDT** | 5 | 0 | 0 |
| **Total GAS Idle Time (hours)** | **LHDT1** | **LHDT2** | **MHDT** | **HHDT** |
| | 67.4 | 7.2 | 24.7 | 5.2 |

| ID | Arterial | From | To | Internal Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | east of Street A | Gilman Springs Rd | 2,662 | 180 | 289 | 506 |
| 19 | Street F | east of Street A | Street C | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | east of Street A | Street F | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Street H | 9,679 | 407 | 859 | 1,602 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | 9,883 | 386 | 746 | 1,030 |

**World Logistics Center** **2035**

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Internal Roadway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 | 2147 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 | 5590 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 | 6837 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 | 469 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 | 2799 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 | 715 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 | 14 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 | 9 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 | 1410 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 | 691 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 | 2775 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 | 1690 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 | 2912 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 | 1080 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 | 5193 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 | 890 |
| | | | | | | | | | | | | | | | | Total | 35224 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 0 | 0 | 1 | 37 | 12 | 416 | 1675 |
| 2 | 1 | 16 | 1 | 1 | 2 | 145 | 48 | 1099 | 4278 |
| 3 | 1 | 21 | 1 | 1 | 2 | 186 | 62 | 1362 | 5202 |
| 5 | 1 | 8 | 0 | 0 | 1 | 44 | 14 | 361 | 41 |
| 6 | 1 | 9 | 1 | 1 | 1 | 74 | 25 | 595 | 2094 |
| 8 | 1 | 13 | 1 | 1 | 1 | 74 | 25 | 601 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 0 |
| 12 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 |
| 14 | 1 | 5 | 0 | 0 | 0 | 51 | 17 | 305 | 1031 |
| 18 | 1 | 4 | 0 | 0 | 0 | 32 | 11 | 207 | 437 |
| 19 | 1 | 7 | 0 | 0 | 1 | 62 | 20 | 546 | 2139 |
| 21 | 1 | 10 | 1 | 1 | 1 | 66 | 22 | 566 | 1024 |
| 24 | 1 | 19 | 1 | 1 | 2 | 100 | 33 | 847 | 1909 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 3 | 0 | 0 | 0 | 20 | 7 | 211 | 838 |
| 30 | 1 | 20 | 1 | 1 | 2 | 115 | 38 | 1141 | 3873 |
| 31 | 1 | 8 | 1 | 0 | 1 | 40 | 13 | 310 | 517 |
| Total | | **150** | **9** | **9** | **16** | **1050** | **348** | **8584** | **25058** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 150 | 9 | 9 | 16 | 1050 | 348 | 8584 | 25058 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | **150** | **9** | **9** | **16** | **1050** | **348** | **8584** | **25058** | **35224** |

**World Logistics Center** **2035**

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Internal Roadway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 | 3899 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 | 10473 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 | 13415 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 | 4884 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 | 6029 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 | 7978 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 | 198 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 | 107 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 | 3170 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 | 2499 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 | 4581 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 | 6631 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 | 12256 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 | 2239 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 | 12873 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 | 5245 |
| | | | | | | | | | | | | | | | | Total | 96475 |

**VMT per Vehicle Class**

| Roadway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1984 | 261 | 789 | 615 | 119 | 13 | 94 | 25 |
| 2 | 1 | 5241 | 690 | 2083 | 1624 | 473 | 50 | 249 | 63 |
| 3 | 1 | 6723 | 885 | 2672 | 2083 | 604 | 64 | 308 | 77 |
| 5 | 1 | 2526 | 332 | 1004 | 782 | 142 | 15 | 82 | 1 |
| 6 | 1 | 3044 | 401 | 1210 | 943 | 241 | 26 | 135 | 31 |
| 8 | 1 | 4119 | 542 | 1637 | 1276 | 241 | 26 | 136 | 0 |
| 11 | 1 | 101 | 13 | 40 | 31 | 8 | 1 | 2 | 0 |
| 12 | 1 | 55 | 7 | 22 | 17 | 4 | 0 | 2 | 0 |
| 14 | 1 | 1579 | 208 | 627 | 489 | 165 | 18 | 69 | 15 |
| 18 | 1 | 1267 | 167 | 504 | 393 | 104 | 11 | 47 | 6 |
| 19 | 1 | 2286 | 301 | 909 | 708 | 200 | 21 | 124 | 31 |
| 21 | 1 | 3399 | 447 | 1351 | 1053 | 216 | 23 | 128 | 15 |
| 24 | 1 | 6350 | 836 | 2524 | 1967 | 325 | 34 | 192 | 28 |
| 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 1145 | 151 | 455 | 355 | 66 | 7 | 48 | 12 |
| 30 | 1 | 6603 | 869 | 2624 | 2046 | 375 | 40 | 258 | 57 |
| 31 | 1 | 2732 | 360 | 1086 | 846 | 130 | 14 | 70 | 8 |
| Total | | **49156** | **6469** | **19535** | **15227** | **3414** | **362** | **1944** | **369** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 49156 | 6469 | 19535 | 15227 | 3414 | 362 | 1944 | 369 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **49156** | **6469** | **19535** | **15227** | **3414** | **362** | **1944** | **369** | **96475** |

**World Logistics Center**
**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**
**Entrained Road Dust**
Internal Roadways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 18,000 | 3656 | 886 | 180 | 2,512 | 510 | 8,368 | 1700 | 6047 | 8.98 | 0.035 | 0.0002 | 1.5 | 0.0010 | 5.9 |
| 2 | A | 731 | 0.45 | 21,267 | 9657 | 1,578 | 717 | 2,969 | 1348 | 9,559 | 4341 | 16063 | 8.80 | 0.035 | 0.0002 | 3.8 | 0.0010 | 15.4 |
| 3 | A | 2352 | 1.46 | 8,478 | 12387 | 627 | 916 | 1,143 | 1670 | 3,613 | 5279 | 20252 | 8.59 | 0.035 | 0.0002 | 4.6 | 0.0009 | 18.9 |
| 5 | A | 953 | 0.59 | 7,861 | 4654 | 363 | 215 | 748 | 443 | 70 | 41 | 5353 | 3.23 | 0.035 | 0.0001 | 0.5 | 0.0003 | 1.8 |
| 6 | A | 1099 | 0.68 | 8,214 | 5608 | 536 | 366 | 1,069 | 730 | 3,112 | 2125 | 8828 | 8.15 | 0.035 | 0.0002 | 1.9 | 0.0009 | 7.8 |
| 8 | A | 1091 | 0.68 | 11,199 | 7590 | 540 | 366 | 1,087 | 737 | 0 | 0 | 8693 | 3.09 | 0.035 | 0.0001 | 0.7 | 0.0003 | 2.9 |
| 11 | A | 1201 | 0.75 | 250 | 187 | 17 | 13 | 17 | 13 | 0 | 0 | 212 | 2.92 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 12 | A | 824 | 0.51 | 197 | 101 | 12 | 6 | 18 | 9 | 0 | 0 | 116 | 3.08 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 14 | A | 1618 | 1.01 | 2,894 | 2909 | 249 | 250 | 372 | 374 | 1,041 | 1046 | 4579 | 7.93 | 0.035 | 0.0002 | 1.0 | 0.0009 | 3.9 |
| 18 | A | 1412 | 0.88 | 2,662 | 2335 | 180 | 158 | 289 | 253 | 506 | 444 | 3190 | 6.01 | 0.035 | 0.0002 | 0.5 | 0.0006 | 2.1 |
| 19 | A | 2386 | 1.48 | 2,842 | 4212 | 205 | 304 | 452 | 670 | 1,464 | 2170 | 7356 | 9.38 | 0.035 | 0.0003 | 1.8 | 0.0010 | 7.5 |
| 21 | A | 1258 | 0.78 | 8,013 | 6262 | 418 | 327 | 888 | 694 | 1,329 | 1039 | 8321 | 5.71 | 0.035 | 0.0002 | 1.3 | 0.0006 | 5.1 |
| 24 | A | 1946 | 1.21 | 9,679 | 11701 | 407 | 492 | 859 | 1038 | 1,602 | 1937 | 15168 | 5.60 | 0.035 | 0.0001 | 2.2 | 0.0006 | 9.2 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 29 | A | 675 | 0.42 | 5,033 | 2110 | 237 | 99 | 617 | 259 | 2,028 | 850 | 3319 | 8.40 | 0.035 | 0.0002 | 0.7 | 0.0009 | 3.0 |
| 30 | A | 2827 | 1.76 | 6,928 | 12167 | 324 | 569 | 797 | 1400 | 2,238 | 3930 | 18066 | 7.58 | 0.035 | 0.0002 | 3.6 | 0.0008 | 14.8 |
| 31 | A | 820 | 0.51 | 9,883 | 5034 | 386 | 197 | 746 | 380 | 1,030 | 525 | 6136 | 4.64 | 0.035 | 0.0001 | 0.8 | 0.0005 | 3.1 |
| | | | | | | | | | | | | | | | **Totals:** | **24.9** | | **101.5** |

| ID | Segment | From | To | Surface Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 7,006 | 301 | 797 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1,011 | 43 | 72 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1,555 | 60 | 190 | 1,041 |
| 32 | Cactus Ave | west of Redlands Blvd | | 3,010 | 179 | 228 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 749 | 24 | 57 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 595 | 47 | 127 | 636 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 2,377 | 142 | 365 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 388 | 41 | 144 | 587 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 3,045 | 201 | 383 | 7 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,903 | 143 | 401 | 636 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 350 | 15 | 25 | 110 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 777 | 46 | 109 | 59 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 938 | 37 | 88 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 892 | 33 | 74 | 102 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 11,199 | 540 | 1,087 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 75 | 2 | 5 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 7,014 | 299 | 801 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 0 | 0 | 0 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 1,535 | 83 | 247 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 19 | 1 | 0 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 1,535 | 83 | 247 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,267 | 86 | 227 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 493 | 26 | 37 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 974 | 116 | 121 | 0 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 307 | 25 | 66 | 209 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 562 | 30 | 52 | 168 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | 1,330 | 199 | 192 | 0 |
| 65 | Alessandro Blvd | Nason St | Oliver St | 1,018 | 37 | 81 | 102 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 1,167 | 47 | 97 | 102 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 731 | 32 | 64 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 69 | Cactus Ave | Nason St | Oliver St | 1,033 | 56 | 91 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 2,169 | 130 | 165 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 620 | 42 | 25 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 6,962 | 297 | 799 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 560 | 17 | 27 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 114 | 5 | 5 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 16 | 1 | 1 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 661 | 21 | 30 | 6 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 773 | 27 | 40 | 12 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 976 | 37 | 68 | 93 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 356 | 16 | 27 | 59 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 802 | 38 | 60 | 650 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 77 | 5 | 13 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 70 | 5 | 13 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 637 | 14 | 36 | 48 |
| 96 | N California Ave | W 6th St | E 8th St | 147 | 2 | 4 | 3 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 468 | 12 | 29 | 41 |
| 98 | N California Ave | W 6th St | I-10 | 13 | 0 | 2 | 1 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 330 | 6 | 12 | 13 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 88 | 3 | 8 | 29 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 728 | 24 | 65 | 98 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 297 | 12 | 31 | 148 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 535 | 18 | 53 | 82 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 13 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 554 | 19 | 56 | 81 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 1 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 67 | 4 | 10 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 562 | 19 | 57 | 81 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 573 | 21 | 64 | 124 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 18 | 3 | 10 | 24 |

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|---|---|---|---|---|---|---|---|
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 27 | 2 | 8 | 40 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 590 | 21 | 60 | 87 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 3 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 24 | 1 | 1 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 624 | 23 | 66 | 108 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 7 | 1 | 3 | 13 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 43 | 3 | 9 | 44 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 656 | 24 | 65 | 95 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 6 | 1 | 3 | 19 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 33 | 2 | 2 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 701 | 26 | 68 | 95 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 12 | 1 | 1 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 756 | 27 | 70 | 101 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 32 | 3 | 11 | 636 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 14 | 0 | 1 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 814 | 29 | 72 | 101 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 61 | 3 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 27 | 1 | 1 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 73 | 4 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 144 | 6 | 8 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 1,040 | 39 | 82 | 102 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 42 | 3 | 4 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 20 | 1 | 2 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 6 | 1 | 5 | 25 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 251 | 10 | 30 | 32 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 223 | 8 | 18 | 0 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 393 | 15 | 37 | 16 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 11 | 1 | 4 | 7 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 531 | 22 | 57 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 539 | 23 | 62 | 5 |
| 145 | Cactus Ave | Graham St | Heacock St | 556 | 26 | 70 | 1 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 4 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 605 | 29 | 76 | 2 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 5 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 664 | 33 | 80 | 4 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|
| 151 | Cactus Ave | Perris Blvd | Kitching St | 696 | 35 | 82 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 25 | 3 | 10 | 629 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 814 | 40 | 85 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 2 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,228 | 59 | 106 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 302 | 14 | 18 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,415 | 73 | 123 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 380 | 10 | 27 | 42 |
| 159 | Beaumont Ave | E 6th St | I-10 | 275 | 5 | 13 | 19 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,520 | 74 | 246 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 3,857 | 189 | 592 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 2,337 | 115 | 347 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 63 | 5 | 5 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 6,778 | 286 | 794 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 451 | 24 | 80 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 1,886 | 91 | 267 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,694 | 82 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,694 | 82 | 192 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | 2 | 0 | 0 | 1 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | 21 | 0 | 1 | 0 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,655 | 128 | 370 | 587 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 168 | 11 | 23 | 44 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,823 | 138 | 394 | 631 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 46 | 3 | 6 | 4 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | 2,096 | 71 | 179 | 223 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | 3,183 | 107 | 286 | 333 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | 3,204 | 108 | 284 | 347 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | 1,037 | 36 | 102 | 118 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 6,955 | 162 | 514 | 815 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 5,432 | 131 | 448 | 577 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 1,521 | 32 | 66 | 248 |
| 194 | Crescent Ave | West of Alessandro Rd | | 305 | 26 | 69 | 0 |

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|---|---|---|---|---|---|---|---|
| 195 | Crescent Ave | Alessandro Rd | Center St | 690 | 47 | 134 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 996 | 73 | 202 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 48 | 3 | 6 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 223 | 11 | 20 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,267 | 86 | 227 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 1,502 | 82 | 254 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 1,486 | 81 | 246 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 18 | 2 | 9 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 89 | 2 | 2 | 2 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 359 | 11 | 36 | 46 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 169 | 6 | 16 | 32 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 241 | 8 | 29 | 33 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 14 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 51 | 1 | 2 | 3 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 194 | 5 | 20 | 14 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 2 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 73 | 3 | 12 | 23 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 27 | 1 | 1 | 1 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 52 | 1 | 1 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 152 | 4 | 13 | 33 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 1,025 | 36 | 129 | 345 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 70 | 3 | 12 | 24 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 20 | 1 | 4 | 4 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 889 | 35 | 131 | 344 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 136 | 3 | 10 | 16 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 720 | 31 | 117 | 319 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 1 | 0 | 0 | 1 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 634 | 26 | 94 | 242 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 23 | 1 | 3 | 7 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 52 | 6 | 21 | 74 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 53 | 2 | 9 | 26 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 187 | 14 | 55 | 198 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 530 | 18 | 63 | 128 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 104 | 3 | 11 | 22 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 1,032 | 36 | 126 | 339 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 35 | 1 | 2 | 2 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 367 | 9 | 18 | 33 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 1,346 | 43 | 137 | 354 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 162 | 4 | 13 | 26 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 254 | 9 | 27 | 46 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 1,166 | 38 | 120 | 312 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 14 | 1 | 5 | 25 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 834 | 27 | 84 | 212 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,799 | 64 | 201 | 553 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 216 | 10 | 32 | 63 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 818 | 26 | 80 | 178 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 482 | 23 | 77 | 219 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 488 | 23 | 78 | 220 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 2 | 4 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 508 | 23 | 81 | 225 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 25 | 1 | 3 | 4 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 543 | 25 | 83 | 230 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 14 | 1 | 2 | 4 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 227 | 10 | 33 | 85 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 619 | 29 | 98 | 286 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 454 | 19 | 66 | 171 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0 | 0 | 0 | 0 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,004 | 39 | 62 | 71 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 217 | 12 | 25 | 70 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 516 | 19 | 28 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 439 | 21 | 34 | 325 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 174 | 9 | 21 | 27 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 519 | 24 | 39 | 357 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 227 | 15 | 26 | 649 |
| 294 | Via Del Lago | South of Iris Ave | | 43 | 1 | 0 | 0 |

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|---|---|---|---|---|---|---|---|
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 41 | 2 | 7 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 83 | 3 | 8 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 50 | 4 | 11 | 625 |
| 304 | Iris Ave | Indian St | Perris Blvd | 483 | 13 | 44 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 1,019 | 60 | 203 | 620 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,220 | 59 | 189 | 620 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 86 | 3 | 11 | 9 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 3,002 | 74 | 268 | 497 |
| 326 | Ramona Expy | Sanderson Ave | State St | 664 | 19 | 81 | 122 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 2,251 | 52 | 177 | 365 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 5,416 | 130 | 447 | 577 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 54 | 2 | 6 | 7 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 3,734 | 86 | 281 | 353 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 3,310 | 85 | 326 | 572 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 24 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 2,313 | 48 | 137 | 100 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 2,820 | 76 | 286 | 467 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 723 | 23 | 64 | 93 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 5 | 0 | 1 | 4 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ram | Mid County Pkwy | 3rd St | 678 | 16 | 36 | 262 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | 1,331 | 27 | 60 | 245 |
| 377 | Mid County Pkwy WB Off-Ran | Mid County Pkwy | 3rd St | 68 | 2 | 6 | 8 |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | 957 | 19 | 38 | 109 |
| 379 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | 3rd St | 530 | 12 | 25 | 183 |
| 380 | Mid County Pkwy EB On-Ram | 3rd St | Mid County Pkwy | 24 | 0 | 1 | 1 |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | 681 | 13 | 26 | 18 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 230 | 20 | 56 | 57 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,317 | 58 | 179 | 569 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 25 | 1 | 1 | 3 |
| 390 | Ramona Expy | Webster Ave | Indian St | 430 | 18 | 44 | 33 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 477 | 28 | 113 | 103 |
| 393 | Indian St | Ramona Expy | Morgan St | 49 | 11 | 70 | 70 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 2,613 | 109 | 340 | 451 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 2,125 | 73 | 216 | 293 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 203 | 7 | 16 | 4 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,446 | 73 | 184 | 1 |
| 399 | Ramona Expy | Evans Rd | Rider St | 242 | 4 | 7 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 1,740 | 50 | 140 | 4 |
| 401 | Morgan St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 11 | 0 | 0 | 0 |
| 406 | Ironwood Ave | East of Thedore St | | 668 | 59 | 18 | 7 |
| 407 | Rider St | Indian St | Perris Blvd | 1 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 0 | 0 | 0 | 0 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 176 | 7 | 5 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 0 | 0 | 0 | 1 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 125 | 6 | 23 | 28 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 7 | 0 | 0 | 5 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1,870 | 62 | 172 | 238 |
| 416 | Mid County Pkwy WB On-Ran | Mid County Pkwy | Perris Blvd | 626 | 18 | 66 | 107 |
| 417 | Mid County Pkwy WB Off-Ran | Perris Blvd | Mid County Pkwy | 8 | 0 | 2 | 67 |
| 419 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | Perris Blvd | 367 | 9 | 30 | 76 |
| 420 | Mid County Pkwy EB On-Ram | Perris Blvd | Mid County Pkwy | 3 | 0 | 1 | 33 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 101 | 6 | 15 | 640 |
| 425 | Mid County Pkwy WB On-Ran | West of Evan | | 23 | 1 | 2 | 0 |
| 426 | Mid County Pkwy WB Off-Ran | East of Evan | | 12 | 1 | 2 | 36 |
| 427 | Day St | south of Alessandro Blvd | | 23 | 1 | 3 | 0 |
| 428 | Mid County Pkwy EB Off-Ram | West of Evan | | 27 | 1 | 3 | 1 |
| 429 | Mid County Pkwy EB On-Ram | East of Evan | | 13 | 1 | 1 | 35 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 639 | 21 | 58 | 70 |
| 431 | Placentia Ave | Water Ave | Evans Rd | 4 | 0 | 0 | 3 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | 17 | 0 | 0 | 1 |
| 433 | Evans Rd | Rider St | Orange Ave | 1,581 | 42 | 132 | 22 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 435 | Orange Ave | Evans Rd | Foothill Dr | 70 | 1 | 2 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 3 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 1,444 | 40 | 129 | 30 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 10 | 0 | 1 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | 1,403 | 40 | 128 | 30 |
| 452 | San Jacinto Ave | West of Evan Rd | | 8 | 0 | 0 | 0 |
| 453 | Evans Rd | North of San Jancito Ave | | 1,288 | 34 | 121 | 28 |
| 454 | San Jacinto Ave | East of Evan Rd | | 246 | 5 | 15 | 0 |
| 455 | Evans Rd | South of San Jancito Ave | | 1,034 | 30 | 106 | 27 |
| 458 | Nason St | South of Cactus Ave | | 9 | 0 | 1 | 0 |
| 464 | Quincy | South of Eucalyptus | | 61 | 3 | 5 | 0 |
| 477 | Ellis Ave | West of Evan Rd | | 80 | 4 | 7 | 9 |
| 478 | Evans Rd | North of Ellis Ave | | 1,054 | 36 | 117 | 46 |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | 726 | 15 | 64 | 0 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | 0 | 0 | 0 | 1 |
| 482 | Ellis Ave | East of SR-215 | | 164 | 2 | 10 | 1 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | 837 | 22 | 96 | 0 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | 1 | 0 | 0 | 1 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | 1,360 | 23 | 99 | 0 |
| 488 | Nason St | North of Iris Ave | | 9 | 0 | 1 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | 2,525 | 76 | 188 | 0 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | 3 | 0 | 0 | 0 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 170 | 11 | 20 | 645 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 189 | 12 | 21 | 645 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 504 | Krameria Ave | west of Perris Blvd | | 251 | 25 | 94 | 0 |

**World Logistics Center** **2035**

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Surface Street Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Daily VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8104 | 7,006 | 301 | 797 | 0 | 1820 | 1.131 | 12 | 1 | 1 | 1 | 61 | 20 | 650 | 0 | 745 | 843 |
| 10 | 1126 | 1,011 | 43 | 72 | 0 | 826 | 0.513 | 2 | 0 | 0 | 0 | 9 | 3 | 59 | 0 | 72 | 37 |
| 13 | 2846 | 1,555 | 60 | 190 | 1,041 | 345 | 0.214 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 1026 | 1200 | 257 |
| 32 | 3417 | 3,010 | 179 | 228 | 0 | 1551 | 0.964 | 5 | 0 | 0 | 1 | 36 | 12 | 186 | 0 | 240 | 232 |
| 33 | 830 | 749 | 24 | 57 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 0 | 54 | 68 |
| 35 | 1405 | 595 | 47 | 127 | 636 | 801 | 0.498 | 1 | 0 | 0 | 0 | 10 | 3 | 104 | 627 | 744 | 370 |
| 36 | 2884 | 2,377 | 142 | 365 | 0 | 1627 | 1.011 | 4 | 0 | 0 | 0 | 29 | 10 | 298 | 0 | 341 | 344 |
| 37 | 1160 | 388 | 41 | 144 | 587 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 117 | 578 | 708 | 96 |
| 38 | 3636 | 3,045 | 201 | 383 | 7 | 659 | 0.409 | 5 | 0 | 0 | 1 | 41 | 14 | 312 | 7 | 380 | 155 |
| 42 | 3083 | 1,903 | 143 | 401 | 636 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 29 | 10 | 327 | 627 | 996 | 3304 |
| 43 | 500 | 350 | 15 | 25 | 110 | 2598 | 1.614 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 108 | 134 | 216 |
| 46 | 991 | 777 | 46 | 109 | 59 | 806 | 0.501 | 1 | 0 | 0 | 0 | 9 | 3 | 89 | 58 | 161 | 81 |
| 47 | 1063 | 938 | 37 | 88 | 0 | 1995 | 1.239 | 2 | 0 | 0 | 0 | 8 | 2 | 72 | 0 | 84 | 104 |
| 48 | 1101 | 892 | 33 | 74 | 102 | 795 | 0.494 | 1 | 0 | 0 | 0 | 7 | 2 | 60 | 101 | 172 | 85 |
| 50 | 12826 | 11,199 | 540 | 1,087 | 0 | 479 | 0.298 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 | 314 |
| 51 | 82 | 75 | 2 | 5 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 3 |
| 52 | 8114 | 7,014 | 299 | 801 | 0 | 1269 | 0.788 | 12 | 1 | 1 | 1 | 61 | 20 | 653 | 0 | 748 | 590 |
| 53 | 0 | 0 | 0 | 0 | 0 | 795 | 0.494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 1865 | 1,535 | 83 | 247 | 0 | 325 | 0.202 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 | 46 |
| 55 | 20 | 19 | 1 | 0 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1865 | 1,535 | 83 | 247 | 0 | 1152 | 0.716 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 | 162 |
| 57 | 1580 | 1,267 | 86 | 227 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 | 32 |
| 58 | 556 | 493 | 26 | 37 | 0 | 172 | 0.107 | 1 | 0 | 0 | 0 | 5 | 2 | 30 | 0 | 38 | 4 |
| 59 | 1211 | 974 | 116 | 121 | 0 | 786 | 0.488 | 2 | 0 | 0 | 0 | 24 | 8 | 99 | 0 | 132 | 64 |
| 60 | 607 | 307 | 25 | 66 | 209 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 206 | 267 | 26 |
| 61 | 812 | 562 | 30 | 52 | 168 | 97 | 0.060 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 166 | 217 | 13 |
| 62 | 1721 | 1,330 | 199 | 192 | 0 | 781 | 0.485 | 2 | 0 | 0 | 0 | 40 | 13 | 157 | 0 | 213 | 103 |
| 65 | 1238 | 1,018 | 37 | 81 | 102 | 795 | 0.494 | 2 | 0 | 0 | 0 | 8 | 2 | 66 | 101 | 179 | 88 |
| 66 | 1413 | 1,167 | 47 | 97 | 102 | 812 | 0.504 | 2 | 0 | 0 | 0 | 10 | 3 | 79 | 101 | 195 | 98 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 827 | 731 | 32 | 64 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 6 | 2 | 52 | 0 | 62 | 32 |
| 69 | 1180 | 1,033 | 56 | 91 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 11 | 4 | 74 | 0 | 91 | 47 |
| 70 | 2464 | 2,169 | 130 | 165 | 0 | 795 | 0.494 | 4 | 0 | 0 | 0 | 26 | 9 | 135 | 0 | 174 | 86 |
| 71 | 687 | 620 | 42 | 25 | 0 | 803 | 0.499 | 1 | 0 | 0 | 0 | 9 | 3 | 20 | 0 | 33 | 16 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 8058 | 6,962 | 297 | 799 | 0 | 742 | 0.461 | 12 | 1 | 1 | 1 | 60 | 20 | 651 | 0 | 746 | 344 |
| 74 | 605 | 560 | 17 | 27 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 1 | 29 | 28 |
| 75 | 129 | 114 | 5 | 5 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 5 | 11 | 5 |
| 76 | 18 | 16 | 1 | 1 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 77 | 718 | 661 | 21 | 30 | 6 | 438 | 0.272 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 6 | 37 | 10 |
| 80 | 852 | 773 | 27 | 40 | 12 | 138 | 0.086 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 12 | 53 | 5 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1174 | 976 | 37 | 68 | 93 | 322 | 0.200 | 2 | 0 | 0 | 0 | 8 | 2 | 55 | 92 | 159 | 32 |
| 83 | 458 | 356 | 16 | 27 | 59 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 58 | 85 | 5 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1550 | 802 | 38 | 60 | 650 | 284 | 0.176 | 1 | 0 | 0 | 0 | 8 | 3 | 49 | 641 | 701 | 124 |
| 87 | 95 | 77 | 5 | 13 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 | 6 |
| 88 | 88 | 70 | 5 | 13 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 | 6 |
| 95 | 735 | 637 | 14 | 36 | 48 | 439 | 0.273 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 47 | 82 | 22 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 156 | 147 | 2 | 4 | 3 | 399 | 0.248 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |
| 97 | 550 | 468 | 12 | 29 | 41 | 389 | 0.242 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 40 | 68 | 16 |
| 98 | 16 | 13 | 0 | 2 | 1 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 |
| 99 | 361 | 330 | 6 | 12 | 13 | 405 | 0.252 | 1 | 0 | 0 | 0 | 1 | 0 | 10 | 13 | 25 | 6 |
| 100 | 128 | 88 | 3 | 8 | 29 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 29 | 36 | 5 |
| 101 | 915 | 728 | 24 | 65 | 98 | 313 | 0.194 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 97 | 158 | 31 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 488 | 297 | 12 | 31 | 148 | 291 | 0.181 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 146 | 175 | 32 |
| 104 | 688 | 535 | 18 | 53 | 82 | 404 | 0.251 | 1 | 0 | 0 | 0 | 4 | 1 | 43 | 81 | 130 | 33 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 14 | 13 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 107 | 710 | 554 | 19 | 56 | 81 | 388 | 0.241 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 132 | 32 |
| 108 | 15 | 12 | 1 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 109 | 81 | 67 | 4 | 10 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 9 | 5 |
| 110 | 719 | 562 | 19 | 57 | 81 | 756 | 0.470 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 133 | 62 |
| 111 | 1 | 1 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 782 | 573 | 21 | 64 | 124 | 817 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 122 | 181 | 92 |
| 113 | 55 | 18 | 3 | 10 | 24 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 24 | 33 | 16 |
| 114 | 77 | 27 | 2 | 8 | 40 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 39 | 47 | 23 |
| 115 | 758 | 590 | 21 | 60 | 87 | 851 | 0.529 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 86 | 142 | 75 |
| 116 | 3 | 0 | 0 | 0 | 3 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 |
| 117 | 26 | 24 | 1 | 1 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 118 | 821 | 624 | 23 | 66 | 108 | 765 | 0.475 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 106 | 168 | 80 |
| 119 | 24 | 7 | 1 | 3 | 13 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 16 | 8 |
| 120 | 99 | 43 | 3 | 9 | 44 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 43 | 52 | 26 |
| 121 | 840 | 656 | 24 | 65 | 95 | 825 | 0.513 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 94 | 154 | 79 |
| 122 | 29 | 6 | 1 | 3 | 19 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 19 | 21 | 10 |
| 123 | 37 | 33 | 2 | 2 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 124 | 890 | 701 | 26 | 68 | 95 | 800 | 0.497 | 1 | 0 | 0 | 0 | 5 | 2 | 55 | 94 | 158 | 78 |
| 125 | 14 | 12 | 1 | 1 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 126 | 954 | 756 | 27 | 70 | 101 | 774 | 0.481 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 100 | 165 | 80 |
| 127 | 682 | 32 | 3 | 11 | 636 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 627 | 637 | 326 |
| 128 | 15 | 14 | 0 | 1 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 129 | 1016 | 814 | 29 | 72 | 101 | 823 | 0.511 | 1 | 0 | 0 | 0 | 6 | 2 | 59 | 100 | 168 | 86 |
| 130 | 65 | 61 | 3 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 1 |
| 131 | 29 | 27 | 1 | 1 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 133 | 77 | 73 | 4 | 0 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 134 | 158 | 144 | 6 | 8 | 0 | 760 | 0.472 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 4 |
| 135 | 1263 | 1,040 | 39 | 82 | 102 | 816 | 0.507 | 2 | 0 | 0 | 0 | 8 | 3 | 67 | 101 | 180 | 91 |
| 136 | 49 | 42 | 3 | 4 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 2 |
| 137 | 23 | 20 | 1 | 2 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 138 | 37 | 6 | 1 | 5 | 25 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 | 5 |
| 139 | 323 | 251 | 10 | 30 | 32 | 504 | 0.313 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 32 | 59 | 19 |
| 140 | 249 | 223 | 8 | 18 | 0 | 527 | 0.327 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 17 | 6 |
| 141 | 461 | 393 | 15 | 37 | 16 | 1001 | 0.622 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 16 | 51 | 32 |
| 142 | 23 | 11 | 1 | 4 | 7 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 10 | 2 |
| 143 | 618 | 531 | 22 | 57 | 8 | 845 | 0.525 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 8 | 61 | 32 |
| 144 | 629 | 539 | 23 | 62 | 5 | 783 | 0.486 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 5 | 63 | 31 |
| 145 | 653 | 556 | 26 | 70 | 1 | 787 | 0.489 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 1 | 66 | 32 |
| 146 | 5 | 4 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 147 | 712 | 605 | 29 | 76 | 2 | 798 | 0.496 | 1 | 0 | 0 | 0 | 6 | 2 | 62 | 2 | 73 | 36 |
| 148 | 5 | 0 | 0 | 0 | 5 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 2 |
| 149 | 781 | 664 | 33 | 80 | 4 | 808 | 0.502 | 1 | 0 | 0 | 0 | 7 | 2 | 65 | 4 | 79 | 40 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 813 | 696 | 35 | 82 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 7 | 2 | 67 | 0 | 78 | 38 |
| 152 | 667 | 25 | 3 | 10 | 629 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 620 | 629 | 306 |
| 153 | 939 | 814 | 40 | 85 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 8 | 3 | 69 | 0 | 82 | 41 |
| 154 | 2 | 2 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1393 | 1,228 | 59 | 106 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 12 | 4 | 86 | 0 | 105 | 50 |
| 156 | 334 | 302 | 14 | 18 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 15 | 0 | 19 | 9 |
| 157 | 1611 | 1,415 | 73 | 123 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 15 | 5 | 100 | 0 | 123 | 61 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 158 | 459 | 380 | 10 | 27 | 42 | 1039 | 0.645 | 1 | 0 | 0 | 0 | 2 | 1 | 22 | 41 | 67 | 43 |
| 159 | 312 | 275 | 5 | 13 | 19 | 170 | 0.106 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 19 | 31 | 3 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1840 | 1,520 | 74 | 246 | 0 | 784 | 0.487 | 3 | 0 | 0 | 0 | 15 | 5 | 201 | 0 | 224 | 109 |
| 162 | 4638 | 3,857 | 189 | 592 | 0 | 1052 | 0.654 | 6 | 0 | 0 | 1 | 38 | 13 | 483 | 0 | 542 | 354 |
| 163 | 2799 | 2,337 | 115 | 347 | 0 | 350 | 0.217 | 4 | 0 | 0 | 0 | 23 | 8 | 283 | 0 | 319 | 69 |
| 164 | 73 | 63 | 5 | 5 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 | 2 |
| 165 | 7858 | 6,778 | 286 | 794 | 0 | 1541 | 0.957 | 11 | 1 | 1 | 1 | 58 | 19 | 647 | 0 | 738 | 707 |
| 168 | 555 | 451 | 24 | 80 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 0 | 73 | 34 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 2244 | 1,886 | 91 | 267 | 0 | 248 | 0.154 | 3 | 0 | 0 | 0 | 18 | 6 | 218 | 0 | 246 | 38 |
| 171 | 2968 | 2,694 | 82 | 192 | 0 | 522 | 0.324 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 | 60 |
| 172 | 2968 | 2,694 | 82 | 192 | 0 | 993 | 0.617 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 | 114 |
| 173 | 3 | 2 | 0 | 0 | 1 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 174 | 22 | 21 | 0 | 1 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 177 | 2740 | 1,655 | 128 | 370 | 587 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 26 | 9 | 302 | 578 | 918 | 633 |
| 178 | 246 | 168 | 11 | 23 | 44 | 7132 | 4.430 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 43 | 65 | 290 |
| 179 | 2986 | 1,823 | 138 | 394 | 631 | 2189 | 1.360 | 3 | 0 | 0 | 0 | 28 | 9 | 321 | 622 | 984 | 1338 |
| 180 | 59 | 46 | 3 | 6 | 4 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 4 | 10 | 41 |
| 181 | 2569 | 2,096 | 71 | 179 | 223 | 625 | 0.388 | 3 | 0 | 0 | 0 | 14 | 5 | 146 | 220 | 389 | 151 |
| 182 | 3909 | 3,183 | 107 | 286 | 333 | 349 | 0.217 | 5 | 0 | 0 | 1 | 22 | 7 | 233 | 328 | 597 | 129 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 3943 | 3,204 | 108 | 284 | 347 | 292 | 0.181 | 5 | 0 | 0 | 1 | 22 | 7 | 232 | 342 | 609 | 111 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1293 | 1,037 | 36 | 102 | 118 | 477 | 0.296 | 2 | 0 | 0 | 0 | 7 | 2 | 83 | 116 | 211 | 63 |
| 190 | 8446 | 6,955 | 162 | 514 | 815 | 6368 | 3.956 | 12 | 1 | 1 | 1 | 33 | 11 | 419 | 803 | 1280 | 5064 |
| 191 | 6588 | 5,432 | 131 | 448 | 577 | 4906 | 3.048 | 9 | 1 | 1 | 1 | 27 | 9 | 365 | 569 | 980 | 2988 |
| 192 | 1867 | 1,521 | 32 | 66 | 248 | 4358 | 2.707 | 3 | 0 | 0 | 0 | 6 | 2 | 54 | 244 | 310 | 839 |
| 194 | 400 | 305 | 26 | 69 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 0 | 64 | 14 |
| 195 | 871 | 690 | 47 | 134 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 10 | 3 | 109 | 0 | 123 | 30 |
| 196 | 1271 | 996 | 73 | 202 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 15 | 5 | 165 | 0 | 186 | 83 |
| 198 | 57 | 48 | 3 | 6 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 6 | 4 |
| 199 | 254 | 223 | 11 | 20 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 20 | 5 |
| 200 | 1580 | 1,267 | 86 | 227 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 | 184 |
| 205 | 1838 | 1,502 | 82 | 254 | 0 | 1501 | 0.932 | 2 | 0 | 0 | 0 | 17 | 6 | 207 | 0 | 232 | 217 |
| 206 | 1813 | 1,486 | 81 | 246 | 0 | 2658 | 1.651 | 2 | 0 | 0 | 0 | 16 | 5 | 201 | 0 | 225 | 372 |
| 207 | 29 | 18 | 2 | 9 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 | 13 |
| 215 | 95 | 89 | 2 | 2 | 2 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 8 |
| 216 | 452 | 359 | 11 | 36 | 46 | 2000 | 1.242 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 45 | 78 | 97 |
| 217 | 223 | 169 | 6 | 16 | 32 | 663 | 0.412 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 32 | 47 | 19 |
| 218 | 311 | 241 | 8 | 29 | 33 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 33 | 59 | 43 |
| 219 | 15 | 14 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 57 | 51 | 1 | 2 | 3 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 8 |
| 223 | 233 | 194 | 5 | 20 | 14 | 359 | 0.223 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 14 | 32 | 7 |
| 225 | 2 | 2 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 111 | 73 | 3 | 12 | 23 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 23 | 33 | 34 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 30 | 27 | 1 | 1 | 1 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |
| 230 | 54 | 52 | 1 | 1 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 231 | 202 | 152 | 4 | 13 | 33 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 33 | 45 | 54 |
| 232 | 1535 | 1,025 | 36 | 129 | 345 | 1719 | 1.068 | 2 | 0 | 0 | 0 | 7 | 2 | 105 | 340 | 457 | 488 |
| 233 | 109 | 70 | 3 | 12 | 24 | 976 | 0.606 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 24 | 34 | 21 |
| 236 | 29 | 20 | 1 | 4 | 4 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 8 | 4 |
| 237 | 1399 | 889 | 35 | 131 | 344 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 7 | 2 | 107 | 339 | 457 | 442 |
| 238 | 165 | 136 | 3 | 10 | 16 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 16 | 25 | 17 |
| 239 | 1187 | 720 | 31 | 117 | 319 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 95 | 314 | 420 | 361 |
| 240 | 2 | 1 | 0 | 0 | 1 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 996 | 634 | 26 | 94 | 242 | 989 | 0.614 | 1 | 0 | 0 | 0 | 5 | 2 | 77 | 238 | 323 | 199 |
| 243 | 34 | 23 | 1 | 3 | 7 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 10 | 0 |
| 244 | 153 | 52 | 6 | 21 | 74 | 173 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 73 | 92 | 10 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 245 | 90 | 53 | 2 | 9 | 26 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 26 | 34 | 4 |
| 246 | 454 | 187 | 14 | 55 | 198 | 273 | 0.170 | 0 | 0 | 0 | 0 | 3 | 1 | 45 | 195 | 244 | 41 |
| 247 | 739 | 530 | 18 | 63 | 128 | 87 | 0.054 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 126 | 183 | 10 |
| 250 | 140 | 104 | 3 | 11 | 22 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 22 | 32 | 27 |
| 252 | 1533 | 1,032 | 36 | 126 | 339 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 103 | 334 | 449 | 443 |
| 254 | 40 | 35 | 1 | 2 | 2 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 256 | 427 | 367 | 9 | 18 | 33 | 943 | 0.586 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 33 | 50 | 30 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1880 | 1,346 | 43 | 137 | 354 | 1783 | 1.108 | 2 | 0 | 0 | 0 | 9 | 3 | 112 | 349 | 475 | 526 |
| 261 | 205 | 162 | 4 | 13 | 26 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 26 | 38 | 28 |
| 262 | 336 | 254 | 9 | 27 | 46 | 860 | 0.534 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 45 | 70 | 38 |
| 263 | 1636 | 1,166 | 38 | 120 | 312 | 141 | 0.088 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 307 | 418 | 37 |
| 264 | 45 | 14 | 1 | 5 | 25 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 | 4 |
| 265 | 1157 | 834 | 27 | 84 | 212 | 98 | 0.061 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 209 | 286 | 17 |
| 266 | 2617 | 1,799 | 64 | 201 | 553 | 171 | 0.106 | 3 | 0 | 0 | 0 | 13 | 4 | 164 | 545 | 730 | 78 |
| 267 | 321 | 216 | 10 | 32 | 63 | 156 | 0.097 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 62 | 91 | 9 |
| 268 | 1102 | 818 | 26 | 80 | 178 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 175 | 249 | 25 |
| 269 | 801 | 482 | 23 | 77 | 219 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 216 | 286 | 435 |
| 270 | 13 | 10 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 271 | 809 | 488 | 23 | 78 | 220 | 370 | 0.230 | 1 | 0 | 0 | 0 | 5 | 2 | 64 | 217 | 288 | 66 |
| 272 | 4 | 3 | 0 | 0 | 1 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 273 | 16 | 10 | 0 | 2 | 4 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 2 |
| 274 | 837 | 508 | 23 | 81 | 225 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 222 | 295 | 226 |
| 275 | 33 | 25 | 1 | 3 | 4 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 2 |
| 276 | 881 | 543 | 25 | 83 | 230 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 227 | 302 | 30 |
| 277 | 21 | 14 | 1 | 2 | 4 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 4 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 355 | 227 | 10 | 33 | 85 | 157 | 0.098 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 84 | 114 | 11 |
| 280 | 1032 | 619 | 29 | 98 | 286 | 163 | 0.101 | 1 | 0 | 0 | 0 | 6 | 2 | 80 | 282 | 371 | 38 |
| 281 | 0 | 0 | 0 | 0 | 0 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 710 | 454 | 19 | 66 | 171 | 167 | 0.104 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 169 | 228 | 24 |
| 283 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1176 | 1,004 | 39 | 62 | 71 | 365 | 0.227 | 2 | 0 | 0 | 0 | 8 | 3 | 51 | 70 | 133 | 30 |
| 285 | 324 | 217 | 12 | 25 | 70 | 230 | 0.143 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 69 | 93 | 13 |
| 286 | 571 | 516 | 19 | 28 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 4 | 1 | 23 | 8 | 37 | 5 |
| 287 | 819 | 439 | 21 | 34 | 325 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 28 | 320 | 355 | 64 |
| 288 | 231 | 174 | 9 | 21 | 27 | 152 | 0.094 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 27 | 47 | 4 |
| 289 | 939 | 519 | 24 | 39 | 357 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 32 | 352 | 391 | 69 |
| 290 | 917 | 227 | 15 | 26 | 649 | 328 | 0.204 | 0 | 0 | 0 | 0 | 3 | 1 | 21 | 640 | 665 | 136 |
| 294 | 44 | 43 | 1 | 0 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 50 | 41 | 2 | 7 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 3 |
| 302 | 94 | 83 | 3 | 8 | 0 | 796 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 4 |
| 303 | 690 | 50 | 4 | 11 | 625 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 616 | 626 | 589 |
| 304 | 540 | 483 | 13 | 44 | 0 | 729 | 0.453 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 40 | 18 |
| 306 | 1902 | 1,019 | 60 | 203 | 620 | 818 | 0.508 | 2 | 0 | 0 | 0 | 12 | 4 | 166 | 611 | 795 | 404 |
| 307 | 2088 | 1,220 | 59 | 189 | 620 | 0 | 0.000 | 2 | 0 | 0 | 0 | 12 | 4 | 154 | 611 | 784 | 0 |
| 324 | 109 | 86 | 3 | 11 | 9 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 9 | 19 | 34 |
| 325 | 3841 | 3,002 | 74 | 268 | 497 | 2224 | 1.382 | 5 | 0 | 0 | 1 | 15 | 5 | 219 | 490 | 734 | 1015 |
| 326 | 886 | 664 | 19 | 81 | 122 | 3506 | 2.178 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 120 | 193 | 420 |
| 327 | 2845 | 2,251 | 52 | 177 | 365 | 227 | 0.141 | 4 | 0 | 0 | 0 | 11 | 3 | 144 | 360 | 523 | 74 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 6570 | 5,416 | 130 | 447 | 577 | 0 | 0.000 | 9 | 1 | 1 | 1 | 26 | 9 | 364 | 569 | 979 | 0 |
| 359 | 69 | 54 | 2 | 6 | 7 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 12 | 3 |
| 360 | 4454 | 3,734 | 86 | 281 | 353 | 247 | 0.153 | 6 | 0 | 0 | 1 | 17 | 6 | 229 | 348 | 608 | 93 |
| 361 | 4293 | 3,310 | 85 | 326 | 572 | 337 | 0.209 | 5 | 0 | 0 | 1 | 17 | 6 | 266 | 564 | 859 | 180 |
| 362 | 26 | 24 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 2598 | 2,313 | 48 | 137 | 100 | 4495 | 2.792 | 4 | 0 | 0 | 0 | 10 | 3 | 112 | 99 | 228 | 636 |
| 364 | 3649 | 2,820 | 76 | 286 | 467 | 286 | 0.178 | 5 | 0 | 0 | 0 | 15 | 5 | 233 | 460 | 720 | 128 |
| 365 | 903 | 723 | 23 | 64 | 93 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 92 | 152 | 151 |
| 366 | 10 | 5 | 0 | 1 | 4 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 5 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 992 | 678 | 16 | 36 | 262 | 388 | 0.241 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 258 | 293 | 71 |
| 376 | 1663 | 1,331 | 27 | 60 | 245 | 477 | 0.296 | 2 | 0 | 0 | 0 | 5 | 2 | 49 | 241 | 300 | 89 |
| 377 | 84 | 68 | 2 | 6 | 8 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 8 | 13 | 3 |
| 378 | 1123 | 957 | 19 | 38 | 109 | 212 | 0.132 | 2 | 0 | 0 | 0 | 4 | 1 | 31 | 107 | 145 | 19 |
| 379 | 750 | 530 | 12 | 25 | 183 | 331 | 0.206 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 180 | 205 | 42 |
| 380 | 26 | 24 | 0 | 1 | 1 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 381 | 738 | 681 | 13 | 26 | 18 | 469 | 0.291 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 18 | 44 | 13 |
| 386 | 363 | 230 | 20 | 56 | 57 | 810 | 0.503 | 0 | 0 | 0 | 0 | 4 | 1 | 46 | 56 | 108 | 54 |
| 387 | 2123 | 1,317 | 58 | 179 | 569 | 2761 | 1.715 | 2 | 0 | 0 | 0 | 12 | 4 | 146 | 561 | 725 | 1244 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 30 | 25 | 1 | 1 | 3 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 0 |
| 390 | 525 | 430 | 18 | 44 | 33 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 4 | 1 | 36 | 33 | 74 | 55 |
| 392 | 721 | 477 | 28 | 113 | 103 | 436 | 0.271 | 1 | 0 | 0 | 0 | 6 | 2 | 92 | 102 | 202 | 55 |
| 393 | 200 | 49 | 11 | 70 | 70 | 934 | 0.580 | 0 | 0 | 0 | 0 | 2 | 1 | 57 | 69 | 129 | 75 |
| 394 | 3513 | 2,613 | 109 | 340 | 451 | 1292 | 0.803 | 4 | 0 | 0 | 0 | 22 | 7 | 277 | 444 | 756 | 607 |
| 396 | 2707 | 2,125 | 73 | 216 | 293 | 2366 | 1.470 | 4 | 0 | 0 | 0 | 15 | 5 | 176 | 289 | 489 | 719 |
| 397 | 230 | 203 | 7 | 16 | 4 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 4 | 19 | 19 |
| 398 | 2704 | 2,446 | 73 | 184 | 1 | 560 | 0.348 | 4 | 0 | 0 | 0 | 15 | 5 | 150 | 1 | 176 | 61 |
| 399 | 253 | 242 | 4 | 7 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 15 |
| 400 | 1934 | 1,740 | 50 | 140 | 4 | 1704 | 1.059 | 3 | 0 | 0 | 0 | 10 | 3 | 114 | 4 | 135 | 143 |
| 401 | 0 | 0 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 11 | 11 | 0 | 0 | 0 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 406 | 752 | 668 | 59 | 18 | 7 | 395 | 0.245 | 1 | 0 | 0 | 0 | 12 | 4 | 15 | 7 | 39 | 10 |
| 407 | 1 | 1 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 0 | 0 | 0 | 0 | 0 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 188 | 176 | 7 | 5 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 | 4 |
| 410 | 1 | 0 | 0 | 0 | 1 | 884 | 0.549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 182 | 125 | 6 | 23 | 28 | 678 | 0.421 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 28 | 48 | 20 |
| 414 | 12 | 7 | 0 | 0 | 5 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 3 |
| 415 | 2342 | 1,870 | 62 | 172 | 238 | 855 | 0.531 | 3 | 0 | 0 | 0 | 13 | 4 | 140 | 235 | 395 | 210 |
| 416 | 817 | 626 | 18 | 66 | 107 | 284 | 0.176 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 105 | 165 | 29 |
| 417 | 77 | 8 | 0 | 2 | 67 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 66 | 68 | 13 |
| 419 | 482 | 367 | 9 | 30 | 76 | 343 | 0.213 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 75 | 103 | 22 |
| 420 | 37 | 3 | 0 | 1 | 33 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 33 | 33 | 6 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 762 | 101 | 6 | 15 | 640 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 631 | 645 | 332 |
| 425 | 26 | 23 | 1 | 2 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| 426 | 51 | 12 | 1 | 2 | 36 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 35 | 37 | 6 |
| 427 | 27 | 23 | 1 | 3 | 0 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 428 | 32 | 27 | 1 | 3 | 1 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 1 |
| 429 | 50 | 13 | 1 | 1 | 35 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 34 | 36 | 5 |
| 430 | 788 | 639 | 21 | 58 | 70 | 114 | 0.071 | 1 | 0 | 0 | 0 | 4 | 1 | 47 | 69 | 123 | 9 |
| 431 | 7 | 4 | 0 | 0 | 3 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 |
| 432 | 18 | 17 | 0 | 0 | 1 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 433 | 1777 | 1,581 | 42 | 132 | 22 | 1802 | 1.119 | 3 | 0 | 0 | 0 | 9 | 3 | 108 | 22 | 144 | 161 |
| 434 | 0 | 0 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 73 | 70 | 1 | 2 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 436 | 3 | 3 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 1643 | 1,444 | 40 | 129 | 30 | 2365 | 1.469 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 30 | 148 | 218 |
| 443 | 11 | 10 | 0 | 1 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 444 | 1601 | 1,403 | 40 | 128 | 30 | 905 | 0.562 | 2 | 0 | 0 | 0 | 8 | 3 | 104 | 30 | 148 | 83 |
| 452 | 8 | 8 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 1471 | 1,288 | 34 | 121 | 28 | 1563 | 0.971 | 2 | 0 | 0 | 0 | 7 | 2 | 99 | 28 | 138 | 134 |
| 454 | 266 | 246 | 5 | 15 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 | 6 |
| 455 | 1197 | 1,034 | 30 | 106 | 27 | 366 | 0.227 | 2 | 0 | 0 | 0 | 6 | 2 | 86 | 27 | 123 | 28 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 458 | 10 | 9 | 0 | 1 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 464 | 69 | 61 | 3 | 5 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 | 2 |
| 477 | 100 | 80 | 4 | 7 | 9 | 750 | 0.466 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 9 | 16 | 7 |
| 478 | 1253 | 1,054 | 36 | 117 | 46 | 253 | 0.157 | 2 | 0 | 0 | 0 | 7 | 2 | 95 | 45 | 153 | 24 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 805 | 726 | 15 | 64 | 0 | 500 | 0.311 | 1 | 0 | 0 | 0 | 3 | 1 | 52 | 0 | 58 | 18 |
| 481 | 1 | 0 | 0 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 482 | 177 | 164 | 2 | 10 | 1 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 10 | 8 |
| 483 | 955 | 837 | 22 | 96 | 0 | 589 | 0.366 | 1 | 0 | 0 | 0 | 4 | 1 | 78 | 0 | 86 | 31 |
| 484 | 2 | 1 | 0 | 0 | 1 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 485 | 1482 | 1,360 | 23 | 99 | 0 | 319 | 0.198 | 2 | 0 | 0 | 0 | 5 | 2 | 81 | 0 | 90 | 18 |
| 488 | 10 | 9 | 0 | 1 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 494 | 2789 | 2,525 | 76 | 188 | 0 | 1039 | 0.645 | 4 | 0 | 0 | 0 | 15 | 5 | 153 | 0 | 179 | 116 |
| 498 | 3 | 3 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 846 | 170 | 11 | 20 | 645 | 660 | 0.410 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 636 | 655 | 269 |
| 500 | 867 | 189 | 12 | 21 | 645 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 636 | 656 | 161 |
| 502 | 1 | 1 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 370 | 251 | 25 | 94 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 5 | 2 | 77 | 0 | 84 | 19 |
| | | | | | | | | | | | | | | | | | 37969 |

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 13 | 1 | 1 | 1 | 69 | 23 | 735 | 0 |
| 10 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 30 | 0 |
| 13 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 33 | 220 |
| 32 | 3 | 5 | 0 | 0 | 0 | 35 | 12 | 179 | 0 |
| 33 | 1 | 2 | 0 | 0 | 0 | 6 | 2 | 58 | 0 |
| 35 | 7 | 0 | 0 | 0 | 0 | 5 | 2 | 52 | 312 |
| 36 | 7 | 4 | 0 | 0 | 0 | 29 | 10 | 301 | 0 |
| 37 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 79 |
| 38 | 7 | 2 | 0 | 0 | 0 | 17 | 6 | 128 | 3 |
| 42 | 7 | 10 | 1 | 1 | 1 | 96 | 32 | 1084 | 2078 |
| 43 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 175 |
| 46 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 44 | 29 |
| 47 | 7 | 2 | 0 | 0 | 0 | 9 | 3 | 89 | 0 |
| 48 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 50 |
| 50 | 3 | 6 | 0 | 0 | 1 | 33 | 11 | 264 | 0 |
| 51 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 52 | 3 | 9 | 1 | 1 | 1 | 48 | 16 | 515 | 0 |
| 53 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 0 |
| 55 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 7 | 2 | 0 | 0 | 0 | 12 | 4 | 144 | 0 |
| 57 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 28 | 0 |
| 58 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 59 | 1 | 1 | 0 | 0 | 0 | 11 | 4 | 48 | 0 |
| 60 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 20 |
| 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 62 | 1 | 1 | 0 | 0 | 0 | 20 | 6 | 76 | 0 |
| 65 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 33 | 50 |
| 66 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 40 | 51 |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 26 | 0 |
| 69 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 38 | 0 |
| 70 | 3 | 2 | 0 | 0 | 0 | 13 | 4 | 66 | 0 |
| 71 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 10 | 0 |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 3 | 5 | 0 | 0 | 1 | 28 | 9 | 300 | 0 |
| 74 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 1 |
| 75 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 |
| 76 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 77 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 2 |
| 80 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 18 |
| 83 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|
| 86 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 113 |
| 87 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 88 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 95 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 13 |
| 96 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 97 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 10 |
| 98 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 100 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 101 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 19 |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 26 |
| 104 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 20 |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 107 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 19 |
| 108 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 109 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| 110 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 37 |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 62 |
| 113 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 12 |
| 114 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 19 |
| 115 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 26 | 45 |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 117 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 51 |
| 119 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| 120 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 22 |
| 121 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 27 | 48 |
| 122 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| 123 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 124 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 47 |
| 125 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 48 |
| 127 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 321 |
| 128 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 51 |
| 130 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 131 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 134 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 135 | 3 | 1 | 0 | 0 | 0 | 4 | 1 | 34 | 51 |
| 136 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 137 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 138 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 139 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 10 |
| 140 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 |
| 141 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 10 |
| 142 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 143 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 4 |
| 144 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 2 |
| 145 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 28 | 0 |
| 146 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 31 | 1 |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 149 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 33 | 2 |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 33 | 0 |
| 152 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 301 |
| 153 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 34 | 0 |
| 154 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 0 |
| 156 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 |
| 157 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 50 | 0 |
| 158 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 |
| 159 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 98 | 0 |
| 162 | 3 | 4 | 0 | 0 | 0 | 25 | 8 | 315 | 0 |
| 163 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 62 | 0 |
| 164 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 165 | 1 | 11 | 1 | 1 | 1 | 56 | 18 | 620 | 0 |
| 168 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 31 | 0 |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 34 | 0 |
| 171 | 3 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 0 |
| 172 | 6 | 3 | 0 | 0 | 0 | 10 | 3 | 97 | 0 |
| 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 174 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 7 | 2 | 0 | 0 | 0 | 18 | 6 | 208 | 399 |
| 178 | 7 | 1 | 0 | 0 | 0 | 10 | 3 | 83 | 192 |
| 179 | 7 | 4 | 0 | 0 | 0 | 38 | 13 | 437 | 846 |
| 180 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 20 | 16 |
| 181 | 1 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 85 |
| 182 | 1 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 71 |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 42 | 62 |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 25 | 34 |
| 190 | 7 | 46 | 3 | 3 | 5 | 130 | 43 | 1658 | 3177 |
| 191 | 7 | 27 | 2 | 2 | 3 | 81 | 27 | 1113 | 1733 |
| 192 | 7 | 7 | 0 | 0 | 1 | 18 | 6 | 146 | 662 |
| 194 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 |
| 195 | 5 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 0 |
| 196 | 5 | 1 | 0 | 0 | 0 | 7 | 2 | 73 | 0 |
| 198 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 199 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 |
| 200 | 6 | 2 | 0 | 0 | 0 | 15 | 5 | 161 | 0 |
| 205 | 6 | 2 | 0 | 0 | 0 | 16 | 5 | 193 | 0 |
| 206 | 6 | 4 | 0 | 0 | 0 | 27 | 9 | 331 | 0 |
| 207 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 |
| 215 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 4 |
| 216 | 6 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 56 |
| 217 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 13 |
| 218 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 24 |
| 219 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 223 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 |
| 225 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 23 |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 230 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 231 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 40 |
| 232 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 112 | 363 |
| 233 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 |
| 236 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 237 | 7 | 1 | 0 | 0 | 0 | 7 | 2 | 103 | 328 |
| 238 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 11 |
| 239 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 82 | 270 |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 47 | 147 |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 244 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| 245 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 246 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 33 |
| 247 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 250 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 18 |
| 252 | 6 | 2 | 0 | 0 | 0 | 7 | 2 | 101 | 330 |
| 254 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 256 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 19 |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 3 | 2 | 0 | 0 | 0 | 10 | 3 | 124 | 386 |
| 261 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 19 |
| 262 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 24 |
| 263 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 27 |
| 264 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 265 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 |
| 266 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 58 |
| 267 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 |
| 268 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 17 |
| 269 | 6 | 1 | 0 | 0 | 0 | 7 | 2 | 96 | 328 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 270 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 271 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 50 |
| 272 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 273 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 274 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 170 |
| 275 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 276 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 22 |
| 277 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 |
| 280 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 29 |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 17 |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 11 | 16 |
| 285 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 286 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 |
| 287 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 58 |
| 288 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 289 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 62 |
| 290 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 130 |
| 294 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 302 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 303 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 579 |
| 304 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 |
| 306 | 6 | 1 | 0 | 0 | 0 | 6 | 2 | 84 | 310 |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 16 |
| 325 | 7 | 7 | 0 | 0 | 1 | 21 | 7 | 302 | 677 |
| 326 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 144 | 262 |
| 327 | 7 | 1 | 0 | 0 | 0 | 1 | 0 | 20 | 51 |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 359 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 360 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 35 | 53 |
| 361 | 1 | 1 | 0 | 0 | 0 | 4 | 1 | 56 | 118 |
| 362 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 363 | 1 | 11 | 1 | 1 | 1 | 27 | 9 | 312 | 275 |
| 364 | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 41 | 82 |
| 365 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 91 |
| 366 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 62 |
| 376 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 14 | 72 |
| 377 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 378 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 14 |
| 379 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 37 |
| 380 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 |
| 386 | 6 | 0 | 0 | 0 | 0 | 2 | 1 | 23 | 28 |
| 387 | 3 | 4 | 0 | 0 | 0 | 20 | 7 | 250 | 962 |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 390 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 26 | 24 |
| 392 | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 27 |
| 393 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 33 | 40 |
| 394 | 3 | 3 | 0 | 0 | 0 | 18 | 6 | 223 | 357 |
| 396 | 3 | 5 | 0 | 0 | 1 | 22 | 7 | 259 | 424 |
| 397 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 4 |
| 398 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 0 |
| 399 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 12 | 0 |
| 400 | 6 | 3 | 0 | 0 | 0 | 11 | 4 | 121 | 4 |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 406 | 7 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 2 |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 410 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 12 |
| 414 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 415 | 3 | 2 | 0 | 0 | 0 | 7 | 2 | 74 | 125 |
| 416 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 19 |
| 417 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 419 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 16 |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 324 |
| 425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 427 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 428 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 430 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 431 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 432 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 6 | 3 | 0 | 0 | 0 | 10 | 3 | 120 | 24 |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 6 | 4 | 0 | 0 | 0 | 12 | 4 | 155 | 43 |
| 443 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 444 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 59 | 17 |
| 452 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 6 | 2 | 0 | 0 | 0 | 7 | 2 | 96 | 27 |
| 454 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| 455 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 6 |
| 458 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 477 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 478 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 7 |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 |
| 483 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 0 |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 |
| 488 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 494 | 6 | 3 | 0 | 0 | 0 | 10 | 3 | 99 | 0 |
| 498 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 261 |
| 500 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 156 |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 0 |
| Total | | **294** | **19** | **17** | **30** | **1374** | **455** | **15116** | **20664** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 43 | 3 | 3 | 4 | 202 | 67 | 1987 | 3426 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 60 | 4 | 4 | 6 | 324 | 108 | 3174 | 2440 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 3 | 0 | 0 | 0 | 16 | 5 | 165 | 68 | |
| 6 | 61 | 4 | 4 | 6 | 288 | 95 | 3329 | 3172 | |
| 7 | 127 | 8 | 8 | 13 | 543 | 180 | 6460 | 11556 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **294** | **19** | **17** | **30** | **1374** | **455** | **15116** | **20664** | **37969** |

**World Logistics Center** **2035**
Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Surface Street Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8104 | 7,006 | 301 | 797 | 0 | 1820 | 1.131 | 3802 | 500 | 1511 | 1178 | 199 | 21 | 147 | 0 | 7359 | 8320 |
| 10 | 1126 | 1,011 | 43 | 72 | 0 | 826 | 0.513 | 549 | 72 | 218 | 170 | 28 | 3 | 13 | 0 | 1054 | 541 |
| 13 | 2846 | 1,555 | 60 | 190 | 1,041 | 345 | 0.214 | 844 | 111 | 335 | 261 | 40 | 4 | 35 | 15 | 1646 | 353 |
| 32 | 3417 | 3,010 | 179 | 228 | 0 | 1551 | 0.964 | 1634 | 215 | 649 | 506 | 118 | 13 | 42 | 0 | 3177 | 3061 |
| 33 | 830 | 749 | 24 | 57 | 0 | 2006 | 1.246 | 407 | 53 | 162 | 126 | 16 | 2 | 11 | 0 | 776 | 966 |
| 35 | 1405 | 595 | 47 | 127 | 636 | 801 | 0.498 | 323 | 42 | 128 | 100 | 31 | 3 | 23 | 9 | 661 | 329 |
| 36 | 2884 | 2,377 | 142 | 365 | 0 | 1627 | 1.011 | 1290 | 170 | 513 | 400 | 94 | 10 | 67 | 0 | 2543 | 2570 |
| 37 | 1160 | 388 | 41 | 144 | 587 | 219 | 0.136 | 211 | 28 | 84 | 65 | 27 | 3 | 27 | 9 | 452 | 62 |
| 38 | 3636 | 3,045 | 201 | 383 | 7 | 659 | 0.409 | 1653 | 217 | 657 | 512 | 133 | 14 | 71 | 0 | 3256 | 1333 |
| 42 | 3083 | 1,903 | 143 | 401 | 636 | 5338 | 3.316 | 1033 | 136 | 410 | 320 | 94 | 10 | 74 | 9 | 2087 | 6920 |
| 43 | 500 | 350 | 15 | 25 | 110 | 2598 | 1.614 | 190 | 25 | 75 | 59 | 10 | 1 | 5 | 2 | 366 | 591 |
| 46 | 991 | 777 | 46 | 109 | 59 | 806 | 0.501 | 422 | 55 | 168 | 131 | 30 | 3 | 20 | 1 | 830 | 416 |
| 47 | 1063 | 938 | 37 | 88 | 0 | 1995 | 1.239 | 509 | 67 | 202 | 158 | 24 | 3 | 16 | 0 | 979 | 1214 |
| 48 | 1101 | 892 | 33 | 74 | 102 | 795 | 0.494 | 484 | 64 | 192 | 150 | 22 | 2 | 14 | 1 | 929 | 459 |
| 50 | 12826 | 11,199 | 540 | 1,087 | 0 | 479 | 0.298 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 | 3503 |
| 51 | 82 | 75 | 2 | 5 | 0 | 975 | 0.606 | 41 | 5 | 16 | 13 | 1 | 0 | 1 | 0 | 77 | 47 |
| 52 | 8114 | 7,014 | 299 | 801 | 0 | 1269 | 0.788 | 3807 | 501 | 1513 | 1179 | 197 | 21 | 148 | 0 | 7366 | 5807 |
| 53 | 0 | 0 | 0 | 0 | 0 | 795 | 0.494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 1865 | 1,535 | 83 | 247 | 0 | 325 | 0.202 | 833 | 110 | 331 | 258 | 55 | 6 | 46 | 0 | 1638 | 331 |
| 55 | 20 | 19 | 1 | 0 | 0 | 2042 | 1.269 | 10 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 20 | 25 |
| 56 | 1865 | 1,535 | 83 | 247 | 0 | 1152 | 0.716 | 833 | 110 | 331 | 258 | 55 | 6 | 46 | 0 | 1638 | 1172 |
| 57 | 1580 | 1,267 | 86 | 227 | 0 | 246 | 0.153 | 688 | 90 | 273 | 213 | 57 | 6 | 42 | 0 | 1369 | 209 |
| 58 | 556 | 493 | 26 | 37 | 0 | 172 | 0.107 | 268 | 35 | 106 | 83 | 17 | 2 | 7 | 0 | 518 | 55 |
| 59 | 1211 | 974 | 116 | 121 | 0 | 786 | 0.488 | 529 | 70 | 210 | 164 | 77 | 8 | 22 | 0 | 1079 | 527 |
| 60 | 607 | 307 | 25 | 66 | 209 | 159 | 0.099 | 167 | 22 | 66 | 52 | 16 | 2 | 12 | 3 | 340 | 34 |
| 61 | 812 | 562 | 30 | 52 | 168 | 97 | 0.060 | 305 | 40 | 121 | 94 | 20 | 2 | 10 | 2 | 595 | 36 |
| 62 | 1721 | 1,330 | 199 | 192 | 0 | 781 | 0.485 | 722 | 95 | 287 | 224 | 131 | 14 | 35 | 0 | 1508 | 732 |
| 65 | 1238 | 1,018 | 37 | 81 | 102 | 795 | 0.494 | 553 | 73 | 220 | 171 | 24 | 3 | 15 | 1 | 1059 | 523 |
| 66 | 1413 | 1,167 | 47 | 97 | 102 | 812 | 0.504 | 633 | 83 | 252 | 196 | 31 | 3 | 18 | 1 | 1218 | 615 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 827 | 731 | 32 | 64 | 0 | 814 | 0.506 | 397 | 52 | 158 | 123 | 21 | 2 | 12 | 0 | 765 | 387 |
| 69 | 1180 | 1,033 | 56 | 91 | 0 | 819 | 0.509 | 561 | 74 | 223 | 174 | 37 | 4 | 17 | 0 | 1089 | 554 |
| 70 | 2464 | 2,169 | 130 | 165 | 0 | 795 | 0.494 | 1177 | 155 | 468 | 365 | 86 | 9 | 30 | 0 | 2290 | 1131 |
| 71 | 687 | 620 | 42 | 25 | 0 | 803 | 0.499 | 336 | 44 | 134 | 104 | 28 | 3 | 5 | 0 | 654 | 326 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 8058 | 6,962 | 297 | 799 | 0 | 742 | 0.461 | 3779 | 497 | 1502 | 1171 | 196 | 21 | 148 | 0 | 7312 | 3370 |
| 74 | 605 | 560 | 17 | 27 | 1 | 1573 | 0.977 | 304 | 40 | 121 | 94 | 11 | 1 | 5 | 0 | 576 | 563 |
| 75 | 129 | 114 | 5 | 5 | 5 | 805 | 0.500 | 62 | 8 | 25 | 19 | 3 | 0 | 1 | 0 | 118 | 59 |
| 76 | 18 | 16 | 1 | 1 | 0 | 1597 | 0.992 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 17 | 17 |
| 77 | 718 | 661 | 21 | 30 | 6 | 438 | 0.272 | 359 | 47 | 143 | 111 | 14 | 1 | 6 | 0 | 681 | 185 |
| 80 | 852 | 773 | 27 | 40 | 12 | 138 | 0.086 | 420 | 55 | 167 | 130 | 18 | 2 | 7 | 0 | 799 | 68 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1174 | 976 | 37 | 68 | 93 | 322 | 0.200 | 530 | 70 | 211 | 164 | 24 | 3 | 13 | 1 | 1015 | 203 |
| 83 | 458 | 356 | 16 | 27 | 59 | 95 | 0.059 | 193 | 25 | 77 | 60 | 11 | 1 | 5 | 1 | 373 | 22 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1550 | 802 | 38 | 60 | 650 | 284 | 0.176 | 435 | 57 | 173 | 135 | 25 | 3 | 11 | 9 | 849 | 150 |
| 87 | 95 | 77 | 5 | 13 | 0 | 800 | 0.497 | 42 | 5 | 17 | 13 | 3 | 0 | 2 | 0 | 83 | 41 |
| 88 | 88 | 70 | 5 | 13 | 0 | 809 | 0.503 | 38 | 5 | 15 | 12 | 3 | 0 | 2 | 0 | 76 | 38 |
| 95 | 735 | 637 | 14 | 36 | 48 | 439 | 0.273 | 346 | 45 | 137 | 107 | 9 | 1 | 7 | 1 | 653 | 178 |
| 96 | 156 | 147 | 2 | 4 | 3 | 399 | 0.248 | 80 | 10 | 32 | 25 | 1 | 0 | 1 | 0 | 149 | 37 |
| 97 | 550 | 468 | 12 | 29 | 41 | 389 | 0.242 | 254 | 33 | 101 | 79 | 8 | 1 | 5 | 1 | 482 | 116 |
| 98 | 16 | 13 | 0 | 2 | 1 | 160 | 0.099 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 1 |
| 99 | 361 | 330 | 6 | 12 | 13 | 405 | 0.252 | 179 | 24 | 71 | 55 | 4 | 0 | 2 | 0 | 336 | 85 |
| 100 | 128 | 88 | 3 | 8 | 29 | 227 | 0.141 | 48 | 6 | 19 | 15 | 2 | 0 | 1 | 0 | 92 | 13 |
| 101 | 915 | 728 | 24 | 65 | 98 | 313 | 0.194 | 395 | 52 | 157 | 122 | 16 | 2 | 12 | 1 | 757 | 147 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 488 | 297 | 12 | 31 | 148 | 291 | 0.181 | 161 | 21 | 64 | 50 | 8 | 1 | 6 | 2 | 313 | 57 |
| 104 | 688 | 535 | 18 | 53 | 82 | 404 | 0.251 | 290 | 38 | 115 | 90 | 12 | 1 | 10 | 1 | 558 | 140 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 14 | 13 | 0 | 1 | 0 | 1803 | 1.120 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 13 | 15 |
| 107 | 710 | 554 | 19 | 56 | 81 | 388 | 0.241 | 301 | 40 | 119 | 93 | 13 | 1 | 10 | 1 | 578 | 139 |
| 108 | 15 | 12 | 1 | 2 | 0 | 997 | 0.619 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 13 | 8 |
| 109 | 81 | 67 | 4 | 10 | 0 | 787 | 0.489 | 36 | 5 | 14 | 11 | 3 | 0 | 2 | 0 | 72 | 35 |
| 110 | 719 | 562 | 19 | 57 | 81 | 756 | 0.470 | 305 | 40 | 121 | 94 | 13 | 1 | 11 | 1 | 586 | 275 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 1 | 1 | 0 | 0 | 0 | 800 | 0.497 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 112 | 782 | 573 | 21 | 64 | 124 | 817 | 0.508 | 311 | 41 | 124 | 96 | 14 | 1 | 12 | 2 | 601 | 305 |
| 113 | 55 | 18 | 3 | 10 | 24 | 791 | 0.491 | 10 | 1 | 4 | 3 | 2 | 0 | 2 | 0 | 22 | 11 |
| 114 | 77 | 27 | 2 | 8 | 40 | 791 | 0.491 | 15 | 2 | 6 | 5 | 1 | 0 | 1 | 1 | 30 | 15 |
| 115 | 758 | 590 | 21 | 60 | 87 | 851 | 0.529 | 320 | 42 | 127 | 99 | 14 | 1 | 11 | 1 | 616 | 326 |
| 116 | 3 | 0 | 0 | 0 | 3 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117 | 26 | 24 | 1 | 1 | 0 | 757 | 0.470 | 13 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 25 | 12 |
| 118 | 821 | 624 | 23 | 66 | 108 | 765 | 0.475 | 339 | 45 | 135 | 105 | 15 | 2 | 12 | 2 | 653 | 310 |
| 119 | 24 | 7 | 1 | 3 | 13 | 782 | 0.486 | 4 | 0 | 2 | 1 | 1 | 0 | 1 | 0 | 8 | 4 |
| 120 | 99 | 43 | 3 | 9 | 44 | 814 | 0.506 | 23 | 3 | 9 | 7 | 2 | 0 | 2 | 1 | 47 | 24 |
| 121 | 840 | 656 | 24 | 65 | 95 | 825 | 0.513 | 356 | 47 | 141 | 110 | 16 | 2 | 12 | 1 | 686 | 351 |
| 122 | 29 | 6 | 1 | 3 | 19 | 782 | 0.486 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 8 | 4 |
| 123 | 37 | 33 | 2 | 2 | 0 | 791 | 0.491 | 18 | 2 | 7 | 6 | 1 | 0 | 0 | 0 | 35 | 17 |
| 124 | 890 | 701 | 26 | 68 | 95 | 800 | 0.497 | 380 | 50 | 151 | 118 | 17 | 2 | 13 | 1 | 732 | 364 |
| 125 | 14 | 12 | 1 | 1 | 0 | 817 | 0.508 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 13 | 7 |
| 126 | 954 | 756 | 27 | 70 | 101 | 774 | 0.481 | 410 | 54 | 163 | 127 | 18 | 2 | 13 | 1 | 789 | 379 |
| 127 | 682 | 32 | 3 | 11 | 636 | 825 | 0.513 | 17 | 2 | 7 | 5 | 2 | 0 | 2 | 9 | 45 | 23 |
| 128 | 15 | 14 | 0 | 1 | 0 | 774 | 0.481 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 7 |
| 129 | 1016 | 814 | 29 | 72 | 101 | 823 | 0.511 | 442 | 58 | 176 | 137 | 19 | 2 | 13 | 1 | 848 | 434 |
| 130 | 65 | 61 | 3 | 1 | 0 | 800 | 0.497 | 33 | 4 | 13 | 10 | 2 | 0 | 0 | 0 | 63 | 31 |
| 131 | 29 | 27 | 1 | 1 | 0 | 775 | 0.481 | 15 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 28 | 13 |
| 133 | 77 | 73 | 4 | 0 | 0 | 804 | 0.499 | 40 | 5 | 16 | 12 | 3 | 0 | 0 | 0 | 76 | 38 |
| 134 | 158 | 144 | 6 | 8 | 0 | 760 | 0.472 | 78 | 10 | 31 | 24 | 4 | 0 | 1 | 0 | 150 | 71 |
| 135 | 1263 | 1,040 | 39 | 82 | 102 | 816 | 0.507 | 564 | 74 | 224 | 175 | 26 | 3 | 15 | 1 | 1083 | 549 |
| 136 | 49 | 42 | 3 | 4 | 0 | 786 | 0.488 | 23 | 3 | 9 | 7 | 2 | 0 | 1 | 0 | 45 | 22 |
| 137 | 23 | 20 | 1 | 2 | 0 | 790 | 0.491 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 21 | 10 |
| 138 | 37 | 6 | 1 | 5 | 25 | 267 | 0.166 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 8 | 1 |
| 139 | 323 | 251 | 10 | 30 | 32 | 504 | 0.313 | 136 | 18 | 54 | 42 | 7 | 1 | 6 | 0 | 264 | 83 |
| 140 | 249 | 223 | 8 | 18 | 0 | 527 | 0.327 | 121 | 16 | 48 | 37 | 5 | 1 | 3 | 0 | 232 | 76 |
| 141 | 461 | 393 | 15 | 37 | 16 | 1001 | 0.622 | 213 | 28 | 85 | 66 | 10 | 1 | 7 | 0 | 410 | 255 |
| 142 | 23 | 11 | 1 | 4 | 7 | 291 | 0.181 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 13 | 2 |
| 143 | 618 | 531 | 22 | 57 | 8 | 845 | 0.525 | 288 | 38 | 115 | 89 | 15 | 2 | 11 | 0 | 557 | 292 |
| 144 | 629 | 539 | 23 | 62 | 5 | 783 | 0.486 | 293 | 38 | 116 | 91 | 15 | 2 | 11 | 0 | 566 | 275 |
| 145 | 653 | 556 | 26 | 70 | 1 | 787 | 0.489 | 302 | 40 | 120 | 93 | 17 | 2 | 13 | 0 | 587 | 287 |
| 146 | 5 | 4 | 0 | 1 | 0 | 814 | 0.506 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 147 | 712 | 605 | 29 | 76 | 2 | 798 | 0.496 | 328 | 43 | 130 | 102 | 19 | 2 | 14 | 0 | 639 | 317 |
| 148 | 5 | 0 | 0 | 0 | 5 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 149 | 781 | 664 | 33 | 80 | 4 | 808 | 0.502 | 360 | 47 | 143 | 112 | 22 | 2 | 15 | 0 | 702 | 352 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 813 | 696 | 35 | 82 | 0 | 787 | 0.489 | 378 | 50 | 150 | 117 | 23 | 2 | 15 | 0 | 735 | 359 |
| 152 | 667 | 25 | 3 | 10 | 629 | 782 | 0.486 | 14 | 2 | 5 | 4 | 2 | 0 | 2 | 9 | 38 | 19 |
| 153 | 939 | 814 | 40 | 85 | 0 | 798 | 0.496 | 442 | 58 | 176 | 137 | 26 | 3 | 16 | 0 | 857 | 425 |
| 154 | 2 | 2 | 0 | 0 | 0 | 901 | 0.560 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| 155 | 1393 | 1,228 | 59 | 106 | 0 | 775 | 0.481 | 666 | 88 | 265 | 206 | 39 | 4 | 20 | 0 | 1288 | 620 |
| 156 | 334 | 302 | 14 | 18 | 0 | 771 | 0.479 | 164 | 22 | 65 | 51 | 9 | 1 | 3 | 0 | 315 | 151 |
| 157 | 1611 | 1,415 | 73 | 123 | 0 | 804 | 0.499 | 768 | 101 | 305 | 238 | 48 | 5 | 23 | 0 | 1488 | 743 |
| 158 | 459 | 380 | 10 | 27 | 42 | 1039 | 0.645 | 206 | 27 | 82 | 64 | 7 | 1 | 5 | 1 | 392 | 253 |
| 159 | 312 | 275 | 5 | 13 | 19 | 170 | 0.106 | 149 | 20 | 59 | 46 | 3 | 0 | 2 | 0 | 281 | 30 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1840 | 1,520 | 74 | 246 | 0 | 784 | 0.487 | 825 | 109 | 328 | 256 | 49 | 5 | 45 | 0 | 1616 | 787 |
| 162 | 4638 | 3,857 | 189 | 592 | 0 | 1052 | 0.654 | 2093 | 275 | 832 | 648 | 125 | 13 | 109 | 0 | 4096 | 2677 |
| 163 | 2799 | 2,337 | 115 | 347 | 0 | 350 | 0.217 | 1268 | 167 | 504 | 393 | 76 | 8 | 64 | 0 | 2480 | 539 |
| 164 | 73 | 63 | 5 | 5 | 0 | 473 | 0.294 | 34 | 4 | 14 | 11 | 3 | 0 | 1 | 0 | 67 | 20 |
| 165 | 7858 | 6,778 | 286 | 794 | 0 | 1541 | 0.957 | 3679 | 484 | 1462 | 1140 | 189 | 20 | 147 | 0 | 7120 | 6815 |
| 168 | 555 | 451 | 24 | 80 | 0 | 758 | 0.471 | 245 | 32 | 97 | 76 | 16 | 2 | 15 | 0 | 482 | 227 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 2244 | 1,886 | 91 | 267 | 0 | 248 | 0.154 | 1024 | 135 | 407 | 317 | 60 | 6 | 49 | 0 | 1998 | 308 |
| 171 | 2968 | 2,694 | 82 | 192 | 0 | 522 | 0.324 | 1462 | 192 | 581 | 453 | 54 | 6 | 35 | 0 | 2784 | 903 |
| 172 | 2968 | 2,694 | 82 | 192 | 0 | 993 | 0.617 | 1462 | 192 | 581 | 453 | 54 | 6 | 35 | 0 | 2784 | 1717 |
| 173 | 3 | 2 | 0 | 0 | 1 | 1615 | 1.003 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 174 | 22 | 21 | 0 | 1 | 0 | 330 | 0.205 | 11 | 1 | 5 | 4 | 0 | 0 | 0 | 0 | 21 | 4 |
| 177 | 2740 | 1,655 | 128 | 370 | 587 | 1110 | 0.690 | 898 | 118 | 357 | 278 | 84 | 9 | 68 | 9 | 1822 | 1256 |
| 178 | 246 | 168 | 11 | 23 | 44 | 7132 | 4.430 | 91 | 12 | 36 | 28 | 7 | 1 | 4 | 1 | 181 | 800 |
| 179 | 2986 | 1,823 | 138 | 394 | 631 | 2189 | 1.360 | 989 | 130 | 393 | 306 | 91 | 10 | 73 | 9 | 2002 | 2722 |
| 180 | 59 | 46 | 3 | 6 | 4 | 6725 | 4.178 | 25 | 3 | 10 | 8 | 2 | 0 | 1 | 0 | 49 | 206 |
| 181 | 2569 | 2,096 | 71 | 179 | 223 | 625 | 0.388 | 1138 | 150 | 452 | 352 | 47 | 5 | 33 | 3 | 2180 | 846 |
| 182 | 3909 | 3,183 | 107 | 286 | 333 | 349 | 0.217 | 1728 | 227 | 687 | 535 | 71 | 7 | 53 | 5 | 3312 | 718 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 3943 | 3,204 | 108 | 284 | 347 | 292 | 0.181 | 1739 | 229 | 691 | 539 | 71 | 8 | 52 | 5 | 3334 | 605 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1293 | 1,037 | 36 | 102 | 118 | 477 | 0.296 | 563 | 74 | 224 | 174 | 24 | 3 | 19 | 2 | 1082 | 321 |
| 190 | 8446 | 6,955 | 162 | 514 | 815 | 6368 | 3.956 | 3775 | 497 | 1500 | 1169 | 107 | 11 | 95 | 12 | 7166 | 28347 |
| 191 | 6588 | 5,432 | 131 | 448 | 577 | 4906 | 3.048 | 2948 | 388 | 1172 | 913 | 86 | 9 | 83 | 8 | 5608 | 17090 |
| 192 | 1867 | 1,521 | 32 | 66 | 248 | 4358 | 2.707 | 825 | 109 | 328 | 256 | 21 | 2 | 12 | 4 | 1557 | 4215 |
| 194 | 400 | 305 | 26 | 69 | 0 | 355 | 0.221 | 166 | 22 | 66 | 51 | 17 | 2 | 13 | 0 | 336 | 74 |
| 195 | 871 | 690 | 47 | 134 | 0 | 397 | 0.247 | 374 | 49 | 149 | 116 | 31 | 3 | 25 | 0 | 748 | 184 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196 | 1271 | 996 | 73 | 202 | 0 | 716 | 0.445 | 541 | 71 | 215 | 167 | 48 | 5 | 37 | 0 | 1085 | 482 |
| 198 | 57 | 48 | 3 | 6 | 0 | 1009 | 0.627 | 26 | 3 | 10 | 8 | 2 | 0 | 1 | 0 | 51 | 32 |
| 199 | 254 | 223 | 11 | 20 | 0 | 378 | 0.235 | 121 | 16 | 48 | 37 | 7 | 1 | 4 | 0 | 234 | 55 |
| 200 | 1580 | 1,267 | 86 | 227 | 0 | 1403 | 0.872 | 688 | 90 | 273 | 213 | 57 | 6 | 42 | 0 | 1369 | 1193 |
| 205 | 1838 | 1,502 | 82 | 254 | 0 | 1501 | 0.932 | 815 | 107 | 324 | 253 | 54 | 6 | 47 | 0 | 1606 | 1497 |
| 206 | 1813 | 1,486 | 81 | 246 | 0 | 2658 | 1.651 | 807 | 106 | 321 | 250 | 53 | 6 | 45 | 0 | 1588 | 2621 |
| 207 | 29 | 18 | 2 | 9 | 0 | 2611 | 1.622 | 10 | 1 | 4 | 3 | 1 | 0 | 2 | 0 | 21 | 34 |
| 215 | 95 | 89 | 2 | 2 | 2 | 2937 | 1.825 | 48 | 6 | 19 | 15 | 1 | 0 | 0 | 0 | 91 | 165 |
| 216 | 452 | 359 | 11 | 36 | 46 | 2000 | 1.242 | 195 | 26 | 77 | 60 | 7 | 1 | 7 | 1 | 374 | 464 |
| 217 | 223 | 169 | 6 | 16 | 32 | 663 | 0.412 | 92 | 12 | 36 | 28 | 4 | 0 | 3 | 0 | 176 | 73 |
| 218 | 311 | 241 | 8 | 29 | 33 | 1167 | 0.725 | 131 | 17 | 52 | 41 | 5 | 1 | 5 | 0 | 252 | 183 |
| 219 | 15 | 14 | 0 | 0 | 1 | 2672 | 1.660 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 14 | 23 |
| 221 | 57 | 51 | 1 | 2 | 3 | 2622 | 1.629 | 28 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 52 | 85 |
| 223 | 233 | 194 | 5 | 20 | 14 | 359 | 0.223 | 105 | 14 | 42 | 33 | 3 | 0 | 4 | 0 | 201 | 45 |
| 225 | 2 | 2 | 0 | 0 | 0 | 1243 | 0.772 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 226 | 111 | 73 | 3 | 12 | 23 | 1643 | 1.021 | 40 | 5 | 16 | 12 | 2 | 0 | 2 | 0 | 78 | 79 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 30 | 27 | 1 | 1 | 1 | 1122 | 0.697 | 15 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 28 | 19 |
| 230 | 54 | 52 | 1 | 1 | 0 | 1007 | 0.626 | 28 | 4 | 11 | 9 | 1 | 0 | 0 | 0 | 53 | 33 |
| 231 | 202 | 152 | 4 | 13 | 33 | 1968 | 1.223 | 82 | 11 | 33 | 26 | 3 | 0 | 2 | 0 | 157 | 193 |
| 232 | 1535 | 1,025 | 36 | 129 | 345 | 1719 | 1.068 | 556 | 73 | 221 | 172 | 24 | 3 | 24 | 5 | 1078 | 1151 |
| 233 | 109 | 70 | 3 | 12 | 24 | 976 | 0.606 | 38 | 5 | 15 | 12 | 2 | 0 | 2 | 0 | 75 | 45 |
| 236 | 29 | 20 | 1 | 4 | 4 | 794 | 0.493 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | 21 | 11 |
| 237 | 1399 | 889 | 35 | 131 | 344 | 1556 | 0.967 | 482 | 63 | 192 | 149 | 23 | 2 | 24 | 5 | 942 | 910 |
| 238 | 165 | 136 | 3 | 10 | 16 | 1120 | 0.696 | 74 | 10 | 29 | 23 | 2 | 0 | 2 | 0 | 140 | 97 |
| 239 | 1187 | 720 | 31 | 117 | 319 | 1385 | 0.860 | 391 | 51 | 155 | 121 | 20 | 2 | 22 | 5 | 767 | 660 |
| 240 | 2 | 1 | 0 | 0 | 1 | 240 | 0.149 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 996 | 634 | 26 | 94 | 242 | 989 | 0.614 | 344 | 45 | 137 | 107 | 17 | 2 | 17 | 4 | 673 | 413 |
| 243 | 34 | 23 | 1 | 3 | 7 | 64 | 0.040 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | 24 | 1 |
| 244 | 153 | 52 | 6 | 21 | 74 | 173 | 0.107 | 28 | 4 | 11 | 9 | 4 | 0 | 4 | 1 | 61 | 7 |
| 245 | 90 | 53 | 2 | 9 | 26 | 181 | 0.112 | 29 | 4 | 11 | 9 | 1 | 0 | 2 | 0 | 56 | 6 |
| 246 | 454 | 187 | 14 | 55 | 198 | 273 | 0.170 | 101 | 13 | 40 | 31 | 9 | 1 | 10 | 3 | 210 | 36 |
| 247 | 739 | 530 | 18 | 63 | 128 | 87 | 0.054 | 288 | 38 | 114 | 89 | 12 | 1 | 12 | 2 | 556 | 30 |
| 250 | 140 | 104 | 3 | 11 | 22 | 1366 | 0.849 | 56 | 7 | 22 | 17 | 2 | 0 | 2 | 0 | 108 | 92 |
| 252 | 1533 | 1,032 | 36 | 126 | 339 | 1588 | 0.986 | 560 | 74 | 223 | 174 | 24 | 3 | 23 | 5 | 1084 | 1070 |
| 254 | 40 | 35 | 1 | 2 | 2 | 424 | 0.263 | 19 | 2 | 8 | 6 | 1 | 0 | 0 | 0 | 36 | 9 |
| 256 | 427 | 367 | 9 | 18 | 33 | 943 | 0.586 | 199 | 26 | 79 | 62 | 6 | 1 | 3 | 0 | 377 | 221 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1880 | 1,346 | 43 | 137 | 354 | 1783 | 1.108 | 731 | 96 | 290 | 226 | 28 | 3 | 25 | 5 | 1405 | 1556 |
| 261 | 205 | 162 | 4 | 13 | 26 | 1181 | 0.734 | 88 | 12 | 35 | 27 | 3 | 0 | 2 | 0 | 167 | 123 |
| 262 | 336 | 254 | 9 | 27 | 46 | 860 | 0.534 | 138 | 18 | 55 | 43 | 6 | 1 | 5 | 1 | 266 | 142 |
| 263 | 1636 | 1,166 | 38 | 120 | 312 | 141 | 0.088 | 633 | 83 | 251 | 196 | 25 | 3 | 22 | 5 | 1218 | 107 |
| 264 | 45 | 14 | 1 | 5 | 25 | 224 | 0.139 | 8 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 16 | 2 |
| 265 | 1157 | 834 | 27 | 84 | 212 | 98 | 0.061 | 453 | 60 | 180 | 140 | 18 | 2 | 16 | 3 | 871 | 53 |
| 266 | 2617 | 1,799 | 64 | 201 | 553 | 171 | 0.106 | 976 | 128 | 388 | 302 | 42 | 4 | 37 | 8 | 1887 | 200 |
| 267 | 321 | 216 | 10 | 32 | 63 | 156 | 0.097 | 117 | 15 | 47 | 36 | 7 | 1 | 6 | 1 | 230 | 22 |
| 268 | 1102 | 818 | 26 | 80 | 178 | 159 | 0.099 | 444 | 58 | 176 | 138 | 17 | 2 | 15 | 3 | 853 | 84 |
| 269 | 801 | 482 | 23 | 77 | 219 | 2450 | 1.522 | 262 | 34 | 104 | 81 | 15 | 2 | 14 | 3 | 515 | 784 |
| 270 | 13 | 10 | 0 | 1 | 2 | 620 | 0.385 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 4 |
| 271 | 809 | 488 | 23 | 78 | 220 | 370 | 0.230 | 265 | 35 | 105 | 82 | 15 | 2 | 14 | 3 | 521 | 120 |
| 272 | 4 | 3 | 0 | 0 | 1 | 1246 | 0.774 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 2 |
| 273 | 16 | 10 | 0 | 2 | 4 | 625 | 0.388 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 4 |
| 274 | 837 | 508 | 23 | 81 | 225 | 1231 | 0.765 | 276 | 36 | 110 | 85 | 15 | 2 | 15 | 3 | 542 | 414 |
| 275 | 33 | 25 | 1 | 3 | 4 | 377 | 0.234 | 14 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | 26 | 6 |
| 276 | 881 | 543 | 25 | 83 | 230 | 159 | 0.099 | 295 | 39 | 117 | 91 | 16 | 2 | 15 | 3 | 579 | 57 |
| 277 | 21 | 14 | 1 | 2 | 4 | 1074 | 0.667 | 8 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 15 | 10 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 355 | 227 | 10 | 33 | 85 | 157 | 0.098 | 123 | 16 | 49 | 38 | 7 | 1 | 6 | 1 | 241 | 24 |
| 280 | 1032 | 619 | 29 | 98 | 286 | 163 | 0.101 | 336 | 44 | 134 | 104 | 19 | 2 | 18 | 4 | 661 | 67 |
| 281 | 0 | 0 | 0 | 0 | 0 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 710 | 454 | 19 | 66 | 171 | 167 | 0.104 | 246 | 32 | 98 | 76 | 13 | 1 | 12 | 2 | 482 | 50 |
| 283 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1176 | 1,004 | 39 | 62 | 71 | 365 | 0.227 | 545 | 72 | 217 | 169 | 26 | 3 | 11 | 1 | 1043 | 236 |
| 285 | 324 | 217 | 12 | 25 | 70 | 230 | 0.143 | 118 | 15 | 47 | 36 | 8 | 1 | 5 | 1 | 231 | 33 |
| 286 | 571 | 516 | 19 | 28 | 8 | 209 | 0.130 | 280 | 37 | 111 | 87 | 13 | 1 | 5 | 0 | 534 | 69 |
| 287 | 819 | 439 | 21 | 34 | 325 | 292 | 0.181 | 238 | 31 | 95 | 74 | 14 | 1 | 6 | 5 | 464 | 84 |
| 288 | 231 | 174 | 9 | 21 | 27 | 152 | 0.094 | 94 | 12 | 38 | 29 | 6 | 1 | 4 | 0 | 184 | 17 |
| 289 | 939 | 519 | 24 | 39 | 357 | 285 | 0.177 | 282 | 37 | 112 | 87 | 16 | 2 | 7 | 5 | 548 | 97 |
| 290 | 917 | 227 | 15 | 26 | 649 | 328 | 0.204 | 123 | 16 | 49 | 38 | 10 | 1 | 5 | 9 | 252 | 51 |
| 294 | 44 | 43 | 1 | 0 | 0 | 824 | 0.512 | 23 | 3 | 9 | 7 | 1 | 0 | 0 | 0 | 44 | 22 |
| 301 | 50 | 41 | 2 | 7 | 0 | 774 | 0.481 | 22 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | 44 | 21 |
| 302 | 94 | 83 | 3 | 8 | 0 | 796 | 0.494 | 45 | 6 | 18 | 14 | 2 | 0 | 1 | 0 | 86 | 43 |
| 303 | 690 | 50 | 4 | 11 | 625 | 1514 | 0.941 | 27 | 4 | 11 | 8 | 3 | 0 | 2 | 9 | 64 | 60 |
| 304 | 540 | 483 | 13 | 44 | 0 | 729 | 0.453 | 262 | 34 | 104 | 81 | 9 | 1 | 8 | 0 | 500 | 226 |
| 306 | 1902 | 1,019 | 60 | 203 | 620 | 818 | 0.508 | 553 | 73 | 220 | 171 | 40 | 4 | 37 | 9 | 1107 | 563 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 307 | 2088 | 1,220 | 59 | 189 | 620 | 0 | 0.000 | 662 | 87 | 263 | 205 | 39 | 4 | 35 | 9 | 1304 | 0 |
| 324 | 109 | 86 | 3 | 11 | 9 | 2925 | 1.817 | 47 | 6 | 19 | 14 | 2 | 0 | 2 | 0 | 90 | 164 |
| 325 | 3841 | 3,002 | 74 | 268 | 497 | 2224 | 1.382 | 1629 | 214 | 647 | 505 | 49 | 5 | 49 | 7 | 3107 | 4292 |
| 326 | 886 | 664 | 19 | 81 | 122 | 3506 | 2.178 | 360 | 47 | 143 | 112 | 13 | 1 | 15 | 2 | 693 | 1510 |
| 327 | 2845 | 2,251 | 52 | 177 | 365 | 227 | 0.141 | 1222 | 161 | 486 | 378 | 34 | 4 | 33 | 5 | 2322 | 327 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 6570 | 5,416 | 130 | 447 | 577 | 0 | 0.000 | 2939 | 387 | 1168 | 911 | 86 | 9 | 83 | 8 | 5591 | 0 |
| 359 | 69 | 54 | 2 | 6 | 7 | 339 | 0.211 | 29 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | 57 | 12 |
| 360 | 4454 | 3,734 | 86 | 281 | 353 | 247 | 0.153 | 2027 | 267 | 805 | 628 | 57 | 6 | 52 | 5 | 3846 | 590 |
| 361 | 4293 | 3,310 | 85 | 326 | 572 | 337 | 0.209 | 1796 | 236 | 714 | 557 | 56 | 6 | 60 | 8 | 3434 | 719 |
| 362 | 26 | 24 | 0 | 1 | 1 | 338 | 0.210 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 5 |
| 363 | 2598 | 2,313 | 48 | 137 | 100 | 4495 | 2.792 | 1255 | 165 | 499 | 389 | 32 | 3 | 25 | 1 | 2370 | 6618 |
| 364 | 3649 | 2,820 | 76 | 286 | 467 | 286 | 0.178 | 1531 | 201 | 608 | 474 | 50 | 5 | 53 | 7 | 2929 | 520 |
| 365 | 903 | 723 | 23 | 64 | 93 | 1602 | 0.995 | 392 | 52 | 156 | 122 | 15 | 2 | 12 | 1 | 751 | 748 |
| 366 | 10 | 5 | 0 | 1 | 4 | 1742 | 1.082 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 6 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 992 | 678 | 16 | 36 | 262 | 388 | 0.241 | 368 | 48 | 146 | 114 | 11 | 1 | 7 | 4 | 699 | 168 |
| 376 | 1663 | 1,331 | 27 | 60 | 245 | 477 | 0.296 | 722 | 95 | 287 | 224 | 18 | 2 | 11 | 4 | 1363 | 404 |
| 377 | 84 | 68 | 2 | 6 | 8 | 339 | 0.211 | 37 | 5 | 15 | 11 | 1 | 0 | 1 | 0 | 71 | 15 |
| 378 | 1123 | 957 | 19 | 38 | 109 | 212 | 0.132 | 519 | 68 | 206 | 161 | 13 | 1 | 7 | 2 | 978 | 129 |
| 379 | 750 | 530 | 12 | 25 | 183 | 331 | 0.206 | 288 | 38 | 114 | 89 | 8 | 1 | 5 | 3 | 545 | 112 |
| 380 | 26 | 24 | 0 | 1 | 1 | 283 | 0.176 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 24 | 4 |
| 381 | 738 | 681 | 13 | 26 | 18 | 469 | 0.291 | 370 | 49 | 147 | 114 | 9 | 1 | 5 | 0 | 694 | 202 |
| 386 | 363 | 230 | 20 | 56 | 57 | 810 | 0.503 | 125 | 16 | 50 | 39 | 13 | 1 | 10 | 1 | 255 | 128 |
| 387 | 2123 | 1,317 | 58 | 179 | 569 | 2761 | 1.715 | 715 | 94 | 284 | 221 | 38 | 4 | 33 | 8 | 1398 | 2398 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 30 | 25 | 1 | 1 | 3 | 189 | 0.117 | 14 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 26 | 3 |
| 390 | 525 | 430 | 18 | 44 | 33 | 1189 | 0.739 | 233 | 31 | 93 | 72 | 12 | 1 | 8 | 0 | 451 | 333 |
| 392 | 721 | 477 | 28 | 113 | 103 | 436 | 0.271 | 259 | 34 | 103 | 80 | 18 | 2 | 21 | 1 | 519 | 141 |
| 393 | 200 | 49 | 11 | 70 | 70 | 934 | 0.580 | 27 | 3 | 11 | 8 | 7 | 1 | 13 | 1 | 71 | 41 |
| 394 | 3513 | 2,613 | 109 | 340 | 451 | 1292 | 0.803 | 1418 | 187 | 564 | 439 | 72 | 8 | 63 | 7 | 2757 | 2212 |
| 396 | 2707 | 2,125 | 73 | 216 | 293 | 2366 | 1.470 | 1153 | 152 | 458 | 357 | 48 | 5 | 40 | 4 | 2218 | 3260 |
| 397 | 230 | 203 | 7 | 16 | 4 | 1588 | 0.986 | 110 | 14 | 44 | 34 | 5 | 0 | 3 | 0 | 211 | 208 |
| 398 | 2704 | 2,446 | 73 | 184 | 1 | 560 | 0.348 | 1328 | 175 | 528 | 411 | 48 | 5 | 34 | 0 | 2528 | 880 |
| 399 | 253 | 242 | 4 | 7 | 0 | 3389 | 2.105 | 131 | 17 | 52 | 41 | 3 | 0 | 1 | 0 | 246 | 517 |
| 400 | 1934 | 1,740 | 50 | 140 | 4 | 1704 | 1.059 | 944 | 124 | 375 | 293 | 33 | 4 | 26 | 0 | 1799 | 1904 |
| 401 | 0 | 0 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 11 | 11 | 0 | 0 | 0 | 1010 | 0.627 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 7 |
| 406 | 752 | 668 | 59 | 18 | 7 | 395 | 0.245 | 363 | 48 | 144 | 112 | 39 | 4 | 3 | 0 | 713 | 175 |
| 407 | 1 | 1 | 0 | 0 | 0 | 756 | 0.470 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 408 | 0 | 0 | 0 | 0 | 0 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 188 | 176 | 7 | 5 | 0 | 1137 | 0.706 | 96 | 13 | 38 | 30 | 5 | 0 | 1 | 0 | 182 | 128 |
| 410 | 1 | 0 | 0 | 0 | 1 | 884 | 0.549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 182 | 125 | 6 | 23 | 28 | 678 | 0.421 | 68 | 9 | 27 | 21 | 4 | 0 | 4 | 0 | 134 | 56 |
| 414 | 12 | 7 | 0 | 0 | 5 | 895 | 0.556 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 7 | 4 |
| 415 | 2342 | 1,870 | 62 | 172 | 238 | 855 | 0.531 | 1015 | 134 | 403 | 314 | 41 | 4 | 32 | 3 | 1947 | 1034 |
| 416 | 817 | 626 | 18 | 66 | 107 | 284 | 0.176 | 340 | 45 | 135 | 105 | 12 | 1 | 12 | 2 | 652 | 115 |
| 417 | 77 | 8 | 0 | 2 | 67 | 303 | 0.188 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 9 | 2 |
| 419 | 482 | 367 | 9 | 30 | 76 | 343 | 0.213 | 199 | 26 | 79 | 62 | 6 | 1 | 6 | 1 | 379 | 81 |
| 420 | 37 | 3 | 0 | 1 | 33 | 300 | 0.186 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 1 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 762 | 101 | 6 | 15 | 640 | 828 | 0.514 | 55 | 7 | 22 | 17 | 4 | 0 | 3 | 9 | 117 | 60 |
| 425 | 26 | 23 | 1 | 2 | 0 | 203 | 0.126 | 12 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 24 | 3 |
| 426 | 51 | 12 | 1 | 2 | 36 | 276 | 0.171 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 1 | 14 | 2 |
| 427 | 27 | 23 | 1 | 3 | 0 | 654 | 0.406 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | 24 | 10 |
| 428 | 32 | 27 | 1 | 3 | 1 | 293 | 0.182 | 15 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | 28 | 5 |
| 429 | 50 | 13 | 1 | 1 | 35 | 219 | 0.136 | 7 | 1 | 3 | 2 | 1 | 0 | 0 | 1 | 14 | 2 |
| 430 | 788 | 639 | 21 | 58 | 70 | 114 | 0.071 | 347 | 46 | 138 | 107 | 14 | 1 | 11 | 1 | 665 | 47 |
| 431 | 7 | 4 | 0 | 0 | 3 | 524 | 0.326 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 1 |
| 432 | 18 | 17 | 0 | 0 | 1 | 629 | 0.391 | 9 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 17 | 7 |
| 433 | 1777 | 1,581 | 42 | 132 | 22 | 1802 | 1.119 | 858 | 113 | 341 | 266 | 28 | 3 | 24 | 0 | 1633 | 1828 |
| 434 | 0 | 0 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 73 | 70 | 1 | 2 | 0 | 1537 | 0.955 | 38 | 5 | 15 | 12 | 1 | 0 | 0 | 0 | 71 | 68 |
| 436 | 3 | 3 | 0 | 0 | 0 | 178 | 0.111 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 1643 | 1,444 | 40 | 129 | 30 | 2365 | 1.469 | 784 | 103 | 311 | 243 | 26 | 3 | 24 | 0 | 1495 | 2196 |
| 443 | 11 | 10 | 0 | 1 | 0 | 1588 | 0.986 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 10 |
| 444 | 1601 | 1,403 | 40 | 128 | 30 | 905 | 0.562 | 761 | 100 | 303 | 236 | 26 | 3 | 24 | 0 | 1453 | 817 |
| 452 | 8 | 8 | 0 | 0 | 0 | 815 | 0.506 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 4 |
| 453 | 1471 | 1,288 | 34 | 121 | 28 | 1563 | 0.971 | 699 | 92 | 278 | 217 | 22 | 2 | 22 | 0 | 1333 | 1294 |
| 454 | 266 | 246 | 5 | 15 | 0 | 661 | 0.411 | 134 | 18 | 53 | 41 | 3 | 0 | 3 | 0 | 252 | 103 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 455 | 1197 | 1,034 | 30 | 106 | 27 | 366 | 0.227 | 561 | 74 | 223 | 174 | 20 | 2 | 20 | 0 | 1074 | 244 |
| 458 | 10 | 9 | 0 | 1 | 0 | 237 | 0.147 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 9 | 1 |
| 464 | 69 | 61 | 3 | 5 | 0 | 702 | 0.436 | 33 | 4 | 13 | 10 | 2 | 0 | 1 | 0 | 64 | 28 |
| 477 | 100 | 80 | 4 | 7 | 9 | 750 | 0.466 | 43 | 6 | 17 | 13 | 3 | 0 | 1 | 0 | 84 | 39 |
| 478 | 1253 | 1,054 | 36 | 117 | 46 | 253 | 0.157 | 572 | 75 | 227 | 177 | 24 | 3 | 22 | 1 | 1100 | 173 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 805 | 726 | 15 | 64 | 0 | 500 | 0.311 | 394 | 52 | 157 | 122 | 10 | 1 | 12 | 0 | 747 | 232 |
| 481 | 1 | 0 | 0 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 177 | 164 | 2 | 10 | 1 | 1353 | 0.841 | 89 | 12 | 35 | 28 | 1 | 0 | 2 | 0 | 167 | 140 |
| 483 | 955 | 837 | 22 | 96 | 0 | 589 | 0.366 | 454 | 60 | 181 | 141 | 15 | 2 | 18 | 0 | 869 | 318 |
| 484 | 2 | 1 | 0 | 0 | 1 | 684 | 0.425 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 485 | 1482 | 1,360 | 23 | 99 | 0 | 319 | 0.198 | 738 | 97 | 293 | 229 | 15 | 2 | 18 | 0 | 1392 | 276 |
| 488 | 10 | 9 | 0 | 1 | 0 | 1441 | 0.895 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 9 | 8 |
| 494 | 2789 | 2,525 | 76 | 188 | 0 | 1039 | 0.645 | 1370 | 180 | 545 | 425 | 50 | 5 | 35 | 0 | 2610 | 1685 |
| 498 | 3 | 3 | 0 | 0 | 0 | 792 | 0.492 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 1 |
| 499 | 846 | 170 | 11 | 20 | 645 | 660 | 0.410 | 92 | 12 | 37 | 29 | 7 | 1 | 4 | 9 | 191 | 78 |
| 500 | 867 | 189 | 12 | 21 | 645 | 395 | 0.245 | 103 | 13 | 41 | 32 | 8 | 1 | 4 | 9 | 211 | 52 |
| 502 | 1 | 1 | 0 | 0 | 0 | 855 | 0.531 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 370 | 251 | 25 | 94 | 0 | 360 | 0.224 | 136 | 18 | 54 | 42 | 16 | 2 | 17 | 0 | 286 | 64 |

Total 185735

**VMT per Vehicle Class**

| Street Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2-GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) | Road Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 4299 | 566 | 1708 | 1332 | 225 | 24 | 166 | 0 | A |
| 10 | 3 | 282 | 37 | 112 | 87 | 15 | 2 | 7 | 0 | A |
| 13 | 6 | 181 | 24 | 72 | 56 | 8 | 1 | 8 | 3 | A |
| 32 | 3 | 1574 | 207 | 626 | 488 | 114 | 12 | 41 | 0 | A |
| 33 | 1 | 507 | 67 | 201 | 157 | 20 | 2 | 13 | 0 | M |
| 35 | 7 | 161 | 21 | 64 | 50 | 15 | 2 | 12 | 5 | A |
| 36 | 7 | 1304 | 172 | 518 | 404 | 95 | 10 | 68 | 0 | A |
| 37 | 7 | 29 | 4 | 11 | 9 | 4 | 0 | 4 | 1 | A |
| 38 | 7 | 677 | 89 | 269 | 210 | 54 | 6 | 29 | 0 | A |
| 42 | 7 | 3425 | 451 | 1361 | 1061 | 313 | 33 | 246 | 31 | A |
| 43 | 7 | 307 | 40 | 122 | 95 | 16 | 2 | 7 | 3 | A |
| 46 | 7 | 211 | 28 | 84 | 65 | 15 | 2 | 10 | 0 | A |
| 47 | 7 | 631 | 83 | 251 | 195 | 30 | 3 | 20 | 0 | A |
| 48 | 6 | 239 | 31 | 95 | 74 | 11 | 1 | 7 | 1 | A |
| 50 | 3 | 1809 | 238 | 719 | 560 | 106 | 11 | 60 | 0 | A |
| 51 | 7 | 25 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | A |
| 52 | 3 | 3001 | 395 | 1193 | 930 | 156 | 17 | 117 | 0 | A |
| 53 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 54 | 6 | 168 | 22 | 67 | 52 | 11 | 1 | 9 | 0 | A |
| 55 | 6 | 13 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 56 | 7 | 596 | 78 | 237 | 185 | 39 | 4 | 33 | 0 | A |
| 57 | 7 | 105 | 14 | 42 | 33 | 9 | 1 | 6 | 0 | A |
| 58 | 1 | 29 | 4 | 11 | 9 | 2 | 0 | 1 | 0 | M |
| 59 | 1 | 258 | 34 | 103 | 80 | 37 | 4 | 11 | 0 | M |
| 60 | 1 | 16 | 2 | 7 | 5 | 2 | 0 | 1 | 0 | M |
| 61 | 1 | 18 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | M |
| 62 | 1 | 350 | 46 | 139 | 108 | 64 | 7 | 17 | 0 | M |
| 65 | 3 | 273 | 36 | 108 | 85 | 12 | 1 | 7 | 1 | A |
| 66 | 3 | 319 | 42 | 127 | 99 | 16 | 2 | 9 | 1 | A |
| 67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 68 | 7 | 201 | 26 | 80 | 62 | 11 | 1 | 6 | 0 | A |
| 69 | 3 | 285 | 38 | 113 | 88 | 19 | 2 | 9 | 0 | A |
| 70 | 3 | 581 | 77 | 231 | 180 | 42 | 4 | 15 | 0 | A |
| 71 | 1 | 168 | 22 | 67 | 52 | 14 | 1 | 2 | 0 | M |
| 72 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 73 | 3 | 1742 | 229 | 692 | 540 | 90 | 10 | 68 | 0 | A |
| 74 | 6 | 297 | 39 | 118 | 92 | 11 | 1 | 5 | 0 | A |
| 75 | 1 | 31 | 4 | 12 | 10 | 2 | 0 | 0 | 0 | M |
| 76 | 1 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 77 | 5 | 98 | 13 | 39 | 30 | 4 | 0 | 2 | 0 | A |
| 80 | 5 | 36 | 5 | 14 | 11 | 2 | 0 | 1 | 0 | A |
| 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 82 | 1 | 106 | 14 | 42 | 33 | 5 | 1 | 3 | 0 | M |
| 83 | 5 | 11 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | A |
| 85 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 86 | 1 | 77 | 10 | 31 | 24 | 4 | 0 | 2 | 2 | M |
| 87 | 1 | 21 | 3 | 8 | 6 | 2 | 0 | 1 | 0 | M |
| 88 | 1 | 19 | 3 | 8 | 6 | 2 | 0 | 1 | 0 | M |
| 95 | 6 | 94 | 12 | 37 | 29 | 3 | 0 | 2 | 0 | A |
| 96 | 8 | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | A |
| 97 | 5 | 61 | 8 | 24 | 19 | 2 | 0 | 1 | 0 | A |
| 98 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 99 | 5 | 45 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | A |
| 100 | 1 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 101 | 1 | 77 | 10 | 31 | 24 | 3 | 0 | 2 | 0 | M |
| 102 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 103 | 1 | 29 | 4 | 12 | 9 | 1 | 0 | 1 | 0 | M |
| 104 | 1 | 73 | 10 | 29 | 23 | 3 | 0 | 2 | 0 | M |
| 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 106 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 107 | 1 | 72 | 10 | 29 | 22 | 3 | 0 | 2 | 0 | M |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 1 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | M |
| 109 | 5 | 18 | 2 | 7 | 6 | 1 | 0 | 1 | 0 | A |
| 110 | 6 | 143 | 19 | 57 | 44 | 6 | 1 | 5 | 1 | A |
| 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 112 | 6 | 158 | 21 | 63 | 49 | 7 | 1 | 6 | 1 | A |
| 113 | 5 | 5 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | A |
| 114 | 1 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | M |
| 115 | 6 | 169 | 22 | 67 | 52 | 7 | 1 | 6 | 1 | A |
| 116 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 117 | 6 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 118 | 6 | 161 | 21 | 64 | 50 | 7 | 1 | 6 | 1 | A |
| 119 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 120 | 1 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | M |
| 121 | 6 | 182 | 24 | 73 | 57 | 8 | 1 | 6 | 1 | A |
| 122 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 123 | 1 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | M |
| 124 | 6 | 189 | 25 | 75 | 59 | 9 | 1 | 6 | 1 | A |
| 125 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 126 | 6 | 197 | 26 | 78 | 61 | 9 | 1 | 6 | 1 | A |
| 127 | 1 | 9 | 1 | 4 | 3 | 1 | 0 | 1 | 5 | M |
| 128 | 6 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 129 | 6 | 226 | 30 | 90 | 70 | 10 | 1 | 7 | 1 | A |
| 130 | 6 | 16 | 2 | 7 | 5 | 1 | 0 | 0 | 0 | A |
| 131 | 6 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | A |
| 133 | 3 | 20 | 3 | 8 | 6 | 1 | 0 | 0 | 0 | A |
| 134 | 1 | 37 | 5 | 15 | 11 | 2 | 0 | 1 | 0 | M |
| 135 | 3 | 286 | 38 | 114 | 89 | 13 | 1 | 8 | 1 | A |
| 136 | 6 | 11 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| 137 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 139 | 1 | 43 | 6 | 17 | 13 | 2 | 0 | 2 | 0 | M |
| 140 | 1 | 40 | 5 | 16 | 12 | 2 | 0 | 1 | 0 | M |
| 141 | 1 | 133 | 17 | 53 | 41 | 6 | 1 | 4 | 0 | M |
| 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 143 | 3 | 151 | 20 | 60 | 47 | 8 | 1 | 6 | 0 | A |
| 144 | 3 | 142 | 19 | 57 | 44 | 7 | 1 | 6 | 0 | A |
| 145 | 3 | 148 | 19 | 59 | 46 | 8 | 1 | 6 | 0 | A |
| 146 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 147 | 6 | 163 | 21 | 65 | 50 | 9 | 1 | 7 | 0 | A |
| 148 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 149 | 6 | 181 | 24 | 72 | 56 | 11 | 1 | 7 | 0 | A |
| 150 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 151 | 1 | 185 | 24 | 73 | 57 | 11 | 1 | 7 | 0 | M |
| 152 | 1 | 7 | 1 | 3 | 2 | 1 | 0 | 1 | 4 | M |
| 153 | 1 | 219 | 29 | 87 | 68 | 13 | 1 | 8 | 0 | M |
| 154 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 155 | 3 | 321 | 42 | 128 | 99 | 19 | 2 | 9 | 0 | A |
| 156 | 3 | 79 | 10 | 31 | 24 | 4 | 0 | 2 | 0 | A |
| 157 | 3 | 384 | 50 | 152 | 119 | 24 | 3 | 11 | 0 | A |
| 158 | 6 | 133 | 18 | 53 | 41 | 4 | 0 | 3 | 0 | A |
| 159 | 6 | 16 | 2 | 6 | 5 | 0 | 0 | 0 | 0 | A |
| 160 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 161 | 3 | 402 | 53 | 160 | 124 | 24 | 3 | 22 | 0 | A |
| 162 | 3 | 1368 | 180 | 544 | 424 | 81 | 9 | 71 | 0 | A |
| 163 | 3 | 276 | 36 | 110 | 85 | 16 | 2 | 14 | 0 | A |
| 164 | 3 | 10 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | A |
| 165 | 1 | 3522 | 463 | 1399 | 1091 | 181 | 19 | 140 | 0 | M |
| 168 | 1 | 115 | 15 | 46 | 36 | 7 | 1 | 7 | 0 | M |
| 169 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 170 | 3 | 158 | 21 | 63 | 49 | 9 | 1 | 8 | 0 | A |
| 171 | 3 | 474 | 62 | 188 | 147 | 18 | 2 | 11 | 0 | A |
| 172 | 6 | 902 | 119 | 358 | 279 | 33 | 4 | 22 | 0 | A |
| 173 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 174 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 177 | 7 | 619 | 82 | 246 | 192 | 58 | 6 | 47 | 6 | A |
| 178 | 7 | 404 | 53 | 161 | 125 | 32 | 3 | 19 | 3 | A |
| 179 | 7 | 1345 | 177 | 535 | 417 | 124 | 13 | 99 | 12 | A |
| 180 | 7 | 104 | 14 | 41 | 32 | 8 | 1 | 5 | 0 | A |
| 181 | 1 | 442 | 58 | 176 | 137 | 18 | 2 | 13 | 1 | M |
| 182 | 1 | 375 | 49 | 149 | 116 | 15 | 2 | 11 | 1 | M |
| 183 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 184 | 1 | 315 | 42 | 125 | 98 | 13 | 1 | 10 | 1 | M |
| 185 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 186 | 1 | 167 | 22 | 66 | 52 | 7 | 1 | 6 | 1 | M |
| 190 | 7 | 14932 | 1965 | 5934 | 4626 | 423 | 45 | 375 | 47 | A |
| 191 | 7 | 8985 | 1182 | 3571 | 2783 | 263 | 28 | 252 | 25 | A |
| 192 | 7 | 2235 | 294 | 888 | 692 | 57 | 6 | 33 | 10 | A |
| 194 | 5 | 37 | 5 | 15 | 11 | 4 | 0 | 3 | 0 | A |
| 195 | 5 | 92 | 12 | 37 | 29 | 8 | 1 | 6 | 0 | A |
| 196 | 5 | 240 | 32 | 96 | 74 | 21 | 2 | 17 | 0 | A |
| 198 | 5 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | A |
| 199 | 5 | 28 | 4 | 11 | 9 | 2 | 0 | 1 | 0 | A |
| 200 | 6 | 599 | 79 | 238 | 186 | 49 | 5 | 37 | 0 | A |
| 205 | 6 | 760 | 100 | 302 | 235 | 50 | 5 | 44 | 0 | A |
| 206 | 6 | 1332 | 175 | 529 | 413 | 88 | 9 | 75 | 0 | A |
| 207 | 6 | 16 | 2 | 6 | 5 | 2 | 0 | 3 | 0 | A |
| 215 | 3 | 88 | 12 | 35 | 27 | 2 | 0 | 1 | 0 | A |
| 216 | 6 | 242 | 32 | 96 | 75 | 9 | 1 | 8 | 1 | A |
| 217 | 3 | 38 | 5 | 15 | 12 | 2 | 0 | 1 | 0 | A |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 7 | 95 | 12 | 38 | 29 | 4 | 0 | 4 | 0 | A |
| 219 | 6 | 13 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 221 | 6 | 45 | 6 | 18 | 14 | 1 | 0 | 1 | 0 | A |
| 223 | 6 | 23 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 225 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 226 | 7 | 40 | 5 | 16 | 13 | 2 | 0 | 2 | 0 | A |
| 227 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 229 | 6 | 10 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | A |
| 230 | 6 | 18 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | A |
| 231 | 6 | 101 | 13 | 40 | 31 | 3 | 0 | 3 | 1 | A |
| 232 | 7 | 594 | 78 | 236 | 184 | 25 | 3 | 25 | 5 | A |
| 233 | 7 | 23 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 236 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 237 | 7 | 466 | 61 | 185 | 144 | 22 | 2 | 23 | 5 | A |
| 238 | 6 | 51 | 7 | 20 | 16 | 1 | 0 | 1 | 0 | A |
| 239 | 6 | 336 | 44 | 134 | 104 | 18 | 2 | 19 | 4 | A |
| 240 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 241 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 242 | 1 | 211 | 28 | 84 | 65 | 11 | 1 | 11 | 2 | M |
| 243 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 244 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 245 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 246 | 1 | 17 | 2 | 7 | 5 | 2 | 0 | 2 | 0 | M |
| 247 | 1 | 16 | 2 | 6 | 5 | 1 | 0 | 1 | 0 | M |
| 250 | 5 | 48 | 6 | 19 | 15 | 2 | 0 | 2 | 0 | A |
| 252 | 6 | 553 | 73 | 220 | 171 | 23 | 2 | 23 | 5 | A |
| 254 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | A |
| 256 | 6 | 117 | 15 | 46 | 36 | 3 | 0 | 2 | 0 | A |
| 258 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 260 | 3 | 809 | 106 | 322 | 251 | 31 | 3 | 28 | 6 | A |
| 261 | 5 | 65 | 8 | 26 | 20 | 2 | 0 | 2 | 0 | A |
| 262 | 1 | 74 | 10 | 29 | 23 | 3 | 0 | 3 | 0 | M |
| 263 | 1 | 55 | 7 | 22 | 17 | 2 | 0 | 2 | 0 | M |
| 264 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 265 | 1 | 28 | 4 | 11 | 9 | 1 | 0 | 1 | 0 | M |
| 266 | 1 | 104 | 14 | 41 | 32 | 4 | 0 | 4 | 1 | M |
| 267 | 1 | 11 | 1 | 5 | 4 | 1 | 0 | 1 | 0 | M |
| 268 | 1 | 44 | 6 | 17 | 14 | 2 | 0 | 1 | 0 | M |
| 269 | 6 | 398 | 52 | 158 | 123 | 23 | 2 | 22 | 5 | A |
| 270 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 271 | 6 | 61 | 8 | 24 | 19 | 3 | 0 | 3 | 1 | A |
| 272 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A |
| 273 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 274 | 6 | 211 | 28 | 84 | 65 | 12 | 1 | 11 | 2 | A |
| 275 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 276 | 6 | 29 | 4 | 12 | 9 | 2 | 0 | 2 | 0 | A |
| 277 | 1 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 278 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 279 | 1 | 12 | 2 | 5 | 4 | 1 | 0 | 1 | 0 | M |
| 280 | 1 | 34 | 4 | 14 | 11 | 2 | 0 | 2 | 0 | M |
| 281 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 282 | 1 | 26 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | M |
| 283 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 284 | 1 | 124 | 16 | 49 | 38 | 6 | 1 | 3 | 0 | M |
| 285 | 1 | 17 | 2 | 7 | 5 | 1 | 0 | 1 | 0 | M |
| 286 | 1 | 36 | 5 | 14 | 11 | 2 | 0 | 1 | 0 | M |
| 287 | 1 | 43 | 6 | 17 | 13 | 3 | 0 | 1 | 1 | M |
| 288 | 1 | 9 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | M |
| 289 | 1 | 50 | 7 | 20 | 15 | 3 | 0 | 1 | 1 | M |
| 290 | 1 | 25 | 3 | 10 | 8 | 2 | 0 | 1 | 2 | M |
| 294 | 7 | 12 | 2 | 5 | 4 | 0 | 0 | 0 | 0 | A |
| 301 | 6 | 11 | 1 | 4 | 3 | 1 | 0 | 1 | 0 | A |
| 302 | 6 | 22 | 3 | 9 | 7 | 1 | 0 | 1 | 0 | A |
| 303 | 6 | 26 | 3 | 10 | 8 | 2 | 0 | 2 | 9 | A |
| 304 | 6 | 119 | 16 | 47 | 37 | 4 | 0 | 4 | 0 | A |
| 306 | 6 | 281 | 37 | 112 | 87 | 20 | 2 | 19 | 5 | A |
| 307 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | M |
| 324 | 7 | 85 | 11 | 34 | 26 | 4 | 0 | 4 | 0 | A |
| 325 | 7 | 2251 | 296 | 895 | 697 | 67 | 7 | 68 | 10 | A |
| 326 | 7 | 785 | 103 | 312 | 243 | 27 | 3 | 33 | 4 | A |
| 327 | 7 | 172 | 23 | 68 | 53 | 5 | 1 | 5 | 1 | A |
| 340 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 351 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 358 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 359 | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | M |
| 360 | 1 | 311 | 41 | 124 | 96 | 9 | 1 | 8 | 1 | M |
| 361 | 1 | 376 | 49 | 149 | 117 | 12 | 1 | 13 | 2 | M |
| 362 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |
| 363 | 1 | 3505 | 461 | 1393 | 1086 | 88 | 9 | 71 | 4 | M |
| 364 | 1 | 272 | 36 | 108 | 84 | 9 | 1 | 9 | 1 | M |
| 365 | 6 | 391 | 51 | 155 | 121 | 15 | 2 | 12 | 1 | A |
| 366 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A |
| 367 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A |
| 375 | 1 | 89 | 12 | 35 | 27 | 3 | 0 | 2 | 1 | M |
| 376 | 1 | 214 | 28 | 85 | 66 | 5 | 1 | 3 | 1 | M |
| 377 | 1 | 8 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | M |
| 378 | 1 | 68 | 9 | 27 | 21 | 2 | 0 | 1 | 0 | M |
| 379 | 1 | 59 | 8 | 24 | 18 | 2 | 0 | 1 | 1 | M |
| 380 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | M |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 381 | 1 | 108 | 14 | 43 | 33 | 2 | 0 | 1 | 0 | | M |
| 386 | 6 | 63 | 8 | 25 | 19 | 7 | 1 | 5 | 0 | | A |
| 387 | 3 | 1226 | 161 | 487 | 380 | 66 | 7 | 57 | 14 | | A |
| 388 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 389 | 7 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | A |
| 390 | 7 | 172 | 23 | 69 | 53 | 9 | 1 | 6 | 0 | | A |
| 392 | 7 | 70 | 9 | 28 | 22 | 5 | 1 | 6 | 0 | | A |
| 393 | 7 | 15 | 2 | 6 | 5 | 4 | 0 | 7 | 1 | | A |
| 394 | 3 | 1138 | 150 | 452 | 353 | 58 | 6 | 50 | 5 | | A |
| 396 | 3 | 1695 | 223 | 674 | 525 | 71 | 8 | 59 | 6 | | A |
| 397 | 7 | 109 | 14 | 43 | 34 | 5 | 0 | 3 | 0 | | A |
| 398 | 6 | 462 | 61 | 184 | 143 | 17 | 2 | 12 | 0 | | A |
| 399 | 7 | 277 | 36 | 110 | 86 | 6 | 1 | 3 | 0 | | A |
| 400 | 6 | 1000 | 132 | 397 | 310 | 35 | 4 | 27 | 0 | | A |
| 401 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 402 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 404 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 405 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | M |
| 406 | 7 | 89 | 12 | 35 | 28 | 10 | 1 | 1 | 0 | | A |
| 407 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 408 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 409 | 7 | 67 | 9 | 27 | 21 | 3 | 0 | 1 | 0 | | A |
| 410 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 411 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 413 | 6 | 29 | 4 | 11 | 9 | 2 | 0 | 2 | 0 | | A |
| 414 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | A |
| 415 | 3 | 539 | 71 | 214 | 167 | 22 | 2 | 17 | 2 | | A |
| 416 | 1 | 60 | 8 | 24 | 19 | 2 | 0 | 2 | 0 | | M |
| 417 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 419 | 1 | 42 | 6 | 17 | 13 | 1 | 0 | 1 | 0 | | M |
| 420 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 421 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 424 | 1 | 28 | 4 | 11 | 9 | 2 | 0 | 1 | 5 | | M |
| 425 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | M |
| 426 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 427 | 5 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | | A |
| 428 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | M |
| 429 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 430 | 1 | 25 | 3 | 10 | 8 | 1 | 0 | 1 | 0 | | M |
| 431 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 432 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | M |
| 433 | 6 | 961 | 126 | 382 | 298 | 31 | 3 | 27 | 0 | | A |
| 434 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 435 | 6 | 36 | 5 | 14 | 11 | 1 | 0 | 0 | 0 | | A |
| 436 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 441 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 442 | 6 | 1151 | 152 | 458 | 357 | 39 | 4 | 35 | 1 | | A |
| 443 | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | | A |
| 444 | 6 | 428 | 56 | 170 | 133 | 15 | 2 | 13 | 0 | | A |
| 452 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | M |
| 453 | 6 | 679 | 89 | 270 | 210 | 22 | 2 | 22 | 0 | | A |
| 454 | 1 | 55 | 7 | 22 | 17 | 1 | 0 | 1 | 0 | | M |
| 455 | 6 | 128 | 17 | 51 | 40 | 5 | 0 | 4 | 0 | | A |
| 458 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 464 | 5 | 14 | 2 | 6 | 4 | 1 | 0 | 0 | 0 | | A |
| 477 | 1 | 20 | 3 | 8 | 6 | 1 | 0 | 1 | 0 | | M |
| 478 | 1 | 90 | 12 | 36 | 28 | 4 | 0 | 3 | 0 | | M |
| 479 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 480 | 6 | 122 | 16 | 49 | 38 | 3 | 0 | 4 | 0 | | A |
| 481 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 482 | 6 | 75 | 10 | 30 | 23 | 1 | 0 | 2 | 0 | | A |
| 483 | 1 | 166 | 22 | 66 | 51 | 5 | 1 | 6 | 0 | | M |
| 484 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 485 | 1 | 146 | 19 | 58 | 45 | 3 | 0 | 4 | 0 | | M |
| 488 | 6 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | | A |
| 494 | 6 | 885 | 116 | 352 | 274 | 32 | 3 | 22 | 0 | | A |
| 498 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | M |
| 499 | 1 | 38 | 5 | 15 | 12 | 3 | 0 | 2 | 4 | | M |
| 500 | 1 | 25 | 3 | 10 | 8 | 2 | 0 | 1 | 2 | | M |
| 502 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 503 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | A |
| 504 | 1 | 30 | 4 | 12 | 9 | 4 | 0 | 4 | 0 | | M |
| Total | **1177** | **96295** | **12672** | **38268** | **29830** | **4468** | **474** | **3423** | **304** | | |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 14235 | 1873 | 5657 | 4410 | 657 | 70 | 450 | 50 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 19618 | 2582 | 7796 | 6077 | 1055 | 112 | 719 | 36 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 821 | 108 | 326 | 254 | 52 | 5 | 37 | 1 | |
| 6 | 19982 | 2629 | 7941 | 6190 | 936 | 99 | 754 | 47 | |
| 7 | 41620 | 5477 | 16540 | 12893 | 1767 | 188 | 1463 | 170 | |
| 8 | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **96295** | **12672** | **38268** | **29830** | **4468** | **474** | **3423** | **304** | **185735** |

**World Logistics Center**
**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**
**Entrained Road Dust**
Surface Streets

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | A | 1820 | 1.13 | 7,006 | 7921 | 301 | 340 | 797 | 901 | 0 | 0 | 9162 | 3.21 | 0.035 | 0.0001 | 0.8 | 0.0003 | 3.1 |
| 10 | A | 826 | 0.51 | 1,011 | 519 | 43 | 22 | 72 | 37 | 0 | 0 | 578 | 2.88 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 13 | A | 345 | 0.21 | 1,555 | 333 | 60 | 13 | 190 | 41 | 1,041 | 223 | 610 | 10.57 | 0.035 | 0.0003 | 0.2 | 0.0012 | 0.7 |
| 32 | A | 1551 | 0.96 | 3,010 | 2900 | 179 | 172 | 228 | 220 | 0 | 0 | 3292 | 2.96 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.0 |
| 33 | M | 2006 | 1.25 | 749 | 933 | 24 | 30 | 57 | 71 | 0 | 0 | 1034 | 2.89 | 0.32 | 0.0006 | 0.6 | 0.0023 | 2.4 |
| 35 | A | 801 | 0.50 | 595 | 296 | 47 | 23 | 127 | 63 | 636 | 316 | 699 | 12.68 | 0.035 | 0.0003 | 0.2 | 0.0014 | 1.0 |
| 36 | A | 1627 | 1.01 | 2,377 | 2402 | 142 | 144 | 365 | 369 | 0 | 0 | 2915 | 3.52 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 37 | A | 219 | 0.14 | 388 | 53 | 41 | 6 | 144 | 20 | 587 | 80 | 158 | 14.14 | 0.035 | 0.0004 | 0.1 | 0.0016 | 0.2 |
| 38 | A | 659 | 0.41 | 3,045 | 1247 | 201 | 82 | 383 | 157 | 7 | 3 | 1489 | 3.38 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 42 | A | 5338 | 3.32 | 1,903 | 6310 | 143 | 474 | 401 | 1330 | 636 | 2109 | 10223 | 7.90 | 0.035 | 0.0002 | 2.2 | 0.0009 | 8.8 |
| 43 | A | 2598 | 1.61 | 350 | 565 | 15 | 24 | 25 | 40 | 110 | 178 | 807 | 7.36 | 0.035 | 0.0002 | 0.2 | 0.0008 | 0.6 |
| 46 | A | 806 | 0.50 | 777 | 389 | 46 | 23 | 109 | 55 | 59 | 30 | 496 | 4.61 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.2 |
| 47 | A | 1995 | 1.24 | 938 | 1162 | 37 | 46 | 88 | 109 | 0 | 0 | 1317 | 3.05 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 48 | A | 795 | 0.49 | 892 | 441 | 33 | 16 | 74 | 37 | 102 | 50 | 544 | 4.84 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 50 | A | 479 | 0.30 | 11,199 | 3332 | 540 | 161 | 1,087 | 323 | 0 | 0 | 3817 | 3.09 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 51 | A | 975 | 0.61 | 75 | 45 | 2 | 1 | 5 | 3 | 0 | 0 | 50 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 52 | A | 1269 | 0.79 | 7,014 | 5529 | 299 | 236 | 801 | 631 | 0 | 0 | 6396 | 3.21 | 0.035 | 0.0001 | 0.5 | 0.0003 | 2.2 |
| 53 | A | 795 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 54 | A | 325 | 0.20 | 1,535 | 310 | 83 | 17 | 247 | 50 | 0 | 0 | 377 | 3.56 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 55 | A | 2042 | 1.27 | 19 | 24 | 1 | 1 | 0 | 0 | 0 | 0 | 25 | 2.31 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 56 | A | 1152 | 0.72 | 1,535 | 1099 | 83 | 59 | 247 | 177 | 0 | 0 | 1335 | 3.56 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 57 | A | 246 | 0.15 | 1,267 | 194 | 86 | 13 | 227 | 35 | 0 | 0 | 241 | 3.70 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 58 | M | 172 | 0.11 | 493 | 53 | 26 | 3 | 37 | 4 | 0 | 0 | 59 | 2.93 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.1 |
| 59 | M | 786 | 0.49 | 974 | 476 | 116 | 57 | 121 | 59 | 0 | 0 | 591 | 3.43 | 0.32 | 0.0007 | 0.4 | 0.0027 | 1.6 |
| 60 | M | 159 | 0.10 | 307 | 30 | 25 | 2 | 66 | 7 | 209 | 21 | 60 | 10.59 | 0.32 | 0.0021 | 0.1 | 0.0087 | 0.5 |
| 61 | M | 97 | 0.06 | 562 | 34 | 30 | 2 | 52 | 3 | 168 | 10 | 49 | 7.25 | 0.32 | 0.0014 | 0.1 | 0.0059 | 0.3 |
| 62 | M | 781 | 0.49 | 1,330 | 645 | 199 | 97 | 192 | 93 | 0 | 0 | 835 | 3.61 | 0.32 | 0.0007 | 0.6 | 0.0029 | 2.4 |
| 65 | A | 795 | 0.49 | 1,018 | 503 | 37 | 18 | 81 | 40 | 102 | 50 | 611 | 4.60 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 66 | A | 812 | 0.50 | 1,167 | 589 | 47 | 24 | 97 | 49 | 102 | 51 | 713 | 4.43 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 67 | M | 778 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 68 | A | 814 | 0.51 | 731 | 370 | 32 | 16 | 64 | 32 | 0 | 0 | 418 | 3.01 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 69 | A | 819 | 0.51 | 1,033 | 526 | 56 | 28 | 91 | 46 | 0 | 0 | 600 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 70 | A | 795 | 0.49 | 2,169 | 1071 | 130 | 64 | 165 | 81 | 0 | 0 | 1217 | 2.96 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.4 |
| 71 | M | 803 | 0.50 | 620 | 309 | 42 | 21 | 25 | 12 | 0 | 0 | 343 | 2.69 | 0.32 | 0.0005 | 0.2 | 0.0021 | 0.7 |
| 72 | M | 815 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 73 | A | 742 | 0.46 | 6,962 | 3209 | 297 | 137 | 799 | 368 | 0 | 0 | 3714 | 3.21 | 0.035 | 0.0001 | 0.3 | 0.0003 | 1.3 |
| 74 | A | 1573 | 0.98 | 560 | 547 | 17 | 17 | 27 | 26 | 1 | 1 | 591 | 2.69 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.2 |
| 75 | M | 805 | 0.50 | 114 | 57 | 5 | 3 | 5 | 3 | 5 | 3 | 65 | 3.46 | 0.32 | 0.0007 | 0.0 | 0.0028 | 0.2 |
| 76 | M | 1597 | 0.99 | 16 | 16 | 1 | 1 | 1 | 1 | 0 | 0 | 18 | 2.86 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 77 | A | 438 | 0.27 | 661 | 180 | 21 | 6 | 30 | 8 | 6 | 2 | 195 | 2.81 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 80 | A | 138 | 0.09 | 773 | 66 | 27 | 2 | 40 | 3 | 12 | 1 | 73 | 2.99 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 81 | M | 407 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 82 | M | 322 | 0.20 | 976 | 195 | 37 | 7 | 68 | 14 | 93 | 19 | 235 | 4.47 | 0.32 | 0.0009 | 0.2 | 0.0036 | 0.8 |
| 83 | A | 95 | 0.06 | 356 | 21 | 16 | 1 | 27 | 2 | 59 | 3 | 27 | 5.54 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 85 | M | 293 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 86 | M | 284 | 0.18 | 802 | 141 | 38 | 7 | 60 | 11 | 650 | 115 | 273 | 11.44 | 0.32 | 0.0023 | 0.6 | 0.0094 | 2.6 |
| 87 | M | 800 | 0.50 | 77 | 38 | 5 | 2 | 13 | 6 | 0 | 0 | 47 | 3.63 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.1 |
| 88 | M | 809 | 0.50 | 70 | 35 | 5 | 3 | 13 | 7 | 0 | 0 | 44 | 3.75 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.1 |
| 95 | A | 439 | 0.27 | 637 | 174 | 14 | 4 | 36 | 10 | 48 | 13 | 200 | 4.05 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 96 | A | 399 | 0.25 | 147 | 36 | 2 | 0 | 4 | 1 | 3 | 1 | 39 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 97 | A | 389 | 0.24 | 468 | 113 | 12 | 3 | 29 | 7 | 41 | 10 | 133 | 4.29 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 98 | A | 160 | 0.10 | 13 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 4.65 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 99 | A | 405 | 0.25 | 330 | 83 | 6 | 2 | 12 | 3 | 13 | 3 | 91 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 100 | M | 227 | 0.14 | 88 | 12 | 3 | 0 | 8 | 1 | 29 | 4 | 18 | 7.60 | 0.32 | 0.0015 | 0.0 | 0.0062 | 0.1 |
| 101 | M | 313 | 0.19 | 728 | 142 | 24 | 5 | 65 | 13 | 98 | 19 | 178 | 5.17 | 0.32 | 0.0010 | 0.2 | 0.0042 | 0.7 |
| 102 | M | 246 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 103 | M | 291 | 0.18 | 297 | 54 | 12 | 2 | 31 | 6 | 148 | 27 | 88 | 9.23 | 0.32 | 0.0018 | 0.2 | 0.0075 | 0.7 |
| 104 | M | 404 | 0.25 | 535 | 134 | 18 | 5 | 53 | 13 | 82 | 21 | 173 | 5.48 | 0.32 | 0.0011 | 0.2 | 0.0044 | 0.8 |
| 105 | M | 195 | 0.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 106 | M | 1803 | 1.12 | 13 | 15 | 0 | 0 | 1 | 1 | 0 | 0 | 16 | 2.82 | 0.32 | 0.0006 | 0.0 | 0.0022 | 0.0 |
| 107 | M | 388 | 0.24 | 554 | 134 | 19 | 5 | 56 | 13 | 81 | 20 | 171 | 5.39 | 0.32 | 0.0011 | 0.2 | 0.0043 | 0.7 |
| 108 | M | 997 | 0.62 | 12 | 7 | 1 | 1 | 2 | 1 | 0 | 0 | 9 | 3.65 | 0.32 | 0.0007 | 0.0 | 0.0029 | 0.0 |
| 109 | A | 787 | 0.49 | 67 | 33 | 4 | 2 | 10 | 5 | 0 | 0 | 40 | 3.49 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 110 | A | 756 | 0.47 | 562 | 264 | 19 | 9 | 57 | 27 | 81 | 38 | 338 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.2 |
| 111 | A | 800 | 0.50 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 112 | A | 817 | 0.51 | 573 | 291 | 21 | 11 | 64 | 32 | 124 | 63 | 397 | 6.36 | 0.035 | 0.0002 | 0.1 | 0.0007 | 0.3 |
| 113 | A | 791 | 0.49 | 18 | 9 | 3 | 1 | 10 | 5 | 24 | 12 | 27 | 13.29 | 0.035 | 0.0004 | 0.0 | 0.0015 | 0.0 |
| 114 | M | 791 | 0.49 | 27 | 13 | 2 | 1 | 8 | 4 | 40 | 20 | 38 | 14.19 | 0.32 | 0.0029 | 0.1 | 0.0117 | 0.4 |
| 115 | A | 851 | 0.53 | 590 | 312 | 21 | 11 | 60 | 32 | 87 | 46 | 401 | 5.41 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 116 | M | 819 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 2 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 117 | A | 757 | 0.47 | 24 | 11 | 1 | 0 | 1 | 0 | 0 | 0 | 12 | 2.63 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 118 | A | 765 | 0.48 | 624 | 297 | 23 | 11 | 66 | 31 | 108 | 51 | 390 | 5.78 | 0.035 | 0.0002 | 0.1 | 0.0006 | 0.2 |
| 119 | A | 782 | 0.49 | 7 | 3 | 1 | 0 | 3 | 1 | 13 | 6 | 12 | 14.92 | 0.035 | 0.0004 | 0.0 | 0.0016 | 0.0 |
| 120 | M | 814 | 0.51 | 43 | 22 | 3 | 2 | 9 | 5 | 44 | 22 | 50 | 12.50 | 0.32 | 0.0025 | 0.1 | 0.0103 | 0.5 |
| 121 | A | 825 | 0.51 | 656 | 336 | 24 | 12 | 65 | 33 | 95 | 49 | 431 | 5.36 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 122 | A | 782 | 0.49 | 6 | 3 | 1 | 0 | 3 | 1 | 19 | 9 | 14 | 17.08 | 0.035 | 0.0005 | 0.0 | 0.0019 | 0.0 |
| 123 | M | 791 | 0.49 | 33 | 16 | 2 | 1 | 2 | 1 | 0 | 0 | 18 | 2.84 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.0 |
| 124 | A | 800 | 0.50 | 701 | 348 | 26 | 13 | 68 | 34 | 95 | 47 | 442 | 5.22 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 125 | A | 817 | 0.51 | 12 | 6 | 1 | 1 | 1 | 1 | 0 | 0 | 7 | 3.07 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 126 | A | 774 | 0.48 | 756 | 363 | 27 | 13 | 70 | 34 | 101 | 49 | 459 | 5.17 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.3 |
| 127 | M | 825 | 0.51 | 32 | 16 | 3 | 2 | 11 | 6 | 636 | 326 | 350 | 22.00 | 0.32 | 0.0045 | 1.6 | 0.0183 | 6.4 |
| 128 | A | 774 | 0.48 | 14 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 2.77 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 129 | A | 823 | 0.51 | 814 | 416 | 29 | 15 | 72 | 37 | 101 | 52 | 519 | 5.01 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 130 | A | 800 | 0.50 | 61 | 30 | 3 | 1 | 1 | 0 | 0 | 0 | 32 | 2.44 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 131 | A | 775 | 0.48 | 27 | 13 | 1 | 0 | 1 | 0 | 0 | 0 | 14 | 2.58 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 133 | A | 804 | 0.50 | 73 | 36 | 4 | 2 | 0 | 0 | 0 | 0 | 38 | 2.31 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 134 | M | 760 | 0.47 | 144 | 68 | 6 | 3 | 8 | 4 | 0 | 0 | 75 | 2.75 | 0.32 | 0.0005 | 0.0 | 0.0022 | 0.2 |
| 135 | A | 816 | 0.51 | 1,040 | 527 | 39 | 20 | 82 | 42 | 102 | 52 | 640 | 4.57 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.3 |
| 136 | A | 786 | 0.49 | 42 | 21 | 3 | 1 | 4 | 2 | 0 | 0 | 24 | 3.13 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 137 | A | 790 | 0.49 | 20 | 10 | 1 | 0 | 2 | 1 | 0 | 0 | 11 | 3.12 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 138 | M | 267 | 0.17 | 6 | 1 | 1 | 0 | 5 | 1 | 25 | 4 | 6 | 17.79 | 0.32 | 0.0036 | 0.0 | 0.0147 | 0.1 |
| 139 | M | 504 | 0.31 | 251 | 79 | 10 | 3 | 30 | 9 | 32 | 10 | 101 | 5.22 | 0.32 | 0.0010 | 0.1 | 0.0042 | 0.4 |
| 140 | M | 527 | 0.33 | 223 | 73 | 8 | 3 | 18 | 6 | 0 | 0 | 82 | 2.94 | 0.32 | 0.0006 | 0.0 | 0.0023 | 0.2 |
| 141 | M | 1001 | 0.62 | 393 | 244 | 15 | 9 | 37 | 23 | 16 | 10 | 287 | 3.75 | 0.32 | 0.0007 | 0.2 | 0.0030 | 0.9 |
| 142 | M | 291 | 0.18 | 11 | 2 | 1 | 0 | 4 | 1 | 7 | 1 | 4 | 10.38 | 0.32 | 0.0021 | 0.0 | 0.0085 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 143 | A | 845 | 0.52 | 531 | 279 | 22 | 12 | 57 | 30 | 8 | 4 | 324 | 3.42 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 144 | A | 783 | 0.49 | 539 | 262 | 23 | 11 | 62 | 30 | 5 | 2 | 306 | 3.37 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 145 | A | 787 | 0.49 | 556 | 272 | 26 | 13 | 70 | 34 | 1 | 0 | 319 | 3.33 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 146 | A | 814 | 0.51 | 4 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 4.05 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 147 | A | 798 | 0.50 | 605 | 300 | 29 | 14 | 76 | 38 | 2 | 1 | 353 | 3.36 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 148 | A | 731 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 2 | 23.25 | 0.035 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 149 | A | 808 | 0.50 | 664 | 333 | 33 | 17 | 80 | 40 | 4 | 2 | 392 | 3.37 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 150 | A | 793 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 151 | M | 787 | 0.49 | 696 | 340 | 35 | 17 | 82 | 40 | 0 | 0 | 397 | 3.25 | 0.32 | 0.0006 | 0.3 | 0.0026 | 1.0 |
| 152 | M | 782 | 0.49 | 25 | 12 | 3 | 1 | 10 | 5 | 629 | 306 | 324 | 22.21 | 0.32 | 0.0045 | 1.5 | 0.0184 | 6.0 |
| 153 | M | 798 | 0.50 | 814 | 404 | 40 | 20 | 85 | 42 | 0 | 0 | 465 | 3.15 | 0.32 | 0.0006 | 0.3 | 0.0025 | 1.2 |
| 154 | A | 901 | 0.56 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 155 | A | 775 | 0.48 | 1,228 | 591 | 59 | 28 | 106 | 51 | 0 | 0 | 671 | 3.01 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.2 |
| 156 | A | 771 | 0.48 | 302 | 145 | 14 | 7 | 18 | 9 | 0 | 0 | 160 | 2.80 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 157 | A | 804 | 0.50 | 1,415 | 707 | 73 | 36 | 123 | 61 | 0 | 0 | 805 | 3.02 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 158 | A | 1039 | 0.65 | 380 | 245 | 10 | 6 | 27 | 17 | 42 | 27 | 296 | 4.70 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 159 | A | 170 | 0.11 | 275 | 29 | 5 | 1 | 13 | 1 | 19 | 2 | 33 | 3.87 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 160 | A | 717 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 161 | A | 784 | 0.49 | 1,520 | 740 | 74 | 36 | 246 | 120 | 0 | 0 | 896 | 3.56 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 162 | A | 1052 | 0.65 | 3,857 | 2521 | 189 | 124 | 592 | 387 | 0 | 0 | 3031 | 3.50 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 163 | A | 350 | 0.22 | 2,337 | 508 | 115 | 25 | 347 | 75 | 0 | 0 | 609 | 3.47 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.2 |
| 164 | A | 473 | 0.29 | 63 | 19 | 5 | 1 | 5 | 1 | 0 | 0 | 21 | 3.03 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 165 | M | 1541 | 0.96 | 6,778 | 6488 | 286 | 274 | 794 | 760 | 0 | 0 | 7522 | 3.23 | 0.32 | 0.0006 | 4.8 | 0.0026 | 19.4 |
| 168 | M | 758 | 0.47 | 451 | 212 | 24 | 11 | 80 | 38 | 0 | 0 | 261 | 3.67 | 0.32 | 0.0007 | 0.2 | 0.0029 | 0.8 |
| 169 | A | 931 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 170 | A | 248 | 0.15 | 1,886 | 291 | 91 | 14 | 267 | 41 | 0 | 0 | 346 | 3.42 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 171 | A | 522 | 0.32 | 2,694 | 874 | 82 | 27 | 192 | 62 | 0 | 0 | 962 | 2.85 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 172 | A | 993 | 0.62 | 2,694 | 1662 | 82 | 51 | 192 | 118 | 0 | 0 | 1831 | 2.85 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.6 |
| 173 | A | 1615 | 1.00 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 9.17 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.0 |
| 174 | A | 330 | 0.21 | 21 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 2.57 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 177 | A | 1110 | 0.69 | 1,655 | 1141 | 128 | 88 | 370 | 255 | 587 | 405 | 1889 | 8.12 | 0.035 | 0.0002 | 0.4 | 0.0009 | 1.7 |
| 178 | A | 7132 | 4.43 | 168 | 744 | 11 | 49 | 23 | 102 | 44 | 195 | 1090 | 6.96 | 0.035 | 0.0002 | 0.2 | 0.0008 | 0.8 |
| 179 | A | 2189 | 1.36 | 1,823 | 2479 | 138 | 188 | 394 | 536 | 631 | 858 | 4060 | 8.02 | 0.035 | 0.0002 | 0.9 | 0.0009 | 3.5 |
| 180 | A | 6725 | 4.18 | 46 | 192 | 3 | 13 | 6 | 25 | 4 | 17 | 246 | 4.72 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 181 | M | 625 | 0.39 | 2,096 | 814 | 71 | 28 | 179 | 69 | 223 | 87 | 997 | 4.73 | 0.32 | 0.0009 | 0.9 | 0.0038 | 3.8 |
| 182 | M | 349 | 0.22 | 3,183 | 690 | 107 | 23 | 286 | 62 | 333 | 72 | 847 | 4.73 | 0.32 | 0.0009 | 0.8 | 0.0038 | 3.2 |
| 183 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 184 | M | 292 | 0.18 | 3,204 | 581 | 108 | 20 | 284 | 52 | 347 | 63 | 715 | 4.78 | 0.32 | 0.0009 | 0.7 | 0.0038 | 2.8 |
| 185 | M | 287 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 186 | M | 477 | 0.30 | 1,037 | 307 | 36 | 11 | 102 | 30 | 118 | 35 | 383 | 4.91 | 0.32 | 0.0010 | 0.4 | 0.0040 | 1.5 |
| 190 | A | 6368 | 3.96 | 6,955 | 27513 | 162 | 641 | 514 | 2033 | 815 | 3224 | 33411 | 4.82 | 0.035 | 0.0001 | 4.2 | 0.0005 | 17.3 |
| 191 | A | 4906 | 3.05 | 5,432 | 16555 | 131 | 399 | 448 | 1365 | 577 | 1759 | 20078 | 4.70 | 0.035 | 0.0001 | 2.5 | 0.0005 | 10.1 |
| 192 | A | 4358 | 2.71 | 1,521 | 4118 | 32 | 87 | 66 | 179 | 248 | 671 | 5054 | 5.34 | 0.035 | 0.0001 | 0.7 | 0.0006 | 2.9 |
| 194 | A | 355 | 0.22 | 305 | 67 | 26 | 6 | 69 | 15 | 0 | 0 | 88 | 4.02 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 195 | A | 397 | 0.25 | 690 | 170 | 47 | 12 | 134 | 33 | 0 | 0 | 215 | 3.80 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 196 | A | 716 | 0.44 | 996 | 443 | 73 | 32 | 202 | 90 | 0 | 0 | 565 | 3.86 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.2 |
| 198 | A | 1009 | 0.63 | 48 | 30 | 3 | 2 | 6 | 4 | 0 | 0 | 36 | 3.33 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 199 | A | 378 | 0.23 | 223 | 52 | 11 | 3 | 20 | 5 | 0 | 0 | 60 | 3.04 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 200 | A | 1403 | 0.87 | 1,267 | 1104 | 86 | 75 | 227 | 198 | 0 | 0 | 1377 | 3.70 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 205 | A | 1501 | 0.93 | 1,502 | 1401 | 82 | 76 | 254 | 237 | 0 | 0 | 1714 | 3.62 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.7 |
| 206 | A | 2658 | 1.65 | 1,486 | 2454 | 81 | 134 | 246 | 406 | 0 | 0 | 2994 | 3.59 | 0.035 | 0.0001 | 0.3 | 0.0004 | 1.1 |
| 207 | A | 2611 | 1.62 | 18 | 29 | 2 | 3 | 9 | 15 | 0 | 0 | 47 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.0 |
| 215 | A | 2937 | 1.82 | 89 | 162 | 2 | 4 | 2 | 4 | 2 | 4 | 173 | 2.85 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 216 | A | 2000 | 1.24 | 359 | 446 | 11 | 14 | 36 | 45 | 46 | 57 | 562 | 5.13 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.3 |
| 217 | A | 663 | 0.41 | 169 | 70 | 6 | 2 | 16 | 7 | 32 | 13 | 92 | 5.95 | 0.035 | 0.0002 | 0.0 | 0.0006 | 0.1 |
| 218 | A | 1167 | 0.72 | 241 | 175 | 8 | 6 | 29 | 21 | 33 | 24 | 225 | 5.36 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 219 | A | 2672 | 1.66 | 14 | 23 | 0 | 0 | 0 | 0 | 1 | 2 | 25 | 3.54 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 221 | A | 2622 | 1.63 | 51 | 83 | 1 | 2 | 2 | 3 | 3 | 5 | 93 | 3.64 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 223 | A | 359 | 0.22 | 194 | 43 | 5 | 1 | 20 | 4 | 14 | 3 | 52 | 4.30 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 225 | M | 1243 | 0.77 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 226 | A | 1643 | 1.02 | 73 | 75 | 3 | 3 | 12 | 12 | 23 | 23 | 113 | 7.64 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 227 | M | 1154 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 229 | A | 1122 | 0.70 | 27 | 19 | 1 | 1 | 1 | 1 | 1 | 1 | 21 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 230 | A | 1007 | 0.63 | 52 | 33 | 1 | 1 | 1 | 1 | 0 | 0 | 34 | 2.37 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 231 | A | 1968 | 1.22 | 152 | 186 | 4 | 5 | 13 | 16 | 33 | 40 | 247 | 6.27 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.2 |
| 232 | A | 1719 | 1.07 | 1,025 | 1095 | 36 | 38 | 129 | 138 | 345 | 368 | 1639 | 7.77 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.4 |
| 233 | A | 976 | 0.61 | 70 | 42 | 3 | 2 | 12 | 7 | 24 | 15 | 66 | 7.94 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 236 | A | 794 | 0.49 | 20 | 10 | 1 | 0 | 4 | 2 | 4 | 2 | 14 | 6.49 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 237 | A | 1556 | 0.97 | 889 | 859 | 35 | 34 | 131 | 127 | 344 | 333 | 1352 | 8.31 | 0.035 | 0.0002 | 0.3 | 0.0009 | 1.2 |
| 238 | A | 1120 | 0.70 | 136 | 95 | 3 | 2 | 10 | 7 | 16 | 11 | 115 | 4.82 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 239 | A | 1385 | 0.86 | 720 | 619 | 31 | 27 | 117 | 101 | 319 | 274 | 1021 | 8.85 | 0.035 | 0.0002 | 0.2 | 0.0010 | 1.0 |
| 240 | A | 240 | 0.15 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 12.69 | 0.035 | 0.0003 | 0.0 | 0.0014 | 0.0 |
| 241 | A | 843 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 242 | M | 989 | 0.61 | 634 | 390 | 26 | 16 | 94 | 58 | 242 | 149 | 612 | 8.26 | 0.32 | 0.0016 | 1.0 | 0.0067 | 4.1 |
| 243 | M | 64 | 0.04 | 23 | 1 | 1 | 0 | 3 | 0 | 7 | 0 | 1 | 7.43 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.0 |
| 244 | M | 173 | 0.11 | 52 | 6 | 6 | 1 | 21 | 2 | 74 | 8 | 16 | 13.80 | 0.32 | 0.0028 | 0.0 | 0.0113 | 0.2 |
| 245 | M | 181 | 0.11 | 53 | 6 | 2 | 0 | 9 | 1 | 26 | 3 | 10 | 9.27 | 0.32 | 0.0019 | 0.0 | 0.0076 | 0.1 |
| 246 | M | 273 | 0.17 | 187 | 32 | 14 | 2 | 55 | 9 | 198 | 34 | 77 | 12.61 | 0.32 | 0.0025 | 0.2 | 0.0104 | 0.8 |
| 247 | M | 87 | 0.05 | 530 | 29 | 18 | 1 | 63 | 3 | 128 | 7 | 40 | 6.69 | 0.32 | 0.0013 | 0.1 | 0.0054 | 0.2 |
| 250 | A | 1366 | 0.85 | 104 | 88 | 3 | 3 | 11 | 9 | 22 | 19 | 119 | 6.28 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 252 | A | 1588 | 0.99 | 1,032 | 1018 | 36 | 36 | 126 | 124 | 339 | 334 | 1512 | 7.67 | 0.035 | 0.0002 | 0.3 | 0.0008 | 1.3 |
| 254 | A | 424 | 0.26 | 35 | 9 | 1 | 0 | 2 | 1 | 2 | 1 | 11 | 3.75 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 256 | A | 943 | 0.59 | 367 | 215 | 9 | 5 | 18 | 11 | 33 | 19 | 250 | 4.24 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 258 | A | 472 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 260 | A | 1783 | 1.11 | 1,346 | 1491 | 43 | 48 | 137 | 152 | 354 | 392 | 2082 | 6.89 | 0.035 | 0.0002 | 0.4 | 0.0007 | 1.6 |
| 261 | A | 1181 | 0.73 | 162 | 119 | 4 | 3 | 13 | 10 | 26 | 19 | 150 | 5.49 | 0.035 | 0.0001 | 0.0 | 0.0006 | 0.1 |
| 262 | M | 860 | 0.53 | 254 | 136 | 9 | 5 | 27 | 14 | 46 | 25 | 180 | 5.89 | 0.32 | 0.0012 | 0.2 | 0.0048 | 0.9 |
| 263 | M | 141 | 0.09 | 1,166 | 102 | 38 | 3 | 120 | 11 | 312 | 27 | 143 | 6.94 | 0.32 | 0.0014 | 0.2 | 0.0056 | 0.8 |
| 264 | M | 224 | 0.14 | 14 | 2 | 1 | 0 | 5 | 1 | 25 | 3 | 6 | 15.01 | 0.32 | 0.0030 | 0.0 | 0.0124 | 0.1 |
| 265 | M | 98 | 0.06 | 834 | 51 | 27 | 2 | 84 | 5 | 212 | 13 | 70 | 6.78 | 0.32 | 0.0013 | 0.1 | 0.0055 | 0.4 |
| 266 | M | 171 | 0.11 | 1,799 | 191 | 64 | 7 | 201 | 21 | 553 | 59 | 278 | 7.42 | 0.32 | 0.0015 | 0.4 | 0.0060 | 1.7 |
| 267 | M | 156 | 0.10 | 216 | 21 | 10 | 1 | 32 | 3 | 63 | 6 | 31 | 7.34 | 0.32 | 0.0015 | 0.0 | 0.0060 | 0.2 |
| 268 | M | 159 | 0.10 | 818 | 81 | 26 | 3 | 80 | 8 | 178 | 18 | 109 | 6.32 | 0.32 | 0.0013 | 0.1 | 0.0051 | 0.6 |
| 269 | A | 2450 | 1.52 | 482 | 734 | 23 | 35 | 77 | 117 | 219 | 333 | 1219 | 8.93 | 0.035 | 0.0002 | 0.3 | 0.0010 | 1.2 |
| 270 | A | 620 | 0.39 | 10 | 4 | 0 | 0 | 1 | 0 | 2 | 1 | 5 | 6.12 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.0 |
| 271 | A | 370 | 0.23 | 488 | 112 | 23 | 5 | 78 | 18 | 220 | 51 | 186 | 8.90 | 0.035 | 0.0002 | 0.0 | 0.0010 | 0.2 |
| 272 | A | 1246 | 0.77 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 7.41 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.0 |
| 273 | M | 625 | 0.39 | 10 | 4 | 0 | 0 | 2 | 1 | 4 | 2 | 6 | 8.61 | 0.32 | 0.0017 | 0.0 | 0.0070 | 0.0 |
| 274 | A | 1231 | 0.76 | 508 | 388 | 23 | 18 | 81 | 62 | 225 | 172 | 640 | 8.83 | 0.035 | 0.0002 | 0.2 | 0.0010 | 0.6 |
| 275 | M | 377 | 0.23 | 25 | 6 | 1 | 0 | 3 | 1 | 4 | 1 | 8 | 5.67 | 0.32 | 0.0011 | 0.0 | 0.0046 | 0.0 |
| 276 | A | 159 | 0.10 | 543 | 54 | 25 | 2 | 83 | 8 | 230 | 23 | 87 | 8.65 | 0.035 | 0.0002 | 0.0 | 0.0009 | 0.1 |
| 277 | M | 1074 | 0.67 | 14 | 9 | 1 | 1 | 2 | 1 | 4 | 3 | 14 | 7.24 | 0.32 | 0.0014 | 0.0 | 0.0059 | 0.1 |
| 278 | M | 239 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 279 | M | 157 | 0.10 | 227 | 22 | 10 | 1 | 33 | 3 | 85 | 8 | 35 | 8.18 | 0.32 | 0.0016 | 0.1 | 0.0067 | 0.2 |
| 280 | M | 163 | 0.10 | 619 | 63 | 29 | 3 | 98 | 10 | 286 | 29 | 104 | 8.99 | 0.32 | 0.0018 | 0.2 | 0.0073 | 0.8 |
| 281 | M | 280 | 0.17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 282 | M | 167 | 0.10 | 454 | 47 | 19 | 2 | 66 | 7 | 171 | 18 | 74 | 8.20 | 0.32 | 0.0016 | 0.1 | 0.0067 | 0.5 |
| 283 | M | 405 | 0.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 284 | M | 365 | 0.23 | 1,004 | 228 | 39 | 9 | 62 | 14 | 71 | 16 | 267 | 4.03 | 0.32 | 0.0008 | 0.2 | 0.0032 | 0.9 |
| 285 | M | 230 | 0.14 | 217 | 31 | 12 | 2 | 25 | 4 | 70 | 10 | 46 | 7.56 | 0.32 | 0.0015 | 0.1 | 0.0061 | 0.3 |
| 286 | M | 209 | 0.13 | 516 | 67 | 19 | 2 | 28 | 4 | 8 | 1 | 74 | 3.01 | 0.32 | 0.0006 | 0.0 | 0.0024 | 0.2 |
| 287 | M | 292 | 0.18 | 439 | 80 | 21 | 4 | 34 | 6 | 325 | 59 | 149 | 11.00 | 0.32 | 0.0022 | 0.3 | 0.0090 | 1.3 |
| 288 | M | 152 | 0.09 | 174 | 16 | 9 | 1 | 21 | 2 | 27 | 3 | 22 | 5.61 | 0.32 | 0.0011 | 0.0 | 0.0045 | 0.1 |
| 289 | M | 285 | 0.18 | 519 | 92 | 24 | 4 | 39 | 7 | 357 | 63 | 166 | 10.65 | 0.32 | 0.0021 | 0.4 | 0.0087 | 1.4 |
| 290 | M | 328 | 0.20 | 227 | 46 | 15 | 3 | 26 | 5 | 649 | 132 | 187 | 17.41 | 0.32 | 0.0035 | 0.7 | 0.0144 | 2.7 |
| 294 | A | 824 | 0.51 | 43 | 22 | 1 | 1 | 0 | 0 | 0 | 0 | 23 | 2.21 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 301 | A | 774 | 0.48 | 41 | 20 | 2 | 1 | 7 | 3 | 0 | 0 | 24 | 3.62 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 302 | A | 796 | 0.49 | 83 | 41 | 3 | 1 | 8 | 4 | 0 | 0 | 46 | 3.06 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 303 | A | 1514 | 0.94 | 50 | 47 | 4 | 4 | 11 | 10 | 625 | 588 | 649 | 21.43 | 0.035 | 0.0006 | 0.4 | 0.0024 | 1.5 |
| 304 | A | 729 | 0.45 | 483 | 219 | 13 | 6 | 44 | 20 | 0 | 0 | 245 | 3.00 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 306 | A | 818 | 0.51 | 1,019 | 518 | 60 | 30 | 203 | 103 | 620 | 315 | 967 | 10.15 | 0.035 | 0.0003 | 0.3 | 0.0011 | 1.1 |
| 307 | M | 0 | 0.00 | 1,220 | 0 | 59 | 0 | 189 | 0 | 620 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 324 | A | 2925 | 1.82 | 86 | 156 | 3 | 5 | 11 | 20 | 9 | 16 | 198 | 4.94 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.1 |
| 325 | A | 2224 | 1.38 | 3,002 | 4147 | 74 | 102 | 268 | 370 | 497 | 687 | 5307 | 5.60 | 0.035 | 0.0001 | 0.8 | 0.0006 | 3.2 |
| 326 | A | 3506 | 2.18 | 664 | 1446 | 19 | 41 | 81 | 176 | 122 | 266 | 1930 | 5.99 | 0.035 | 0.0002 | 0.3 | 0.0006 | 1.2 |
| 327 | A | 227 | 0.14 | 2,251 | 317 | 52 | 7 | 177 | 25 | 365 | 51 | 401 | 5.50 | 0.035 | 0.0001 | 0.1 | 0.0006 | 0.2 |
| 340 | A | 292 | 0.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 351 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 358 | A | 0 | 0.00 | 5,416 | 0 | 130 | 0 | 447 | 0 | 577 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 359 | M | 339 | 0.21 | 54 | 11 | 2 | 0 | 6 | 1 | 7 | 1 | 15 | 5.21 | 0.32 | 0.0010 | 0.0 | 0.0042 | 0.1 |
| 360 | M | 247 | 0.15 | 3,734 | 573 | 86 | 13 | 281 | 43 | 353 | 54 | 683 | 4.48 | 0.32 | 0.0009 | 0.6 | 0.0036 | 2.5 |
| 361 | M | 337 | 0.21 | 3,310 | 693 | 85 | 18 | 326 | 68 | 572 | 120 | 899 | 5.74 | 0.32 | 0.0011 | 1.0 | 0.0046 | 4.2 |
| 362 | M | 338 | 0.21 | 24 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 3.31 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 363 | M | 4495 | 2.79 | 2,313 | 6459 | 48 | 134 | 137 | 383 | 100 | 279 | 7255 | 3.51 | 0.32 | 0.0007 | 5.0 | 0.0028 | 20.4 |
| 364 | M | 286 | 0.18 | 2,820 | 501 | 76 | 14 | 286 | 51 | 467 | 83 | 648 | 5.66 | 0.32 | 0.0011 | 0.7 | 0.0046 | 3.0 |
| 365 | A | 1602 | 1.00 | 723 | 720 | 23 | 23 | 64 | 64 | 93 | 93 | 899 | 5.08 | 0.035 | 0.0001 | 0.1 | 0.0005 | 0.5 |
| 366 | A | 1742 | 1.08 | 5 | 5 | 0 | 0 | 1 | 1 | 4 | 4 | 11 | 11.54 | 0.035 | 0.0003 | 0.0 | 0.0013 | 0.0 |
| 367 | A | 1054 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 375 | M | 388 | 0.24 | 678 | 163 | 16 | 4 | 36 | 9 | 262 | 63 | 239 | 8.11 | 0.32 | 0.0016 | 0.4 | 0.0066 | 1.6 |
| 376 | M | 477 | 0.30 | 1,331 | 394 | 27 | 8 | 60 | 18 | 245 | 73 | 493 | 5.65 | 0.32 | 0.0011 | 0.6 | 0.0046 | 2.2 |
| 377 | M | 339 | 0.21 | 68 | 14 | 2 | 0 | 6 | 1 | 8 | 2 | 18 | 4.91 | 0.32 | 0.0010 | 0.0 | 0.0040 | 0.1 |
| 378 | M | 212 | 0.13 | 957 | 126 | 19 | 3 | 38 | 5 | 109 | 14 | 148 | 4.56 | 0.32 | 0.0009 | 0.1 | 0.0037 | 0.5 |
| 379 | M | 331 | 0.21 | 530 | 109 | 12 | 2 | 25 | 5 | 183 | 38 | 154 | 7.66 | 0.32 | 0.0015 | 0.2 | 0.0062 | 1.0 |
| 380 | M | 283 | 0.18 | 24 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 3.31 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 381 | M | 469 | 0.29 | 681 | 198 | 13 | 4 | 26 | 8 | 18 | 5 | 215 | 3.05 | 0.32 | 0.0006 | 0.1 | 0.0024 | 0.5 |
| 386 | A | 810 | 0.50 | 230 | 116 | 20 | 10 | 56 | 28 | 57 | 29 | 183 | 7.12 | 0.035 | 0.0002 | 0.0 | 0.0008 | 0.1 |
| 387 | A | 2761 | 1.72 | 1,317 | 2259 | 58 | 99 | 179 | 307 | 569 | 976 | 3641 | 8.70 | 0.035 | 0.0002 | 0.8 | 0.0009 | 3.4 |
| 388 | A | 175 | 0.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 389 | A | 189 | 0.12 | 25 | 3 | 1 | 0 | 1 | 0 | 3 | 0 | 4 | 4.68 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.0 |
| 390 | A | 1189 | 0.74 | 430 | 318 | 18 | 13 | 44 | 32 | 33 | 24 | 388 | 4.38 | 0.035 | 0.0001 | 0.0 | 0.0005 | 0.2 |
| 392 | A | 436 | 0.27 | 477 | 129 | 28 | 8 | 113 | 31 | 103 | 28 | 195 | 6.79 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 393 | A | 934 | 0.58 | 49 | 28 | 11 | 6 | 70 | 41 | 70 | 41 | 116 | 13.08 | 0.035 | 0.0004 | 0.0 | 0.0014 | 0.2 |
| 394 | A | 1292 | 0.80 | 2,613 | 2097 | 109 | 87 | 340 | 273 | 451 | 362 | 2820 | 5.88 | 0.035 | 0.0002 | 0.4 | 0.0006 | 1.8 |
| 396 | A | 2366 | 1.47 | 2,125 | 3123 | 73 | 107 | 216 | 317 | 293 | 431 | 3979 | 5.28 | 0.035 | 0.0001 | 0.6 | 0.0006 | 2.3 |
| 397 | A | 1588 | 0.99 | 203 | 200 | 7 | 7 | 16 | 16 | 4 | 4 | 227 | 3.27 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 398 | A | 560 | 0.35 | 2,446 | 851 | 73 | 25 | 184 | 64 | 1 | 0 | 941 | 2.89 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.3 |
| 399 | A | 3389 | 2.11 | 242 | 509 | 4 | 8 | 7 | 15 | 0 | 0 | 533 | 2.45 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 400 | A | 1704 | 1.06 | 1,740 | 1842 | 50 | 53 | 140 | 148 | 4 | 4 | 2047 | 2.96 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.6 |
| 401 | M | 790 | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 402 | M | 1199 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 404 | M | 768 | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 405 | M | 1010 | 0.63 | 11 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 406 | A | 395 | 0.25 | 668 | 164 | 59 | 14 | 18 | 4 | 7 | 2 | 185 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 407 | A | 756 | 0.47 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 408 | A | 1072 | 0.67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 409 | A | 1137 | 0.71 | 176 | 124 | 7 | 5 | 5 | 4 | 0 | 0 | 133 | 2.52 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 410 | A | 884 | 0.55 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 23.25 | 0.035 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 411 | A | 2332 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 412 | A | 141 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 413 | A | 678 | 0.42 | 125 | 53 | 6 | 3 | 23 | 10 | 28 | 12 | 77 | 6.71 | 0.035 | 0.0002 | 0.0 | 0.0007 | 0.1 |
| 414 | A | 895 | 0.56 | 7 | 4 | 0 | 0 | 0 | 0 | 5 | 3 | 7 | 10.93 | 0.035 | 0.0003 | 0.0 | 0.0012 | 0.0 |
| 415 | A | 855 | 0.53 | 1,870 | 993 | 62 | 33 | 172 | 91 | 238 | 126 | 1244 | 5.08 | 0.035 | 0.0001 | 0.2 | 0.0005 | 0.7 |
| 416 | M | 284 | 0.18 | 626 | 110 | 18 | 3 | 66 | 12 | 107 | 19 | 144 | 5.75 | 0.32 | 0.0011 | 0.2 | 0.0046 | 0.7 |
| 417 | M | 303 | 0.19 | 8 | 2 | 0 | 0 | 2 | 0 | 67 | 13 | 14 | 20.76 | 0.32 | 0.0042 | 0.1 | 0.0172 | 0.2 |
| 419 | M | 343 | 0.21 | 367 | 78 | 9 | 2 | 30 | 6 | 76 | 16 | 103 | 6.12 | 0.32 | 0.0012 | 0.1 | 0.0050 | 0.5 |
| 420 | M | 300 | 0.19 | 3 | 1 | 0 | 0 | 1 | 0 | 33 | 6 | 7 | 21.23 | 0.32 | 0.0043 | 0.0 | 0.0176 | 0.1 |
| 421 | A | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 424 | M | 828 | 0.51 | 101 | 52 | 6 | 3 | 15 | 8 | 640 | 329 | 392 | 20.09 | 0.32 | 0.0041 | 1.6 | 0.0166 | 6.5 |
| 425 | M | 203 | 0.13 | 23 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 3.00 | 0.32 | 0.0006 | 0.0 | 0.0024 | 0.0 |
| 426 | M | 276 | 0.17 | 12 | 2 | 1 | 0 | 2 | 0 | 36 | 6 | 9 | 17.48 | 0.32 | 0.0035 | 0.0 | 0.0144 | 0.1 |
| 427 | A | 654 | 0.41 | 23 | 9 | 1 | 0 | 3 | 1 | 0 | 0 | 11 | 3.33 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.0 |
| 428 | M | 293 | 0.18 | 27 | 5 | 1 | 0 | 3 | 1 | 1 | 0 | 6 | 3.80 | 0.32 | 0.0007 | 0.0 | 0.0030 | 0.0 |
| 429 | M | 219 | 0.14 | 13 | 2 | 1 | 0 | 1 | 0 | 35 | 5 | 7 | 17.18 | 0.32 | 0.0035 | 0.0 | 0.0142 | 0.1 |
| 430 | M | 114 | 0.07 | 639 | 45 | 21 | 1 | 58 | 4 | 70 | 5 | 56 | 4.81 | 0.32 | 0.0009 | 0.1 | 0.0039 | 0.2 |
| 431 | M | 524 | 0.33 | 4 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 11.18 | 0.32 | 0.0022 | 0.0 | 0.0092 | 0.0 |
| 432 | M | 629 | 0.39 | 17 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 3.30 | 0.32 | 0.0006 | 0.0 | 0.0026 | 0.0 |
| 433 | A | 1802 | 1.12 | 1,581 | 1770 | 42 | 47 | 132 | 148 | 22 | 25 | 1989 | 3.19 | 0.035 | 0.0001 | 0.2 | 0.0003 | 0.7 |
| 434 | A | 1269 | 0.79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 435 | A | 1537 | 0.95 | 70 | 67 | 1 | 1 | 2 | 2 | 0 | 0 | 70 | 2.44 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 436 | M | 178 | 0.11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 441 | A | 1192 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 442 | A | 2365 | 1.47 | 1,444 | 2121 | 40 | 59 | 129 | 190 | 30 | 44 | 2414 | 3.36 | 0.035 | 0.0001 | 0.2 | 0.0004 | 0.9 |
| 443 | A | 1588 | 0.99 | 10 | 10 | 0 | 0 | 1 | 1 | 0 | 0 | 11 | 3.00 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 444 | A | 905 | 0.56 | 1,403 | 789 | 40 | 22 | 128 | 72 | 30 | 17 | 900 | 3.38 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.3 |
| 452 | M | 815 | 0.51 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 453 | A | 1563 | 0.97 | 1,288 | 1251 | 34 | 33 | 121 | 117 | 28 | 27 | 1428 | 3.40 | 0.035 | 0.0001 | 0.1 | 0.0004 | 0.5 |
| 454 | M | 661 | 0.41 | 246 | 101 | 5 | 2 | 15 | 6 | 0 | 0 | 109 | 2.74 | 0.32 | 0.0005 | 0.1 | 0.0022 | 0.2 |
| 455 | A | 366 | 0.23 | 1,034 | 235 | 30 | 7 | 106 | 24 | 27 | 6 | 272 | 3.55 | 0.035 | 0.0001 | 0.0 | 0.0004 | 0.1 |
| 458 | M | 237 | 0.15 | 9 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3.09 | 0.32 | 0.0006 | 0.0 | 0.0025 | 0.0 |
| 464 | A | 702 | 0.44 | 61 | 27 | 3 | 1 | 5 | 2 | 0 | 0 | 30 | 2.98 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 477 | M | 750 | 0.47 | 80 | 37 | 4 | 2 | 7 | 3 | 9 | 4 | 47 | 4.84 | 0.32 | 0.0010 | 0.0 | 0.0039 | 0.2 |
| 478 | M | 253 | 0.16 | 1,054 | 166 | 36 | 6 | 117 | 18 | 46 | 7 | 197 | 3.90 | 0.32 | 0.0008 | 0.2 | 0.0031 | 0.6 |
| 479 | M | 461 | 0.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.32 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 480 | A | 500 | 0.31 | 726 | 226 | 15 | 5 | 64 | 20 | 0 | 0 | 250 | 2.96 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.1 |
| 481 | M | 377 | 0.23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 23.25 | 0.32 | 0.0047 | 0.0 | 0.0193 | 0.0 |
| 482 | A | 1353 | 0.84 | 164 | 138 | 2 | 2 | 10 | 8 | 1 | 1 | 149 | 2.83 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 483 | M | 589 | 0.37 | 837 | 306 | 22 | 8 | 96 | 35 | 0 | 0 | 349 | 3.18 | 0.32 | 0.0006 | 0.2 | 0.0025 | 0.9 |
| 484 | M | 684 | 0.42 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 12.69 | 0.32 | 0.0026 | 0.0 | 0.0104 | 0.0 |
| 485 | M | 319 | 0.20 | 1,360 | 270 | 23 | 5 | 99 | 20 | 0 | 0 | 294 | 2.83 | 0.32 | 0.0006 | 0.2 | 0.0023 | 0.7 |
| 488 | A | 1441 | 0.90 | 9 | 8 | 0 | 0 | 1 | 1 | 0 | 0 | 9 | 3.09 | 0.035 | 0.0001 | 0.0 | 0.0003 | 0.0 |
| 494 | A | 1039 | 0.65 | 2,525 | 1630 | 76 | 49 | 188 | 121 | 0 | 0 | 1800 | 2.87 | 0.035 | 0.0001 | 0.1 | 0.0003 | 0.6 |
| 498 | M | 792 | 0.49 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.32 | 0.0004 | 0.0 | 0.0017 | 0.0 |
| 499 | M | 660 | 0.41 | 170 | 70 | 11 | 5 | 20 | 8 | 645 | 264 | 347 | 18.51 | 0.32 | 0.0038 | 1.3 | 0.0153 | 5.3 |
| 500 | M | 395 | 0.25 | 189 | 46 | 12 | 3 | 21 | 5 | 645 | 158 | 213 | 18.12 | 0.32 | 0.0037 | 0.8 | 0.0150 | 3.2 |
| 502 | A | 855 | 0.53 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.13 | 0.035 | 0.0001 | 0.0 | 0.0002 | 0.0 |
| 503 | A | 820 | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.0000 | 0.0 |
| 504 | M | 360 | 0.22 | 251 | 56 | 25 | 6 | 94 | 21 | 0 | 0 | 83 | 4.81 | 0.32 | 0.0010 | 0.1 | 0.0039 | 0.3 |
| | | | | **227822** | **177426** | **9364** | **6771** | **24444** | **18539** | **28843** | **20967** | **223704** | | **Totals:** | | **59.1** | | **240.7** |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 830 | 80 | 210 | 2,450 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 650 | 80 | 220 | 2,490 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 680 | 80 | 230 | 2,520 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 740 | 90 | 240 | 2,570 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 770 | 90 | 250 | 2,620 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 790 | 90 | 260 | 2,630 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 810 | 90 | 260 | 2,640 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 830 | 90 | 270 | 2,670 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 920 | 100 | 310 | 2,860 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 950 | 100 | 310 | 2,890 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 1,030 | 100 | 320 | 2,910 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,440 | 130 | 420 | 3,230 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,500 | 140 | 460 | 3,360 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,540 | 140 | 480 | 3,480 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,540 | 140 | 480 | 3,490 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,610 | 150 | 490 | 3,500 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 2,230 | 180 | 590 | 3,780 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 2,490 | 190 | 620 | 3,830 |
| FRWY19 | SR60 | Market St to Main St | 2,630 | 200 | 670 | 3,950 |
| FRWY20 | SR60 | Main St to SR-91 | 3,010 | 230 | 760 | 4,200 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 5,080 | 340 | 1,200 | 6,960 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 5,210 | 350 | 1,250 | 7,120 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 5,350 | 360 | 1,290 | 7,190 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 5,890 | 380 | 1,370 | 7,420 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 7,110 | 430 | 1,510 | 7,770 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 7,720 | 400 | 1,420 | 7,330 |
| FRWY27 | SR60 | I-215 to Day St | 8,150 | 460 | 1,650 | 8,410 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 8,170 | 490 | 1,720 | 8,410 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 8,130 | 510 | 1,770 | 8,440 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 9,210 | 540 | 1,830 | 8,520 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 10,110 | 590 | 1,900 | 9,200 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 10,910 | 630 | 1,940 | 9,200 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 12,070 | 690 | 2,070 | 9,320 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,650 | 690 | 2,030 | 8,920 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 6,820 | 300 | 820 | 2,470 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 6,830 | 230 | 670 | 1,540 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 6,800 | 220 | 640 | 1,510 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 393 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 393 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 393 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 393 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 393 |
| FRWY75 | SR91 | I-15 to McKinley St | 1,160 | 90 | 330 | 2,010 |
| FRWY76 | SR91 | McKinley St to Pierce St | 1,320 | 100 | 360 | 2,090 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 1,320 | 100 | 360 | 2,090 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 1,410 | 100 | 370 | 2,100 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,530 | 100 | 390 | 2,120 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,610 | 100 | 400 | 2,150 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,680 | 110 | 410 | 2,170 |

| ID | Arterial | From | Freeway Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY82 | SR91 | Adam St to Madison St | 1,730 | 110 | 430 | 2,200 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,740 | 110 | 430 | 2,210 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,660 | 90 | 380 | 2,010 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,640 | 90 | 380 | 2,000 |
| FRWY86 | SR91 | 14th St to University Ave | 1,660 | 80 | 340 | 1,860 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,790 | 90 | 350 | 1,880 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 2,930 | 100 | 300 | 1,090 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 2,040 | 70 | 250 | 1,040 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 1,610 | 60 | 220 | 1,000 |
| FRWY106 | I-10 | 22nd St to S 8th St | 1,500 | 60 | 210 | 990 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 1,410 | 50 | 200 | 970 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 1,330 | 50 | 190 | 960 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 1,230 | 50 | 150 | 920 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 1,230 | 50 | 150 | 920 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 1,210 | 50 | 150 | 910 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 1,200 | 40 | 150 | 910 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 1,020 | 40 | 120 | 790 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 1,020 | 40 | 120 | 790 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 1,390 | 20 | 130 | 250 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,620 | 30 | 140 | 250 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,800 | 30 | 160 | 260 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,850 | 40 | 160 | 270 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,440 | 30 | 120 | 270 |
| FRWY167 | I-215 | Redlands Ave to D St | 480 | 10 | 50 | 310 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 620 | 20 | 70 | 400 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 590 | 20 | 70 | 390 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 320 | 10 | 40 | 330 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 330 | 10 | 50 | 390 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 750 | 30 | 80 | 420 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 470 | 20 | 70 | 440 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 710 | 30 | 90 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 760 | 30 | 100 | 590 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 380 | 30 | 90 | 880 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 370 | 20 | 90 | 870 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 340 | 20 | 90 | 870 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 300 | 20 | 70 | 810 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 270 | 20 | 70 | 800 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 1,200 | 60 | 180 | 780 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 1,140 | 60 | 180 | 800 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 1,070 | 60 | 160 | 710 |
| FRWY142 | SR-215 | Mill St to 2rd St | 1,080 | 60 | 160 | 700 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 1,020 | 50 | 140 | 640 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 890 | 40 | 110 | 580 |

**World Logistics Center** **2035**

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Freeway Circulation
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3570 | 830 | 80 | 210 | 2,450 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 16 | 5 | 171 | 2414 | 2609 | 2551 |
| FRWY2 | 3440 | 650 | 80 | 220 | 2,490 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 16 | 5 | 179 | 2454 | 2656 | 3553 |
| FRWY3 | 3510 | 680 | 80 | 230 | 2,520 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 16 | 5 | 188 | 2483 | 2694 | 2907 |
| FRWY4 | 3640 | 740 | 90 | 240 | 2,570 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 18 | 6 | 196 | 2533 | 2754 | 3160 |
| FRWY5 | 3730 | 770 | 90 | 250 | 2,620 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 18 | 6 | 204 | 2582 | 2812 | 2484 |
| FRWY6 | 3770 | 790 | 90 | 260 | 2,630 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2592 | 2830 | 3669 |
| FRWY7 | 3800 | 810 | 90 | 260 | 2,640 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2602 | 2840 | 2911 |
| FRWY8 | 3860 | 830 | 90 | 270 | 2,670 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 18 | 6 | 220 | 2631 | 2877 | 2747 |
| FRWY9 | 4190 | 920 | 100 | 310 | 2,860 | 1792 | 1.113 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2819 | 3100 | 3451 |
| FRWY10 | 4250 | 950 | 100 | 310 | 2,890 | 1665 | 1.034 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2848 | 3130 | 3237 |
| FRWY11 | 4360 | 1,030 | 100 | 320 | 2,910 | 849 | 0.527 | 2 | 0 | 0 | 0 | 20 | 7 | 261 | 2868 | 3158 | 1665 |
| FRWY12 | 5220 | 1,440 | 130 | 420 | 3,230 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 26 | 9 | 342 | 3183 | 3564 | 5090 |
| FRWY13 | 5460 | 1,500 | 140 | 460 | 3,360 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 28 | 9 | 375 | 3311 | 3727 | 3911 |
| FRWY14 | 5640 | 1,540 | 140 | 480 | 3,480 | 2444 | 1.518 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3430 | 3862 | 5863 |
| FRWY15 | 5650 | 1,540 | 140 | 480 | 3,490 | 1608 | 0.999 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3439 | 3872 | 3868 |
| FRWY16 | 5750 | 1,610 | 150 | 490 | 3,500 | 2722 | 1.691 | 3 | 0 | 0 | 0 | 30 | 10 | 400 | 3449 | 3893 | 6582 |
| FRWY17 | 6780 | 2,230 | 180 | 590 | 3,780 | 3198 | 1.987 | 4 | 0 | 0 | 0 | 37 | 12 | 481 | 3725 | 4259 | 8462 |
| FRWY18 | 7130 | 2,490 | 190 | 620 | 3,830 | 2509 | 1.559 | 4 | 0 | 0 | 0 | 39 | 13 | 506 | 3774 | 4336 | 6759 |
| FRWY19 | 7450 | 2,630 | 200 | 670 | 3,950 | 910 | 0.565 | 4 | 0 | 0 | 0 | 41 | 13 | 546 | 3893 | 4498 | 2543 |
| FRWY20 | 8200 | 3,010 | 230 | 760 | 4,200 | 774 | 0.481 | 5 | 0 | 0 | 1 | 47 | 15 | 620 | 4139 | 4827 | 2321 |
| FRWY21 | 13580 | 5,080 | 340 | 1,200 | 6,960 | 1798 | 1.117 | 8 | 1 | 0 | 1 | 69 | 23 | 978 | 6859 | 7940 | 8868 |
| FRWY22 | 13930 | 5,210 | 350 | 1,250 | 7,120 | 1035 | 0.643 | 9 | 1 | 1 | 1 | 71 | 24 | 1019 | 7017 | 8141 | 5234 |
| FRWY23 | 14190 | 5,350 | 360 | 1,290 | 7,190 | 1042 | 0.647 | 9 | 1 | 1 | 1 | 73 | 24 | 1052 | 7086 | 8246 | 5337 |
| FRWY24 | 15060 | 5,890 | 380 | 1,370 | 7,420 | 2260 | 1.404 | 10 | 1 | 1 | 1 | 77 | 26 | 1117 | 7312 | 8544 | 11995 |
| FRWY25 | 16820 | 7,110 | 430 | 1,510 | 7,770 | 1305 | 0.811 | 12 | 1 | 1 | 1 | 87 | 29 | 1231 | 7657 | 9019 | 7312 |
| FRWY26 | 16870 | 7,720 | 400 | 1,420 | 7,330 | 977 | 0.607 | 13 | 1 | 1 | 1 | 81 | 27 | 1158 | 7224 | 8505 | 5162 |
| FRWY27 | 18670 | 8,150 | 460 | 1,650 | 8,410 | 1186 | 0.737 | 14 | 1 | 1 | 1 | 93 | 31 | 1345 | 8288 | 9774 | 7201 |
| FRWY28 | 18790 | 8,170 | 490 | 1,720 | 8,410 | 1642 | 1.020 | 14 | 1 | 1 | 1 | 99 | 33 | 1402 | 8288 | 9840 | 10037 |
| FRWY29 | 18850 | 8,130 | 510 | 1,770 | 8,440 | 1636 | 1.016 | 13 | 1 | 1 | 1 | 103 | 34 | 1443 | 8318 | 9915 | 10077 |
| FRWY30 | 20100 | 9,210 | 540 | 1,830 | 8,520 | 1555 | 0.966 | 15 | 1 | 1 | 2 | 110 | 36 | 1492 | 8397 | 10053 | 9711 |
| FRWY31 | 21800 | 10,110 | 590 | 1,900 | 9,200 | 3384 | 2.102 | 17 | 1 | 1 | 2 | 120 | 40 | 1549 | 9067 | 10796 | 22695 |
| FRWY32 | 22680 | 10,910 | 630 | 1,940 | 9,200 | 1112 | 0.691 | 18 | 1 | 1 | 2 | 128 | 42 | 1582 | 9067 | 10841 | 7489 |
| FRWY33 | 24150 | 12,070 | 690 | 2,070 | 9,320 | 1935 | 1.202 | 20 | 1 | 1 | 2 | 140 | 46 | 1688 | 9185 | 11084 | 13323 |
| FRWY34 | 24290 | 12,650 | 690 | 2,030 | 8,920 | 1675 | 1.041 | 21 | 1 | 1 | 2 | 140 | 46 | 1655 | 8791 | 10658 | 11090 |
| FRWY35 | 10410 | 6,820 | 300 | 820 | 2,470 | 1143 | 0.710 | 11 | 1 | 1 | 1 | 61 | 20 | 669 | 2434 | 3198 | 2271 |
| FRWY36 | 9270 | 6,830 | 230 | 670 | 1,540 | 9120 | 5.665 | 11 | 1 | 1 | 1 | 47 | 15 | 546 | 1518 | 2140 | 12124 |
| FRWY37 | 9170 | 6,800 | 220 | 640 | 1,510 | 3802 | 2.362 | 11 | 1 | 1 | 1 | 45 | 15 | 522 | 1488 | 2083 | 4920 |
| FRWY294 | 393 | 0 | 0 | 0 | 393 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 704 |
| FRWY295 | 393 | 0 | 0 | 0 | 393 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 252 |
| FRWY296 | 393 | 0 | 0 | 0 | 393 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 436 |
| FRWY297 | 393 | 0 | 0 | 0 | 393 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 362 |
| FRWY299 | 393 | 0 | 0 | 0 | 393 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 398 |
| FRWY75 | 3590 | 1,160 | 90 | 330 | 2,010 | 2861 | 1.777 | 2 | 0 | 0 | 0 | 18 | 6 | 269 | 1981 | 2277 | 4046 |
| FRWY76 | 3870 | 1,320 | 100 | 360 | 2,090 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 | 3701 |
| FRWY77 | 3870 | 1,320 | 100 | 360 | 2,090 | 450 | 0.280 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 | 666 |
| FRWY78 | 3980 | 1,410 | 100 | 370 | 2,100 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 20 | 7 | 302 | 2070 | 2401 | 2064 |
| FRWY79 | 4140 | 1,530 | 100 | 390 | 2,120 | 1713 | 1.064 | 3 | 0 | 0 | 0 | 20 | 7 | 318 | 2089 | 2437 | 2594 |
| FRWY80 | 4260 | 1,610 | 100 | 400 | 2,150 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 20 | 7 | 326 | 2119 | 2475 | 2619 |
| FRWY81 | 4370 | 1,680 | 110 | 410 | 2,170 | 2512 | 1.560 | 3 | 0 | 0 | 0 | 22 | 7 | 334 | 2139 | 2506 | 3911 |
| FRWY82 | 4470 | 1,730 | 110 | 430 | 2,200 | 1674 | 1.040 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2168 | 2552 | 2654 |
| FRWY83 | 4490 | 1,740 | 110 | 430 | 2,210 | 1819 | 1.130 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2178 | 2562 | 2895 |
| FRWY84 | 4140 | 1,660 | 90 | 380 | 2,010 | 1182 | 0.734 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1981 | 2318 | 1702 |
| FRWY85 | 4110 | 1,640 | 90 | 380 | 2,000 | 2360 | 1.466 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1971 | 2308 | 3384 |
| FRWY86 | 3940 | 1,660 | 80 | 340 | 1,860 | 783 | 0.486 | 3 | 0 | 0 | 0 | 16 | 5 | 277 | 1833 | 2135 | 1039 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY87 | 4110 | 1,790 | 90 | 350 | 1,880 | 1370 | 0.851 | 3 | 0 | 0 | 0 | 18 | 6 | 285 | 1853 | 2166 | 1843 |
| FRWY101 | 4420 | 2,930 | 100 | 300 | 1,090 | 1703 | 1.058 | 5 | 0 | 0 | 1 | 20 | 7 | 245 | 1074 | 1352 | 1430 |
| FRWY102 | 3950 | 2,520 | 90 | 280 | 1,060 | 925 | 0.575 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 | 748 |
| FRWY103 | 3950 | 2,520 | 90 | 280 | 1,060 | 1770 | 1.100 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 | 1432 |
| FRWY104 | 3400 | 2,040 | 70 | 250 | 1,040 | 3182 | 1.977 | 3 | 0 | 0 | 0 | 14 | 5 | 204 | 1025 | 1252 | 2474 |
| FRWY105 | 2890 | 1,610 | 60 | 220 | 1,000 | 1010 | 0.627 | 3 | 0 | 0 | 0 | 12 | 4 | 179 | 986 | 1184 | 743 |
| FRWY106 | 2760 | 1,500 | 60 | 210 | 990 | 1305 | 0.811 | 2 | 0 | 0 | 0 | 12 | 4 | 171 | 976 | 1166 | 945 |
| FRWY107 | 2630 | 1,410 | 50 | 200 | 970 | 1655 | 1.028 | 2 | 0 | 0 | 0 | 10 | 3 | 163 | 956 | 1135 | 1167 |
| FRWY108 | 2530 | 1,330 | 50 | 190 | 960 | 4341 | 2.697 | 2 | 0 | 0 | 0 | 10 | 3 | 155 | 946 | 1117 | 3013 |
| FRWY109 | 2350 | 1,230 | 50 | 150 | 920 | 1728 | 1.073 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 | 1122 |
| FRWY110 | 2350 | 1,230 | 50 | 150 | 920 | 2788 | 1.732 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 | 1810 |
| FRWY111 | 2320 | 1,210 | 50 | 150 | 910 | 7717 | 4.794 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 897 | 1035 | 4962 |
| FRWY112 | 2300 | 1,200 | 40 | 150 | 910 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 8 | 3 | 122 | 897 | 1032 | 888 |
| FRWY113 | 1970 | 1,020 | 40 | 120 | 790 | 3380 | 2.100 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 | 1867 |
| FRWY114 | 1970 | 1,020 | 40 | 120 | 790 | 3719 | 2.310 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 | 2054 |
| FRWY129 | 1790 | 1,390 | 20 | 130 | 250 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 106 | 246 | 361 | 1003 |
| FRWY130 | 2040 | 1,620 | 30 | 140 | 250 | 3830 | 2.379 | 3 | 0 | 0 | 0 | 6 | 2 | 114 | 246 | 372 | 885 |
| FRWY131 | 2250 | 1,800 | 30 | 160 | 260 | 2967 | 1.843 | 3 | 0 | 0 | 0 | 6 | 2 | 130 | 256 | 398 | 734 |
| FRWY132 | 2320 | 1,850 | 40 | 160 | 270 | 1163 | 0.722 | 3 | 0 | 0 | 0 | 8 | 3 | 130 | 266 | 411 | 297 |
| FRWY133 | 1860 | 1,440 | 30 | 120 | 270 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 266 | 375 | 1058 |
| FRWY167 | 850 | 480 | 10 | 50 | 310 | 1471 | 0.914 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 306 | 350 | 320 |
| FRWY168 | 1110 | 620 | 20 | 70 | 400 | 916 | 0.569 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 394 | 458 | 261 |
| FRWY169 | 1070 | 590 | 20 | 70 | 390 | 4924 | 3.059 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 384 | 448 | 1370 |
| FRWY171 | 700 | 320 | 10 | 40 | 330 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 325 | 361 | 481 |
| FRWY172 | 780 | 330 | 10 | 50 | 390 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 384 | 428 | 799 |
| FRWY173 | 1280 | 750 | 30 | 80 | 420 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 414 | 489 | 759 |
| FRWY174 | 1000 | 470 | 20 | 70 | 440 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 434 | 497 | 350 |
| FRWY175 | 1370 | 710 | 30 | 90 | 540 | 1547 | 0.961 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 532 | 615 | 591 |
| FRWY176 | 1480 | 760 | 30 | 100 | 590 | 1359 | 0.844 | 1 | 0 | 0 | 0 | 6 | 2 | 82 | 581 | 673 | 568 |
| FRWY134 | 1380 | 380 | 30 | 90 | 880 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 867 | 950 | 817 |
| FRWY135 | 1350 | 370 | 20 | 90 | 870 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 | 996 |
| FRWY136 | 1320 | 340 | 20 | 90 | 870 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 | 604 |
| FRWY137 | 1200 | 300 | 20 | 70 | 810 | 1516 | 0.942 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 798 | 861 | 811 |
| FRWY138 | 1160 | 270 | 20 | 70 | 800 | 2485 | 1.544 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 788 | 851 | 1314 |
| FRWY139 | 2220 | 1,200 | 60 | 180 | 780 | 1950 | 1.211 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 769 | 934 | 1132 |
| FRWY140 | 2180 | 1,140 | 60 | 180 | 800 | 1581 | 0.982 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 788 | 954 | 937 |
| FRWY141 | 2000 | 1,070 | 60 | 160 | 710 | 1447 | 0.899 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 700 | 849 | 763 |
| FRWY142 | 2000 | 1,080 | 60 | 160 | 700 | 938 | 0.583 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 690 | 839 | 489 |
| FRWY143 | 1850 | 1,020 | 50 | 140 | 640 | 2032 | 1.262 | 2 | 0 | 0 | 0 | 10 | 3 | 114 | 631 | 760 | 960 |
| FRWY144 | 1620 | 890 | 40 | 110 | 580 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 8 | 3 | 90 | 572 | 674 | 1306 |
| | | | | | | | | | | | | | | | | | **312110** |

**VMT per Vehicle Class**

| Freeway Segment | **Speed Group** | **LDA-DSL** (miles) | **LDT1-DSL** (miles) | **LDT2-DSL** (miles) | **MDT-DSL** (miles) | **LHDT1-DSL** (miles) | **LHDT2_DSL** (miles) | **MHDT-DSL** (miles) | **HHDT-DSL** (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 6 | 1 | 0 | 0 | 0 | 16 | 5 | 167 | 2361 |
| FRWY2 | 6 | 1 | 0 | 0 | 0 | 22 | 7 | 240 | 3282 |
| FRWY3 | 6 | 1 | 0 | 0 | 0 | 18 | 6 | 202 | 2680 |
| FRWY4 | 6 | 1 | 0 | 0 | 0 | 21 | 7 | 225 | 2906 |
| FRWY5 | 6 | 1 | 0 | 0 | 0 | 16 | 5 | 180 | 2281 |
| FRWY6 | 6 | 2 | 0 | 0 | 0 | 24 | 8 | 275 | 3360 |
| FRWY7 | 6 | 1 | 0 | 0 | 0 | 19 | 6 | 217 | 2667 |
| FRWY8 | 6 | 1 | 0 | 0 | 0 | 17 | 6 | 210 | 2512 |
| FRWY9 | 6 | 2 | 0 | 0 | 0 | 23 | 7 | 281 | 3138 |
| FRWY10 | 6 | 2 | 0 | 0 | 0 | 21 | 7 | 261 | 2946 |
| FRWY11 | 6 | 1 | 0 | 0 | 0 | 11 | 4 | 138 | 1513 |
| FRWY12 | 7 | 3 | 0 | 0 | 0 | 38 | 12 | 489 | 4546 |
| FRWY13 | 7 | 3 | 0 | 0 | 0 | 30 | 10 | 394 | 3474 |
| FRWY14 | 7 | 4 | 0 | 0 | 0 | 43 | 14 | 594 | 5207 |
| FRWY15 | 7 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3436 |
| FRWY16 | 7 | 5 | 0 | 0 | 0 | 51 | 17 | 676 | 5833 |
| FRWY17 | 7 | 7 | 0 | 0 | 1 | 73 | 24 | 956 | 7401 |
| FRWY18 | 7 | 6 | 0 | 0 | 1 | 60 | 20 | 788 | 5883 |
| FRWY19 | 7 | 2 | 0 | 0 | 0 | 23 | 8 | 309 | 2201 |
| FRWY20 | 7 | 2 | 0 | 0 | 0 | 22 | 7 | 298 | 1990 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY21 | 6 | 9 | 1 | 1 | 1 | 77 | 26 | 1093 | 7661 |
| FRWY22 | 6 | 6 | 0 | 0 | 1 | 46 | 15 | 655 | 4511 |
| FRWY23 | 6 | 6 | 0 | 0 | 1 | 47 | 16 | 681 | 4587 |
| FRWY24 | 6 | 14 | 1 | 1 | 1 | 108 | 36 | 1568 | 10266 |
| FRWY25 | 6 | 10 | 1 | 1 | 1 | 71 | 23 | 998 | 6208 |
| FRWY26 | 6 | 8 | 0 | 0 | 1 | 49 | 16 | 703 | 4384 |
| FRWY27 | 7 | 10 | 1 | 1 | 1 | 69 | 23 | 991 | 6106 |
| FRWY28 | 7 | 14 | 1 | 1 | 1 | 101 | 34 | 1431 | 8454 |
| FRWY29 | 7 | 14 | 1 | 1 | 1 | 105 | 35 | 1467 | 8453 |
| FRWY30 | 7 | 15 | 1 | 1 | 2 | 106 | 35 | 1441 | 8111 |
| FRWY31 | 7 | 35 | 2 | 2 | 4 | 252 | 83 | 3257 | 19060 |
| FRWY32 | 7 | 12 | 1 | 1 | 1 | 88 | 29 | 1093 | 6263 |
| FRWY33 | 7 | 24 | 2 | 1 | 2 | 168 | 56 | 2029 | 11041 |
| FRWY34 | 7 | 22 | 1 | 1 | 2 | 146 | 48 | 1722 | 9147 |
| FRWY35 | 7 | 8 | 1 | 0 | 1 | 43 | 14 | 475 | 1728 |
| FRWY36 | 7 | 64 | 4 | 4 | 7 | 264 | 88 | 3095 | 8598 |
| FRWY37 | 7 | 27 | 2 | 2 | 3 | 105 | 35 | 1233 | 3515 |
| FRWY294 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 704 |
| FRWY295 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 252 |
| FRWY296 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 436 |
| FRWY297 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 362 |
| FRWY299 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 398 |
| FRWY75 | 3 | 3 | 0 | 0 | 0 | 32 | 11 | 478 | 3521 |
| FRWY76 | 3 | 3 | 0 | 0 | 0 | 32 | 10 | 456 | 3199 |
| FRWY77 | 3 | 1 | 0 | 0 | 0 | 6 | 2 | 82 | 576 |
| FRWY78 | 3 | 2 | 0 | 0 | 0 | 17 | 6 | 259 | 1779 |
| FRWY79 | 3 | 3 | 0 | 0 | 0 | 22 | 7 | 338 | 2223 |
| FRWY80 | 3 | 3 | 0 | 0 | 0 | 21 | 7 | 345 | 2242 |
| FRWY81 | 3 | 4 | 0 | 0 | 0 | 35 | 12 | 522 | 3337 |
| FRWY82 | 3 | 3 | 0 | 0 | 0 | 23 | 8 | 365 | 2255 |
| FRWY83 | 3 | 3 | 0 | 0 | 0 | 25 | 8 | 396 | 2461 |
| FRWY84 | 3 | 2 | 0 | 0 | 0 | 13 | 4 | 228 | 1454 |
| FRWY85 | 3 | 4 | 0 | 0 | 0 | 27 | 9 | 454 | 2890 |
| FRWY86 | 3 | 1 | 0 | 0 | 0 | 8 | 3 | 135 | 892 |
| FRWY87 | 3 | 3 | 0 | 0 | 0 | 16 | 5 | 243 | 1577 |
| FRWY101 | 7 | 5 | 0 | 0 | 1 | 21 | 7 | 259 | 1136 |
| FRWY102 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 131 | 600 |
| FRWY103 | 7 | 5 | 0 | 0 | 0 | 20 | 7 | 251 | 1149 |
| FRWY104 | 7 | 7 | 0 | 0 | 1 | 28 | 9 | 403 | 2026 |
| FRWY105 | 7 | 2 | 0 | 0 | 0 | 8 | 3 | 113 | 618 |
| FRWY106 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 139 | 791 |
| FRWY107 | 7 | 2 | 0 | 0 | 0 | 10 | 3 | 168 | 983 |
| FRWY108 | 7 | 6 | 0 | 0 | 1 | 27 | 9 | 418 | 2551 |
| FRWY109 | 7 | 2 | 0 | 0 | 0 | 11 | 4 | 131 | 973 |
| FRWY110 | 7 | 4 | 0 | 0 | 0 | 18 | 6 | 212 | 1570 |
| FRWY111 | 7 | 10 | 1 | 1 | 1 | 49 | 16 | 586 | 4299 |
| FRWY112 | 7 | 2 | 0 | 0 | 0 | 7 | 2 | 105 | 771 |
| FRWY113 | 7 | 4 | 0 | 0 | 0 | 17 | 6 | 205 | 1635 |
| FRWY114 | 7 | 4 | 0 | 0 | 0 | 19 | 6 | 226 | 1799 |
| FRWY129 | 7 | 6 | 0 | 0 | 1 | 11 | 4 | 295 | 685 |
| FRWY130 | 7 | 6 | 0 | 0 | 1 | 14 | 5 | 272 | 586 |
| FRWY131 | 7 | 5 | 0 | 0 | 1 | 11 | 4 | 240 | 472 |
| FRWY132 | 7 | 2 | 0 | 0 | 0 | 6 | 2 | 94 | 192 |
| FRWY133 | 7 | 7 | 0 | 0 | 1 | 17 | 6 | 276 | 751 |
| FRWY167 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 279 |
| FRWY168 | 7 | 1 | 0 | 0 | 0 | 2 | 1 | 32 | 224 |
| FRWY169 | 7 | 3 | 0 | 0 | 0 | 12 | 4 | 175 | 1176 |
| FRWY171 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 43 | 433 |
| FRWY172 | 7 | 1 | 0 | 0 | 0 | 4 | 1 | 76 | 716 |
| FRWY173 | 7 | 2 | 0 | 0 | 0 | 9 | 3 | 101 | 643 |
| FRWY174 | 7 | 1 | 0 | 0 | 0 | 3 | 1 | 40 | 306 |
| FRWY175 | 7 | 1 | 0 | 0 | 0 | 6 | 2 | 71 | 511 |
| FRWY176 | 7 | 1 | 0 | 0 | 0 | 5 | 2 | 69 | 491 |
| FRWY134 | 6 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 746 |
| FRWY135 | 6 | 1 | 0 | 0 | 0 | 4 | 1 | 78 | 911 |
| FRWY136 | 6 | 0 | 0 | 0 | 0 | 3 | 1 | 47 | 553 |
| FRWY137 | 6 | 0 | 0 | 0 | 0 | 4 | 1 | 54 | 752 |
| FRWY138 | 6 | 1 | 0 | 0 | 0 | 6 | 2 | 88 | 1217 |
| FRWY139 | 6 | 2 | 0 | 0 | 0 | 15 | 5 | 178 | 931 |
| FRWY140 | 3 | 2 | 0 | 0 | 0 | 12 | 4 | 144 | 774 |
| FRWY141 | 3 | 2 | 0 | 0 | 0 | 11 | 4 | 117 | 629 |
| FRWY142 | 3 | 1 | 0 | 0 | 0 | 7 | 2 | 76 | 402 |
| FRWY143 | 3 | 2 | 0 | 0 | 0 | 13 | 4 | 144 | 796 |
| FRWY144 | 3 | 3 | 0 | 0 | 0 | 16 | 5 | 174 | 1107 |
| **Total** | | **490** | **31** | **29** | **51** | **3155** | **1046** | **41855** | **265454** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2_DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 45 | 3 | 3 | 5 | 335 | 111 | 4956 | 34266 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 72 | 5 | 4 | 7 | 641 | 213 | 8603 | 72373 | |
| 7 | 373 | 24 | 22 | 39 | 2178 | 722 | 28295 | 158815 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **490** | **31** | **29** | **51** | **3155** | **1046** | **41855** | **265454** | **312110** |

**World Logistics Center** **2035**
Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Freeway Circulation
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3570 | 830 | 80 | 210 | 2,450 | 1574 | 0.978 | 450 | 59 | 179 | 140 | 53 | 6 | 39 | 36 | 961 | 940 |
| FRWY2 | 3440 | 650 | 80 | 220 | 2,490 | 2153 | 1.337 | 353 | 46 | 140 | 109 | 53 | 6 | 41 | 36 | 784 | 1048 |
| FRWY3 | 3510 | 680 | 80 | 230 | 2,520 | 1737 | 1.079 | 369 | 49 | 147 | 114 | 53 | 6 | 42 | 37 | 816 | 880 |
| FRWY4 | 3640 | 740 | 90 | 240 | 2,570 | 1847 | 1.147 | 402 | 53 | 160 | 124 | 59 | 6 | 44 | 37 | 886 | 1016 |
| FRWY5 | 3730 | 770 | 90 | 250 | 2,620 | 1422 | 0.883 | 418 | 55 | 166 | 129 | 59 | 6 | 46 | 38 | 918 | 811 |
| FRWY6 | 3770 | 790 | 90 | 260 | 2,630 | 2087 | 1.296 | 429 | 56 | 170 | 133 | 59 | 6 | 48 | 38 | 940 | 1219 |
| FRWY7 | 3800 | 810 | 90 | 260 | 2,640 | 1650 | 1.025 | 440 | 58 | 175 | 136 | 59 | 6 | 48 | 38 | 960 | 984 |
| FRWY8 | 3860 | 830 | 90 | 270 | 2,670 | 1537 | 0.955 | 450 | 59 | 179 | 140 | 59 | 6 | 50 | 39 | 983 | 938 |
| FRWY9 | 4190 | 920 | 100 | 310 | 2,860 | 1792 | 1.113 | 499 | 66 | 198 | 155 | 66 | 7 | 57 | 41 | 1090 | 1213 |
| FRWY10 | 4250 | 950 | 100 | 310 | 2,890 | 1665 | 1.034 | 516 | 68 | 205 | 160 | 66 | 7 | 57 | 42 | 1120 | 1159 |
| FRWY11 | 4360 | 1,030 | 100 | 320 | 2,910 | 849 | 0.527 | 559 | 74 | 222 | 173 | 66 | 7 | 59 | 42 | 1202 | 634 |
| FRWY12 | 5220 | 1,440 | 130 | 420 | 3,230 | 2299 | 1.428 | 782 | 103 | 311 | 242 | 86 | 9 | 78 | 47 | 1656 | 2365 |
| FRWY13 | 5460 | 1,500 | 140 | 460 | 3,360 | 1689 | 1.049 | 814 | 107 | 324 | 252 | 92 | 10 | 85 | 49 | 1733 | 1818 |
| FRWY14 | 5640 | 1,540 | 140 | 480 | 3,480 | 2444 | 1.518 | 836 | 110 | 332 | 259 | 92 | 10 | 89 | 50 | 1778 | 2700 |
| FRWY15 | 5650 | 1,540 | 140 | 480 | 3,490 | 1608 | 0.999 | 836 | 110 | 332 | 259 | 92 | 10 | 89 | 51 | 1778 | 1776 |
| FRWY16 | 5750 | 1,610 | 150 | 490 | 3,500 | 2722 | 1.691 | 874 | 115 | 347 | 271 | 99 | 11 | 90 | 51 | 1857 | 3141 |
| FRWY17 | 6780 | 2,230 | 180 | 590 | 3,780 | 3198 | 1.987 | 1210 | 159 | 481 | 375 | 119 | 13 | 109 | 55 | 2521 | 5007 |
| FRWY18 | 7130 | 2,490 | 190 | 620 | 3,830 | 2509 | 1.559 | 1351 | 178 | 537 | 419 | 125 | 13 | 114 | 56 | 2794 | 4354 |
| FRWY19 | 7450 | 2,630 | 200 | 670 | 3,950 | 910 | 0.565 | 1427 | 188 | 567 | 442 | 132 | 14 | 124 | 57 | 2952 | 1669 |
| FRWY20 | 8200 | 3,010 | 230 | 760 | 4,200 | 774 | 0.481 | 1634 | 215 | 649 | 506 | 152 | 16 | 140 | 61 | 3373 | 1622 |
| FRWY21 | 13580 | 5,080 | 340 | 1,200 | 6,960 | 1798 | 1.117 | 2757 | 363 | 1096 | 854 | 224 | 24 | 222 | 101 | 5640 | 6300 |
| FRWY22 | 13930 | 5,210 | 350 | 1,250 | 7,120 | 1035 | 0.643 | 2828 | 372 | 1124 | 876 | 231 | 25 | 231 | 103 | 5789 | 3722 |
| FRWY23 | 14190 | 5,350 | 360 | 1,290 | 7,190 | 1042 | 0.647 | 2904 | 382 | 1154 | 899 | 238 | 25 | 238 | 104 | 5944 | 3848 |
| FRWY24 | 15060 | 5,890 | 380 | 1,370 | 7,420 | 2260 | 1.404 | 3197 | 421 | 1270 | 990 | 251 | 27 | 253 | 108 | 6516 | 9148 |
| FRWY25 | 16820 | 7,110 | 430 | 1,510 | 7,770 | 1305 | 0.811 | 3859 | 508 | 1534 | 1195 | 284 | 30 | 279 | 113 | 7801 | 6324 |
| FRWY26 | 16870 | 7,720 | 400 | 1,420 | 7,330 | 977 | 0.607 | 4190 | 551 | 1665 | 1298 | 264 | 28 | 262 | 106 | 8365 | 5077 |
| FRWY27 | 18670 | 8,150 | 460 | 1,650 | 8,410 | 1186 | 0.737 | 4423 | 582 | 1758 | 1370 | 304 | 32 | 305 | 122 | 8896 | 6554 |
| FRWY28 | 18790 | 8,170 | 490 | 1,720 | 8,410 | 1642 | 1.020 | 4434 | 584 | 1762 | 1374 | 323 | 34 | 318 | 122 | 8950 | 9130 |
| FRWY29 | 18850 | 8,130 | 510 | 1,770 | 8,440 | 1636 | 1.016 | 4412 | 581 | 1754 | 1367 | 337 | 36 | 327 | 122 | 8935 | 9081 |
| FRWY30 | 20100 | 9,210 | 540 | 1,830 | 8,520 | 1555 | 0.966 | 4999 | 658 | 1986 | 1548 | 356 | 38 | 338 | 123 | 10047 | 9705 |
| FRWY31 | 21800 | 10,110 | 590 | 1,900 | 9,200 | 3384 | 2.102 | 5487 | 722 | 2181 | 1700 | 389 | 41 | 351 | 133 | 11004 | 23133 |
| FRWY32 | 22680 | 10,910 | 630 | 1,940 | 9,200 | 1112 | 0.691 | 5921 | 779 | 2353 | 1834 | 416 | 44 | 358 | 133 | 11839 | 8178 |
| FRWY33 | 24150 | 12,070 | 690 | 2,070 | 9,320 | 1935 | 1.202 | 6551 | 862 | 2603 | 2029 | 455 | 48 | 382 | 135 | 13066 | 15706 |
| FRWY34 | 24290 | 12,650 | 690 | 2,030 | 8,920 | 1675 | 1.041 | 6866 | 903 | 2728 | 2127 | 455 | 48 | 375 | 129 | 13632 | 14185 |
| FRWY35 | 10410 | 6,820 | 300 | 820 | 2,470 | 1143 | 0.710 | 3701 | 487 | 1471 | 1147 | 198 | 21 | 151 | 36 | 7212 | 5121 |
| FRWY36 | 9270 | 6,830 | 230 | 670 | 1,540 | 9120 | 5.665 | 3707 | 488 | 1473 | 1148 | 152 | 16 | 124 | 22 | 7130 | 40395 |
| FRWY37 | 9170 | 6,800 | 220 | 640 | 1,510 | 3802 | 2.362 | 3691 | 486 | 1467 | 1143 | 145 | 15 | 118 | 22 | 7087 | 16738 |
| FRWY294 | 393 | 0 | 0 | 0 | 393 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| FRWY295 | 393 | 0 | 0 | 0 | 393 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| FRWY296 | 393 | 0 | 0 | 0 | 393 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| FRWY297 | 393 | 0 | 0 | 0 | 393 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| FRWY299 | 393 | 0 | 0 | 0 | 393 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| FRWY75 | 3590 | 1,160 | 90 | 330 | 2,010 | 2861 | 1.777 | 630 | 83 | 250 | 195 | 59 | 6 | 61 | 29 | 1313 | 2334 |
| FRWY76 | 3870 | 1,320 | 100 | 360 | 2,090 | 2500 | 1.553 | 716 | 94 | 285 | 222 | 66 | 7 | 66 | 30 | 1487 | 2309 |
| FRWY77 | 3870 | 1,320 | 100 | 360 | 2,090 | 450 | 0.280 | 716 | 94 | 285 | 222 | 66 | 7 | 66 | 30 | 1487 | 416 |
| FRWY78 | 3980 | 1,410 | 100 | 370 | 2,100 | 1384 | 0.860 | 765 | 101 | 304 | 237 | 66 | 7 | 68 | 30 | 1579 | 1357 |
| FRWY79 | 4140 | 1,530 | 100 | 390 | 2,120 | 1713 | 1.064 | 830 | 109 | 330 | 257 | 66 | 7 | 72 | 31 | 1703 | 1812 |
| FRWY80 | 4260 | 1,610 | 100 | 400 | 2,150 | 1703 | 1.058 | 874 | 115 | 347 | 271 | 66 | 7 | 74 | 31 | 1785 | 1888 |
| FRWY81 | 4370 | 1,680 | 110 | 410 | 2,170 | 2512 | 1.560 | 912 | 120 | 362 | 282 | 73 | 8 | 76 | 31 | 1864 | 2909 |
| FRWY82 | 4470 | 1,730 | 110 | 430 | 2,200 | 1674 | 1.040 | 939 | 124 | 373 | 291 | 73 | 8 | 79 | 32 | 1918 | 1995 |
| FRWY83 | 4490 | 1,740 | 110 | 430 | 2,210 | 1819 | 1.130 | 944 | 124 | 375 | 293 | 73 | 8 | 79 | 32 | 1928 | 2179 |
| FRWY84 | 4140 | 1,660 | 90 | 380 | 2,010 | 1182 | 0.734 | 901 | 119 | 358 | 279 | 59 | 6 | 70 | 29 | 1822 | 1338 |
| FRWY85 | 4110 | 1,640 | 90 | 380 | 2,000 | 2360 | 1.466 | 890 | 117 | 354 | 276 | 59 | 6 | 70 | 29 | 1802 | 2641 |
| FRWY86 | 3940 | 1,660 | 80 | 340 | 1,860 | 783 | 0.486 | 901 | 119 | 358 | 279 | 53 | 6 | 63 | 27 | 1805 | 878 |
| FRWY87 | 4110 | 1,790 | 90 | 350 | 1,880 | 1370 | 0.851 | 971 | 128 | 386 | 301 | 59 | 6 | 65 | 27 | 1944 | 1654 |
| FRWY101 | 4420 | 2,930 | 100 | 300 | 1,090 | 1703 | 1.058 | 1590 | 209 | 632 | 493 | 66 | 7 | 55 | 16 | 3068 | 3246 |
| FRWY102 | 3950 | 2,520 | 90 | 280 | 1,060 | 925 | 0.575 | 1368 | 180 | 544 | 424 | 59 | 6 | 52 | 15 | 2648 | 1521 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 3950 | 2,520 | 90 | 280 | 1,060 | 1770 | 1.100 | 1368 | 180 | 544 | 424 | 59 | 6 | 52 | 15 | 2648 | 2911 |
| FRWY104 | 3400 | 2,040 | 70 | 250 | 1,040 | 3182 | 1.977 | 1107 | 146 | 440 | 343 | 46 | 5 | 46 | 15 | 2148 | 4246 |
| FRWY105 | 2890 | 1,610 | 60 | 220 | 1,000 | 1010 | 0.627 | 874 | 115 | 347 | 271 | 40 | 4 | 41 | 14 | 1706 | 1070 |
| FRWY106 | 2760 | 1,500 | 60 | 210 | 990 | 1305 | 0.811 | 814 | 107 | 324 | 252 | 40 | 4 | 39 | 14 | 1594 | 1292 |
| FRWY107 | 2630 | 1,410 | 50 | 200 | 970 | 1655 | 1.028 | 765 | 101 | 304 | 237 | 33 | 4 | 37 | 14 | 1495 | 1537 |
| FRWY108 | 2530 | 1,330 | 50 | 190 | 960 | 4341 | 2.697 | 722 | 95 | 287 | 224 | 33 | 4 | 35 | 14 | 1413 | 3810 |
| FRWY109 | 2350 | 1,230 | 50 | 150 | 920 | 1728 | 1.073 | 668 | 88 | 265 | 207 | 33 | 4 | 28 | 13 | 1305 | 1401 |
| FRWY110 | 2350 | 1,230 | 50 | 150 | 920 | 2788 | 1.732 | 668 | 88 | 265 | 207 | 33 | 4 | 28 | 13 | 1305 | 2260 |
| FRWY111 | 2320 | 1,210 | 50 | 150 | 910 | 7717 | 4.794 | 657 | 86 | 261 | 203 | 33 | 4 | 28 | 13 | 1285 | 6160 |
| FRWY112 | 2300 | 1,200 | 40 | 150 | 910 | 1384 | 0.860 | 651 | 86 | 259 | 202 | 26 | 3 | 28 | 13 | 1268 | 1090 |
| FRWY113 | 1970 | 1,020 | 40 | 120 | 790 | 3380 | 2.100 | 554 | 73 | 220 | 171 | 26 | 3 | 22 | 11 | 1081 | 2269 |
| FRWY114 | 1970 | 1,020 | 40 | 120 | 790 | 3719 | 2.310 | 554 | 73 | 220 | 171 | 26 | 3 | 22 | 11 | 1081 | 2497 |
| FRWY129 | 1790 | 1,390 | 20 | 130 | 250 | 4476 | 2.781 | 754 | 99 | 300 | 234 | 13 | 1 | 24 | 4 | 1429 | 3975 |
| FRWY130 | 2040 | 1,620 | 30 | 140 | 250 | 3830 | 2.379 | 879 | 116 | 349 | 272 | 20 | 2 | 26 | 4 | 1668 | 3969 |
| FRWY131 | 2250 | 1,800 | 30 | 160 | 260 | 2967 | 1.843 | 977 | 129 | 388 | 303 | 20 | 2 | 30 | 4 | 1852 | 3413 |
| FRWY132 | 2320 | 1,850 | 40 | 160 | 270 | 1163 | 0.722 | 1004 | 132 | 399 | 311 | 26 | 3 | 30 | 4 | 1909 | 1379 |
| FRWY133 | 1860 | 1,440 | 30 | 120 | 270 | 4541 | 2.821 | 782 | 103 | 311 | 242 | 20 | 2 | 22 | 4 | 1485 | 4189 |
| FRWY167 | 850 | 480 | 10 | 50 | 310 | 1471 | 0.914 | 261 | 34 | 104 | 81 | 7 | 1 | 9 | 4 | 500 | 457 |
| FRWY168 | 1110 | 620 | 20 | 70 | 400 | 916 | 0.569 | 336 | 44 | 134 | 104 | 13 | 1 | 13 | 6 | 652 | 371 |
| FRWY169 | 1070 | 590 | 20 | 70 | 390 | 4924 | 3.059 | 320 | 42 | 127 | 99 | 13 | 1 | 13 | 6 | 622 | 1903 |
| FRWY171 | 700 | 320 | 10 | 40 | 330 | 2145 | 1.333 | 174 | 23 | 69 | 54 | 7 | 1 | 7 | 5 | 339 | 451 |
| FRWY172 | 780 | 330 | 10 | 50 | 390 | 3000 | 1.864 | 179 | 24 | 71 | 55 | 7 | 1 | 9 | 6 | 352 | 655 |
| FRWY173 | 1280 | 750 | 30 | 80 | 420 | 2501 | 1.554 | 407 | 54 | 162 | 126 | 20 | 2 | 15 | 6 | 791 | 1229 |
| FRWY174 | 1000 | 470 | 20 | 70 | 440 | 1135 | 0.705 | 255 | 34 | 101 | 79 | 13 | 1 | 13 | 6 | 503 | 355 |
| FRWY175 | 1370 | 710 | 30 | 90 | 540 | 1547 | 0.961 | 385 | 51 | 153 | 119 | 20 | 2 | 17 | 8 | 755 | 725 |
| FRWY176 | 1480 | 760 | 30 | 100 | 590 | 1359 | 0.844 | 412 | 54 | 164 | 128 | 20 | 2 | 18 | 9 | 807 | 682 |
| FRWY134 | 1380 | 380 | 30 | 90 | 880 | 1385 | 0.860 | 206 | 27 | 82 | 64 | 20 | 2 | 17 | 13 | 430 | 370 |
| FRWY135 | 1350 | 370 | 20 | 90 | 870 | 1711 | 1.063 | 201 | 26 | 80 | 62 | 13 | 1 | 17 | 13 | 413 | 439 |
| FRWY136 | 1320 | 340 | 20 | 90 | 870 | 1038 | 0.645 | 185 | 24 | 73 | 57 | 13 | 1 | 17 | 13 | 383 | 247 |
| FRWY137 | 1200 | 300 | 20 | 70 | 810 | 1516 | 0.942 | 163 | 21 | 65 | 50 | 13 | 1 | 13 | 12 | 339 | 319 |
| FRWY138 | 1160 | 270 | 20 | 70 | 800 | 2485 | 1.544 | 147 | 19 | 58 | 45 | 13 | 1 | 13 | 12 | 309 | 476 |
| FRWY139 | 2220 | 1,200 | 60 | 180 | 780 | 1950 | 1.211 | 651 | 86 | 259 | 202 | 40 | 4 | 33 | 11 | 1286 | 1558 |
| FRWY140 | 2180 | 1,140 | 60 | 180 | 800 | 1581 | 0.982 | 619 | 81 | 246 | 192 | 40 | 4 | 33 | 12 | 1226 | 1204 |
| FRWY141 | 2000 | 1,070 | 60 | 160 | 710 | 1447 | 0.899 | 581 | 76 | 231 | 180 | 40 | 4 | 30 | 10 | 1151 | 1035 |
| FRWY142 | 2000 | 1,080 | 60 | 160 | 700 | 938 | 0.583 | 586 | 77 | 233 | 182 | 40 | 4 | 30 | 10 | 1161 | 677 |
| FRWY143 | 1850 | 1,020 | 50 | 140 | 640 | 2032 | 1.262 | 554 | 73 | 220 | 171 | 33 | 4 | 26 | 9 | 1090 | 1375 |
| FRWY144 | 1620 | 890 | 40 | 110 | 580 | 3119 | 1.938 | 483 | 64 | 192 | 150 | 26 | 3 | 20 | 8 | 946 | 1833 |
| | | | | | | | | | | | | | | | | | 319977 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 6 | 440 | 58 | 175 | 136 | 52 | 5 | 38 | 35 |
| FRWY2 | 6 | 472 | 62 | 188 | 146 | 71 | 7 | 54 | 48 |
| FRWY3 | 6 | 398 | 52 | 158 | 123 | 57 | 6 | 46 | 39 |
| FRWY4 | 6 | 461 | 61 | 183 | 143 | 68 | 7 | 51 | 43 |
| FRWY5 | 6 | 369 | 49 | 147 | 114 | 52 | 6 | 41 | 34 |
| FRWY6 | 6 | 556 | 73 | 221 | 172 | 77 | 8 | 62 | 49 |
| FRWY7 | 6 | 451 | 59 | 179 | 140 | 61 | 6 | 49 | 39 |
| FRWY8 | 6 | 430 | 57 | 171 | 133 | 57 | 6 | 48 | 37 |
| FRWY9 | 6 | 556 | 73 | 221 | 172 | 73 | 8 | 64 | 46 |
| FRWY10 | 6 | 533 | 70 | 212 | 165 | 68 | 7 | 59 | 43 |
| FRWY11 | 6 | 295 | 39 | 117 | 91 | 35 | 4 | 31 | 22 |
| FRWY12 | 7 | 1116 | 147 | 444 | 346 | 123 | 13 | 111 | 67 |
| FRWY13 | 7 | 854 | 112 | 339 | 265 | 97 | 10 | 89 | 51 |
| FRWY14 | 7 | 1269 | 167 | 504 | 393 | 140 | 15 | 135 | 77 |
| FRWY15 | 7 | 835 | 110 | 332 | 259 | 92 | 10 | 89 | 51 |
| FRWY16 | 7 | 1478 | 194 | 587 | 458 | 167 | 18 | 153 | 86 |
| FRWY17 | 7 | 2404 | 316 | 956 | 745 | 236 | 25 | 216 | 109 |
| FRWY18 | 7 | 2106 | 277 | 837 | 652 | 195 | 21 | 178 | 87 |
| FRWY19 | 7 | 807 | 106 | 321 | 250 | 75 | 8 | 70 | 32 |
| FRWY20 | 7 | 785 | 103 | 312 | 243 | 73 | 8 | 67 | 29 |
| FRWY21 | 6 | 3080 | 405 | 1224 | 954 | 251 | 27 | 247 | 113 |
| FRWY22 | 6 | 1818 | 239 | 723 | 563 | 148 | 16 | 148 | 66 |
| FRWY23 | 6 | 1880 | 247 | 747 | 582 | 154 | 16 | 154 | 67 |
| FRWY24 | 6 | 4488 | 591 | 1784 | 1390 | 352 | 37 | 355 | 151 |
| FRWY25 | 6 | 3128 | 412 | 1243 | 969 | 230 | 24 | 226 | 91 |
| FRWY26 | 6 | 2543 | 335 | 1011 | 788 | 160 | 17 | 159 | 64 |
| FRWY27 | 7 | 3259 | 429 | 1295 | 1010 | 224 | 24 | 224 | 90 |
| FRWY28 | 7 | 4523 | 595 | 1797 | 1401 | 330 | 35 | 324 | 124 |
| FRWY29 | 7 | 4484 | 590 | 1782 | 1389 | 342 | 36 | 332 | 124 |
| FRWY30 | 7 | 4829 | 635 | 1919 | 1496 | 344 | 37 | 326 | 119 |
| FRWY31 | 7 | 11535 | 1518 | 4584 | 3573 | 818 | 87 | 737 | 280 |
| FRWY32 | 7 | 4090 | 538 | 1626 | 1267 | 287 | 30 | 247 | 92 |
| FRWY33 | 7 | 7874 | 1036 | 3129 | 2439 | 547 | 58 | 459 | 162 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FRWY34 | 7 | 7144 | 940 | 2839 | 2213 | 474 | 50 | 390 | 135 |
| FRWY35 | 7 | 2628 | 346 | 1044 | 814 | 141 | 15 | 107 | 25 |
| FRWY36 | 7 | 21001 | 2764 | 8346 | 6506 | 860 | 91 | 701 | 126 |
| FRWY37 | 7 | 8717 | 1147 | 3464 | 2700 | 343 | 36 | 279 | 52 |
| FRWY294 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| FRWY295 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| FRWY296 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| FRWY297 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| FRWY299 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| FRWY75 | 3 | 1119 | 147 | 445 | 347 | 106 | 11 | 108 | 52 |
| FRWY76 | 3 | 1113 | 146 | 442 | 345 | 102 | 11 | 103 | 47 |
| FRWY77 | 3 | 200 | 26 | 80 | 62 | 18 | 2 | 19 | 8 |
| FRWY78 | 3 | 658 | 87 | 261 | 204 | 57 | 6 | 59 | 26 |
| FRWY79 | 3 | 884 | 116 | 351 | 274 | 70 | 7 | 77 | 33 |
| FRWY80 | 3 | 924 | 122 | 367 | 286 | 70 | 7 | 78 | 33 |
| FRWY81 | 3 | 1423 | 187 | 565 | 441 | 113 | 12 | 118 | 49 |
| FRWY82 | 3 | 976 | 128 | 388 | 302 | 75 | 8 | 83 | 33 |
| FRWY83 | 3 | 1067 | 140 | 424 | 331 | 82 | 9 | 90 | 36 |
| FRWY84 | 3 | 662 | 87 | 263 | 205 | 44 | 5 | 52 | 21 |
| FRWY85 | 3 | 1305 | 172 | 519 | 404 | 87 | 9 | 103 | 42 |
| FRWY86 | 3 | 438 | 58 | 174 | 136 | 26 | 3 | 31 | 13 |
| FRWY87 | 3 | 827 | 109 | 329 | 256 | 51 | 5 | 55 | 23 |
| FRWY101 | 7 | 1682 | 221 | 669 | 521 | 70 | 7 | 59 | 17 |
| FRWY102 | 7 | 786 | 103 | 312 | 243 | 34 | 4 | 30 | 9 |
| FRWY103 | 7 | 1504 | 198 | 598 | 466 | 65 | 7 | 57 | 17 |
| FRWY104 | 7 | 2189 | 288 | 870 | 678 | 91 | 10 | 91 | 30 |
| FRWY105 | 7 | 548 | 72 | 218 | 170 | 25 | 3 | 25 | 9 |
| FRWY106 | 7 | 660 | 87 | 262 | 204 | 32 | 3 | 31 | 12 |
| FRWY107 | 7 | 787 | 104 | 313 | 244 | 34 | 4 | 38 | 14 |
| FRWY108 | 7 | 1947 | 256 | 774 | 603 | 89 | 9 | 95 | 38 |
| FRWY109 | 7 | 717 | 94 | 285 | 222 | 35 | 4 | 30 | 14 |
| FRWY110 | 7 | 1156 | 152 | 459 | 358 | 57 | 6 | 48 | 23 |
| FRWY111 | 7 | 3148 | 414 | 1251 | 975 | 158 | 17 | 133 | 63 |
| FRWY112 | 7 | 560 | 74 | 223 | 173 | 23 | 2 | 24 | 11 |
| FRWY113 | 7 | 1162 | 153 | 462 | 360 | 55 | 6 | 47 | 24 |
| FRWY114 | 7 | 1279 | 168 | 508 | 396 | 61 | 6 | 51 | 26 |
| FRWY129 | 7 | 2098 | 276 | 834 | 650 | 37 | 4 | 67 | 10 |
| FRWY130 | 7 | 2092 | 275 | 831 | 648 | 47 | 5 | 61 | 9 |
| FRWY131 | 7 | 1801 | 237 | 716 | 558 | 36 | 4 | 54 | 7 |
| FRWY132 | 7 | 725 | 95 | 288 | 225 | 19 | 2 | 21 | 3 |
| FRWY133 | 7 | 2205 | 290 | 876 | 683 | 56 | 6 | 62 | 11 |
| FRWY167 | 7 | 238 | 31 | 95 | 74 | 6 | 1 | 8 | 4 |
| FRWY168 | 7 | 191 | 25 | 76 | 59 | 8 | 1 | 7 | 3 |
| FRWY169 | 7 | 979 | 129 | 389 | 303 | 40 | 4 | 40 | 17 |
| FRWY171 | 7 | 231 | 30 | 92 | 72 | 9 | 1 | 10 | 6 |
| FRWY172 | 7 | 334 | 44 | 133 | 103 | 12 | 1 | 17 | 11 |
| FRWY173 | 7 | 632 | 83 | 251 | 196 | 31 | 3 | 23 | 9 |
| FRWY174 | 7 | 180 | 24 | 71 | 56 | 9 | 1 | 9 | 4 |
| FRWY175 | 7 | 370 | 49 | 147 | 115 | 19 | 2 | 16 | 8 |
| FRWY176 | 7 | 348 | 46 | 138 | 108 | 17 | 2 | 16 | 7 |
| FRWY134 | 6 | 177 | 23 | 71 | 55 | 17 | 2 | 14 | 11 |
| FRWY135 | 6 | 213 | 28 | 85 | 66 | 14 | 1 | 18 | 13 |
| FRWY136 | 6 | 119 | 16 | 47 | 37 | 9 | 1 | 11 | 8 |
| FRWY137 | 6 | 153 | 20 | 61 | 48 | 12 | 1 | 12 | 11 |
| FRWY138 | 6 | 226 | 30 | 90 | 70 | 20 | 2 | 20 | 18 |
| FRWY139 | 6 | 789 | 104 | 314 | 244 | 48 | 5 | 40 | 14 |
| FRWY140 | 3 | 608 | 80 | 241 | 188 | 39 | 4 | 33 | 11 |
| FRWY141 | 3 | 522 | 69 | 207 | 162 | 36 | 4 | 27 | 9 |
| FRWY142 | 3 | 342 | 45 | 136 | 106 | 23 | 2 | 17 | 6 |
| FRWY143 | 3 | 699 | 92 | 278 | 216 | 42 | 4 | 33 | 12 |
| FRWY144 | 3 | 936 | 123 | 372 | 290 | 51 | 5 | 39 | 16 |
| **Total** | | **160566** | **21130** | **63810** | **49740** | **10261** | **1089** | **9477** | **3904** |

**Vehicle Miles Traveled per Speed Group**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2_GAS** | **MHDT-GAS** | **HHDT-GAS** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 14702 | 1935 | 5842 | 4554 | 1091 | 116 | 1122 | 504 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 23576 | 3102 | 9369 | 7303 | 2086 | 221 | 1948 | 1064 | |
| 7 | 122289 | 16093 | 48598 | 37882 | 7084 | 752 | 6407 | 2336 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | **160566** | **21130** | **63810** | **49740** | **10261** | **1089** | **9477** | **3904** | **319977** |

**World Logistics Center**
**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**
**Entrained Road Dust**
Freeways
**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |
| Particle Size Multiplier for PM10 = | | 0.0022 lb/VMT |
| Particle Size Multiplier for PM2.5 = | | 0.00054 lb/VMT |

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | F | 1574 | 0.98 | 830 | 812 | 80 | 78 | 210 | 205 | 2,450 | 2396 | 3491 | 17.27 | 0.022 | 0.0003 | 1.1 | 0.0012 | 4.4 |
| FRWY2 | F | 2153 | 1.34 | 650 | 869 | 80 | 107 | 220 | 294 | 2,490 | 3330 | 4601 | 18.11 | 0.022 | 0.0003 | 1.5 | 0.0013 | 6.0 |
| FRWY3 | F | 1737 | 1.08 | 680 | 734 | 80 | 86 | 230 | 248 | 2,520 | 2719 | 3787 | 18.00 | 0.022 | 0.0003 | 1.2 | 0.0013 | 4.9 |
| FRWY4 | F | 1847 | 1.15 | 740 | 849 | 90 | 103 | 240 | 275 | 2,570 | 2949 | 4176 | 17.76 | 0.022 | 0.0003 | 1.3 | 0.0013 | 5.4 |
| FRWY5 | F | 1422 | 0.88 | 770 | 680 | 90 | 80 | 250 | 221 | 2,620 | 2314 | 3295 | 17.69 | 0.022 | 0.0003 | 1.0 | 0.0013 | 4.2 |
| FRWY6 | F | 2087 | 1.30 | 790 | 1024 | 90 | 117 | 260 | 337 | 2,630 | 3410 | 4888 | 17.61 | 0.022 | 0.0003 | 1.5 | 0.0013 | 6.2 |
| FRWY7 | F | 1650 | 1.03 | 810 | 830 | 90 | 92 | 260 | 267 | 2,640 | 2706 | 3895 | 17.54 | 0.022 | 0.0003 | 1.2 | 0.0013 | 4.9 |
| FRWY8 | F | 1537 | 0.95 | 830 | 792 | 90 | 86 | 270 | 258 | 2,670 | 2549 | 3686 | 17.49 | 0.022 | 0.0003 | 1.1 | 0.0013 | 4.7 |
| FRWY9 | F | 1792 | 1.11 | 920 | 1024 | 100 | 111 | 310 | 345 | 2,860 | 3184 | 4664 | 17.34 | 0.022 | 0.0003 | 1.4 | 0.0013 | 5.8 |
| FRWY10 | F | 1665 | 1.03 | 950 | 983 | 100 | 103 | 310 | 321 | 2,890 | 2989 | 4396 | 17.28 | 0.022 | 0.0003 | 1.3 | 0.0012 | 5.5 |
| FRWY11 | F | 849 | 0.53 | 1,030 | 543 | 100 | 53 | 320 | 169 | 2,910 | 1535 | 2300 | 17.01 | 0.022 | 0.0003 | 0.7 | 0.0012 | 2.8 |
| FRWY12 | F | 2299 | 1.43 | 1,440 | 2057 | 130 | 186 | 420 | 600 | 3,230 | 4613 | 7455 | 16.06 | 0.022 | 0.0003 | 2.1 | 0.0012 | 8.6 |
| FRWY13 | F | 1689 | 1.05 | 1,500 | 1574 | 140 | 147 | 460 | 483 | 3,360 | 3525 | 5729 | 16.03 | 0.022 | 0.0003 | 1.6 | 0.0012 | 6.6 |
| FRWY14 | F | 2444 | 1.52 | 1,540 | 2338 | 140 | 213 | 480 | 729 | 3,480 | 5283 | 8563 | 16.07 | 0.022 | 0.0003 | 2.4 | 0.0012 | 9.9 |
| FRWY15 | F | 1608 | 1.00 | 1,540 | 1538 | 140 | 140 | 480 | 479 | 3,490 | 3486 | 5644 | 16.08 | 0.022 | 0.0003 | 1.6 | 0.0012 | 6.5 |
| FRWY16 | F | 2722 | 1.69 | 1,610 | 2722 | 150 | 254 | 490 | 829 | 3,500 | 5918 | 9723 | 15.90 | 0.022 | 0.0003 | 2.7 | 0.0011 | 11.1 |
| FRWY17 | F | 3198 | 1.99 | 2,230 | 4430 | 180 | 358 | 590 | 1172 | 3,780 | 7509 | 13469 | 14.83 | 0.022 | 0.0003 | 3.5 | 0.0011 | 14.4 |
| FRWY18 | F | 2509 | 1.56 | 2,490 | 3881 | 190 | 296 | 620 | 966 | 3,830 | 5970 | 11113 | 14.40 | 0.022 | 0.0003 | 2.8 | 0.0010 | 11.5 |
| FRWY19 | F | 910 | 0.57 | 2,630 | 1487 | 200 | 113 | 670 | 379 | 3,950 | 2233 | 4212 | 14.29 | 0.022 | 0.0003 | 1.1 | 0.0010 | 4.3 |
| FRWY20 | F | 774 | 0.48 | 3,010 | 1447 | 230 | 111 | 760 | 365 | 4,200 | 2019 | 3943 | 13.94 | 0.022 | 0.0002 | 1.0 | 0.0010 | 4.0 |
| FRWY21 | F | 1798 | 1.12 | 5,080 | 5674 | 340 | 380 | 1,200 | 1340 | 6,960 | 7774 | 15168 | 13.89 | 0.022 | 0.0002 | 3.7 | 0.0010 | 15.2 |
| FRWY22 | F | 1035 | 0.64 | 5,210 | 3350 | 350 | 225 | 1,250 | 804 | 7,120 | 4578 | 8956 | 13.88 | 0.022 | 0.0002 | 2.2 | 0.0010 | 8.9 |
| FRWY23 | F | 1042 | 0.65 | 5,350 | 3463 | 360 | 233 | 1,290 | 835 | 7,190 | 4654 | 9185 | 13.79 | 0.022 | 0.0002 | 2.2 | 0.0010 | 9.1 |
| FRWY24 | F | 2260 | 1.40 | 5,890 | 8269 | 380 | 533 | 1,370 | 1923 | 7,420 | 10417 | 21143 | 13.50 | 0.022 | 0.0002 | 5.0 | 0.0010 | 20.5 |
| FRWY25 | F | 1305 | 0.81 | 7,110 | 5764 | 430 | 349 | 1,510 | 1224 | 7,770 | 6299 | 13636 | 12.84 | 0.022 | 0.0002 | 3.1 | 0.0009 | 12.6 |
| FRWY26 | F | 977 | 0.61 | 7,720 | 4685 | 400 | 243 | 1,420 | 862 | 7,330 | 4449 | 10239 | 12.20 | 0.022 | 0.0002 | 2.2 | 0.0009 | 9.0 |
| FRWY27 | F | 1186 | 0.74 | 8,150 | 6005 | 460 | 339 | 1,650 | 1216 | 8,410 | 6196 | 13755 | 12.58 | 0.022 | 0.0002 | 3.0 | 0.0009 | 12.4 |
| FRWY28 | F | 1642 | 1.02 | 8,170 | 8334 | 490 | 500 | 1,720 | 1754 | 8,410 | 8578 | 19166 | 12.55 | 0.022 | 0.0002 | 4.2 | 0.0009 | 17.3 |
| FRWY29 | F | 1636 | 1.02 | 8,130 | 8263 | 510 | 518 | 1,770 | 1799 | 8,440 | 8578 | 19157 | 12.58 | 0.022 | 0.0002 | 4.2 | 0.0009 | 17.3 |
| FRWY30 | F | 1555 | 0.97 | 9,210 | 8897 | 540 | 522 | 1,830 | 1768 | 8,520 | 8230 | 19416 | 12.05 | 0.022 | 0.0002 | 4.1 | 0.0009 | 16.8 |
| FRWY31 | F | 3384 | 2.10 | 10,110 | 21253 | 590 | 1240 | 1,900 | 3994 | 9,200 | 19340 | 45828 | 11.98 | 0.022 | 0.0002 | 9.7 | 0.0009 | 39.4 |
| FRWY32 | F | 1112 | 0.69 | 10,910 | 7536 | 630 | 435 | 1,940 | 1340 | 9,200 | 6355 | 15667 | 11.62 | 0.022 | 0.0002 | 3.2 | 0.0008 | 13.0 |
| FRWY33 | F | 1935 | 1.20 | 12,070 | 14509 | 690 | 829 | 2,070 | 2488 | 9,320 | 11203 | 29029 | 11.21 | 0.022 | 0.0002 | 5.7 | 0.0008 | 23.3 |
| FRWY34 | F | 1675 | 1.04 | 12,650 | 13163 | 690 | 718 | 2,030 | 2112 | 8,920 | 9282 | 25274 | 10.79 | 0.022 | 0.0002 | 4.8 | 0.0008 | 19.5 |
| FRWY35 | F | 1143 | 0.71 | 6,820 | 4843 | 300 | 213 | 820 | 582 | 2,470 | 1754 | 7392 | 8.00 | 0.022 | 0.0001 | 1.0 | 0.0006 | 4.2 |
| FRWY36 | F | 9120 | 5.67 | 6,830 | 38695 | 230 | 1303 | 670 | 3796 | 1,540 | 8725 | 52519 | 6.42 | 0.022 | 0.0001 | 5.9 | 0.0005 | 23.9 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY37 | F | 3802 | 2.36 | 6,800 | 16061 | 220 | 520 | 640 | 1512 | 1,510 | 3566 | 21658 | 6.36 | 0.022 | 0.0001 | 2.4 | 0.0005 | 9.8 |
| FRWY294 | F | 2926 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 714 | 714 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.2 |
| FRWY295 | F | 1049 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 256 | 256 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| FRWY296 | F | 1811 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 442 | 442 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| FRWY297 | F | 1505 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 367 | 367 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| FRWY299 | F | 1654 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 404 | 404 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| FRWY75 | F | 2861 | 1.78 | 1,160 | 2062 | 90 | 160 | 330 | 587 | 2,010 | 3572 | 6380 | 14.93 | 0.022 | 0.0003 | 1.7 | 0.0011 | 6.9 |
| FRWY76 | F | 2500 | 1.55 | 1,320 | 2050 | 100 | 155 | 360 | 559 | 2,090 | 3246 | 6010 | 14.52 | 0.022 | 0.0003 | 1.5 | 0.0010 | 6.3 |
| FRWY77 | F | 450 | 0.28 | 1,320 | 369 | 100 | 28 | 360 | 101 | 2,090 | 584 | 1082 | 14.52 | 0.022 | 0.0003 | 0.3 | 0.0010 | 1.1 |
| FRWY78 | F | 1384 | 0.86 | 1,410 | 1212 | 100 | 86 | 370 | 318 | 2,100 | 1805 | 3422 | 14.26 | 0.022 | 0.0003 | 0.9 | 0.0010 | 3.5 |
| FRWY79 | F | 1713 | 1.06 | 1,530 | 1628 | 100 | 106 | 390 | 415 | 2,120 | 2256 | 4406 | 13.94 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.4 |
| FRWY80 | F | 1703 | 1.06 | 1,610 | 1703 | 100 | 106 | 400 | 423 | 2,150 | 2275 | 4507 | 13.77 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.5 |
| FRWY81 | F | 2512 | 1.56 | 1,680 | 2622 | 110 | 172 | 410 | 640 | 2,170 | 3386 | 6819 | 13.61 | 0.022 | 0.0002 | 1.6 | 0.0010 | 6.7 |
| FRWY82 | F | 1674 | 1.04 | 1,730 | 1799 | 110 | 114 | 430 | 447 | 2,200 | 2288 | 4648 | 13.54 | 0.022 | 0.0002 | 1.1 | 0.0010 | 4.5 |
| FRWY83 | F | 1819 | 1.13 | 1,740 | 1966 | 110 | 124 | 430 | 486 | 2,210 | 2497 | 5074 | 13.53 | 0.022 | 0.0002 | 1.2 | 0.0010 | 4.9 |
| FRWY84 | F | 1182 | 0.73 | 1,660 | 1219 | 90 | 66 | 380 | 279 | 2,010 | 1476 | 3040 | 13.34 | 0.022 | 0.0002 | 0.7 | 0.0010 | 2.9 |
| FRWY85 | F | 2360 | 1.47 | 1,640 | 2404 | 90 | 132 | 380 | 557 | 2,000 | 2932 | 6026 | 13.37 | 0.022 | 0.0002 | 1.4 | 0.0010 | 5.8 |
| FRWY86 | F | 783 | 0.49 | 1,660 | 807 | 80 | 39 | 340 | 165 | 1,860 | 905 | 1916 | 13.00 | 0.022 | 0.0002 | 0.4 | 0.0009 | 1.8 |
| FRWY87 | F | 1370 | 0.85 | 1,790 | 1523 | 90 | 77 | 350 | 298 | 1,880 | 1600 | 3498 | 12.69 | 0.022 | 0.0002 | 0.8 | 0.0009 | 3.2 |
| FRWY101 | F | 1703 | 1.06 | 2,930 | 3100 | 100 | 106 | 300 | 317 | 1,090 | 1153 | 4676 | 8.07 | 0.022 | 0.0001 | 0.7 | 0.0006 | 2.7 |
| FRWY102 | F | 925 | 0.57 | 2,520 | 1448 | 90 | 52 | 280 | 161 | 1,060 | 609 | 2270 | 8.56 | 0.022 | 0.0001 | 0.3 | 0.0006 | 1.4 |
| FRWY103 | F | 1770 | 1.10 | 2,520 | 2771 | 90 | 99 | 280 | 308 | 1,060 | 1166 | 4343 | 8.56 | 0.022 | 0.0001 | 0.6 | 0.0006 | 2.6 |
| FRWY104 | F | 3182 | 1.98 | 2,040 | 4032 | 70 | 138 | 250 | 494 | 1,040 | 2056 | 6721 | 9.37 | 0.022 | 0.0002 | 1.1 | 0.0007 | 4.5 |
| FRWY105 | F | 1010 | 0.63 | 1,610 | 1010 | 60 | 38 | 220 | 138 | 1,000 | 627 | 1813 | 10.24 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.3 |
| FRWY106 | F | 1305 | 0.81 | 1,500 | 1216 | 60 | 49 | 210 | 170 | 990 | 803 | 2237 | 10.51 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.7 |
| FRWY107 | F | 1655 | 1.03 | 1,410 | 1450 | 50 | 51 | 200 | 206 | 970 | 997 | 2704 | 10.72 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.1 |
| FRWY108 | F | 4341 | 2.70 | 1,330 | 3587 | 50 | 135 | 190 | 512 | 960 | 2589 | 6823 | 10.94 | 0.022 | 0.0002 | 1.3 | 0.0008 | 5.3 |
| FRWY109 | F | 1728 | 1.07 | 1,230 | 1320 | 50 | 54 | 150 | 161 | 920 | 988 | 2523 | 11.09 | 0.022 | 0.0002 | 0.5 | 0.0008 | 2.0 |
| FRWY110 | F | 2788 | 1.73 | 1,230 | 2130 | 50 | 87 | 150 | 260 | 920 | 1593 | 4070 | 11.09 | 0.022 | 0.0002 | 0.8 | 0.0008 | 3.2 |
| FRWY111 | F | 7717 | 4.79 | 1,210 | 5801 | 50 | 240 | 150 | 719 | 910 | 4362 | 11122 | 11.11 | 0.022 | 0.0002 | 2.2 | 0.0008 | 8.8 |
| FRWY112 | F | 1384 | 0.86 | 1,200 | 1032 | 40 | 34 | 150 | 129 | 910 | 782 | 1977 | 11.17 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.6 |
| FRWY113 | F | 3380 | 2.10 | 1,020 | 2142 | 40 | 84 | 120 | 252 | 790 | 1659 | 4136 | 11.26 | 0.022 | 0.0002 | 0.8 | 0.0008 | 3.3 |
| FRWY114 | F | 3719 | 2.31 | 1,020 | 2356 | 40 | 92 | 120 | 277 | 790 | 1825 | 4551 | 11.26 | 0.022 | 0.0002 | 0.9 | 0.0008 | 3.7 |
| FRWY129 | F | 4476 | 2.78 | 1,390 | 3865 | 20 | 56 | 130 | 361 | 250 | 695 | 4977 | 5.82 | 0.022 | 0.0001 | 0.5 | 0.0004 | 2.0 |
| FRWY130 | F | 3830 | 2.38 | 1,620 | 3854 | 30 | 71 | 140 | 333 | 250 | 595 | 4854 | 5.43 | 0.022 | 0.0001 | 0.5 | 0.0004 | 1.9 |
| FRWY131 | F | 2967 | 1.84 | 1,800 | 3318 | 30 | 55 | 160 | 295 | 260 | 479 | 4147 | 5.30 | 0.022 | 0.0001 | 0.4 | 0.0004 | 1.6 |
| FRWY132 | F | 1163 | 0.72 | 1,850 | 1337 | 40 | 29 | 160 | 116 | 270 | 195 | 1676 | 5.31 | 0.022 | 0.0001 | 0.2 | 0.0004 | 0.6 |
| FRWY133 | F | 4541 | 2.82 | 1,440 | 4062 | 30 | 85 | 120 | 339 | 270 | 762 | 5247 | 5.87 | 0.022 | 0.0001 | 0.5 | 0.0004 | 2.2 |
| FRWY167 | F | 1471 | 0.91 | 480 | 439 | 10 | 9 | 50 | 46 | 310 | 283 | 777 | 10.44 | 0.022 | 0.0002 | 0.1 | 0.0007 | 0.6 |
| FRWY168 | F | 916 | 0.57 | 620 | 353 | 20 | 11 | 70 | 40 | 400 | 228 | 632 | 10.41 | 0.022 | 0.0002 | 0.1 | 0.0007 | 0.5 |
| FRWY169 | F | 4924 | 3.06 | 590 | 1805 | 20 | 61 | 70 | 214 | 390 | 1193 | 3273 | 10.52 | 0.022 | 0.0002 | 0.6 | 0.0008 | 2.5 |
| FRWY171 | F | 2145 | 1.33 | 320 | 426 | 10 | 13 | 40 | 53 | 330 | 440 | 933 | 12.69 | 0.022 | 0.0002 | 0.2 | 0.0009 | 0.8 |
| FRWY172 | F | 3000 | 1.86 | 330 | 615 | 10 | 19 | 50 | 93 | 390 | 727 | 1454 | 13.35 | 0.022 | 0.0002 | 0.3 | 0.0010 | 1.4 |
| FRWY173 | F | 2501 | 1.55 | 750 | 1165 | 30 | 47 | 80 | 124 | 420 | 653 | 1989 | 9.74 | 0.022 | 0.0002 | 0.3 | 0.0007 | 1.4 |
| FRWY174 | F | 1135 | 0.71 | 470 | 331 | 20 | 14 | 70 | 49 | 440 | 310 | 705 | 12.17 | 0.022 | 0.0002 | 0.2 | 0.0009 | 0.6 |
| FRWY175 | F | 1547 | 0.96 | 710 | 682 | 30 | 29 | 90 | 86 | 540 | 519 | 1317 | 11.16 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.1 |
| FRWY176 | F | 1359 | 0.84 | 760 | 642 | 30 | 25 | 100 | 84 | 590 | 498 | 1249 | 11.27 | 0.022 | 0.0002 | 0.2 | 0.0008 | 1.0 |
| FRWY134 | F | 1385 | 0.86 | 380 | 327 | 30 | 26 | 90 | 77 | 880 | 757 | 1187 | 16.30 | 0.022 | 0.0003 | 0.3 | 0.0012 | 1.4 |
| FRWY135 | F | 1711 | 1.06 | 370 | 393 | 20 | 21 | 90 | 96 | 870 | 925 | 1435 | 16.43 | 0.022 | 0.0003 | 0.4 | 0.0012 | 1.7 |
| FRWY136 | F | 1038 | 0.64 | 340 | 219 | 20 | 13 | 90 | 58 | 870 | 561 | 851 | 16.76 | 0.022 | 0.0003 | 0.3 | 0.0012 | 1.0 |
| FRWY137 | F | 1516 | 0.94 | 300 | 283 | 20 | 19 | 70 | 66 | 810 | 763 | 1130 | 17.01 | 0.022 | 0.0003 | 0.3 | 0.0012 | 1.4 |
| FRWY138 | F | 2485 | 1.54 | 270 | 417 | 20 | 31 | 70 | 108 | 800 | 1235 | 1791 | 17.34 | 0.022 | 0.0003 | 0.6 | 0.0013 | 2.2 |
| FRWY139 | F | 1950 | 1.21 | 1,200 | 1454 | 60 | 73 | 180 | 218 | 780 | 945 | 2689 | 10.43 | 0.022 | 0.0002 | 0.5 | 0.0007 | 2.0 |
| FRWY140 | F | 1581 | 0.98 | 1,140 | 1120 | 60 | 59 | 180 | 177 | 800 | 786 | 2141 | 10.77 | 0.022 | 0.0002 | 0.4 | 0.0008 | 1.7 |
| FRWY141 | F | 1447 | 0.90 | 1,070 | 962 | 60 | 54 | 160 | 144 | 710 | 638 | 1798 | 10.50 | 0.022 | 0.0002 | 0.3 | 0.0008 | 1.4 |
| FRWY142 | F | 938 | 0.58 | 1,080 | 629 | 60 | 35 | 160 | 93 | 700 | 408 | 1165 | 10.40 | 0.022 | 0.0002 | 0.2 | 0.0007 | 0.9 |
| FRWY143 | F | 2032 | 1.26 | 1,020 | 1288 | 50 | 63 | 140 | 177 | 640 | 808 | 2335 | 10.26 | 0.022 | 0.0002 | 0.4 | 0.0007 | 1.7 |
| FRWY144 | F | 3119 | 1.94 | 890 | 1724 | 40 | 78 | 110 | 213 | 580 | 1124 | 3139 | 10.43 | 0.022 | 0.0002 | 0.6 | 0.0007 | 2.3 |
| | | | | | | | | | | | | | | | **Totals:** | **133.6** | | **544.3** |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 393 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 393 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 393 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 393 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 393 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 393 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 393 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 393 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 393 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 393 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 393 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 393 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 393 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 393 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 393 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 393 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 393 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 393 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 393 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 393 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 393 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 393 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 393 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 393 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 393 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 393 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 393 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 393 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 393 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 393 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 393 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 393 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 393 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 393 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 393 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 393 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 393 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 393 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 393 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 393 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 393 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 393 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 393 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 393 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 393 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 393 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 393 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 393 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 393 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 393 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 393 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 393 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 393 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 786 |

| ID | Arterial | From | Freeway to Port Volumes | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 786 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 786 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 786 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 786 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 786 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 786 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 393 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 393 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 393 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 393 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 393 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 393 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 393 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 393 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 393 |

**World Logistics Center** **2035**
Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Freeway to Port
Diesel
Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.3% | 6.7% | 81.5% | 98.6% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 393 | 0 | 0 | 0 | 393 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 446 |
| 229 | 393 | 0 | 0 | 0 | 393 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 279 |
| 228 | 393 | 0 | 0 | 0 | 393 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 125 |
| 227 | 393 | 0 | 0 | 0 | 393 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 200 |
| 226 | 393 | 0 | 0 | 0 | 393 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 515 |
| 225 | 393 | 0 | 0 | 0 | 393 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 248 |
| 224 | 393 | 0 | 0 | 0 | 393 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 656 |
| 223 | 393 | 0 | 0 | 0 | 393 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 285 |
| 222 | 393 | 0 | 0 | 0 | 393 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 297 |
| 221 | 393 | 0 | 0 | 0 | 393 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 277 |
| 220 | 393 | 0 | 0 | 0 | 393 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 351 |
| 219 | 393 | 0 | 0 | 0 | 393 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 594 |
| 218 | 393 | 0 | 0 | 0 | 393 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 650 |
| 217 | 393 | 0 | 0 | 0 | 393 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 743 |
| 216 | 393 | 0 | 0 | 0 | 393 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 602 |
| 215 | 393 | 0 | 0 | 0 | 393 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 348 |
| 214 | 393 | 0 | 0 | 0 | 393 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 376 |
| 213 | 393 | 0 | 0 | 0 | 393 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 590 |
| 212 | 393 | 0 | 0 | 0 | 393 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 565 |
| 211 | 393 | 0 | 0 | 0 | 393 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 425 |
| 210 | 393 | 0 | 0 | 0 | 393 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 902 |
| 209 | 393 | 0 | 0 | 0 | 393 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 478 |
| 263 | 393 | 0 | 0 | 0 | 393 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 496 |
| 264 | 393 | 0 | 0 | 0 | 393 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 240 |
| 265 | 393 | 0 | 0 | 0 | 393 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 173 |
| 266 | 393 | 0 | 0 | 0 | 393 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 162 |
| 267 | 393 | 0 | 0 | 0 | 393 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 159 |
| 268 | 393 | 0 | 0 | 0 | 393 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 243 |
| 269 | 393 | 0 | 0 | 0 | 393 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 464 |
| 270 | 393 | 0 | 0 | 0 | 393 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 433 |
| 271 | 393 | 0 | 0 | 0 | 393 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 255 |
| 272 | 393 | 0 | 0 | 0 | 393 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 163 |
| 273 | 393 | 0 | 0 | 0 | 393 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 60 |
| 274 | 393 | 0 | 0 | 0 | 393 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 415 |
| 275 | 393 | 0 | 0 | 0 | 393 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 425 |
| 276 | 393 | 0 | 0 | 0 | 393 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 427 |
| 277 | 393 | 0 | 0 | 0 | 393 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 253 |
| 278 | 393 | 0 | 0 | 0 | 393 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 425 |
| 279 | 393 | 0 | 0 | 0 | 393 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 445 |
| 280 | 393 | 0 | 0 | 0 | 393 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 363 |
| 281 | 393 | 0 | 0 | 0 | 393 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 515 |
| 282 | 393 | 0 | 0 | 0 | 393 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 274 |
| 283 | 393 | 0 | 0 | 0 | 393 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 352 |
| 284 | 393 | 0 | 0 | 0 | 393 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 356 |
| 285 | 393 | 0 | 0 | 0 | 393 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 432 |
| 286 | 393 | 0 | 0 | 0 | 393 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 384 |
| 287 | 393 | 0 | 0 | 0 | 393 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 300 |
| 288 | 393 | 0 | 0 | 0 | 393 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 352 |
| 289 | 393 | 0 | 0 | 0 | 393 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 550 |
| 290 | 393 | 0 | 0 | 0 | 393 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 1138 |
| 291 | 393 | 0 | 0 | 0 | 393 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 714 |
| 292 | 393 | 0 | 0 | 0 | 393 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 1300 |
| 293 | 393 | 0 | 0 | 0 | 393 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 369 |
| 262 | 786 | 0 | 0 | 0 | 786 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 816 |
| 261 | 786 | 0 | 0 | 0 | 786 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 411 |
| 260 | 786 | 0 | 0 | 0 | 786 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 640 |
| 259 | 786 | 0 | 0 | 0 | 786 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 1217 |
| 258 | 786 | 0 | 0 | 0 | 786 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 1079 |
| 257 | 786 | 0 | 0 | 0 | 786 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 941 |
| 256 | 786 | 0 | 0 | 0 | 786 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 | 693 |
| 255 | 393 | 0 | 0 | 0 | 393 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 361 |
| 254 | 393 | 0 | 0 | 0 | 393 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 391 |
| 253 | 393 | 0 | 0 | 0 | 393 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 736 |
| 252 | 393 | 0 | 0 | 0 | 393 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 560 |
| 251 | 393 | 0 | 0 | 0 | 393 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 518 |
| 250 | 393 | 0 | 0 | 0 | 393 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 831 |
| 249 | 393 | 0 | 0 | 0 | 393 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 174 |
| 248 | 393 | 0 | 0 | 0 | 393 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 291 |
| 247 | 393 | 0 | 0 | 0 | 393 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 | 505 |
| | | | | | | | | | | | | | | | | | 32752 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-DSL (miles) | LDT1-DSL (miles) | LDT2-DSL (miles) | MDT-DSL (miles) | LHDT1-DSL (miles) | LHDT2_DSL (miles) | MHDT-DSL (miles) | HHDT-DSL (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 446 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 279 |
| 228 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 |
| 227 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 |
| 226 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 515 |
| 225 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 248 |
| 224 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 656 |
| 223 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 285 |
| 222 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 297 |
| 221 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 277 |
| 220 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 351 |
| 219 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 594 |
| 218 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 650 |
| 217 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 743 |
| 216 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 602 |
| 215 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 214 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 376 |
| 213 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 590 |
| 212 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 565 |
| 211 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 210 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 902 |
| 209 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 478 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 496 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 240 |
| 265 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 |
| 266 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 |
| 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 159 |
| 268 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 243 |
| 269 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 464 |
| 270 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 433 |
| 271 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 255 |
| 272 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| 273 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 274 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 415 |
| 275 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 276 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 427 |
| 277 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 253 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 445 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 363 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 515 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 274 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 356 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 432 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 384 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 550 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1138 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 714 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1300 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 369 |
| 262 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 816 |
| 261 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 411 |
| 260 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 640 |
| 259 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1217 |
| 258 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1079 |
| 257 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 941 |
| 256 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 693 |
| 255 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 361 |
| 254 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 391 |
| 253 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 736 |
| 252 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 560 |
| 251 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 518 |
| 250 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 831 |
| 249 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 174 |
| 248 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 291 |
| 247 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 505 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **32752** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11626 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21126 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **32752** | **32752** |

**World Logistics Center** **2035**

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Freeway to Port
Gasoline
Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 393 | 0 | 0 | 0 | 393 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 229 | 393 | 0 | 0 | 0 | 393 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 228 | 393 | 0 | 0 | 0 | 393 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 227 | 393 | 0 | 0 | 0 | 393 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 3 |
| 226 | 393 | 0 | 0 | 0 | 393 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 225 | 393 | 0 | 0 | 0 | 393 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 224 | 393 | 0 | 0 | 0 | 393 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| 223 | 393 | 0 | 0 | 0 | 393 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 222 | 393 | 0 | 0 | 0 | 393 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 221 | 393 | 0 | 0 | 0 | 393 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 220 | 393 | 0 | 0 | 0 | 393 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 219 | 393 | 0 | 0 | 0 | 393 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 9 |
| 218 | 393 | 0 | 0 | 0 | 393 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| 217 | 393 | 0 | 0 | 0 | 393 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 11 |
| 216 | 393 | 0 | 0 | 0 | 393 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 9 |
| 215 | 393 | 0 | 0 | 0 | 393 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 214 | 393 | 0 | 0 | 0 | 393 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 213 | 393 | 0 | 0 | 0 | 393 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 9 |
| 212 | 393 | 0 | 0 | 0 | 393 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 211 | 393 | 0 | 0 | 0 | 393 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 210 | 393 | 0 | 0 | 0 | 393 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 13 |
| 209 | 393 | 0 | 0 | 0 | 393 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 263 | 393 | 0 | 0 | 0 | 393 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 264 | 393 | 0 | 0 | 0 | 393 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 265 | 393 | 0 | 0 | 0 | 393 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 3 |
| 266 | 393 | 0 | 0 | 0 | 393 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 267 | 393 | 0 | 0 | 0 | 393 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 268 | 393 | 0 | 0 | 0 | 393 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 269 | 393 | 0 | 0 | 0 | 393 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 270 | 393 | 0 | 0 | 0 | 393 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 271 | 393 | 0 | 0 | 0 | 393 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 272 | 393 | 0 | 0 | 0 | 393 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 |
| 273 | 393 | 0 | 0 | 0 | 393 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 1 |
| 274 | 393 | 0 | 0 | 0 | 393 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 275 | 393 | 0 | 0 | 0 | 393 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 276 | 393 | 0 | 0 | 0 | 393 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 277 | 393 | 0 | 0 | 0 | 393 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 278 | 393 | 0 | 0 | 0 | 393 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 279 | 393 | 0 | 0 | 0 | 393 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| 280 | 393 | 0 | 0 | 0 | 393 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 281 | 393 | 0 | 0 | 0 | 393 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 282 | 393 | 0 | 0 | 0 | 393 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 283 | 393 | 0 | 0 | 0 | 393 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 284 | 393 | 0 | 0 | 0 | 393 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 285 | 393 | 0 | 0 | 0 | 393 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 286 | 393 | 0 | 0 | 0 | 393 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 287 | 393 | 0 | 0 | 0 | 393 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 288 | 393 | 0 | 0 | 0 | 393 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 289 | 393 | 0 | 0 | 0 | 393 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 290 | 393 | 0 | 0 | 0 | 393 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 17 |
| 291 | 393 | 0 | 0 | 0 | 393 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 10 |
| 292 | 393 | 0 | 0 | 0 | 393 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 19 |
| 293 | 393 | 0 | 0 | 0 | 393 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 262 | 786 | 0 | 0 | 0 | 786 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 12 |
| 261 | 786 | 0 | 0 | 0 | 786 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 6 |
| 260 | 786 | 0 | 0 | 0 | 786 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 9 |
| 259 | 786 | 0 | 0 | 0 | 786 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 18 |
| 258 | 786 | 0 | 0 | 0 | 786 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 16 |
| 257 | 786 | 0 | 0 | 0 | 786 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 14 |
| 256 | 786 | 0 | 0 | 0 | 786 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 10 |
| 255 | 393 | 0 | 0 | 0 | 393 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 5 |
| 254 | 393 | 0 | 0 | 0 | 393 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| 253 | 393 | 0 | 0 | 0 | 393 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 11 |
| 252 | 393 | 0 | 0 | 0 | 393 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 251 | 393 | 0 | 0 | 0 | 393 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 8 |
| 250 | 393 | 0 | 0 | 0 | 393 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 12 |
| 249 | 393 | 0 | 0 | 0 | 393 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 3 |
| 248 | 393 | 0 | 0 | 0 | 393 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 |
| 247 | 393 | 0 | 0 | 0 | 393 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 7 |
| | | | | | | | | | | | | | | | | | 482 |

**VMT per Vehicle Class**

| Freeway Segment | Speed Group | LDA-GAS (miles) | LDT1-GAS (miles) | LDT2-GAS (miles) | MDT-GAS (miles) | LHDT1-GAS (miles) | LHDT2_GAS (miles) | MHDT-GAS (miles) | HHDT-GAS (miles) |
|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 229 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 228 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 227 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 226 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 225 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 224 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 223 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 222 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 221 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 220 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 219 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 218 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 217 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 216 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 215 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 214 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 213 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 212 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 211 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 210 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 209 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 263 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 264 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 265 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 266 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 268 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 269 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 270 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 271 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 272 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 273 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 274 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 275 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 276 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 277 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 278 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 279 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 280 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 281 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 282 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 283 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 284 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 285 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 286 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 287 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 288 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 289 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 290 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 291 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 292 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 293 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 262 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 261 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 260 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 259 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 258 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 257 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 256 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 255 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 254 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 253 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 252 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 251 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 250 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 249 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 248 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 247 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Total | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **482** |

**Vehicle Miles Traveled per Speed Group**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 | |
| Total | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **482** | **482** |

**World Logistics Center**
**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**
**Entrained Road Dust**
Freeway to Port

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT
Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle Wt (tons) | Silt Loading (g/m2) | PM2.5 Emission Factor (lb/VMT) | PM2.5 Entrained Dust (lb/day) | PM10 Emission Factor (lb/VMT) | PM10 Entrained Dust (lb/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | F | 1854 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 453 | 453 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 229 | F | 1159 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 283 | 283 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 228 | F | 520 | 0.32 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 127 | 127 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.2 |
| 227 | F | 833 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 203 | 203 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 226 | F | 2141 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 523 | 523 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 225 | F | 1032 | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 252 | 252 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 224 | F | 2726 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 666 | 666 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.1 |
| 223 | F | 1185 | 0.74 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 289 | 289 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 222 | F | 1233 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 301 | 301 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 221 | F | 1153 | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 281 | 281 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 220 | F | 1458 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 356 | 356 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 219 | F | 2467 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 602 | 602 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 218 | F | 2700 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 659 | 659 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.1 |
| 217 | F | 3089 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 754 | 754 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.3 |
| 216 | F | 2502 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 611 | 611 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.0 |
| 215 | F | 1445 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 353 | 353 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 214 | F | 1563 | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 382 | 382 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 213 | F | 2452 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 599 | 599 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 212 | F | 2347 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 573 | 573 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 211 | F | 1767 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 431 | 431 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 210 | F | 3749 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 915 | 915 | 23.25 | 0.022 | 0.0004 | 0.4 | 0.0017 | 1.5 |
| 209 | F | 1985 | 1.23 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 485 | 485 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 263 | F | 2061 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 503 | 503 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 264 | F | 997 | 0.62 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 243 | 243 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 265 | F | 720 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 176 | 176 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 266 | F | 675 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 267 | F | 659 | 0.41 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 161 | 161 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 268 | F | 1012 | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 247 | 247 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 269 | F | 1929 | 1.20 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 471 | 471 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 270 | F | 1798 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 439 | 439 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 271 | F | 1058 | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 258 | 258 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 272 | F | 676 | 0.42 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 165 | 165 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 273 | F | 248 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 61 | 61 | 23.25 | 0.022 | 0.0004 | 0.0 | 0.0017 | 0.1 |
| 274 | F | 1725 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 421 | 421 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 275 | F | 1766 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 431 | 431 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 276 | F | 1776 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 434 | 434 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 277 | F | 1050 | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 256 | 256 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.4 |
| 278 | F | 1765 | 1.10 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 431 | 431 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 279 | F | 1851 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 452 | 452 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.8 |
| 280 | F | 1510 | 0.94 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 369 | 369 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 281 | F | 2140 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 522 | 522 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 282 | F | 1138 | 0.71 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 278 | 278 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 283 | F | 1464 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 357 | 357 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 284 | F | 1480 | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 361 | 361 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 285 | F | 1797 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 439 | 439 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 286 | F | 1596 | 0.99 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 390 | 390 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 287 | F | 1247 | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 304 | 304 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 288 | F | 1463 | 0.91 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 357 | 357 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.6 |
| 289 | F | 2284 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 558 | 558 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 290 | F | 4728 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 1154 | 1154 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 2.0 |
| 291 | F | 2967 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 724 | 724 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.2 |
| 292 | F | 5404 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 1319 | 1319 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 2.2 |
| 293 | F | 1533 | 0.95 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 374 | 374 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 262 | F | 1695 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 828 | 828 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.4 |
| 261 | F | 854 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 417 | 417 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 260 | F | 1330 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 649 | 649 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.1 |
| 259 | F | 2529 | 1.57 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 1235 | 1235 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 2.1 |
| 258 | F | 2243 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 1095 | 1095 | 23.25 | 0.022 | 0.0004 | 0.5 | 0.0017 | 1.9 |
| 257 | F | 1956 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 955 | 955 | 23.25 | 0.022 | 0.0004 | 0.4 | 0.0017 | 1.6 |
| 256 | F | 1441 | 0.90 | 0 | 0 | 0 | 0 | 0 | 0 | 786 | 704 | 704 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.2 |
| 255 | F | 1501 | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 366 | 366 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.6 |
| 254 | F | 1627 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 397 | 397 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.7 |
| 253 | F | 3060 | 1.90 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 747 | 747 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.3 |
| 252 | F | 2329 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 569 | 569 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 1.0 |
| 251 | F | 2154 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 526 | 526 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| 250 | F | 3452 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 843 | 843 | 23.25 | 0.022 | 0.0004 | 0.3 | 0.0017 | 1.4 |
| 249 | F | 722 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 176 | 176 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.3 |
| 248 | F | 1211 | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 296 | 296 | 23.25 | 0.022 | 0.0004 | 0.1 | 0.0017 | 0.5 |
| 247 | F | 2097 | 1.30 | 0 | 0 | 0 | 0 | 0 | 0 | 393 | 512 | 512 | 23.25 | 0.022 | 0.0004 | 0.2 | 0.0017 | 0.9 |
| | | | | | | | | | | | | | | | **Totals:** | **13.8** | | **56.2** |

**World Logistics Center**
Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT
Total Vehicle Miles Traveled

**Segment Vehicle Speed (mph)**

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT |
|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 1 | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| 2 | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| 3 | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| 4 | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| 5 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| 6 | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| 7 | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| 8 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 9 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Total VMT per Source**

| | Gas | Diesel | Total |
|---|---|---|---|
| Area | 11644 | 2384 | 14029 |
| Internal | 96475 | 35224 | 131699 |
| Surface | 185735 | 37969 | 223704 |
| Freeways | 319977 | 312110 | 632086 |
| Freeways to Ports | 482 | 32752 | 33233 |
| Total | **614312** | **420438** | **1034751** |

**TOTAL VMT Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 67 | 7 | 25 | 5 | 104 |
| 0 | (miles) | 6058 | 797 | 2408 | 1877 | 325 | 35 | 119 | 25 | 11644 |
| 1 | | 63391 | 8342 | 25192 | 19637 | 4071 | 432 | 2394 | 419 | 123878 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 171 |
| 3 | | 34320 | 4516 | 13639 | 10632 | 2146 | 228 | 1841 | 540 | 67861 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 821 | 108 | 326 | 254 | 52 | 5 | 37 | 1 | 1605 |
| 6 | | 43557 | 5732 | 17310 | 13493 | 3022 | 321 | 2702 | 1111 | 87249 |
| 7 | | 163908 | 21570 | 65138 | 50775 | 8851 | 940 | 7870 | 2506 | 321557 |
| 8 | | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 37 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 | 311 |
| Total | (miles) | **312076** | **41068** | **124020** | **96674** | **18468** | **1960** | **14963** | **5083** | **614312** |

**TOTAL VMT Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 21 | 7 | 109 | 356 | 492 |
| 0 | (miles) | 19 | 1 | 1 | 2 | 100 | 33 | 526 | 1702 | 2384 |
| 1 | | 194 | 12 | 11 | 20 | 1252 | 415 | 10572 | 28484 | 40960 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11626 | 11626 |
| 3 | | 105 | 7 | 6 | 11 | 660 | 219 | 8130 | 36706 | 45843 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 3 | 0 | 0 | 0 | 16 | 5 | 165 | 68 | 257 |
| 6 | | 133 | 8 | 8 | 14 | 929 | 308 | 11932 | 75545 | 88878 |
| 7 | | 500 | 32 | 30 | 52 | 2721 | 902 | 34755 | 170370 | 209363 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21126 | 21126 |
| Total | (miles) | **953** | **60** | **56** | **98** | **5678** | **1883** | **66081** | **345629** | **420438** |
| Grand total VMT | | **313029** | **41128** | **124077** | **96773** | **24146** | **3843** | **81044** | **350712** | **1034751** |

**VMT: Area Source, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 67 | 7 | 25 | 5 | 104 |
| 0 | (miles) | 6058 | 797 | 2408 | 1877 | 325 | 35 | 119 | 25 | 11644 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **6058** | **797** | **2408** | **1877** | **325** | **35** | **119** | **25** | **11644** |

**VMT: Area Source, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 21 | 7 | 109 | 356 | 492 |
| 0 | (miles) | 19 | 1 | 1 | 2 | 100 | 33 | 526 | 1702 | 2384 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **19** | **1** | **1** | **2** | **100** | **33** | **526** | **1702** | **2384** |
| Grand total VMT | | **6077** | **798** | **2409** | **1879** | **425** | **68** | **645** | **1727** | **14029** |

**VMT: Internal, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 49156 | 6469 | 19535 | 15227 | 3414 | 362 | 1944 | 369 | 96475 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **49156** | **6469** | **19535** | **15227** | **3414** | **362** | **1944** | **369** | **96475** |

**VMT: Internal, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 150 | 9 | 9 | 16 | 1050 | 348 | 8584 | 25058 | 35224 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **150** | **9** | **9** | **16** | **1050** | **348** | **8584** | **25058** | **35224** |
| Grand total VMT | | **49306** | **6478** | **19544** | **15243** | **4464** | **710** | **10528** | **25426** | **131699** |

**VMT: Surface, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 14235 | 1873 | 5657 | 4410 | 657 | 70 | 450 | 50 | 27403 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 19618 | 2582 | 7796 | 6077 | 1055 | 112 | 719 | 36 | 37995 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 821 | 108 | 326 | 254 | 52 | 5 | 37 | 1 | 1605 |
| 6 | | 19982 | 2629 | 7941 | 6190 | 936 | 99 | 754 | 47 | 38578 |
| 7 | | 41620 | 5477 | 16540 | 12893 | 1767 | 188 | 1463 | 170 | 80117 |
| 8 | | 20 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 37 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **96295** | **12672** | **38268** | **29830** | **4468** | **474** | **3423** | **304** | **185735** |

**VMT: Surface, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 43 | 3 | 3 | 4 | 202 | 67 | 1987 | 3426 | 5736 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 60 | 4 | 4 | 6 | 324 | 108 | 3174 | 2440 | 6120 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | 3 | 0 | 0 | 0 | 16 | 5 | 165 | 68 | 257 |
| 6 | | 61 | 4 | 4 | 6 | 288 | 95 | 3329 | 3172 | 6959 |
| 7 | | 127 | 8 | 8 | 13 | 543 | 180 | 6460 | 11556 | 18895 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **294** | **19** | **17** | **30** | **1374** | **455** | **15116** | **20664** | **37969** |
| Grand total VMT | | **96589** | **12691** | **38286** | **29861** | **5841** | **930** | **18539** | **20967** | **223704** |

**VMT: Freeways, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 14702 | 1935 | 5842 | 4554 | 1091 | 116 | 1122 | 504 | 29866 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 23576 | 3102 | 9369 | 7303 | 2086 | 221 | 1948 | 1064 | 48671 |
| 7 | | 122289 | 16093 | 48598 | 37882 | 7084 | 752 | 6407 | 2336 | 241440 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **160566** | **21130** | **63810** | **49740** | **10261** | **1089** | **9477** | **3904** | **319977** |

**VMT: Freeways, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | | 45 | 3 | 3 | 5 | 335 | 111 | 4956 | 34266 | 39724 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 72 | 5 | 4 | 7 | 641 | 213 | 8603 | 72373 | 81919 |
| 7 | | 373 | 24 | 22 | 39 | 2178 | 722 | 28295 | 158815 | 190467 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | (miles) | **490** | **31** | **29** | **51** | **3155** | **1046** | **41855** | **265454** | **312110** |
| Grand total VMT | | **161056** | **21161** | **63839** | **49791** | **13416** | **2135** | **51332** | **269357** | **632086** |

**VMT: Freeways to Ports, Gas**

| Speed Group | | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2_GAS | MHDT-GAS | HHDT-GAS | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 171 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 | 311 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **482** | **482** |

**VMT: Freeways to Ports, Diesel**

| Speed Group | | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| idle | (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11626 | 11626 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21126 | 21126 |
| Subtotal | (miles) | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **32752** | **32752** |
| Grand total VMT | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **33233** | **33233** |

# World Logistics Center

## Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT Emissions Estimates

**Emissions Summary: Pounds per day**

| Source | ROG | NOx | CO | SOx | PM10 exhaust | PM10 break, tire | PM10 dust | PM10 total | PM2.5 exhaust | PM2.5 break, tire | PM2.5 dust | PM2.5 total | CO2 | BC | CH4 | N2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 7 | 61 | 71 | | 0.16 | | | | 0.15 | | | | 28813 | | 1.52 | 0.17 |
| Internal | 20 | 181 | 181 | | 0.69 | | | | 0.65 | | | | 170341 | | 1.15 | 1.54 |
| Surface | 18 | 89 | 201 | | 0.73 | | | | 0.69 | | | | 195621 | | 1.11 | 2.59 |
| Freeways | 71 | 630 | 787 | | 4.17 | | | | 3.97 | | | | 1132042 | | 4.42 | 7.25 |
| Freeways to Ports | 3 | 40 | 46 | | 0.36 | | | | 0.34 | | | | 99676 | | 0.24 | 0.36 |
| **Total** | **119** | **1001** | **1286** | | **6.11** | **172** | **943** | **1120** | **5.80** | **66** | **231** | **303** | **1626494** | **3.58** | **8.43** | **11.90** |

**Emissions Summary: tons per year**

| Source | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 1.36 | 11.16 | 13.03 | | 0.03 | | | | 0.03 | | | | 5258 | | 0.28 | 0.03 |
| Internal | 3.59 | 33.10 | 33.09 | | 0.13 | | | | 0.12 | | | | 31087 | | 0.21 | 0.28 |
| Surface | 3.26 | 16.32 | 36.59 | | 0.13 | | | | 0.13 | | | | 35701 | | 0.20 | 0.47 |
| Freeways | 12.99 | 114.91 | 143.54 | | 0.76 | | | | 0.72 | | | | 206598 | | 0.81 | 1.32 |
| Freeways to Ports | 0.60 | 7.22 | 8.38 | | 0.06 | | | | 0.06 | | | | 18191 | | 0.04 | 0.07 |
| **Total** | **21.80** | **182.72** | **234.64** | | **1.11** | **31** | **172** | **204** | **1.06** | **12.07** | **42.23** | **55.36** | **296835** | **0.65** | **1.54** | **2.17** |

**World Logistics Center** 2035 **ROG**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1497 | 0.2303 | 0.1963 | 0.3025 | 10.9138 | 9.4577 | 21.0552 | 10.4371 |
| 0 | 0.0595 | 0.1160 | 0.0766 | 0.1155 | 0.3495 | 0.1462 | 0.1864 | 1.0108 |
| 1 | 0.0242 | 0.0477 | 0.0311 | 0.0472 | 0.2081 | 0.0869 | 0.1092 | 0.5342 |
| 2 | 0.0160 | 0.0312 | 0.0206 | 0.0312 | 0.1152 | 0.0243 | 0.0599 | 0.2754 |
| 3 | 0.0189 | 0.0372 | 0.0243 | 0.0368 | 0.1480 | 0.0617 | 0.0768 | 0.3483 |
| 4 | 0.0147 | 0.0281 | 0.0189 | 0.0289 | 0.0951 | 0.0397 | 0.0503 | 0.2630 |
| 5 | 0.0285 | 0.0560 | 0.0366 | 0.0554 | 0.2081 | 0.0869 | 0.1092 | 0.5342 |
| 6 | 0.0212 | 0.0416 | 0.0272 | 0.0412 | 0.1480 | 0.0617 | 0.0768 | 0.3483 |
| 7 | 0.0172 | 0.0337 | 0.0221 | 0.0336 | 0.1294 | 0.0539 | 0.0672 | 0.3025 |
| 8 | 0.0346 | 0.0680 | 0.0446 | 0.0673 | 0.2081 | 0.0869 | 0.1092 | 0.5342 |
| 9 | 0.0152 | 0.0294 | 0.0195 | 0.0296 | 0.1040 | 0.0434 | 0.0545 | 0.2627 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.4398 | 1.3699 | 1.3095 | 0.5264 | 3.1731 | 3.1731 | 0.1842 | 0.5788 |
| 0 | 0.0323 | 0.1045 | 0.0959 | 0.0387 | 0.2808 | 0.2728 | 0.1371 | 0.3331 |
| 1 | 0.0046 | 0.0175 | 0.0134 | 0.0054 | 0.0718 | 0.0648 | 0.0727 | 0.1693 |
| 2 | 0.0024 | 0.0109 | 0.0071 | 0.0029 | 0.0334 | 0.0277 | 0.0215 | 0.0503 |
| 3 | 0.0032 | 0.0130 | 0.0094 | 0.0038 | 0.0452 | 0.0393 | 0.0395 | 0.0921 |
| 4 | 0.0023 | 0.0110 | 0.0067 | 0.0027 | 0.0273 | 0.0214 | 0.0117 | 0.0276 |
| 5 | 0.0057 | 0.0221 | 0.0169 | 0.0068 | 0.0718 | 0.0648 | 0.0727 | 0.1693 |
| 6 | 0.0038 | 0.0148 | 0.0111 | 0.0045 | 0.0452 | 0.0393 | 0.0395 | 0.0921 |
| 7 | 0.0028 | 0.0116 | 0.0081 | 0.0033 | 0.0382 | 0.0325 | 0.0291 | 0.0681 |
| 8 | 0.0076 | 0.0290 | 0.0224 | 0.0090 | 0.0718 | 0.0648 | 0.0727 | 0.1693 |
| 9 | 0.0023 | 0.0110 | 0.0067 | 0.0027 | 0.0301 | 0.0242 | 0.0158 | 0.0369 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.440 | 0.088 | 0.032 | 0.008 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| LDT1 | DSL | 1.370 | 0.274 | 0.104 | 0.029 | 0.022 | 0.018 | 0.015 | 0.013 | 0.012 | 0.011 | 0.011 | 0.011 |
| LDT2 | DSL | 1.310 | 0.262 | 0.096 | 0.022 | 0.017 | 0.013 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 |
| LHDT1 | DSL | 3.173 | 0.756 | 0.281 | 0.072 | 0.055 | 0.045 | 0.038 | 0.033 | 0.030 | 0.027 | 0.027 | 0.029 |
| LHDT2 | DSL | 3.173 | 0.744 | 0.273 | 0.065 | 0.049 | 0.039 | 0.033 | 0.028 | 0.024 | 0.021 | 0.020 | 0.021 |
| MDV | DSL | 0.526 | 0.105 | 0.039 | 0.009 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| MH | DSL | 4.054 | 0.811 | 0.299 | 0.076 | 0.059 | 0.048 | 0.040 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 |
| OBUS | DSL | 0.437 | 0.340 | 0.194 | 0.103 | 0.076 | 0.056 | 0.041 | 0.030 | 0.022 | 0.016 | 0.014 | 0.014 |
| SBUS | DSL | 0.201 | 0.278 | 0.156 | 0.081 | 0.060 | 0.045 | 0.033 | 0.025 | 0.018 | 0.014 | 0.012 | 0.012 |
| T6 | DSL | 0.184 | 0.241 | 0.137 | 0.073 | 0.054 | 0.040 | 0.029 | 0.021 | 0.016 | 0.012 | 0.010 | 0.010 |
| T7 | DSL | 0.579 | 0.595 | 0.333 | 0.169 | 0.125 | 0.092 | 0.068 | 0.050 | 0.037 | 0.028 | 0.023 | 0.023 |
| UBUS | DSL | 32.491 | 6.498 | 2.487 | 0.757 | 0.586 | 0.458 | 0.374 | 0.333 | 0.335 | 0.381 | 0.470 | 0.603 |
| LDA | GAS | 0.150 | 0.030 | 0.013 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| LDT1 | GAS | 0.230 | 0.046 | 0.020 | 0.010 | 0.008 | 0.007 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 |
| LDT2 | GAS | 0.196 | 0.039 | 0.017 | 0.009 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.005 | 0.005 |
| LHDT1 | GAS | 10.914 | 0.046 | 0.019 | 0.010 | 0.008 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 |
| LHDT2 | GAS | 9.458 | 0.025 | 0.010 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| MCY | GAS | 62.093 | 12.419 | 5.483 | 2.989 | 2.386 | 2.005 | 1.774 | 1.651 | 1.617 | 1.666 | 1.805 | 2.056 |
| MDV | GAS | 0.303 | 0.061 | 0.026 | 0.014 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 | 0.008 |
| MH | GAS | 0.457 | 0.091 | 0.038 | 0.020 | 0.015 | 0.013 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 |
| OBUS | GAS | 15.694 | 0.069 | 0.029 | 0.015 | 0.012 | 0.010 | 0.008 | 0.008 | 0.007 | 0.008 | 0.008 | 0.009 |
| SBUS | GAS | 15.415 | 0.058 | 0.024 | 0.013 | 0.010 | 0.008 | 0.007 | 0.006 | 0.006 | 0.006 | 0.007 | 0.008 |
| T6 | GAS | 21.055 | 0.074 | 0.031 | 0.016 | 0.012 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 | 0.009 | 0.010 |
| T7 | GAS | 10.437 | 2.087 | 0.873 | 0.451 | 0.352 | 0.289 | 0.251 | 0.229 | 0.221 | 0.225 | 0.242 | 0.274 |
| UBUS | GAS | 1.074 | 0.215 | 0.090 | 0.046 | 0.036 | 0.030 | 0.026 | 0.024 | 0.023 | 0.023 | 0.025 | 0.028 |
| T7 | NG | 0.017 | 0.309 | 0.163 | 0.081 | 0.061 | 0.046 | 0.035 | 0.027 | 0.021 | 0.016 | 0.015 | 0.015 |
| UBUS | NG | 3.082 | 0.616 | 0.234 | 0.072 | 0.057 | 0.047 | 0.039 | 0.034 | 0.033 | 0.034 | 0.038 | 0.045 |

**EMFAC2014 Running Losses Emission Factors (grams/mile)**

| | | Idling | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | GAS | | 0.140 | 0.047 | 0.028 | 0.023 | 0.020 | 0.018 | 0.016 | 0.014 | 0.013 | 0.012 | 0.011 |
| LDT1 | GAS | | 0.288 | 0.096 | 0.058 | 0.048 | 0.041 | 0.036 | 0.032 | 0.029 | 0.026 | 0.024 | 0.022 |
| LDT2 | GAS | | 0.180 | 0.060 | 0.036 | 0.030 | 0.026 | 0.022 | 0.020 | 0.018 | 0.016 | 0.015 | 0.014 |
| LHDT1 | GAS | | 0.990 | 0.330 | 0.198 | 0.165 | 0.141 | 0.124 | 0.110 | 0.099 | 0.090 | 0.083 | 0.076 |
| LHDT2 | GAS | | 0.408 | 0.136 | 0.082 | 0.068 | 0.058 | 0.051 | 0.045 | 0.041 | 0.037 | 0.034 | 0.031 |
| MCY | GAS | | 0.238 | 0.079 | 0.048 | 0.040 | 0.034 | 0.030 | 0.026 | 0.024 | 0.022 | 0.020 | 0.018 |
| MDV | GAS | | 0.269 | 0.090 | 0.054 | 0.045 | 0.038 | 0.034 | 0.030 | 0.027 | 0.024 | 0.022 | 0.021 |
| MH | GAS | | 1.057 | 0.352 | 0.211 | 0.176 | 0.151 | 0.132 | 0.117 | 0.106 | 0.096 | 0.088 | 0.081 |
| OBUS | GAS | | 0.557 | 0.186 | 0.111 | 0.093 | 0.080 | 0.070 | 0.062 | 0.056 | 0.051 | 0.046 | 0.043 |
| SBUS | GAS | | 0.653 | 0.218 | 0.131 | 0.109 | 0.093 | 0.082 | 0.073 | 0.065 | 0.059 | 0.054 | 0.050 |
| HHDT | GAS | | 0.466 | 0.155 | 0.093 | 0.078 | 0.067 | 0.058 | 0.052 | 0.047 | 0.042 | 0.039 | 0.036 |
| MHDT | GAS | | 0.415 | 0.138 | 0.083 | 0.069 | 0.059 | 0.052 | 0.046 | 0.041 | 0.038 | 0.035 | 0.032 |
| UBUS | GAS | | 0.683 | 0.228 | 0.137 | 0.114 | 0.098 | 0.085 | 0.076 | 0.068 | 0.062 | 0.057 | 0.053 |

**EMFAC2014 Total Emission Factors (grams/mile)**

| | | idle | 5mph | 15mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.440 | 0.088 | 0.032 | 0.008 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| LDT1 | DSL | 1.370 | 0.274 | 0.104 | 0.029 | 0.022 | 0.018 | 0.015 | 0.013 | 0.012 | 0.011 | 0.011 | 0.011 |
| LDT2 | DSL | 1.310 | 0.262 | 0.096 | 0.022 | 0.017 | 0.013 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 |
| LHDT1 | DSL | 3.173 | 0.756 | 0.281 | 0.072 | 0.055 | 0.045 | 0.038 | 0.033 | 0.030 | 0.027 | 0.027 | 0.029 |
| LHDT2 | DSL | 3.173 | 0.744 | 0.273 | 0.065 | 0.049 | 0.039 | 0.033 | 0.028 | 0.024 | 0.021 | 0.020 | 0.021 |
| MDV | DSL | 0.526 | 0.105 | 0.039 | 0.009 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| MH | DSL | 4.054 | 0.811 | 0.299 | 0.076 | 0.059 | 0.048 | 0.040 | 0.034 | 0.030 | 0.028 | 0.028 | 0.029 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBUS | DSL | 0.437 | 0.340 | 0.194 | 0.103 | 0.076 | 0.056 | 0.041 | 0.030 | 0.022 | 0.016 | 0.014 | 0.014 |
| SBUS | DSL | 0.201 | 0.278 | 0.156 | 0.081 | 0.060 | 0.045 | 0.033 | 0.025 | 0.018 | 0.014 | 0.012 | 0.012 |
| T6 | DSL | 0.184 | 0.241 | 0.137 | 0.073 | 0.054 | 0.040 | 0.029 | 0.021 | 0.016 | 0.012 | 0.010 | 0.010 |
| T7 | DSL | 0.579 | 0.595 | 0.333 | 0.169 | 0.125 | 0.092 | 0.068 | 0.050 | 0.037 | 0.028 | 0.023 | 0.023 |
| UBUS | DSL | 32.491 | 6.498 | 2.487 | 0.757 | 0.586 | 0.458 | 0.374 | 0.333 | 0.335 | 0.381 | 0.470 | 0.603 |
| LDA | GAS | 0.150 | 0.170 | 0.060 | 0.035 | 0.028 | 0.024 | 0.021 | 0.019 | 0.017 | 0.016 | 0.015 | 0.015 |
| LDT1 | GAS | 0.230 | 0.334 | 0.116 | 0.068 | 0.056 | 0.048 | 0.042 | 0.037 | 0.034 | 0.031 | 0.029 | 0.028 |
| LDT2 | GAS | 0.196 | 0.219 | 0.077 | 0.045 | 0.037 | 0.031 | 0.027 | 0.024 | 0.022 | 0.021 | 0.020 | 0.019 |
| LHDT1 | GAS | 10.914 | 1.037 | 0.349 | 0.208 | 0.173 | 0.148 | 0.129 | 0.115 | 0.104 | 0.095 | 0.088 | 0.082 |
| LHDT2 | GAS | 9.458 | 0.432 | 0.146 | 0.087 | 0.072 | 0.062 | 0.054 | 0.048 | 0.043 | 0.040 | 0.037 | 0.035 |
| MCY | GAS | 62.093 | 12.657 | 5.562 | 3.036 | 2.425 | 2.039 | 1.804 | 1.678 | 1.641 | 1.688 | 1.825 | 2.074 |
| MDV | GAS | 0.303 | 0.329 | 0.115 | 0.067 | 0.055 | 0.047 | 0.041 | 0.037 | 0.034 | 0.031 | 0.030 | 0.029 |
| MH | GAS | 0.457 | 1.149 | 0.391 | 0.231 | 0.192 | 0.164 | 0.143 | 0.128 | 0.115 | 0.106 | 0.099 | 0.093 |
| OBUS | GAS | 15.694 | 0.627 | 0.215 | 0.127 | 0.105 | 0.089 | 0.078 | 0.070 | 0.063 | 0.058 | 0.055 | 0.052 |
| SBUS | GAS | 15.415 | 0.711 | 0.242 | 0.143 | 0.119 | 0.101 | 0.089 | 0.079 | 0.071 | 0.066 | 0.061 | 0.058 |
| T6 | GAS | 21.055 | 0.540 | 0.186 | 0.109 | 0.090 | 0.077 | 0.067 | 0.060 | 0.054 | 0.050 | 0.047 | 0.046 |
| T7 | GAS | 10.437 | 2.502 | 1.011 | 0.534 | 0.421 | 0.348 | 0.303 | 0.275 | 0.263 | 0.263 | 0.277 | 0.306 |
| UBUS | GAS | 1.074 | 0.897 | 0.317 | 0.183 | 0.150 | 0.127 | 0.111 | 0.099 | 0.091 | 0.085 | 0.082 | 0.081 |
| T7 | NG | 0.017 | 0.309 | 0.163 | 0.081 | 0.061 | 0.046 | 0.035 | 0.027 | 0.021 | 0.016 | 0.015 | 0.015 |
| UBUS | NG | 3.082 | 0.616 | 0.234 | 0.072 | 0.057 | 0.047 | 0.039 | 0.034 | 0.033 | 0.034 | 0.038 | 0.045 |

# World Logistics Center ROG

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 4 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 1 | 3 | 1 | 2 | 2 | 2 | 0 | 2 | 11 | 24 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 8 | 13 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 16 | 24 |
| 7 | 6 | 2 | 3 | 4 | 3 | 0 | 3 | 27 | 48 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **14** | **4** | **7** | **8** | **9** | **1** | **10** | **67** | **119** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 4 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **1** | **0** | **0** | **0** | **2** | **0** | **1** | **2** | **7** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 3 | 1 | 1 | 2 | 2 | 0 | 2 | 10 | 20 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3** | **1** | **1** | **2** | **2** | **0** | **2** | **10** | **20** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 |
| 7 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 7 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4** | **1** | **2** | **2** | **2** | **0** | **2** | **4** | **18** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 10 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 15 | 20 |
| 7 | 5 | 1 | 2 | 3 | 2 | 0 | 3 | 25 | 41 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **6** | **2** | **3** | **4** | **3** | **0** | **4** | **48** | **71** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **3** |

**World Logistics Center** **NOx**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.1990 | 0.2936 | 0.2602 | 0.4129 | 0.9846 | 0.8503 | 1.9278 | 25.6157 |
| 0 | 0.0307 | 0.0453 | 0.0402 | 0.0625 | 0.1112 | 0.0534 | 0.1360 | 3.9329 |
| 1 | 0.0216 | 0.0310 | 0.0280 | 0.0441 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |
| 2 | 0.0199 | 0.0288 | 0.0258 | 0.0415 | 0.0759 | 0.0260 | 0.0901 | 2.6057 |
| 3 | 0.0201 | 0.0288 | 0.0260 | 0.0412 | 0.0811 | 0.0382 | 0.0969 | 2.8035 |
| 4 | 0.0210 | 0.0305 | 0.0272 | 0.0447 | 0.0756 | 0.0351 | 0.0889 | 2.5813 |
| 5 | 0.0230 | 0.0333 | 0.0300 | 0.0468 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |
| 6 | 0.0206 | 0.0296 | 0.0267 | 0.0422 | 0.0811 | 0.0382 | 0.0969 | 2.8035 |
| 7 | 0.0198 | 0.0284 | 0.0256 | 0.0409 | 0.0778 | 0.0365 | 0.0927 | 2.6815 |
| 8 | 0.0250 | 0.0364 | 0.0326 | 0.0506 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |
| 9 | 0.0203 | 0.0295 | 0.0264 | 0.0425 | 0.0753 | 0.0349 | 0.0888 | 2.5725 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.2386 | 0.9976 | 0.7254 | 0.2813 | 37.4075 | 30.3010 | 18.9115 | 16.6379 |
| 0 | 0.0271 | 0.1524 | 0.0809 | 0.0317 | 0.3479 | 0.1844 | 4.4134 | 9.1862 |
| 1 | 0.0104 | 0.0993 | 0.0292 | 0.0117 | 0.2934 | 0.1138 | 1.3520 | 2.6451 |
| 2 | 0.0077 | 0.0997 | 0.0201 | 0.0084 | 0.3514 | 0.0975 | 0.3064 | 0.6013 |
| 3 | 0.0087 | 0.0986 | 0.0235 | 0.0096 | 0.3207 | 0.1009 | 0.5698 | 1.1135 |
| 4 | 0.0075 | 0.0967 | 0.0195 | 0.0082 | 0.3596 | 0.0943 | 0.1896 | 0.3745 |
| 5 | 0.0119 | 0.1083 | 0.0337 | 0.0135 | 0.2934 | 0.1138 | 1.3520 | 2.6451 |
| 6 | 0.0094 | 0.0977 | 0.0259 | 0.0105 | 0.3207 | 0.1009 | 0.5698 | 1.1135 |
| 7 | 0.0081 | 0.0965 | 0.0216 | 0.0089 | 0.3362 | 0.0986 | 0.4085 | 0.8005 |
| 8 | 0.0141 | 0.1169 | 0.0405 | 0.0161 | 0.2934 | 0.1138 | 1.3520 | 2.6451 |
| 9 | 0.0075 | 0.1039 | 0.0195 | 0.0082 | 0.3699 | 0.0980 | 0.2379 | 0.4617 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.239 | 0.048 | 0.027 | 0.014 | 0.012 | 0.010 | 0.009 | 0.009 | 0.008 | 0.008 | 0.008 | 0.008 |
| LDT1 | DSL | 0.998 | 0.200 | 0.152 | 0.117 | 0.108 | 0.099 | 0.098 | 0.099 | 0.096 | 0.100 | 0.104 | 0.097 |
| LDT2 | DSL | 0.725 | 0.145 | 0.081 | 0.041 | 0.034 | 0.029 | 0.026 | 0.024 | 0.022 | 0.020 | 0.019 | 0.019 |
| LHDT1 | DSL | 37.407 | 0.478 | 0.348 | 0.293 | 0.300 | 0.321 | 0.336 | 0.351 | 0.370 | 0.360 | 0.369 | 0.408 |
| LHDT2 | DSL | 30.301 | 0.304 | 0.184 | 0.114 | 0.105 | 0.101 | 0.099 | 0.098 | 0.098 | 0.094 | 0.095 | 0.102 |
| MDV | DSL | 0.281 | 0.056 | 0.032 | 0.016 | 0.013 | 0.012 | 0.011 | 0.010 | 0.009 | 0.008 | 0.008 | 0.008 |
| MH | DSL | 54.035 | 10.807 | 6.084 | 3.247 | 2.780 | 2.461 | 2.231 | 2.061 | 1.933 | 1.837 | 1.804 | 1.821 |
| OBUS | DSL | 15.949 | 12.510 | 5.701 | 1.737 | 1.079 | 0.728 | 0.521 | 0.389 | 0.301 | 0.239 | 0.215 | 0.215 |
| SBUS | DSL | 24.285 | 8.954 | 4.294 | 1.586 | 1.131 | 0.879 | 0.724 | 0.623 | 0.553 | 0.503 | 0.484 | 0.484 |
| T6 | DSL | 18.911 | 9.688 | 4.413 | 1.352 | 0.842 | 0.570 | 0.409 | 0.306 | 0.238 | 0.190 | 0.171 | 0.171 |
| T7 | DSL | 16.638 | 20.625 | 9.186 | 2.645 | 1.644 | 1.113 | 0.801 | 0.601 | 0.462 | 0.375 | 0.333 | 0.323 |
| UBUS | DSL | 256.574 | 51.315 | 27.550 | 20.173 | 19.964 | 19.862 | 19.865 | 19.971 | 20.181 | 20.493 | 20.908 | 21.427 |
| LDA | GAS | 0.199 | 0.040 | 0.031 | 0.025 | 0.023 | 0.022 | 0.021 | 0.020 | 0.020 | 0.020 | 0.020 | 0.021 |
| LDT1 | GAS | 0.294 | 0.059 | 0.045 | 0.036 | 0.033 | 0.031 | 0.030 | 0.029 | 0.028 | 0.029 | 0.030 | 0.030 |
| LDT2 | GAS | 0.260 | 0.052 | 0.040 | 0.033 | 0.030 | 0.028 | 0.027 | 0.026 | 0.026 | 0.026 | 0.026 | 0.027 |
| LHDT1 | GAS | 0.985 | 0.146 | 0.111 | 0.091 | 0.085 | 0.081 | 0.078 | 0.076 | 0.075 | 0.076 | 0.077 | 0.080 |
| LHDT2 | GAS | 0.850 | 0.069 | 0.053 | 0.044 | 0.040 | 0.038 | 0.037 | 0.035 | 0.035 | 0.035 | 0.036 | 0.037 |
| MCY | GAS | 7.584 | 1.517 | 1.243 | 1.090 | 1.044 | 1.013 | 0.996 | 0.991 | 0.997 | 1.013 | 1.040 | 1.078 |
| MDV | GAS | 0.413 | 0.083 | 0.063 | 0.051 | 0.047 | 0.044 | 0.042 | 0.041 | 0.041 | 0.041 | 0.043 | 0.045 |
| MH | GAS | 1.218 | 0.244 | 0.187 | 0.153 | 0.142 | 0.133 | 0.127 | 0.124 | 0.122 | 0.123 | 0.125 | 0.130 |
| OBUS | GAS | 1.408 | 0.165 | 0.126 | 0.103 | 0.096 | 0.090 | 0.086 | 0.084 | 0.083 | 0.083 | 0.085 | 0.088 |
| SBUS | GAS | 1.386 | 0.150 | 0.115 | 0.094 | 0.087 | 0.082 | 0.079 | 0.077 | 0.076 | 0.076 | 0.077 | 0.080 |
| T6 | GAS | 1.928 | 0.177 | 0.136 | 0.111 | 0.103 | 0.097 | 0.093 | 0.090 | 0.089 | 0.089 | 0.091 | 0.094 |
| T7 | GAS | 25.616 | 5.123 | 3.933 | 3.216 | 2.979 | 2.803 | 2.681 | 2.606 | 2.572 | 2.581 | 2.632 | 2.727 |
| UBUS | GAS | 3.696 | 0.739 | 0.567 | 0.464 | 0.430 | 0.404 | 0.387 | 0.376 | 0.371 | 0.373 | 0.380 | 0.394 |
| T7 | NG | 17.137 | 1.802 | 1.071 | 0.639 | 0.541 | 0.474 | 0.427 | 0.392 | 0.365 | 0.346 | 0.338 | 0.338 |
| UBUS | NG | 17.817 | 3.563 | 1.969 | 1.283 | 1.209 | 1.158 | 1.124 | 1.103 | 1.093 | 1.092 | 1.105 | 1.129 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center NOx

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 13 | 20 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 35 | 41 |
| 1 | 3 | 1 | 2 | 2 | 2 | 0 | 32 | 169 | 210 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 |
| 3 | 2 | 0 | 1 | 1 | 1 | 0 | 11 | 93 | 108 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 2 | 0 | 1 | 1 | 1 | 0 | 16 | 192 | 213 |
| 7 | 7 | 1 | 4 | 5 | 4 | 0 | 33 | 315 | 368 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 23 |
| **Total** | **14** | **3** | **7** | **9** | **9** | **1** | **101** | **857** | **1001** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 13 | 20 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 35 | 41 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **2** | **0** | **10** | **48** | **61** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 2 | 0 | 1 | 1 | 1 | 0 | 26 | 148 | 181 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2** | **0** | **1** | **1** | **1** | **0** | **26** | **148** | **181** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 20 | 28 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 6 | 13 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 8 | 15 |
| 7 | 2 | 0 | 1 | 1 | 1 | 0 | 6 | 21 | 32 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4** | **1** | **2** | **3** | **2** | **0** | **21** | **56** | **89** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 87 | 95 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 1 | 1 | 1 | 0 | 11 | 184 | 198 |
| 7 | 5 | 1 | 3 | 3 | 3 | 0 | 27 | 293 | 336 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **7** | **1** | **4** | **4** | **4** | **0** | **44** | **564** | **630** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 23 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **40** | **40** |

## World Logistics Center

## N2O

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 0 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 1 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 2 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 3 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 4 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 5 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 6 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 7 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 8 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |
| 9 | 0.0036 | 0.0066 | 0.0066 | 0.0066 | 0.0134 | 0.0134 | 0.0134 | 0.0134 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 0 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 1 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 2 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 3 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 4 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 5 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 6 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 7 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 8 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |
| 9 | 0.0010 | 0.0015 | 0.0015 | 0.0048 | 0.0048 | 0.0048 | 0.0048 | 0.0048 |

Source: United States Environmental Protection Agency. April 4, 2014. Emission Factors for Greenhouse Gas Inventories. www.epa.gov/climateleadership/documents/emission-factors.pdf. N2O for Gasoline Vehicles is from Table 3; diesel vehicles from Table 4.

# World Logistics Center N2O

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.002 | 0.004 | 0.008 |
| 0 | 0.048 | 0.012 | 0.035 | 0.027 | 0.011 | 0.001 | 0.009 | 0.019 | 0.162 |
| 1 | 0.502 | 0.121 | 0.366 | 0.285 | 0.133 | 0.017 | 0.182 | 0.313 | 1.921 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.128 | 0.128 |
| 3 | 0.272 | 0.066 | 0.198 | 0.154 | 0.070 | 0.009 | 0.140 | 0.404 | 1.313 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.007 | 0.002 | 0.005 | 0.004 | 0.002 | 0.000 | 0.003 | 0.001 | 0.022 |
| 6 | 0.345 | 0.083 | 0.251 | 0.196 | 0.099 | 0.013 | 0.206 | 0.831 | 2.024 |
| 7 | 1.299 | 0.313 | 0.946 | 0.738 | 0.290 | 0.037 | 0.599 | 1.873 | 6.095 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.232 | 0.232 |
| **Total** | **2.474** | **0.596** | **1.801** | **1.405** | **0.607** | **0.078** | **1.141** | **3.804** | **11.905** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.002 | 0.004 | 0.008 |
| 0 | 0.048 | 0.012 | 0.035 | 0.027 | 0.011 | 0.001 | 0.009 | 0.019 | 0.162 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.048** | **0.012** | **0.035** | **0.027** | **0.013** | **0.002** | **0.011** | **0.023** | **0.170** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.390 | 0.094 | 0.284 | 0.221 | 0.112 | 0.014 | 0.148 | 0.275 | 1.538 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.390** | **0.094** | **0.284** | **0.221** | **0.112** | **0.014** | **0.148** | **0.275** | **1.538** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.113 | 0.027 | 0.082 | 0.064 | 0.022 | 0.003 | 0.034 | 0.038 | 0.382 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.156 | 0.037 | 0.113 | 0.088 | 0.035 | 0.004 | 0.055 | 0.027 | 0.515 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.007 | 0.002 | 0.005 | 0.004 | 0.002 | 0.000 | 0.003 | 0.001 | 0.022 |
| 6 | 0.158 | 0.038 | 0.115 | 0.090 | 0.031 | 0.004 | 0.057 | 0.035 | 0.529 |
| 7 | 0.330 | 0.080 | 0.240 | 0.187 | 0.058 | 0.007 | 0.111 | 0.127 | 1.141 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.763** | **0.184** | **0.556** | **0.433** | **0.146** | **0.019** | **0.261** | **0.227** | **2.589** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.117 | 0.028 | 0.085 | 0.066 | 0.036 | 0.005 | 0.085 | 0.377 | 0.798 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.187 | 0.045 | 0.136 | 0.106 | 0.068 | 0.009 | 0.148 | 0.796 | 1.495 |
| 7 | 0.969 | 0.234 | 0.706 | 0.550 | 0.232 | 0.030 | 0.488 | 1.746 | 4.954 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **1.273** | **0.307** | **0.927** | **0.723** | **0.336** | **0.043** | **0.721** | **2.918** | **7.248** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.128 | 0.128 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.232 | 0.232 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.360** | **0.360** |

**World Logistics Center** **CO**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 2.9675 | 4.0134 | 3.8381 | 4.9658 | 128.0241 | 129.7210 | 323.8834 | 273.1047 |
| 0 | 0.4959 | 0.6725 | 0.6424 | 0.8240 | 0.3240 | 0.1916 | 0.3742 | 45.4559 |
| 1 | 0.3498 | 0.4623 | 0.4516 | 0.5866 | 0.2726 | 0.1610 | 0.3144 | 38.2070 |
| 2 | 0.2611 | 0.3447 | 0.3366 | 0.4398 | 0.2009 | 0.3875 | 0.2292 | 27.8681 |
| 3 | 0.3004 | 0.3962 | 0.3875 | 0.5042 | 0.2332 | 0.1368 | 0.2670 | 32.4491 |
| 4 | 0.2287 | 0.3009 | 0.2942 | 0.3871 | 0.1751 | 0.1020 | 0.1979 | 24.1850 |
| 5 | 0.3806 | 0.5072 | 0.4920 | 0.6351 | 0.2726 | 0.1610 | 0.3144 | 38.2070 |
| 6 | 0.3235 | 0.4268 | 0.4175 | 0.5431 | 0.2332 | 0.1368 | 0.2670 | 32.4491 |
| 7 | 0.2794 | 0.3673 | 0.3598 | 0.4699 | 0.2162 | 0.1267 | 0.2470 | 30.0340 |
| 8 | 0.4150 | 0.5571 | 0.5370 | 0.6903 | 0.2726 | 0.1610 | 0.3144 | 38.2070 |
| 9 | 0.2444 | 0.3236 | 0.3151 | 0.4112 | 0.1872 | 0.1092 | 0.2126 | 25.9227 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 13.1622 | 13.7401 | 13.0714 | 15.2546 | 26.3000 | 26.3000 | 1.3950 | 2.1675 |
| 0 | 0.9646 | 1.0450 | 0.9598 | 1.1187 | 1.2859 | 1.2126 | 0.7215 | 1.9655 |
| 1 | 0.1354 | 0.1752 | 0.1338 | 0.1562 | 0.3331 | 0.2893 | 0.3827 | 0.9992 |
| 2 | 0.0722 | 0.1194 | 0.0710 | 0.0830 | 0.1660 | 0.1260 | 0.1129 | 0.2969 |
| 3 | 0.0947 | 0.1339 | 0.0934 | 0.1091 | 0.2148 | 0.1763 | 0.2079 | 0.5433 |
| 4 | 0.0684 | 0.1324 | 0.0668 | 0.0783 | 0.1464 | 0.0995 | 0.0613 | 0.1629 |
| 5 | 0.1703 | 0.2183 | 0.1687 | 0.1969 | 0.3331 | 0.2893 | 0.3827 | 0.9992 |
| 6 | 0.1117 | 0.1497 | 0.1103 | 0.1288 | 0.2148 | 0.1763 | 0.2079 | 0.5433 |
| 7 | 0.0820 | 0.1224 | 0.0806 | 0.0943 | 0.1852 | 0.1468 | 0.1532 | 0.4017 |
| 8 | 0.2255 | 0.2842 | 0.2237 | 0.2610 | 0.3331 | 0.2893 | 0.3827 | 0.9992 |
| 9 | 0.0682 | 0.1262 | 0.0669 | 0.0783 | 0.1550 | 0.1110 | 0.0832 | 0.2178 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 13.1622 | 2.6324 | 0.9646 | 0.2255 | 0.1703 | 0.1354 | 0.1117 | 0.0947 | 0.0820 | 0.0722 | 0.0682 | 0.0684 |
| LDT1 | DSL | 13.7401 | 2.7480 | 1.0450 | 0.2842 | 0.2183 | 0.1752 | 0.1497 | 0.1339 | 0.1224 | 0.1194 | 0.1262 | 0.1324 |
| LDT2 | DSL | 13.0714 | 2.6143 | 0.9598 | 0.2237 | 0.1687 | 0.1338 | 0.1103 | 0.0934 | 0.0806 | 0.0710 | 0.0669 | 0.0668 |
| LHDT1 | DSL | 26.3000 | 3.4550 | 1.2859 | 0.3331 | 0.2593 | 0.2148 | 0.1852 | 0.1660 | 0.1550 | 0.1464 | 0.1520 | 0.1756 |
| LHDT2 | DSL | 26.3000 | 3.3035 | 1.2126 | 0.2893 | 0.2199 | 0.1763 | 0.1468 | 0.1260 | 0.1110 | 0.0995 | 0.0963 | 0.1007 |
| MDV | DSL | 15.2546 | 3.0509 | 1.1187 | 0.2610 | 0.1969 | 0.1562 | 0.1288 | 0.1091 | 0.0943 | 0.0830 | 0.0783 | 0.0783 |
| MH | DSL | 10.7915 | 2.1583 | 0.8448 | 0.2509 | 0.2012 | 0.1678 | 0.1446 | 0.1282 | 0.1172 | 0.1106 | 0.1102 | 0.1152 |
| OBUS | DSL | 1.7411 | 1.9000 | 1.0837 | 0.5746 | 0.4234 | 0.3120 | 0.2299 | 0.1694 | 0.1249 | 0.0920 | 0.0790 | 0.0790 |
| SBUS | DSL | 1.5607 | 1.2458 | 0.7078 | 0.3750 | 0.2776 | 0.2058 | 0.1530 | 0.1142 | 0.0857 | 0.0648 | 0.0566 | 0.0566 |
| T6 | DSL | 1.3950 | 1.2670 | 0.7215 | 0.3827 | 0.2821 | 0.2079 | 0.1532 | 0.1129 | 0.0832 | 0.0613 | 0.0527 | 0.0526 |
| T7 | DSL | 2.1675 | 3.5060 | 1.9655 | 0.9992 | 0.7363 | 0.5433 | 0.4017 | 0.2969 | 0.2178 | 0.1629 | 0.1386 | 0.1356 |
| UBUS | DSL | 65.7364 | 13.1473 | 8.0177 | 4.4591 | 3.6899 | 3.0547 | 2.5508 | 2.1768 | 1.9320 | 1.8160 | 1.8297 | 1.9726 |
| LDA | GAS | 2.9675 | 0.5935 | 0.4959 | 0.4150 | 0.3806 | 0.3498 | 0.3235 | 0.3004 | 0.2794 | 0.2611 | 0.2444 | 0.2287 |
| LDT1 | GAS | 4.0134 | 0.8027 | 0.6725 | 0.5571 | 0.5072 | 0.4623 | 0.4268 | 0.3962 | 0.3673 | 0.3447 | 0.3236 | 0.3009 |
| LDT2 | GAS | 3.8381 | 0.7676 | 0.6424 | 0.5370 | 0.4920 | 0.4516 | 0.4175 | 0.3875 | 0.3598 | 0.3366 | 0.3151 | 0.2942 |
| LHDT1 | GAS | 128.0241 | 0.3890 | 0.3240 | 0.2726 | 0.2514 | 0.2332 | 0.2162 | 0.2009 | 0.1872 | 0.1751 | 0.1634 | 0.1536 |
| LHDT2 | GAS | 129.7210 | 0.2299 | 0.1916 | 0.1610 | 0.1482 | 0.1368 | 0.1267 | 0.1175 | 0.1092 | 0.1020 | 0.0954 | 0.0894 |
| MCY | GAS | 207.3420 | 41.4684 | 25.9881 | 19.0331 | 17.0601 | 15.7214 | 14.8930 | 14.5272 | 14.6417 | 15.3262 | 16.7687 | 19.3133 |
| MDV | GAS | 4.9658 | 0.9932 | 0.8240 | 0.6903 | 0.6351 | 0.5866 | 0.5431 | 0.5042 | 0.4699 | 0.4398 | 0.4112 | 0.3871 |
| MH | GAS | 2.7961 | 0.5592 | 0.4651 | 0.3910 | 0.3599 | 0.3322 | 0.3075 | 0.2854 | 0.2656 | 0.2478 | 0.2319 | 0.2175 |
| OBUS | GAS | 130.3089 | 0.3999 | 0.3326 | 0.2796 | 0.2574 | 0.2376 | 0.2199 | 0.2041 | 0.1899 | 0.1772 | 0.1658 | 0.1556 |
| SBUS | GAS | 128.7328 | 0.3346 | 0.2782 | 0.2339 | 0.2153 | 0.1988 | 0.1840 | 0.1707 | 0.1589 | 0.1483 | 0.1387 | 0.1301 |
| T6 | GAS | 323.8834 | 0.4497 | 0.3742 | 0.3144 | 0.2894 | 0.2670 | 0.2470 | 0.2292 | 0.2126 | 0.1979 | 0.1851 | 0.1734 |
| T7 | GAS | 273.1047 | 54.6209 | 45.4559 | 38.2070 | 35.1648 | 32.4491 | 30.0340 | 27.8681 | 25.9227 | 24.1850 | 22.6275 | 21.2256 |
| UBUS | GAS | 7.9605 | 1.5921 | 1.3240 | 1.1131 | 1.0247 | 0.9459 | 0.8755 | 0.8125 | 0.7561 | 0.7055 | 0.6601 | 0.6193 |
| T7 | NG | 2.3341 | 44.8048 | 25.5542 | 13.5476 | 9.9847 | 7.3592 | 5.4243 | 3.9986 | 2.9480 | 2.1740 | 1.8671 | 1.8671 |
| UBUS | NG | 207.8220 | 41.5644 | 15.9509 | 4.3984 | 3.4431 | 2.8091 | 2.3651 | 2.0476 | 1.8223 | 1.6695 | 1.6305 | 1.6822 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 20 | 2 | 18 | 5 | 45 |
| 0 | 7 | 1 | 3 | 3 | 1 | 0 | 1 | 10 | 26 |
| 1 | 49 | 8 | 25 | 25 | 3 | 0 | 11 | 98 | 220 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 18 |
| 3 | 23 | 4 | 12 | 12 | 1 | 0 | 5 | 82 | 139 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 6 | 31 | 5 | 16 | 16 | 2 | 0 | 7 | 170 | 247 |
| 7 | 101 | 17 | 52 | 52 | 5 | 1 | 16 | 316 | 560 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 28 |
| **Total** | **211** | **37** | **108** | **110** | **33** | **4** | **57** | **727** | **1286** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 20 | 2 | 18 | 5 | 45 |
| 0 | 7 | 1 | 3 | 3 | 1 | 0 | 1 | 10 | 26 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **7** | **1** | **3** | **3** | **21** | **3** | **19** | **15** | **71** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 38 | 7 | 19 | 20 | 3 | 0 | 9 | 86 | 181 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **38** | **7** | **19** | **20** | **3** | **0** | **9** | **86** | **181** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 11 | 2 | 6 | 6 | 1 | 0 | 2 | 12 | 39 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 13 | 2 | 7 | 7 | 1 | 0 | 2 | 5 | 37 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 6 | 14 | 2 | 7 | 7 | 1 | 0 | 2 | 7 | 41 |
| 7 | 26 | 4 | 13 | 13 | 1 | 0 | 3 | 21 | 82 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **64** | **11** | **33** | **34** | **3** | **0** | **9** | **46** | **201** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 10 | 2 | 5 | 5 | 1 | 0 | 3 | 77 | 102 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 17 | 3 | 9 | 9 | 1 | 0 | 5 | 162 | 206 |
| 7 | 75 | 13 | 38 | 39 | 4 | 0 | 13 | 295 | 478 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **102** | **18** | **52** | **53** | **6** | **1** | **21** | **534** | **787** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 18 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 28 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **46** | **46** |

**World Logistics Center** **PM10**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0337 | 0.0384 | 0.0343 | 0.0369 | 0.0377 | 0.0379 | 0.0380 | 0.0384 |
| 0 | 0.0028 | 0.0033 | 0.0029 | 0.0031 | 0.0032 | 0.0032 | 0.0032 | 0.0032 |
| 1 | 0.0009 | 0.0011 | 0.0009 | 0.0010 | 0.0016 | 0.0016 | 0.0016 | 0.0017 |
| 2 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |
| 3 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0010 | 0.0010 | 0.0011 | 0.0011 |
| 4 | 0.0009 | 0.0010 | 0.0009 | 0.0010 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |
| 5 | 0.0011 | 0.0013 | 0.0012 | 0.0012 | 0.0016 | 0.0016 | 0.0016 | 0.0017 |
| 6 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | 0.0010 | 0.0010 | 0.0011 | 0.0011 |
| 7 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0009 | 0.0009 | 0.0009 | 0.0009 |
| 8 | 0.0015 | 0.0017 | 0.0015 | 0.0016 | 0.0016 | 0.0016 | 0.0016 | 0.0017 |
| 9 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0126 | 0.1178 | 0.0456 | 0.0158 | 0.4679 | 0.5071 | 0.0014 | 0.0015 |
| 0 | 0.0020 | 0.0156 | 0.0075 | 0.0026 | 0.0152 | 0.0143 | 0.0045 | 0.0088 |
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0037 | 0.0068 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0028 | 0.0051 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0058 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0025 | 0.0046 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0037 | 0.0068 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0058 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0029 | 0.0055 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0037 | 0.0068 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0026 | 0.0048 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.013 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | DSL | 0.118 | 0.024 | 0.016 | 0.010 | 0.008 | 0.007 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 |
| LDT2 | DSL | 0.046 | 0.009 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| LHDT1 | DSL | 0.468 | 0.022 | 0.015 | 0.011 | 0.009 | 0.009 | 0.008 | 0.007 | 0.007 | 0.007 | 0.007 | 0.007 |
| LHDT2 | DSL | 0.507 | 0.018 | 0.014 | 0.010 | 0.009 | 0.008 | 0.008 | 0.007 | 0.007 | 0.006 | 0.006 | 0.006 |
| MDV | DSL | 0.016 | 0.003 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | DSL | 0.426 | 0.085 | 0.059 | 0.040 | 0.036 | 0.034 | 0.033 | 0.033 | 0.035 | 0.038 | 0.042 | 0.048 |
| OBUS | DSL | 0.001 | 0.007 | 0.006 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| SBUS | DSL | 0.005 | 0.010 | 0.008 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| T6 | DSL | 0.001 | 0.006 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 |
| T7 | DSL | 0.001 | 0.012 | 0.009 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.004 | 0.004 |
| UBUS | DSL | 9.612 | 1.922 | 0.964 | 0.409 | 0.320 | 0.256 | 0.215 | 0.199 | 0.207 | 0.240 | 0.297 | 0.378 |
| LDA | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT2 | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT1 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.068 | 0.014 | 0.006 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MDV | GAS | 0.037 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | GAS | 0.037 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.033 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.038 | 0.008 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.037 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.010 | 0.006 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 |
| UBUS | NG | 0.030 | 0.006 | 0.004 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| Source | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0370 | 0.0370 | 0.0370 | 0.0760 | 0.0890 | 0.0370 | 0.1300 | 0.0620 |
| Tires | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.012 | 0.02 |
| Total | **0.045** | **0.045** | **0.045** | **0.084** | **0.097** | **0.045** | **0.142** | **0.082** |

| Source | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.037 | 0.037 | 0.037 | 0.076 | 0.089 | 0.037 | 0.130 | 0.062 |
| Tires | 0.008 | 0.008 | 0.008 | 0.012 | 0.012 | 0.008 | 0.012 | 0.036 |
| Total | **0.045** | **0.045** | **0.045** | **0.088** | **0.101** | **0.045** | **0.142** | **0.098** |

**Paved Road Dust Emissions (pounds/day)**

| Source | PM10 |
|---|---|
| Freeways | 544 |
| Freeways to Ports | 56 |
| Internal | 102 |
| Surface | 241 |
| **Total** | **943** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 30.895 | 4.066 | 12.278 | 17.865 | 3.941 | 0.194 | 4.674 | 0.917 | 74.831 |
| Diesel | 0.094 | 0.006 | 0.006 | 0.019 | 1.262 | 0.186 | 20.644 | 74.518 | 96.734 |
| Total | **30.990** | **4.072** | **12.284** | **17.885** | **5.203** | **0.380** | **25.318** | **75.435** | **171.565** |

## World Logistics Center PM10 Exhaust

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.027 | 0.008 | 0.002 | 0.002 | 0.039 |
| 0 | 0.038 | 0.006 | 0.015 | 0.013 | 0.006 | 0.001 | 0.006 | 0.033 | 0.118 |
| 1 | 0.130 | 0.020 | 0.053 | 0.044 | 0.044 | 0.011 | 0.094 | 0.428 | 0.824 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.132 | 0.132 |
| 3 | 0.056 | 0.008 | 0.023 | 0.019 | 0.017 | 0.005 | 0.061 | 0.472 | 0.660 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.002 | 0.000 | 0.001 | 0.001 | 0.001 | 0.000 | 0.001 | 0.001 | 0.007 |
| 6 | 0.078 | 0.012 | 0.031 | 0.026 | 0.025 | 0.006 | 0.089 | 0.971 | 1.238 |
| 7 | 0.258 | 0.039 | 0.104 | 0.088 | 0.065 | 0.017 | 0.241 | 2.052 | 2.863 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.224 | 0.224 |
| **Total** | **0.563** | **0.085** | **0.227** | **0.191** | **0.184** | **0.049** | **0.495** | **4.313** | **6.106** |

**Area Source Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.027 | 0.008 | 0.002 | 0.002 | 0.039 |
| 0 | 0.038 | 0.006 | 0.015 | 0.013 | 0.006 | 0.001 | 0.006 | 0.033 | 0.118 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.038** | **0.006** | **0.015** | **0.013** | **0.033** | **0.010** | **0.008** | **0.035** | **0.157** |

**Internal Emissions (pounds/day)**

| Speed Grc | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.101 | 0.015 | 0.041 | 0.034 | 0.037 | 0.009 | 0.077 | 0.376 | 0.691 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.101** | **0.015** | **0.041** | **0.034** | **0.037** | **0.009** | **0.077** | **0.376** | **0.691** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.029 | 0.004 | 0.012 | 0.010 | 0.007 | 0.002 | 0.018 | 0.051 | 0.134 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.032 | 0.005 | 0.013 | 0.011 | 0.009 | 0.002 | 0.024 | 0.031 | 0.127 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.002 | 0.000 | 0.001 | 0.001 | 0.001 | 0.000 | 0.001 | 0.001 | 0.007 |
| 6 | 0.036 | 0.005 | 0.014 | 0.012 | 0.008 | 0.002 | 0.025 | 0.041 | 0.143 |
| 7 | 0.066 | 0.010 | 0.026 | 0.022 | 0.013 | 0.003 | 0.045 | 0.139 | 0.324 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.165** | **0.025** | **0.066** | **0.056** | **0.037** | **0.010** | **0.113** | **0.264** | **0.734** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.024 | 0.004 | 0.010 | 0.008 | 0.009 | 0.002 | 0.037 | 0.440 | 0.534 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.042 | 0.006 | 0.017 | 0.014 | 0.017 | 0.004 | 0.064 | 0.930 | 1.095 |
| 7 | 0.193 | 0.029 | 0.078 | 0.065 | 0.052 | 0.014 | 0.196 | 1.912 | 2.539 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.259** | **0.039** | **0.104** | **0.088** | **0.078** | **0.020** | **0.297** | **3.283** | **4.168** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.132 | 0.132 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.224 | 0.224 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.356** | **0.356** |

**World Logistics Center** **PM2.5**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0310 | 0.0353 | 0.0316 | 0.0339 | 0.0346 | 0.0348 | 0.0349 | 0.0353 |
| 0 | 0.0026 | 0.0030 | 0.0027 | 0.0029 | 0.0029 | 0.0029 | 0.0029 | 0.0029 |
| 1 | 0.0009 | 0.0010 | 0.0009 | 0.0009 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| 2 | 0.0007 | 0.0008 | 0.0007 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0008 |
| 3 | 0.0007 | 0.0008 | 0.0007 | 0.0007 | 0.0010 | 0.0010 | 0.0010 | 0.0010 |
| 4 | 0.0008 | 0.0009 | 0.0008 | 0.0009 | 0.0007 | 0.0008 | 0.0008 | 0.0008 |
| 5 | 0.0010 | 0.0012 | 0.0011 | 0.0011 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| 6 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0010 | 0.0010 | 0.0010 | 0.0010 |
| 7 | 0.0007 | 0.0007 | 0.0007 | 0.0007 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |
| 8 | 0.0013 | 0.0015 | 0.0014 | 0.0015 | 0.0015 | 0.0015 | 0.0015 | 0.0015 |
| 9 | 0.0007 | 0.0008 | 0.0007 | 0.0008 | 0.0007 | 0.0007 | 0.0007 | 0.0007 |

**Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0120 | 0.1127 | 0.0436 | 0.0151 | 0.4477 | 0.4852 | 0.0013 | 0.0014 |
| 0 | 0.0019 | 0.0149 | 0.0071 | 0.0024 | 0.0145 | 0.0137 | 0.0043 | 0.0085 |
| 1 | 0.0011 | 0.0068 | 0.0042 | 0.0014 | 0.0103 | 0.0099 | 0.0035 | 0.0065 |
| 2 | 0.0008 | 0.0054 | 0.0031 | 0.0011 | 0.0071 | 0.0068 | 0.0026 | 0.0049 |
| 3 | 0.0009 | 0.0058 | 0.0035 | 0.0012 | 0.0082 | 0.0079 | 0.0030 | 0.0056 |
| 4 | 0.0008 | 0.0057 | 0.0030 | 0.0010 | 0.0065 | 0.0060 | 0.0023 | 0.0044 |
| 5 | 0.0012 | 0.0080 | 0.0046 | 0.0016 | 0.0103 | 0.0099 | 0.0035 | 0.0065 |
| 6 | 0.0010 | 0.0062 | 0.0038 | 0.0013 | 0.0082 | 0.0079 | 0.0030 | 0.0056 |
| 7 | 0.0009 | 0.0055 | 0.0033 | 0.0011 | 0.0076 | 0.0073 | 0.0028 | 0.0052 |
| 8 | 0.0014 | 0.0096 | 0.0052 | 0.0018 | 0.0103 | 0.0099 | 0.0035 | 0.0065 |
| 9 | 0.0008 | 0.0056 | 0.0030 | 0.0010 | 0.0068 | 0.0064 | 0.0025 | 0.0046 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.012 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | DSL | 0.113 | 0.023 | 0.015 | 0.010 | 0.008 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.006 | 0.006 |
| LDT2 | DSL | 0.044 | 0.009 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 |
| LHDT1 | DSL | 0.448 | 0.021 | 0.014 | 0.010 | 0.009 | 0.008 | 0.008 | 0.007 | 0.007 | 0.006 | 0.006 | 0.007 |
| LHDT2 | DSL | 0.485 | 0.017 | 0.014 | 0.010 | 0.009 | 0.008 | 0.007 | 0.007 | 0.006 | 0.006 | 0.006 | 0.006 |
| MDV | DSL | 0.015 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | DSL | 0.408 | 0.082 | 0.056 | 0.038 | 0.034 | 0.032 | 0.031 | 0.032 | 0.033 | 0.036 | 0.040 | 0.046 |
| OBUS | DSL | 0.001 | 0.007 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| SBUS | DSL | 0.005 | 0.009 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| T6 | DSL | 0.001 | 0.006 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 |
| T7 | DSL | 0.001 | 0.011 | 0.008 | 0.007 | 0.006 | 0.006 | 0.005 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 |
| UBUS | DSL | 9.196 | 1.839 | 0.922 | 0.392 | 0.307 | 0.245 | 0.206 | 0.191 | 0.198 | 0.230 | 0.284 | 0.362 |
| LDA | GAS | 0.031 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT1 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LDT2 | GAS | 0.032 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT1 | GAS | 0.035 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| LHDT2 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MCY | GAS | 0.064 | 0.013 | 0.006 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| MDV | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| MH | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| OBUS | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| SBUS | GAS | 0.031 | 0.006 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T6 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | GAS | 0.035 | 0.007 | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| UBUS | GAS | 0.034 | 0.007 | 0.003 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| T7 | NG | 0.009 | 0.005 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 |
| UBUS | NG | 0.029 | 0.006 | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

**Break and Tire Dust Emission Factors (g/mi)**

| | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | HDT1-GAS | HDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0050 |
| Total | **0.018** | **0.018** | **0.018** | **0.035** | **0.04** | **0.018** | **0.059** | **0.031** |

| | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | HDT1-DSL | HDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Breaks | 0.0160 | 0.0160 | 0.0160 | 0.0330 | 0.0380 | 0.0160 | 0.0560 | 0.0260 |
| Tires | 0.0020 | 0.0020 | 0.0020 | 0.0030 | 0.0030 | 0.0020 | 0.0030 | 0.0090 |
| Total | **0.018** | **0.018** | **0.018** | **0.036** | **0.041** | **0.018** | **0.059** | **0.035** |

**PM2.5 Paved Road Dust Emissions (pounds/day)**

| Source | PM.5 |
|---|---|
| Freeways | 133.6 |
| Freeways to Ports | 13.8 |
| Internal | 24.9 |
| Surface | 59.1 |
| **Total** | **231.4** |

**Break and Tire Emissions (pounds/day)**

| | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline | 12.358 | 1.626 | 4.911 | 7.444 | 1.625 | 0.078 | 1.942 | 0.347 | 30.331 |
| Diesel | 0.038 | 0.002 | 0.002 | 0.008 | 0.512 | 0.075 | 8.577 | 26.613 | 35.828 |
| Total | **12.396** | **1.629** | **4.913** | **7.452** | **2.137** | **0.152** | **10.519** | **26.960** | **66.159** |

**Black Carbon Emissions (pounds/day)**

Percent of diesel PM2.5 exhaust

| | |
|---|---|
| LDT1, LDT2, MDT: | 64% |
| LHDT1, LHDT2, MHDT, HHDT: | 77% |

| Speed Group | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.06 | 0.31 | 0.41 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.35 | 0.40 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.06 | 0.71 | 0.79 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.17 | 1.51 | 1.72 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 0.16 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.08** | **0.03** | **0.33** | **3.14** | **3.58** |

# World Logistics Center PM2.5 Exhaust

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 |
| 0 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.03 | 0.11 |
| 1 | 0.12 | 0.02 | 0.05 | 0.04 | 0.04 | 0.01 | 0.09 | 0.41 | 0.78 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 3 | 0.05 | 0.01 | 0.02 | 0.02 | 0.02 | 0.00 | 0.06 | 0.45 | 0.63 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.07 | 0.01 | 0.03 | 0.02 | 0.02 | 0.01 | 0.08 | 0.93 | 1.18 |
| 7 | 0.24 | 0.04 | 0.10 | 0.08 | 0.06 | 0.02 | 0.23 | 1.96 | 2.72 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 | 0.21 |
| **Total** | **0.52** | **0.08** | **0.21** | **0.18** | **0.17** | **0.05** | **0.47** | **4.13** | **5.80** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 |
| 0 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.03 | 0.11 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.03** | **0.01** | **0.01** | **0.01** | **0.03** | **0.01** | **0.01** | **0.03** | **0.15** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.09 | 0.01 | 0.04 | 0.03 | 0.03 | 0.01 | 0.07 | 0.36 | 0.65 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.09** | **0.01** | **0.04** | **0.03** | **0.03** | **0.01** | **0.07** | **0.36** | **0.65** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.05 | 0.13 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.03 | 0.12 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 6 | 0.03 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.04 | 0.13 |
| 7 | 0.06 | 0.01 | 0.02 | 0.02 | 0.01 | 0.00 | 0.04 | 0.13 | 0.31 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.15** | **0.02** | **0.06** | **0.05** | **0.03** | **0.01** | **0.11** | **0.25** | **0.69** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.04 | 0.42 | 0.51 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.04 | 0.01 | 0.02 | 0.01 | 0.02 | 0.00 | 0.06 | 0.89 | 1.04 |
| 7 | 0.18 | 0.03 | 0.07 | 0.06 | 0.05 | 0.01 | 0.19 | 1.83 | 2.41 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **0.24** | **0.04** | **0.10** | **0.08** | **0.07** | **0.02** | **0.28** | **3.14** | **3.97** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.13 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 | 0.21 |
| **Total** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.34** | **0.34** |

**World Logistics Center** **CO2**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 3151.3810 | 3539.8960 | 3370.4717 | 4231.7673 | 4509.5151 | 5123.8689 | 13420.8100 | 18985.1977 |
| 0 | 360.3466 | 405.5420 | 385.9368 | 483.7691 | 892.1424 | 1004.9327 | 2157.2506 | 2323.7023 |
| 1 | 183.1925 | 205.4274 | 195.8404 | 246.6428 | 710.1030 | 795.2833 | 1324.4372 | 1766.1960 |
| 2 | 169.2526 | 189.6230 | 180.8702 | 228.1153 | 639.5716 | 174.6830 | 971.3985 | 1520.2813 |
| 3 | 163.4551 | 183.2048 | 174.6830 | 220.1118 | 644.8191 | 718.8495 | 1123.7341 | 1612.8300 |
| 4 | 203.2465 | 227.3523 | 216.9627 | 274.0432 | 710.6853 | 747.5542 | 883.5345 | 1473.1782 |
| 5 | 205.2380 | 230.4990 | 219.5730 | 275.9718 | 710.1030 | 795.2833 | 1324.4372 | 1766.1960 |
| 6 | 169.8350 | 190.3840 | 181.5287 | 228.7196 | 644.8191 | 718.8495 | 1123.7341 | 1612.8300 |
| 7 | 163.2344 | 182.7987 | 174.3531 | 219.9131 | 642.4504 | 702.4339 | 1045.4427 | 1554.5049 |
| 8 | 238.6178 | 268.2854 | 255.4291 | 320.5703 | 710.1030 | 795.2833 | 1324.4372 | 1766.1960 |
| 9 | 182.1262 | 204.0849 | 194.6029 | 245.2685 | 674.5501 | 714.9994 | 908.6548 | 1501.3620 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 2437.4237 | 2775.9443 | 3002.8027 | 3748.4086 | 3660.6293 | 5784.6785 | 6538.0507 | 5765.7353 |
| 0 | 334.2596 | 390.8871 | 419.6972 | 540.2930 | 626.4062 | 706.0581 | 1574.5131 | 2079.9314 |
| 1 | 179.7443 | 206.8979 | 225.1510 | 296.9169 | 473.6384 | 536.6931 | 1269.7971 | 1674.3434 |
| 2 | 170.4553 | 194.4461 | 212.1323 | 283.4191 | 408.6306 | 448.3928 | 1061.8223 | 1391.0506 |
| 3 | 162.4733 | 185.8715 | 202.5688 | 267.2475 | 430.5056 | 484.1028 | 1145.6916 | 1505.7026 |
| 4 | 207.6848 | 235.0766 | 257.8908 | 344.4363 | 447.5106 | 481.1703 | 1001.2546 | 1309.6155 |
| 5 | 198.9332 | 230.7086 | 249.6763 | 327.4281 | 473.6384 | 536.6931 | 1269.7971 | 1674.3434 |
| 6 | 168.1891 | 192.8463 | 210.1029 | 277.6936 | 430.5056 | 484.1028 | 1145.6916 | 1505.7026 |
| 7 | 162.8834 | 185.6021 | 202.8305 | 268.5346 | 418.8432 | 466.4497 | 1100.2361 | 1443.6145 |
| 8 | 229.7619 | 268.1064 | 288.9341 | 379.2802 | 473.6384 | 536.6931 | 1269.7971 | 1674.3434 |
| 9 | 184.8046 | 210.7388 | 229.7936 | 306.9240 | 428.4743 | 464.9295 | 1028.5720 | 1344.7516 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 2437.4 | 487.5 | 334.3 | 229.8 | 198.9 | 179.7 | 168.2 | 162.5 | 162.9 | 170.5 | 184.8 | 207.7 |
| LDT1 | DSL | 2775.9 | 555.2 | 390.9 | 268.1 | 230.7 | 206.9 | 192.8 | 185.9 | 185.6 | 194.4 | 210.7 | 235.1 |
| LDT2 | DSL | 3002.8 | 600.6 | 419.7 | 288.9 | 249.7 | 225.2 | 210.1 | 202.6 | 202.8 | 212.1 | 229.8 | 257.9 |
| LHDT1 | DSL | 3660.6 | 1141.9 | 626.4 | 473.6 | 430.2 | 430.5 | 418.8 | 408.6 | 428.5 | 447.5 | 451.9 | 458.0 |
| LHDT2 | DSL | 5784.7 | 1193.7 | 706.1 | 536.7 | 484.0 | 484.1 | 466.4 | 448.4 | 464.9 | 481.2 | 482.8 | 484.2 |
| MDV | DSL | 3748.4 | 749.7 | 540.3 | 379.3 | 327.4 | 296.9 | 277.7 | 267.2 | 268.5 | 283.4 | 306.9 | 344.4 |
| MH | DSL | 10053.1 | 2010.6 | 1499.0 | 1103.4 | 1035.7 | 979.5 | 934.8 | 901.7 | 880.1 | 870.0 | 871.4 | 884.3 |
| OBUS | DSL | 6149.5 | 2438.0 | 1813.6 | 1462.3 | 1384.6 | 1323.0 | 1272.5 | 1229.9 | 1193.2 | 1161.1 | 1146.5 | 1146.5 |
| SBUS | DSL | 6552.9 | 2140.8 | 1593.9 | 1282.8 | 1213.2 | 1158.2 | 1113.0 | 1075.0 | 1042.5 | 1014.2 | 1001.4 | 1001.4 |
| T6 | DSL | 6538.1 | 2117.4 | 1574.5 | 1269.8 | 1200.7 | 1145.7 | 1100.2 | 1061.8 | 1028.6 | 1001.3 | 988.6 | 988.0 |
| T7 | DSL | 5765.7 | 2799.1 | 2079.9 | 1674.3 | 1580.2 | 1505.7 | 1443.6 | 1391.1 | 1344.8 | 1309.6 | 1292.5 | 1290.6 |
| UBUS | DSL | 19371.5 | 3874.3 | 2888.5 | 2126.1 | 1995.7 | 1887.4 | 1801.4 | 1737.5 | 1695.8 | 1676.3 | 1679.1 | 1704.0 |
| LDA | GAS | 3151.4 | 630.3 | 360.3 | 238.6 | 205.2 | 183.2 | 169.8 | 163.5 | 163.2 | 169.3 | 182.1 | 203.2 |
| LDT1 | GAS | 3539.9 | 708.0 | 405.5 | 268.3 | 230.5 | 205.4 | 190.4 | 183.2 | 182.8 | 189.6 | 204.1 | 227.4 |
| LDT2 | GAS | 3370.5 | 674.1 | 385.9 | 255.4 | 219.6 | 195.8 | 181.5 | 174.7 | 174.4 | 180.9 | 194.6 | 217.0 |
| LHDT1 | GAS | 4509.5 | 1306.0 | 892.1 | 710.1 | 644.6 | 644.8 | 642.5 | 639.6 | 674.6 | 710.7 | 721.1 | 730.9 |
| LHDT2 | GAS | 5123.9 | 1376.3 | 1004.9 | 795.3 | 718.8 | 718.8 | 702.4 | 685.9 | 715.0 | 747.6 | 755.4 | 762.8 |
| MCY | GAS | 2835.6 | 567.1 | 323.8 | 214.6 | 184.7 | 165.0 | 153.0 | 147.2 | 147.1 | 152.5 | 164.0 | 183.2 |
| MDV | GAS | 4231.8 | 846.4 | 483.8 | 320.6 | 276.0 | 246.6 | 228.7 | 220.1 | 219.9 | 228.1 | 245.3 | 274.0 |
| MH | GAS | 18494.7 | 3698.9 | 2176.6 | 1336.3 | 1228.0 | 1133.7 | 1054.8 | 980.0 | 916.8 | 891.5 | 897.1 | 913.7 |
| OBUS | GAS | 9400.9 | 3665.4 | 2156.9 | 1324.2 | 1216.9 | 1123.5 | 1045.2 | 971.2 | 908.5 | 883.4 | 888.9 | 905.4 |
| SBUS | GAS | 4480.3 | 1756.6 | 1033.6 | 634.6 | 583.2 | 538.4 | 500.9 | 465.4 | 435.4 | 423.4 | 426.0 | 433.9 |
| T6 | GAS | 13420.8 | 3666.4 | 2157.3 | 1324.4 | 1217.1 | 1123.7 | 1045.4 | 971.4 | 908.7 | 883.5 | 889.0 | 905.5 |
| T7 | GAS | 18985.2 | 3797.0 | 2323.7 | 1766.2 | 1681.6 | 1612.8 | 1554.5 | 1520.3 | 1501.4 | 1473.2 | 1452.5 | 1448.5 |
| UBUS | GAS | 18441.4 | 3688.3 | 2170.3 | 1332.4 | 1224.5 | 1130.5 | 1051.7 | 977.2 | 914.1 | 888.9 | 894.5 | 911.1 |
| T7 | NG | 5663.3 | 4967.8 | 3696.7 | 2978.6 | 2819.2 | 2692.9 | 2589.3 | 2502.1 | 2427.1 | 2361.7 | 2332.0 | 2332.0 |
| UBUS | NG | 14566.3 | 2913.3 | 2172.0 | 1598.7 | 1500.6 | 1419.2 | 1354.5 | 1306.5 | 1275.2 | 1260.5 | 1262.6 | 1281.3 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CO2

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 835 | 168 | 2294 | 4732 | 8029 |
| 0 | 4817 | 712 | 2045 | 2000 | 776 | 128 | 2388 | 7918 | 20784 |
| 1 | 25625 | 3776 | 10860 | 10668 | 7665 | 1246 | 36507 | 106551 | 202896 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36150 | 36150 |
| 3 | 12379 | 1823 | 5244 | 5155 | 3670 | 593 | 25043 | 123506 | 177413 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 372 | 55 | 158 | 155 | 97 | 16 | 569 | 254 | 1675 |
| 6 | 16324 | 2404 | 6917 | 6798 | 5168 | 836 | 36755 | 254190 | 329391 |
| 7 | 59041 | 8687 | 24999 | 24596 | 15017 | 2378 | 102226 | 549657 | 786601 |
| 8 | 10 | 2 | 4 | 4 | 1 | 0 | 3 | 3 | 28 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63526 | 63526 |
| **Total** | **118567** | **17459** | **50226** | **49376** | **33229** | **5365** | **205785** | **1146487** | **1626494** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 835 | 168 | 2294 | 4732 | 8029 |
| 0 | 4817 | 712 | 2045 | 2000 | 776 | 128 | 2388 | 7918 | 20784 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **4817** | **712** | **2045** | **2000** | **1612** | **296** | **4682** | **12649** | **28813** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 19870 | 2928 | 8421 | 8273 | 6427 | 1045 | 29644 | 93734 | 170341 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **19870** | **2928** | **8421** | **8273** | **6427** | **1045** | **29644** | **93734** | **170341** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 5754 | 848 | 2439 | 2396 | 1237 | 201 | 6863 | 12817 | 32555 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 7076 | 1042 | 2998 | 2947 | 1804 | 292 | 9777 | 8210 | 34146 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 372 | 55 | 158 | 155 | 97 | 16 | 569 | 254 | 1675 |
| 6 | 7488 | 1103 | 3173 | 3119 | 1601 | 259 | 10254 | 10675 | 37671 |
| 7 | 14992 | 2206 | 6348 | 6245 | 2998 | 475 | 19002 | 37281 | 89547 |
| 8 | 10 | 2 | 4 | 4 | 1 | 0 | 3 | 3 | 28 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **35693** | **5255** | **15119** | **14865** | **7738** | **1242** | **46467** | **69241** | **195621** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 5303 | 781 | 2246 | 2208 | 1866 | 302 | 15267 | 115295 | 143267 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 8835 | 1301 | 3744 | 3679 | 3567 | 577 | 26501 | 243515 | 291720 |
| 7 | 44050 | 6481 | 18651 | 18351 | 12019 | 1903 | 83224 | 512376 | 697055 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **58188** | **8564** | **24641** | **24238** | **17451** | **2781** | **124992** | **871186** | **1132042** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36150 | 36150 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63526 | 63526 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **99676** | **99676** |

**World Logistics Center** **CH4**

**Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT**

**Gasoline Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0605 | 0.0930 | 0.0793 | 0.1222 | 4.4101 | 3.8217 | 8.5080 | 4.2174 |
| 0 | 0.0051 | 0.0081 | 0.0068 | 0.0104 | 0.0078 | 0.0042 | 0.0125 | 0.3526 |
| 1 | 0.0017 | 0.0026 | 0.0022 | 0.0035 | 0.0041 | 0.0021 | 0.0065 | 0.1824 |
| 2 | 0.0013 | 0.0020 | 0.0017 | 0.0027 | 0.0021 | 0.0017 | 0.0033 | 0.0927 |
| 3 | 0.0013 | 0.0021 | 0.0017 | 0.0028 | 0.0026 | 0.0014 | 0.0042 | 0.1168 |
| 4 | 0.0016 | 0.0024 | 0.0021 | 0.0033 | 0.0021 | 0.0011 | 0.0032 | 0.0910 |
| 5 | 0.0021 | 0.0033 | 0.0027 | 0.0043 | 0.0041 | 0.0021 | 0.0065 | 0.1824 |
| 6 | 0.0015 | 0.0023 | 0.0019 | 0.0031 | 0.0026 | 0.0014 | 0.0042 | 0.1168 |
| 7 | 0.0013 | 0.0020 | 0.0017 | 0.0027 | 0.0023 | 0.0012 | 0.0036 | 0.1013 |
| 8 | 0.0026 | 0.0042 | 0.0035 | 0.0055 | 0.0041 | 0.0021 | 0.0065 | 0.1824 |
| 9 | 0.0014 | 0.0022 | 0.0018 | 0.0029 | 0.0020 | 0.0011 | 0.0032 | 0.0894 |

**Diesel Exhaust Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| idle | 0.0204 | 0.0636 | 0.0608 | 0.0244 | 0.1474 | 0.1474 | 0.0086 | 0.0269 |
| 0 | 0.0015 | 0.0049 | 0.0045 | 0.0018 | 0.0130 | 0.0127 | 0.0064 | 0.0155 |
| 1 | 0.0002 | 0.0008 | 0.0006 | 0.0003 | 0.0033 | 0.0030 | 0.0034 | 0.0079 |
| 2 | 0.0001 | 0.0005 | 0.0003 | 0.0001 | 0.0016 | 0.0013 | 0.0010 | 0.0023 |
| 3 | 0.0001 | 0.0006 | 0.0004 | 0.0002 | 0.0021 | 0.0018 | 0.0018 | 0.0043 |
| 4 | 0.0001 | 0.0005 | 0.0003 | 0.0001 | 0.0013 | 0.0010 | 0.0005 | 0.0013 |
| 5 | 0.0003 | 0.0010 | 0.0008 | 0.0003 | 0.0033 | 0.0030 | 0.0034 | 0.0079 |
| 6 | 0.0002 | 0.0007 | 0.0005 | 0.0002 | 0.0021 | 0.0018 | 0.0018 | 0.0043 |
| 7 | 0.0001 | 0.0005 | 0.0004 | 0.0002 | 0.0018 | 0.0015 | 0.0014 | 0.0032 |
| 8 | 0.0004 | 0.0013 | 0.0010 | 0.0004 | 0.0033 | 0.0030 | 0.0034 | 0.0079 |
| 9 | 0.0001 | 0.0005 | 0.0003 | 0.0001 | 0.0014 | 0.0011 | 0.0007 | 0.0017 |

**EMFAC2014 Running Exhaust Emission Factors (grams/mile)**

| | | Idling (g/hour) | 5 mph | 15 mph | 25 mph | 30 mph | 35 mph | 40 mph | 45 mph | 50 mph | 55 mph | 60 mph | 65 mph |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LDA | DSL | 0.0204 | 0.0041 | 0.0015 | 0.0004 | 0.0003 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| LDT1 | DSL | 0.0636 | 0.0127 | 0.0049 | 0.0013 | 0.0010 | 0.0008 | 0.0007 | 0.0006 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| LDT2 | DSL | 0.0608 | 0.0122 | 0.0045 | 0.0010 | 0.0008 | 0.0006 | 0.0005 | 0.0004 | 0.0004 | 0.0003 | 0.0003 | 0.0003 |
| LHDT1 | DSL | 0.1474 | 0.0351 | 0.0130 | 0.0033 | 0.0026 | 0.0021 | 0.0018 | 0.0016 | 0.0014 | 0.0013 | 0.0013 | 0.0013 |
| LHDT2 | DSL | 0.1474 | 0.0346 | 0.0127 | 0.0030 | 0.0023 | 0.0018 | 0.0015 | 0.0013 | 0.0011 | 0.0010 | 0.0009 | 0.0010 |
| MDV | DSL | 0.0244 | 0.0049 | 0.0018 | 0.0004 | 0.0003 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 |
| MH | DSL | 0.1883 | 0.0377 | 0.0139 | 0.0035 | 0.0027 | 0.0022 | 0.0018 | 0.0016 | 0.0014 | 0.0013 | 0.0013 | 0.0013 |
| OBUS | DSL | 0.0203 | 0.0158 | 0.0090 | 0.0048 | 0.0035 | 0.0026 | 0.0019 | 0.0014 | 0.0010 | 0.0008 | 0.0007 | 0.0007 |
| SBUS | DSL | 0.0093 | 0.0129 | 0.0072 | 0.0038 | 0.0028 | 0.0021 | 0.0015 | 0.0011 | 0.0009 | 0.0006 | 0.0006 | 0.0006 |
| T6 | DSL | 0.0086 | 0.0112 | 0.0064 | 0.0034 | 0.0025 | 0.0018 | 0.0014 | 0.0010 | 0.0007 | 0.0005 | 0.0005 | 0.0005 |
| T7 | DSL | 0.0269 | 0.0276 | 0.0155 | 0.0079 | 0.0058 | 0.0043 | 0.0032 | 0.0023 | 0.0017 | 0.0013 | 0.0011 | 0.0011 |
| UBUS | DSL | 1.5092 | 0.3018 | 0.1155 | 0.0351 | 0.0272 | 0.0213 | 0.0174 | 0.0155 | 0.0156 | 0.0177 | 0.0218 | 0.0280 |
| LDA | GAS | 0.0605 | 0.0121 | 0.0051 | 0.0026 | 0.0021 | 0.0017 | 0.0015 | 0.0013 | 0.0013 | 0.0013 | 0.0014 | 0.0016 |
| LDT1 | GAS | 0.0930 | 0.0186 | 0.0081 | 0.0042 | 0.0033 | 0.0026 | 0.0023 | 0.0021 | 0.0020 | 0.0020 | 0.0022 | 0.0024 |
| LDT2 | GAS | 0.0793 | 0.0159 | 0.0068 | 0.0035 | 0.0027 | 0.0022 | 0.0019 | 0.0017 | 0.0017 | 0.0017 | 0.0018 | 0.0021 |
| LHDT1 | GAS | 4.4101 | 0.0187 | 0.0078 | 0.0041 | 0.0032 | 0.0026 | 0.0023 | 0.0021 | 0.0020 | 0.0021 | 0.0022 | 0.0025 |
| LHDT2 | GAS | 3.8217 | 0.0099 | 0.0042 | 0.0021 | 0.0017 | 0.0014 | 0.0012 | 0.0011 | 0.0011 | 0.0011 | 0.0012 | 0.0013 |
| MCY | GAS | 13.5142 | 2.7028 | 1.1917 | 0.6488 | 0.5176 | 0.4349 | 0.3846 | 0.3579 | 0.3504 | 0.3609 | 0.3908 | 0.4451 |
| MDV | GAS | 0.1222 | 0.0244 | 0.0104 | 0.0055 | 0.0043 | 0.0035 | 0.0031 | 0.0028 | 0.0027 | 0.0027 | 0.0029 | 0.0033 |
| MH | GAS | 0.1848 | 0.0370 | 0.0154 | 0.0080 | 0.0062 | 0.0051 | 0.0044 | 0.0041 | 0.0039 | 0.0040 | 0.0043 | 0.0049 |
| OBUS | GAS | 6.3416 | 0.0281 | 0.0117 | 0.0061 | 0.0047 | 0.0039 | 0.0034 | 0.0031 | 0.0030 | 0.0030 | 0.0033 | 0.0037 |
| SBUS | GAS | 6.2289 | 0.0235 | 0.0098 | 0.0051 | 0.0039 | 0.0032 | 0.0028 | 0.0026 | 0.0025 | 0.0025 | 0.0027 | 0.0031 |
| T6 | GAS | 8.5080 | 0.0300 | 0.0125 | 0.0065 | 0.0051 | 0.0042 | 0.0036 | 0.0033 | 0.0032 | 0.0032 | 0.0035 | 0.0039 |
| T7 | GAS | 4.2174 | 0.8435 | 0.3526 | 0.1824 | 0.1421 | 0.1168 | 0.1013 | 0.0927 | 0.0894 | 0.0910 | 0.0978 | 0.1108 |
| UBUS | GAS | 0.4339 | 0.0868 | 0.0362 | 0.0188 | 0.0146 | 0.0120 | 0.0104 | 0.0095 | 0.0092 | 0.0094 | 0.0101 | 0.0114 |
| T7 | NG | 0.4585 | 12.8153 | 7.2343 | 3.8087 | 2.8128 | 2.0782 | 1.5365 | 1.1373 | 0.8435 | 0.6277 | 0.5426 | 0.5426 |
| UBUS | NG | 54.1845 | 10.8369 | 4.0086 | 1.0332 | 0.7978 | 0.6395 | 0.5303 | 0.4568 | 0.4118 | 0.3911 | 0.4034 | 0.4439 |

Note: idling factors for LHDT1, LHDT2, OBUS, SBUS, T6, and T7-DSL are idling emission factors; the remainder =5mph x 5.

# World Logistics Center CH4

Project Full Buildout 2035 - Mitigated Model Year 2010 for MHDT and HHDT

**Total Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.660 | 0.062 | 0.464 | 0.070 | 1.256 |
| 0 | 0.068 | 0.014 | 0.036 | 0.043 | 0.008 | 0.001 | 0.011 | 0.077 | 0.259 |
| 1 | 0.234 | 0.049 | 0.122 | 0.152 | 0.045 | 0.005 | 0.113 | 0.661 | 1.381 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.095 | 0.095 |
| 3 | 0.100 | 0.021 | 0.052 | 0.066 | 0.015 | 0.002 | 0.050 | 0.484 | 0.790 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.004 | 0.001 | 0.002 | 0.002 | 0.001 | 0.000 | 0.002 | 0.002 | 0.013 |
| 6 | 0.139 | 0.029 | 0.073 | 0.091 | 0.022 | 0.002 | 0.073 | 0.996 | 1.425 |
| 7 | 0.462 | 0.095 | 0.241 | 0.302 | 0.055 | 0.005 | 0.166 | 1.743 | 3.068 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.141 | 0.141 |
| **Total** | **1.007** | **0.208** | **0.526** | **0.656** | **0.807** | **0.078** | **0.877** | **4.269** | **8.428** |

**Area Source Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.660 | 0.062 | 0.464 | 0.070 | 1.256 |
| 0 | 0.068 | 0.014 | 0.036 | 0.043 | 0.008 | 0.001 | 0.011 | 0.077 | 0.259 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.068** | **0.014** | **0.036** | **0.043** | **0.669** | **0.064** | **0.474** | **0.147** | **1.515** |

**Internal Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.181 | 0.038 | 0.095 | 0.118 | 0.038 | 0.004 | 0.091 | 0.581 | 1.147 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.181** | **0.038** | **0.095** | **0.118** | **0.038** | **0.004** | **0.091** | **0.581** | **1.147** |

**Surface Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.052 | 0.011 | 0.027 | 0.034 | 0.007 | 0.001 | 0.021 | 0.079 | 0.234 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.057 | 0.012 | 0.030 | 0.037 | 0.008 | 0.001 | 0.019 | 0.032 | 0.197 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.004 | 0.001 | 0.002 | 0.002 | 0.001 | 0.000 | 0.002 | 0.002 | 0.013 |
| 6 | 0.064 | 0.013 | 0.033 | 0.042 | 0.007 | 0.001 | 0.020 | 0.042 | 0.222 |
| 7 | 0.117 | 0.024 | 0.061 | 0.077 | 0.011 | 0.001 | 0.031 | 0.118 | 0.440 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.295** | **0.061** | **0.154** | **0.192** | **0.033** | **0.003** | **0.093** | **0.273** | **1.106** |

**Freeway Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 3 | 0.043 | 0.009 | 0.022 | 0.028 | 0.008 | 0.001 | 0.030 | 0.452 | 0.593 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.075 | 0.016 | 0.039 | 0.049 | 0.015 | 0.002 | 0.053 | 0.955 | 1.203 |
| 7 | 0.344 | 0.071 | 0.180 | 0.225 | 0.044 | 0.004 | 0.135 | 1.625 | 2.628 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **0.463** | **0.095** | **0.241** | **0.302** | **0.067** | **0.007** | **0.218** | **3.032** | **4.425** |

**Freeway to Port Emissions (pounds/day)**

| Speed Gro | LDA | LDT1 | LDT2 | MDT | LHDT1 | LHDT2 | MHDT | HHDT | Total |
|---|---|---|---|---|---|---|---|---|---|
| idle | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.095 | 0.095 |
| 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.141 | 0.141 |
| **Total** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.235** | **0.235** |

# Appendix F: Localized Spreadsheets and AERMOD Output

F.1 - Traffic Volumes
F.2 - Project Phase 1 (2012) Emissions
F.3 - Project Phase 1 and Phase 2  Full Buildout (2012) Emissions
F.4 - Project Development Schedule Emissions for 2021
F.5 - Project Development Schedule Emissions for 2027
F.6 - Project Development Schedule Emissions for 2035

Note: All AERMOD input and output files are available digitally by contacting the City of Moreno Valley.  They are not included herein to save paper resources.

# F.1 - Traffic Volumes

## WLC - Daily Link Forecasts - Surface Streets

| Segment ID | Segment | From | To | 2012 With Build-Out Project Only Trips | | | | 2012 With Phase 1 Project Only Trips | | | | 2022 With Phase 1 Proj Only Trips | | | | 2035 With Build-Out Proj Only Trips | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks | Cars | Light Trucks | Medium Trucks | Heavy Trucks | Cars | Light Trucks | Medium Trucks | Heavy Trucks | Cars | Light Trucks | Medium Trucks | Heavy Trucks |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 21,539 | 1,127 | 3,097 | 9,375 | 16,625 | 727 | 2,291 | 6,889 | 17,546 | 680 | 2,253 | 7,100 | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,965 | 1,698 | 3,202 | 9,941 | 16,852 | 1,291 | 2,411 | 7,329 | 18,224 | 1,321 | 2,451 | 7,634 | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | 8,051 | 637 | 1,154 | 3,477 | 8,580 | 607 | 1,255 | 3,797 | 9,089 | 613 | 1,261 | 3,945 | 8,478 | 627 | 1,143 | 3,613 |
| 4 | Street E | north of Alessandro Blvd | | 4,398 | 165 | 247 | 32 | 4,927 | 166 | 283 | 74 | 5,101 | 203 | 393 | 115 | 4,728 | 207 | 406 | 69 |
| 5 | Street E | Street D | Street A | 8,480 | 324 | 525 | 51 | 3,952 | 134 | 237 | 93 | 4,165 | 151 | 317 | 106 | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | 10,562 | 688 | 1,408 | 3,983 | 7,443 | 427 | 796 | 1,777 | 7,907 | 434 | 821 | 1,851 | 8,214 | 536 | 1,069 | 3,112 |
| 7 | Street A | south of Street C | | | | | | | | | | | | | | | | | |
| 8 | Street D | Street E | Cactus Ave | 12,425 | 489 | 760 | 0 | 7,702 | 281 | 459 | 0 | 7,495 | 318 | 621 | 0 | 11,199 | 540 | 1,087 | 0 |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 8,747 | 300 | 592 | 0 | 5,607 | 172 | 375 | 0 | 4,976 | 198 | 482 | 0 | 7,006 | 301 | 797 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1,032 | 46 | 55 | 0 | 499 | 22 | 24 | 0 | 647 | 29 | 41 | 0 | 1,011 | 43 | 72 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 290 | 9 | 12 | 0 | 30 | 1 | 2 | 0 | 74 | 8 | 10 | 0 | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 623 | 38 | 39 | 0 | 318 | 25 | 25 | 0 | 548 | 142 | 117 | 0 | 197 | 12 | 18 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1,545 | 29 | 86 | 490 | 627 | 10 | 35 | 194 | 620 | 13 | 38 | 298 | 1,555 | 60 | 190 | 1,041 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,894 | 61 | 121 | 490 | 906 | 34 | 63 | 194 | 1,049 | 146 | 140 | 298 | 2,894 | 249 | 372 | 1,041 |
| 15 | Eucalyptus Ave | west of Street A | | 1,599 | 552 | 174 | 811 | 1,030 | 436 | 93 | 446 | 1,425 | 538 | 212 | 592 | 3,268 | 697 | 510 | 1,399 |
| 18 | Street B | east of Street A | | 1,341 | 131 | 170 | 375 | | | | | | | | | 2,662 | 180 | 289 | 506 |
| 18a | Street B | west of Gilman Springs Rd | | 442 | 32 | 61 | 78 | | | | | | | | | 2,181 | 96 | 206 | 262 |
| 19 | Street F | east of Street A | | 2,759 | 180 | 392 | 1,254 | 52 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 2,842 | 205 | 452 | 1,464 |
| 20 | Street F | north of Street C | | 1,903 | 69 | 126 | 50 | 33 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 3,159 | 149 | 309 | 453 |
| 21 | Street C | east of Street A | | 10,378 | 514 | 1,085 | 2,179 | 2,376 | 71 | 188 | 193 | 2,797 | 62 | 172 | 214 | 8,013 | 418 | 888 | 1,329 |
| 22 | Street C | west of Street F | | 10,378 | 514 | 1,080 | 2,190 | 2,376 | 71 | 183 | 204 | 2,797 | 62 | 177 | 224 | 8,013 | 418 | 888 | 1,350 |
| 23 | Street F | Street C | Street G | | | | | | | | | | | | | | | | |
| 24 | Street C | Street F | Street H | 7,231 | 304 | 673 | 1,193 | 2,355 | 61 | 182 | 173 | 2,790 | 54 | 176 | 219 | 9,679 | 407 | 859 | 1,602 |
| 25 | Street C | Street H | Gilman Springs Rd | 7,636 | 326 | 770 | 1,858 | 2,357 | 50 | 185 | 200 | 2,794 | 50 | 170 | 219 | 12,370 | 540 | 1,132 | 2,755 |
| 26 | Street H | Street C | Street G | | | | | | | | | | | | | | | | |
| 27 | Street G | east of Street H | | | | | | | | | | | | | | | | | |
| 28 | Street G | Street F | Street H | | | | | | | | | | | | | | | | |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 3,357 | 175 | 428 | 1,503 | 152 | 5 | 17 | 28 | 225 | 8 | 26 | 42 | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 3,792 | 207 | 427 | 1,579 | 152 | 5 | 17 | 28 | 225 | 8 | 26 | 42 | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | 4,604 | 147 | 307 | 402 | 2,504 | 65 | 169 | 228 | 2,993 | 62 | 202 | 261 | 9,883 | 386 | 746 | 1,030 |
| 32 | Cactus Ave | west of Redlands Blvd | | 2,211 | 104 | 101 | 0 | 1,275 | 59 | 52 | 0 | 1,576 | 69 | 92 | 0 | 3,010 | 179 | 228 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 864 | 30 | 47 | 0 | 381 | 13 | 20 | 0 | 481 | 16 | 29 | 0 | 749 | 24 | 57 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 421 | 32 | 59 | 647 | 178 | 13 | 33 | 426 | 187 | 12 | 31 | 450 | 595 | 47 | 127 | 636 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1,582 | 109 | 254 | 0 | 994 | 67 | 176 | 0 | 1,116 | 62 | 173 | 0 | 2,377 | 142 | 365 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 710 | 66 | 212 | 560 | 446 | 39 | 142 | 360 | 478 | 39 | 151 | 382 | 388 | 41 | 144 | 587 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 3,010 | 219 | 521 | 2 | 1,945 | 137 | 366 | 2 | 2,191 | 129 | 349 | 4 | 3,045 | 201 | 383 | 7 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 2,379 | 178 | 415 | 639 | 1,457 | 102 | 273 | 424 | 1,607 | 93 | 285 | 449 | 1,903 | 143 | 401 | 636 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 209 | 10 | 11 | 29 | 120 | 6 | 5 | 25 | 125 | 5 | 5 | 39 | 350 | 15 | 25 | 110 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 142 | 7 | 4 | 16 | 84 | 4 | 1 | 11 | 176 | 8 | 8 | 116 | 777 | 46 | 109 | 59 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 160 | 3 | 2 | 0 | 54 | 2 | 1 | 0 | 85 | 4 | 3 | 0 | 938 | 37 | 88 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 478 | 11 | 18 | 17 | 212 | 5 | 8 | 17 | 239 | 6 | 13 | 27 | 892 | 33 | 74 | 102 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 12,425 | 489 | 760 | 0 | 7,702 | 281 | 459 | 0 | 7,495 | 318 | 621 | 0 | 11,199 | 540 | 1,087 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 175 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 2 | 5 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 8,429 | 261 | 573 | 0 | 5,239 | 145 | 358 | 0 | 4,474 | 164 | 464 | 0 | 7,014 | 299 | 801 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 404 | 26 | 10 | 0 | 301 | 16 | 6 | 0 | 434 | 30 | 16 | 0 | 0 | 0 | 0 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,535 | 83 | 247 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 57 | 5 | 2 | 0 | 44 | 3 | 1 | 0 | 42 | 3 | 1 | 0 | 19 | 1 | 0 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,535 | 83 | 247 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,722 | 120 | 267 | 0 | 1,018 | 67 | 170 | 0 | 1,122 | 59 | 173 | 0 | 1,267 | 86 | 227 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 172 | 13 | 9 | 22 | 148 | 9 | 8 | 22 | 83 | 3 | 3 | 0 | 493 | 26 | 37 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 16 | 0 | 4 | 8 | 12 | 0 | 2 | 6 | 0 | 0 | 0 | 186 | 974 | 116 | 121 | 0 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 1,437 | 48 | 136 | 492 | 723 | 22 | 67 | 286 | 738 | 20 | 64 | 289 | 307 | 25 | 66 | 209 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 434 | 13 | 25 | 246 | 64 | 3 | 2 | 188 | 37 | 5 | 5 | 92 | 562 | 30 | 52 | 168 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | | | | | | | | | | 1,330 | 199 | 192 | 0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | Alessandro Blvd | Nason St | Oliver St | 605 | 15 | 21 | 20 | 268 | 6 | 9 | 18 | 317 | 8 | 16 | 32 | 1,018 | 37 | 81 | 102 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 694 | 23 | 33 | 20 | 328 | 10 | 13 | 18 | 401 | 13 | 27 | 32 | 1,167 | 47 | 97 | 102 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 74 | 1 | 2 | 0 | 15 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 731 | 32 | 64 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 1,134 | 46 | 58 | 0 | 662 | 24 | 30 | 0 | 907 | 34 | 57 | 0 | 1,033 | 56 | 91 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 1,710 | 70 | 86 | 0 | 993 | 36 | 45 | 0 | 1,333 | 51 | 86 | 0 | 2,169 | 130 | 165 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 620 | 42 | 25 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 8,291 | 254 | 570 | 0 | 5,137 | 141 | 356 | 0 | 4,386 | 161 | 462 | 0 | 6,962 | 297 | 799 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 661 | 15 | 9 | 2 | 480 | 9 | 6 | 2 | 388 | 7 | 7 | 1 | 560 | 17 | 27 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 207 | 8 | 12 | 7 | 157 | 5 | 10 | 4 | 140 | 4 | 7 | 5 | 114 | 5 | 5 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 41 | 2 | 7 | 0 | 29 | 1 | 4 | 0 | 32 | 1 | 4 | 0 | 16 | 1 | 1 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 869 | 21 | 19 | 10 | 639 | 13 | 15 | 7 | 525 | 10 | 10 | 7 | 661 | 21 | 30 | 6 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 1,130 | 29 | 31 | 8 | 810 | 18 | 22 | 5 | 693 | 15 | 17 | 8 | 773 | 27 | 40 | 12 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,640 | 49 | 64 | 82 | 1,168 | 29 | 39 | 52 | 1,058 | 28 | 53 | 177 | 976 | 37 | 68 | 93 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 751 | 24 | 28 | 41 | 564 | 15 | 22 | 26 | 504 | 14 | 26 | 88 | 356 | 16 | 27 | 59 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,895 | 87 | 136 | 230 | 1,472 | 54 | 84 | 148 | 1,379 | 47 | 110 | 251 | 802 | 38 | 60 | 650 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 22 | 1 | 0 | 0 | 24 | 0 | 0 | 0 | 15 | 0 | 1 | 0 | 77 | 5 | 13 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 61 | 3 | 2 | 0 | 44 | 2 | 1 | 0 | 26 | 1 | 1 | 0 | 70 | 5 | 13 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 783 | 27 | 39 | 44 | 499 | 15 | 20 | 29 | 480 | 12 | 37 | 33 | 637 | 14 | 36 | 48 |
| 96 | N California Ave | W 6th St | E 8th St | 616 | 12 | 2 | 4 | 389 | 10 | 0 | 0 | 404 | 9 | 19 | 15 | 147 | 2 | 4 | 3 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 74 | 4 | 13 | 8 | 51 | 2 | 9 | 6 | 57 | 2 | 5 | 6 | 468 | 12 | 29 | 41 |
| 98 | N California Ave | W 6th St | I-10 | 84 | 4 | 2 | 14 | 51 | 2 | 0 | 9 | 38 | 2 | 13 | 11 | 13 | 0 | 2 | 1 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 71 | 1 | 2 | 2 | 36 | 0 | 1 | 1 | 141 | 1 | 4 | 3 | 330 | 6 | 12 | 13 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 334 | 11 | 22 | 30 | 259 | 6 | 14 | 20 | 196 | 5 | 13 | 27 | 88 | 3 | 8 | 29 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 1,026 | 27 | 54 | 77 | 637 | 15 | 35 | 53 | 563 | 13 | 36 | 65 | 728 | 24 | 65 | 98 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 1,029 | 28 | 60 | 97 | 635 | 15 | 36 | 62 | 511 | 12 | 30 | 59 | 297 | 12 | 31 | 148 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 205 | 3 | 9 | 31 | 72 | 1 | 4 | 25 | 113 | 2 | 8 | 34 | 535 | 18 | 53 | 82 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 25 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 1 | 0 | 13 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 215 | 3 | 9 | 31 | 78 | 1 | 4 | 25 | 142 | 3 | 12 | 34 | 554 | 19 | 56 | 81 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 12 | 0 | 2 | 0 | 12 | 1 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 41 | 2 | 5 | 0 | 20 | 1 | 3 | 0 | 29 | 2 | 7 | 0 | 67 | 4 | 10 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 184 | 3 | 9 | 22 | 66 | 1 | 4 | 18 | 121 | 3 | 9 | 27 | 562 | 19 | 57 | 81 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 204 | 6 | 20 | 63 | 87 | 4 | 14 | 46 | 133 | 5 | 17 | 55 | 573 | 21 | 64 | 124 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 21 | 3 | 9 | 21 | 14 | 2 | 6 | 14 | 12 | 2 | 7 | 14 | 18 | 3 | 10 | 24 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 38 | 3 | 9 | 40 | 26 | 3 | 9 | 28 | 20 | 2 | 8 | 31 | 27 | 2 | 8 | 40 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 204 | 4 | 10 | 28 | 75 | 1 | 4 | 21 | 130 | 3 | 10 | 35 | 590 | 21 | 60 | 87 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 3 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 17 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 24 | 1 | 1 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 227 | 4 | 10 | 31 | 88 | 2 | 5 | 23 | 140 | 4 | 11 | 39 | 624 | 23 | 66 | 108 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 28 | 0 | 2 | 0 | 7 | 1 | 3 | 13 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 45 | 5 | 6 | 35 | 33 | 3 | 5 | 24 | 88 | 5 | 15 | 126 | 43 | 3 | 9 | 44 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 261 | 5 | 12 | 30 | 112 | 3 | 6 | 24 | 146 | 4 | 10 | 31 | 656 | 24 | 65 | 95 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 12 | 2 | 3 | 23 | 10 | 2 | 2 | 15 | 58 | 3 | 10 | 101 | 6 | 1 | 3 | 19 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 30 | 1 | 1 | 0 | 14 | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 33 | 2 | 2 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 315 | 7 | 15 | 30 | 149 | 4 | 8 | 24 | 170 | 5 | 12 | 31 | 701 | 26 | 68 | 95 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 12 | 1 | 1 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 355 | 7 | 15 | 19 | 151 | 3 | 7 | 18 | 188 | 5 | 11 | 29 | 756 | 27 | 70 | 101 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 69 | 4 | 10 | 144 | 62 | 3 | 7 | 100 | 39 | 3 | 10 | 188 | 32 | 3 | 11 | 636 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 14 | 0 | 1 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 394 | 9 | 9 | 16 | 164 | 3 | 1 | 16 | 207 | 5 | 12 | 27 | 814 | 29 | 72 | 101 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 86 | 3 | 1 | 0 | 55 | 2 | 1 | 0 | 49 | 2 | 1 | 0 | 61 | 3 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 24 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 27 | 1 | 1 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 107 | 5 | 0 | 0 | 65 | 3 | 0 | 0 | 59 | 2 | 2 | 0 | 73 | 4 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 59 | 3 | 1 | 2 | 32 | 1 | 0 | 0 | 36 | 2 | 3 | 5 | 144 | 6 | 8 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 537 | 14 | 20 | 20 | 244 | 6 | 9 | 18 | 275 | 8 | 16 | 32 | 1,040 | 39 | 82 | 102 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 108 | 3 | 0 | 0 | 58 | 1 | 0 | 0 | 67 | 2 | 2 | 0 | 42 | 3 | 4 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 7 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 20 | 1 | 2 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 62 | 3 | 8 | 5 | 22 | 1 | 3 | 3 | 10 | 1 | 4 | 10 | 6 | 1 | 5 | 25 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 116 | 3 | 6 | 5 | 60 | 2 | 4 | 3 | 168 | 4 | 12 | 12 | 251 | 10 | 30 | 32 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 272 | 4 | 8 | 5 | 126 | 2 | 3 | 3 | 12 | 1 | 2 | 12 | 223 | 8 | 18 | 0 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 295 | 5 | 11 | 5 | 127 | 2 | 4 | 3 | 167 | 3 | 9 | 10 | 393 | 15 | 37 | 16 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 36 | 1 | 3 | 4 | 13 | 1 | 2 | 2 | 13 | 1 | 3 | 4 | 11 | 1 | 4 | 7 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 364 | 9 | 24 | 4 | 143 | 3 | 8 | 3 | 177 | 5 | 14 | 8 | 531 | 22 | 57 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 368 | 9 | 24 | 0 | 144 | 3 | 8 | 1 | 181 | 5 | 15 | 0 | 539 | 23 | 62 | 5 |
| 145 | Cactus Ave | Graham St | Heacock St | 378 | 10 | 25 | 0 | 149 | 3 | 9 | 1 | 208 | 6 | 17 | 0 | 556 | 26 | 70 | 1 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 1 | 0 | 4 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 441 | 14 | 26 | 0 | 183 | 5 | 9 | 0 | 243 | 8 | 20 | 0 | 605 | 29 | 76 | 2 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 6 | 1 | 1 | 12 | 5 | 0 | 1 | 8 | 54 | 2 | 8 | 92 | 0 | 0 | 0 | 5 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 543 | 19 | 33 | 0 | 241 | 7 | 12 | 0 | 307 | 10 | 25 | 0 | 664 | 33 | 80 | 4 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 590 | 22 | 38 | 0 | 270 | 9 | 15 | 0 | 340 | 11 | 28 | 0 | 696 | 35 | 82 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 50 | 3 | 7 | 146 | 44 | 2 | 5 | 98 | 28 | 2 | 9 | 184 | 25 | 3 | 10 | 629 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 761 | 27 | 45 | 0 | 380 | 12 | 19 | 0 | 437 | 15 | 30 | 0 | 814 | 40 | 85 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,533 | 63 | 81 | 0 | 869 | 31 | 41 | 0 | 1,147 | 36 | 77 | 0 | 1,228 | 59 | 106 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 623 | 27 | 23 | 0 | 379 | 15 | 11 | 0 | 607 | 17 | 44 | 0 | 302 | 14 | 18 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,703 | 70 | 83 | 0 | 991 | 36 | 41 | 0 | 1,334 | 51 | 86 | 0 | 1,415 | 73 | 123 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 218 | 9 | 28 | 19 | 138 | 5 | 19 | 15 | 194 | 5 | 15 | 18 | 380 | 10 | 27 | 42 |
| 159 | Beaumont Ave | E 6th St | I-10 | 238 | 6 | 0 | 19 | 137 | 3 | 0 | 12 | 317 | 5 | 15 | 17 | 275 | 5 | 13 | 19 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,717 | 71 | 194 | 0 | 1,051 | 40 | 127 | 0 | 583 | 31 | 104 | 0 | 1,520 | 74 | 246 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 3,544 | 130 | 365 | 0 | 1,966 | 70 | 224 | 0 | 1,351 | 77 | 259 | 0 | 3,857 | 189 | 592 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 1,741 | 55 | 165 | 0 | 842 | 27 | 95 | 0 | 712 | 44 | 152 | 0 | 2,337 | 115 | 347 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 22 | 1 | 2 | 0 | 22 | 1 | 2 | 0 | 15 | 1 | 3 | 0 | 63 | 5 | 5 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 8,065 | 242 | 548 | 0 | 4,973 | 133 | 337 | 0 | 4,320 | 157 | 459 | 0 | 6,778 | 286 | 794 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 1,440 | 41 | 134 | 0 | 633 | 19 | 72 | 0 | 648 | 40 | 143 | 0 | 451 | 24 | 80 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,886 | 91 | 267 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 4,292 | 103 | 180 | 0 | 2,836 | 57 | 109 | 0 | 2,787 | 71 | 192 | 0 | 2,694 | 82 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 4,084 | 95 | 172 | 0 | 2,688 | 53 | 104 | 0 | 2,632 | 67 | 189 | 0 | 2,694 | 82 | 192 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | | | | | | | | | | 2 | 0 | 0 | 1 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | | | | | | | | | | 21 | 0 | 1 | 0 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 2,432 | 185 | 478 | 560 | 1,464 | 106 | 313 | 360 | 1,600 | 98 | 324 | 382 | 1,655 | 128 | 370 | 587 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 427 | 31 | 55 | 83 | 300 | 20 | 39 | 63 | 328 | 15 | 39 | 63 | 168 | 11 | 23 | 44 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 2,872 | 216 | 534 | 632 | 1,772 | 126 | 353 | 418 | 1,943 | 115 | 364 | 446 | 1,823 | 138 | 394 | 631 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 115 | 0 | 0 | 0 | 78 | 0 | 0 | 0 | 115 | 4 | 5 | 3 | 46 | 3 | 6 | 4 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | | | | | | | | | | 2,096 | 71 | 179 | 223 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | | | | | | | | | | 3,183 | 107 | 286 | 333 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | | | | | | | | | | 3,204 | 108 | 284 | 347 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | | | | | | | | | | 1,037 | 36 | 102 | 118 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 4,501 | 127 | 284 | 156 | 2,454 | 57 | 157 | 94 | 2,924 | 54 | 187 | 185 | 6,955 | 162 | 514 | 815 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 3,733 | 105 | 252 | 121 | 2,098 | 48 | 143 | 79 | 2,523 | 47 | 171 | 152 | 5,432 | 131 | 448 | 577 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 768 | 22 | 33 | 38 | 356 | 9 | 16 | 18 | 401 | 7 | 16 | 34 | 1,521 | 32 | 66 | 248 |
| 194 | Crescent Ave | West of Alessandro Rd | | 471 | 39 | 98 | 0 | 274 | 22 | 63 | 0 | 329 | 20 | 63 | 0 | 305 | 26 | 69 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 938 | 54 | 147 | 0 | 557 | 30 | 95 | 0 | 592 | 31 | 95 | 0 | 690 | 47 | 134 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 1,409 | 102 | 246 | 0 | 832 | 57 | 157 | 0 | 921 | 50 | 158 | 0 | 996 | 73 | 202 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 83 | 4 | 8 | 0 | 49 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 48 | 3 | 6 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 231 | 6 | 12 | 0 | 137 | 2 | 8 | 0 | 152 | 6 | 10 | 0 | 223 | 11 | 20 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,722 | 120 | 267 | 0 | 1,018 | 67 | 170 | 0 | 1,122 | 59 | 173 | 0 | 1,267 | 86 | 227 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 164 | 18 | 51 | 0 | 91 | 9 | 28 | 0 | 221 | 12 | 41 | 0 | 1,502 | 82 | 254 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,486 | 81 | 246 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 164 | 18 | 51 | 0 | 91 | 9 | 28 | 0 | 221 | 12 | 41 | 0 | 18 | 2 | 9 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 89 | 2 | 2 | 2 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 338 | 8 | 16 | 20 | 200 | 4 | 10 | 13 | 197 | 4 | 11 | 20 | 359 | 11 | 36 | 46 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 612 | 16 | 27 | 34 | 381 | 9 | 15 | 21 | 317 | 7 | 19 | 30 | 169 | 6 | 16 | 32 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 80 | 1 | 4 | 6 | 37 | 0 | 2 | 4 | 60 | 1 | 4 | 9 | 241 | 8 | 29 | 33 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 21 | 1 | 0 | 1 | 14 | 0 | 0 | 0 | 11 | 0 | 0 | 1 | 14 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 8 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 51 | 1 | 2 | 3 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 19 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 194 | 5 | 20 | 14 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 43 | 1 | 4 | 5 | 15 | 0 | 2 | 4 | 36 | 1 | 4 | 9 | 73 | 3 | 12 | 23 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 27 | 1 | 1 | 1 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 65 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 52 | 1 | 1 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 92 | 3 | 8 | 18 | 49 | 1 | 3 | 4 | 66 | 1 | 3 | 6 | 152 | 4 | 13 | 33 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 846 | 24 | 50 | 80 | 519 | 13 | 33 | 66 | 520 | 12 | 45 | 73 | 1,025 | 36 | 129 | 345 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago A | Century Ave | 79 | 2 | 5 | 7 | 39 | 1 | 2 | 4 | 47 | 1 | 4 | 9 | 70 | 3 | 12 | 24 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 22 | 1 | 4 | 3 | 13 | 0 | 2 | 1 | 13 | 0 | 2 | 2 | 20 | 1 | 4 | 4 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 634 | 19 | 55 | 59 | 382 | 11 | 43 | 64 | 404 | 11 | 45 | 74 | 889 | 35 | 131 | 344 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 267 | 7 | 24 | 26 | 159 | 4 | 15 | 15 | 185 | 4 | 17 | 20 | 136 | 3 | 10 | 16 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 330 | 11 | 15 | 8 | 199 | 7 | 16 | 45 | 197 | 6 | 26 | 51 | 720 | 31 | 117 | 319 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 350 | 12 | 9 | 31 | 208 | 7 | 4 | 44 | 201 | 6 | 26 | 50 | 634 | 26 | 94 | 242 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 22 | 1 | 3 | 6 | 13 | 1 | 2 | 4 | 16 | 1 | 2 | 6 | 23 | 1 | 3 | 7 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 3 | 0 | 0 | 0 | 15 | 3 | 2 | 37 | 8 | 0 | 2 | 8 | 52 | 6 | 21 | 74 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 81 | 3 | 0 | 27 | 48 | 2 | 0 | 17 | 46 | 1 | 7 | 18 | 53 | 2 | 9 | 26 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 11 | 1 | 2 | 7 | 8 | 0 | 2 | 5 | 27 | 1 | 6 | 18 | 187 | 14 | 55 | 198 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 355 | 12 | 22 | 47 | 212 | 7 | 15 | 48 | 190 | 6 | 22 | 41 | 530 | 18 | 63 | 128 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 104 | 3 | 11 | 22 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 886 | 24 | 56 | 79 | 546 | 14 | 40 | 67 | 546 | 12 | 46 | 74 | 1,032 | 36 | 126 | 339 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 35 | 1 | 2 | 2 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 356 | 8 | 8 | 12 | 226 | 4 | 5 | 7 | 205 | 3 | 4 | 6 | 367 | 9 | 18 | 33 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 1,235 | 31 | 65 | 95 | 769 | 18 | 46 | 73 | 761 | 16 | 51 | 83 | 1,346 | 43 | 137 | 354 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 109 | 5 | 4 | 1 | 69 | 3 | 2 | 0 | 98 | 4 | 13 | 40 | 162 | 4 | 13 | 26 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 194 | 5 | 6 | 1 | 106 | 3 | 3 | 2 | 209 | 7 | 27 | 72 | 254 | 9 | 27 | 46 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 1,244 | 36 | 61 | 87 | 795 | 20 | 36 | 88 | 781 | 18 | 57 | 95 | 1,166 | 38 | 120 | 312 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 | 14 | 1 | 5 | 16 | 0 | 0 | 0 | 0 | 14 | 1 | 5 | 25 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 681 | 18 | 48 | 70 | 449 | 12 | 34 | 65 | 421 | 11 | 37 | 60 | 834 | 27 | 84 | 212 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,601 | 46 | 82 | 132 | 1,002 | 25 | 40 | 56 | 1,049 | 26 | 90 | 147 | 1,799 | 64 | 201 | 553 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 227 | 8 | 19 | 20 | 149 | 4 | 12 | 11 | 163 | 6 | 26 | 43 | 216 | 10 | 32 | 63 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 1,301 | 0 | 73 | 114 | 867 | 0 | 63 | 113 | 724 | 17 | 54 | 89 | 818 | 26 | 80 | 178 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 650 | 34 | 117 | 299 | 371 | 18 | 71 | 176 | 448 | 15 | 65 | 169 | 482 | 23 | 77 | 219 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 3 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 9 | 0 | 1 | 2 | 10 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 654 | 35 | 114 | 300 | 374 | 18 | 69 | 177 | 457 | 16 | 66 | 171 | 488 | 23 | 78 | 220 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 4 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 7 | 0 | 2 | 2 | 10 | 0 | 2 | 4 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 671 | 35 | 119 | 301 | 384 | 18 | 72 | 178 | 472 | 16 | 69 | 174 | 508 | 23 | 81 | 225 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 24 | 2 | 0 | 0 | 14 | 1 | 0 | 1 | 27 | 3 | 10 | 45 | 25 | 1 | 3 | 4 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 691 | 36 | 108 | 309 | 395 | 19 | 62 | 184 | 463 | 17 | 69 | 185 | 543 | 25 | 83 | 230 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 11 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 14 | 1 | 2 | 4 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 310 | 16 | 52 | 138 | 176 | 8 | 30 | 80 | 141 | 5 | 19 | 46 | 227 | 10 | 33 | 85 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 724 | 38 | 129 | 325 | 418 | 21 | 82 | 202 | 558 | 19 | 81 | 211 | 619 | 29 | 98 | 286 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 3 | 1 | 0 | 10 | 2 | 1 | 0 | 10 | 16 | 0 | 2 | 7 | 0 | 0 | 0 | 0 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 618 | 30 | 100 | 261 | 350 | 15 | 58 | 149 | 298 | 10 | 41 | 100 | 454 | 19 | 66 | 171 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 2 | 0 | 0 | 28 | 26 | 1 | 2 | 33 | 79 | 8 | 30 | 103 | 0 | 0 | 0 | 0 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,543 | 49 | 45 | 123 | 1,170 | 32 | 44 | 88 | 1,139 | 36 | 78 | 244 | 1,004 | 39 | 62 | 71 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 460 | 20 | 30 | 69 | 346 | 12 | 21 | 46 | 366 | 13 | 33 | 151 | 217 | 12 | 25 | 70 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 1,028 | 43 | 88 | 11 | 756 | 25 | 54 | 7 | 766 | 24 | 56 | 8 | 516 | 19 | 28 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 985 | 42 | 78 | 128 | 736 | 26 | 51 | 85 | 682 | 22 | 49 | 126 | 439 | 21 | 34 | 325 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 253 | 12 | 25 | 9 | 195 | 7 | 17 | 6 | 206 | 7 | 18 | 8 | 174 | 9 | 21 | 27 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 1,049 | 44 | 82 | 86 | 808 | 27 | 54 | 57 | 721 | 23 | 52 | 103 | 519 | 24 | 39 | 357 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 660 | 30 | 50 | 194 | 554 | 21 | 37 | 129 | 422 | 16 | 33 | 213 | 227 | 15 | 26 | 649 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 294 | Via Del Lago | South of Iris Ave | | 78 | 3 | 2 | 0 | 56 | 2 | 0 | 0 | 55 | 2 | 2 | 0 | 43 | 1 | 0 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 155 | 9 | 7 | 0 | 102 | 5 | 4 | 0 | 397 | 10 | 37 | 0 | 41 | 2 | 7 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 203 | 10 | 9 | 0 | 117 | 5 | 2 | 0 | 411 | 10 | 35 | 0 | 83 | 3 | 8 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 55 | 3 | 8 | 143 | 33 | 1 | 4 | 96 | 23 | 1 | 5 | 182 | 50 | 4 | 11 | 625 |
| 304 | Iris Ave | Indian St | Perris Blvd | 268 | 10 | 24 | 0 | 157 | 5 | 14 | 0 | 28 | 7 | 18 | 0 | 483 | 13 | 44 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 1,374 | 57 | 171 | 140 | 827 | 32 | 111 | 94 | 503 | 22 | 87 | 180 | 1,019 | 60 | 203 | 620 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 2,646 | 91 | 292 | 140 | 1,357 | 48 | 176 | 94 | 936 | 47 | 165 | 180 | 1,220 | 59 | 189 | 620 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 35 | 1 | 2 | 1 | 8 | 0 | 1 | 0 | 25 | 0 | 1 | 1 | 86 | 3 | 11 | 9 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 1,780 | 49 | 35 | 159 | 963 | 22 | 35 | 88 | 1,181 | 20 | 76 | 91 | 3,002 | 74 | 268 | 497 |
| 326 | Ramona Expy | Sanderson Ave | State St | 593 | 12 | 31 | 27 | 313 | 5 | 17 | 16 | 71 | 1 | 2 | 2 | 664 | 19 | 81 | 122 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 1,216 | 37 | 53 | 133 | 655 | 16 | 24 | 72 | 1,073 | 19 | 73 | 87 | 2,251 | 52 | 177 | 365 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 14 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 15 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 3,730 | 105 | 241 | 121 | 2,096 | 48 | 131 | 79 | 2,520 | 47 | 170 | 151 | 5,416 | 130 | 447 | 577 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 7 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 34 | 0 | 1 | 1 | 54 | 2 | 6 | 7 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 2,759 | 80 | 165 | 60 | 1,564 | 37 | 86 | 42 | 1,855 | 36 | 130 | 93 | 3,734 | 86 | 281 | 353 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,941 | 51 | 146 | 120 | 1,071 | 23 | 80 | 70 | 1,297 | 21 | 80 | 95 | 3,310 | 85 | 326 | 572 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 5 | 0 | 0 | 0 | 27 | 0 | 1 | 1 | 37 | 0 | 1 | 1 | 24 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,954 | 56 | 100 | 21 | 1,134 | 26 | 42 | 12 | 1,316 | 25 | 92 | 50 | 2,313 | 48 | 137 | 100 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 1,604 | 47 | 104 | 79 | 881 | 21 | 54 | 66 | 1,103 | 21 | 58 | 58 | 2,820 | 76 | 286 | 467 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 1,025 | 27 | 50 | 69 | 636 | 15 | 33 | 44 | 556 | 13 | 35 | 55 | 723 | 23 | 64 | 93 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 1 | 0 | 0 | 7 | 1 | 0 | 0 | 9 | 7 | 0 | 2 | 10 | 5 | 0 | 1 | 4 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB Or | Mid County Pkwy | 3rd St | | | | | | | | | | | | | 678 | 16 | 36 | 262 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ram | | | | | | | | | | | | | 1,331 | 27 | 60 | 245 |
| 377 | Mid County Pkwy WB Off | Mid County Pkwy | 3rd St | | | | | | | | | | | | | 68 | 2 | 6 | 8 |
| 378 | 3rd St | Mid County Pkwy EB Ran | Mid County Pkwy WB Ram | | | | | | | | | | | | | 957 | 19 | 38 | 109 |
| 379 | Mid County Pkwy EB Off | Mid County Pkwy | 3rd St | | | | | | | | | | | | | 530 | 12 | 25 | 183 |
| 380 | Mid County Pkwy EB On- | 3rd St | Mid County Pkwy | | | | | | | | | | | | | 24 | 0 | 1 | 1 |
| 381 | 3rd St | Mid County Pkwy EB Ran | MM Blvd | | | | | | | | | | | | | 681 | 13 | 26 | 18 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 230 | 20 | 56 | 57 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 2,437 | 84 | 264 | 115 | 1,270 | 45 | 161 | 78 | 701 | 29 | 109 | 104 | 1,317 | 58 | 179 | 569 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 21 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 16 | 0 | 1 | 2 | 25 | 1 | 1 | 3 |
| 390 | Ramona Expy | Webster Ave | Indian St | 404 | 21 | 52 | 17 | 205 | 10 | 31 | 11 | 286 | 11 | 34 | 13 | 430 | 18 | 44 | 33 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 278 | 30 | 114 | 38 | 171 | 16 | 71 | 26 | 189 | 14 | 64 | 25 | 477 | 28 | 113 | 103 |
| 393 | Indian St | Ramona Expy | Morgan St | 64 | 16 | 95 | 65 | 41 | 9 | 61 | 42 | 34 | 6 | 48 | 44 | 49 | 11 | 70 | 70 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 2,406 | 83 | 263 | 110 | 1,250 | 44 | 160 | 75 | 668 | 27 | 106 | 91 | 2,613 | 109 | 340 | 451 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 2,560 | 69 | 193 | 63 | 1,274 | 33 | 107 | 42 | 1,162 | 39 | 139 | 40 | 2,125 | 73 | 216 | 293 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 1,361 | 32 | 95 | 7 | 852 | 16 | 54 | 5 | 1,136 | 34 | 124 | 12 | 203 | 7 | 16 | 4 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 3,640 | 82 | 175 | 0 | 2,384 | 46 | 110 | 0 | 2,378 | 62 | 181 | 0 | 2,446 | 73 | 184 | 1 |
| 399 | Ramona Expy | Evans Rd | Rider St | 58 | 1 | 1 | 0 | 20 | 0 | 0 | 0 | 183 | 4 | 8 | 0 | 242 | 4 | 7 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 1,152 | 27 | 29 | 3 | 763 | 16 | 19 | 3 | 386 | 9 | 14 | 1 | 1,740 | 50 | 140 | 4 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 299 | 12 | 0 | 5 | 196 | 8 | 0 | 4 | 147 | 6 | 4 | 3 | 11 | 0 | 0 | 0 |
| 406 | Ironwood Ave | East of Thedore St | | 63 | 7 | 3 | 2 | 51 | 6 | 3 | 0 | 76 | 8 | 5 | 4 | 668 | 59 | 18 | 7 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 19 | 0 | 0 | 1 | 8 | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 213 | 5 | 4 | 0 | 76 | 2 | 2 | 0 | 103 | 4 | 7 | 0 | 176 | 7 | 5 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 367 | 12 | 0 | 0 | 225 | 6 | 0 | 0 | 198 | 6 | 8 | 0 | 0 | 0 | 0 | 1 |
| 411 | Rider St | Evans Rd | Ramona Expy | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 17 | 1 | 4 | 4 | 11 | 1 | 0 | 2 | 72 | 2 | 7 | 8 | 125 | 6 | 23 | 28 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 7 | 0 | 0 | 5 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 2,525 | 66 | 141 | 41 | 1,254 | 31 | 64 | 29 | 998 | 32 | 109 | 27 | 1,870 | 62 | 172 | 238 |
| 416 | Mid County Pkwy WB Or | Mid County Pkwy | Perris Blvd | | | | | | | | | 388 | 17 | 65 | 10 | 626 | 18 | 66 | 107 |
| 417 | Mid County Pkwy WB Off | Perris Blvd | Mid County Pkwy | | | | | | | | | 6 | 0 | 0 | 2 | 8 | 0 | 2 | 67 |
| 419 | Mid County Pkwy EB Off | Mid County Pkwy | Perris Blvd | | | | | | | | | 451 | 13 | 50 | 12 | 367 | 9 | 30 | 76 |
| 420 | Mid County Pkwy EB On- | Perris Blvd | Mid County Pkwy | | | | | | | | | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 33 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 197 | 10 | 18 | 180 | 174 | 7 | 14 | 119 | 110 | 5 | 14 | 202 | 101 | 6 | 15 | 640 |
| 425 | Mid County Pkwy WB Or | West of Evan | | | | | | | | | | 121 | 1 | 5 | 2 | 23 | 1 | 2 | 0 |
| 426 | Mid County Pkwy WB Of | East of Evan | | | | | | | | | | 0 | 0 | 0 | 1 | 12 | 1 | 2 | 36 |
| 427 | Day St | south of Alessandro Blvd | | 5 | 1 | 1 | 11 | 6 | 1 | 2 | 7 | 4 | 1 | 5 | 7 | 23 | 1 | 3 | 0 |
| 428 | Mid County Pkwy EB Off | West of Evan | | | | | | | | | | 41 | 0 | 1 | 2 | 27 | 1 | 3 | 1 |
| 429 | Mid County Pkwy EB On- | East of Evan | | | | | | | | | | 1 | 0 | 0 | 0 | 13 | 1 | 1 | 35 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 692 | 17 | 30 | 45 | 378 | 8 | 21 | 34 | 366 | 8 | 23 | 50 | 639 | 21 | 58 | 70 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | | | | | | | | | | 4 | 0 | 0 | 3 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | | | | | | | | | | 17 | 0 | 0 | 1 |
| 433 | Evans Rd | Rider St | Orange Ave | 432 | 6 | 7 | 0 | 295 | 4 | 5 | 0 | 185 | 3 | 5 | 1 | 1,581 | 42 | 132 | 22 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 12 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 1 | 2 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 172 | 2 | 2 | 0 | 112 | 1 | 1 | 0 | 61 | 1 | 2 | 0 | 1,444 | 40 | 129 | 30 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 126 | 1 | 3 | 0 | 81 | 1 | 2 | 0 | 45 | 1 | 2 | 0 | 10 | 0 | 1 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | | | | | | | | | | 1,403 | 40 | 128 | 30 |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | | | | | | | | | | 8 | 0 | 0 | 0 |
| 453 | Evans Rd | North of San Jancito Ave | | | | | | | | | | | | | | 1,288 | 34 | 121 | 28 |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | | | | | | | | | | 246 | 5 | 15 | 0 |
| 455 | Evans Rd | South of San Jancito Ave | | | | | | | | | | | | | | 1,034 | 30 | 106 | 27 |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | | | | | | | | | | 61 | 3 | 5 | 0 |
| 477 | Ellis Ave | West of Evan Rd | | | | | | | | | | | | | | 80 | 4 | 7 | 9 |
| 478 | Evans Rd | North of Ellis Ave | | | | | | | | | | | | | | 1,054 | 36 | 117 | 46 |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | | | | | | | | | | 726 | 15 | 64 | 0 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | | | | | | | | | | 0 | 0 | 0 | 1 |
| 482 | Ellis Ave | East of SR-215 | | | | | | | | | | | | | | 164 | 2 | 10 | 1 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | | | | | | | | | | 837 | 22 | 96 | 0 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | | | | | | | | | | 1 | 0 | 0 | 1 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | | | | | | | | | | 1,360 | 23 | 99 | 0 |
| 488 | Nason St | North of Iris Ave | | | | | | | | | | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | | | | | | | | | | 2,525 | 76 | 188 | 0 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | | | | | | | | | | 3 | 0 | 0 | 0 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 496 | 24 | 16 | 162 | 423 | 16 | 17 | 104 | 340 | 13 | 25 | 208 | 170 | 11 | 20 | 645 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 573 | 27 | 19 | 174 | 488 | 18 | 18 | 116 | 358 | 14 | 26 | 208 | 189 | 12 | 21 | 645 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | | | | | | | | | | 1 | 0 | 0 | 0 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 504 | Krameria Ave | west of Perris Blvd | | 165 | 6 | 12 | 0 | 102 | 3 | 7 | 0 | 151 | 13 | 56 | 0 | 251 | 25 | 94 | 0 |

Roadway does not exist in that scenario

**Daily Freeway Traffic Volumes**

| Segment ID | | | | 2012 Build Out Daily Traffic Volumes | | | | 2012 Phase 1 Daily Traffic Volumes | | | | 2022 Phase 1 Daily Traffic Volumes | | | | 2035 Build OUt Daily Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Project - Only | | | | Project - Only | | | | Project - Only | | | | Project - Only | | | |
| EB/NB | WB/SB | Route | Segment | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT |
| 1 | 74 | SR-60 | SR-71/S Garey Ave to S Reservoir Rd | 790 | 110 | 310 | 3,060 | 450 | 60 | 170 | 1,720 | 530 | 50 | 150 | 1,580 | 830 | 80 | 210 | 2,450 |
| 2 | 73 | | S Reservoir Rd to Ramona Ave | 660 | 110 | 320 | 3,100 | 370 | 60 | 180 | 1,750 | 450 | 50 | 150 | 1,600 | 650 | 80 | 220 | 2,490 |
| 3 | 72 | | Ramona Ave to Central Ave | 700 | 120 | 330 | 3,120 | 390 | 70 | 180 | 1,760 | 470 | 60 | 160 | 1,610 | 680 | 80 | 230 | 2,520 |
| 4 | 71 | | Central Ave to Mountain Ave | 750 | 120 | 340 | 3,180 | 420 | 70 | 190 | 1,790 | 510 | 60 | 170 | 1,640 | 740 | 90 | 240 | 2,570 |
| 5 | 70 | | Mountain Ave to Euclid Ave | 790 | 120 | 360 | 3,230 | 450 | 70 | 200 | 1,820 | 550 | 60 | 180 | 1,670 | 770 | 90 | 250 | 2,620 |
| 6 | 69 | | Euclid Ave to Grove Ave | 830 | 130 | 370 | 3,260 | 470 | 70 | 210 | 1,840 | 580 | 60 | 180 | 1,690 | 790 | 90 | 260 | 2,630 |
| 7 | 68 | | Grove Ave to Vineyard Ave | 860 | 130 | 370 | 3,270 | 480 | 70 | 210 | 1,840 | 610 | 60 | 190 | 1,710 | 810 | 90 | 260 | 2,640 |
| 8 | 67 | | Vineyard Ave to Archibald Ave | 880 | 130 | 380 | 3,310 | 500 | 70 | 220 | 1,870 | 630 | 60 | 190 | 1,730 | 830 | 90 | 270 | 2,670 |
| 9 | 66 | | Archibald Ave to Haven Ave | 960 | 140 | 430 | 3,510 | 540 | 80 | 240 | 1,980 | 680 | 70 | 210 | 1,840 | 920 | 100 | 310 | 2,860 |
| 10 | 65 | | Haven Ave to Miliken Ave | 990 | 140 | 430 | 3,530 | 560 | 80 | 240 | 1,990 | 700 | 70 | 220 | 1,850 | 950 | 100 | 310 | 2,890 |
| 11 | 64 | | Miliken Ave to SR-15 | 1,020 | 140 | 440 | 3,560 | 580 | 80 | 250 | 2,010 | 730 | 70 | 230 | 1,870 | 1,030 | 100 | 320 | 2,910 |
| 12 | 63 | | I-15 to Etiwanda Ave | 1,530 | 180 | 570 | 4,010 | 860 | 100 | 320 | 2,260 | 1,080 | 90 | 290 | 2,090 | 1,440 | 130 | 420 | 3,230 |
| 13 | 62 | | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,630 | 190 | 620 | 4,160 | 920 | 110 | 350 | 2,350 | 1,160 | 90 | 310 | 2,170 | 1,500 | 140 | 460 | 3,360 |
| 14 | 61 | | Mission Blvd/Country Village Rd to Pedley Rd | 1,660 | 200 | 650 | 4,270 | 940 | 110 | 360 | 2,410 | 1,190 | 100 | 330 | 2,230 | 1,540 | 140 | 480 | 3,480 |
| 15 | 60 | | Pedley Rd to Pyrite St | 1,660 | 200 | 650 | 4,270 | 940 | 110 | 360 | 2,410 | 1,190 | 100 | 330 | 2,240 | 1,540 | 140 | 480 | 3,490 |
| 16 | 59 | | Pyrite St to Valley Way | 1,780 | 200 | 650 | 4,290 | 1,010 | 110 | 370 | 2,420 | 1,280 | 100 | 330 | 2,250 | 1,610 | 150 | 490 | 3,500 |
| 17 | 58 | | Valley Way to Rubidoux Blvd | 2,130 | 220 | 690 | 4,390 | 1,200 | 120 | 390 | 2,480 | 1,490 | 110 | 350 | 2,300 | 2,230 | 180 | 590 | 3,780 |
| 18 | 57 | | Rubidoux Blvd to Market St | 2,450 | 230 | 720 | 4,420 | 1,380 | 130 | 410 | 2,500 | 1,690 | 110 | 370 | 2,320 | 2,490 | 190 | 620 | 3,830 |
| 19 | 56 | | Market St to Main St | 2,640 | 250 | 770 | 4,530 | 1,490 | 140 | 440 | 2,550 | 1,840 | 120 | 400 | 2,400 | 2,630 | 200 | 670 | 3,950 |
| 20 | 55 | | Main St to SR-91 | 3,210 | 290 | 910 | 4,890 | 1,810 | 170 | 510 | 2,760 | 2,220 | 150 | 480 | 2,690 | 3,010 | 230 | 760 | 4,200 |
| 21 | 54 | | SR-91 to W Blaine St/3rd St | 6,420 | 500 | 1,630 | 8,020 | 3,620 | 280 | 920 | 4,520 | 3,970 | 230 | 790 | 4,140 | 5,080 | 340 | 1,200 | 6,960 |
| 22 | 53 | | W Blaine St/3rd St to University Ave | 6,630 | 520 | 1,710 | 8,180 | 3,740 | 290 | 960 | 4,610 | 4,030 | 240 | 830 | 4,220 | 5,210 | 350 | 1,250 | 7,120 |
| 23 | 52 | | University Ave to Martin Luther King Blvd | 6,560 | 530 | 1,740 | 8,230 | 3,700 | 300 | 980 | 4,640 | 4,080 | 240 | 850 | 4,260 | 5,350 | 360 | 1,290 | 7,190 |
| 24 | 51 | | Martin Luther King Blvd to Central Ave | 7,230 | 560 | 1,850 | 8,510 | 4,080 | 320 | 1,050 | 4,800 | 4,480 | 260 | 910 | 4,400 | 5,890 | 380 | 1,370 | 7,420 |
| 25 | 50 | | Central Ave to Fair Isle Dr/Box Springs Rd | 8,380 | 610 | 1,950 | 8,660 | 4,730 | 340 | 1,100 | 4,890 | 5,070 | 280 | 970 | 4,510 | 7,110 | 430 | 1,510 | 7,770 |
| 26 | 49 | | Fair Isle Dr/Box Springs Rd to I-215 | 8,850 | 590 | 1,890 | 8,430 | 4,990 | 330 | 1,070 | 4,760 | 5,390 | 280 | 960 | 4,460 | 7,720 | 400 | 1,420 | 7,330 |
| 27 | 48 | | I-215 to Day St | 11,440 | 690 | 2,180 | 9,450 | 6,450 | 390 | 1,230 | 5,330 | 6,600 | 330 | 1,120 | 5,130 | 8,150 | 460 | 1,650 | 8,410 |
| 28 | 47 | | Day St to Pigeon Pass Rd/Frederick St | 11,150 | 710 | 2,230 | 9,450 | 6,290 | 400 | 1,260 | 5,330 | 6,370 | 340 | 1,150 | 5,130 | 8,170 | 490 | 1,720 | 8,410 |
| 29 | 46 | | Pigeon Pass Rd/Frederick St to Heacock St | 11,460 | 740 | 2,310 | 9,510 | 6,460 | 420 | 1,300 | 5,370 | 6,570 | 350 | 1,190 | 5,170 | 8,130 | 510 | 1,770 | 8,440 |
| 30 | 45 | | Heacock St to Perris Blvd | 13,130 | 790 | 2,370 | 9,590 | 7,400 | 450 | 1,340 | 5,410 | 7,480 | 380 | 1,240 | 5,300 | 9,210 | 540 | 1,830 | 8,520 |
| 31 | 44 | | Perris Blvd to Nason St | 15,160 | 880 | 2,540 | 9,810 | 8,550 | 500 | 1,430 | 5,530 | 8,670 | 430 | 1,340 | 5,490 | 10,110 | 590 | 1,900 | 9,200 |
| 32 | 43 | | Nason St to Moreno Beach Dr | 16,270 | 940 | 2,590 | 9,810 | 9,180 | 530 | 1,460 | 5,530 | 9,240 | 450 | 1,360 | 5,490 | 10,910 | 630 | 1,940 | 9,200 |
| 33 | 42 | | Moreno Beach Dr to Redlands Blvd | 17,000 | 960 | 2,600 | 9,860 | 11,470 | 540 | 1,680 | 6,190 | 11,580 | 460 | 1,560 | 6,340 | 12,070 | 690 | 2,070 | 9,320 |
| 34 | 41 | | Redlands Blvd to Theodore St | 18,170 | 970 | 2,590 | 10,020 | 12,400 | 550 | 1,680 | 6,430 | 12,500 | 470 | 1,560 | 6,490 | 12,650 | 690 | 2,030 | 8,920 |
| 35 | 40 | | Theodore St to Gilman Springs Rd | 5,430 | 260 | 690 | 2,130 | 2,400 | 90 | 300 | 700 | 3,360 | 120 | 380 | 850 | 6,820 | 300 | 820 | 2,470 |
| 36 | 39 | | Gilman Springs Rd to Jack Rabbit Trail | 3,790 | 170 | 460 | 1,080 | 2,140 | 100 | 260 | 610 | 3,040 | 120 | 320 | 740 | 6,830 | 230 | 670 | 1,540 |
| 37 | 38 | | Jack Rabbit Trail to I-10 | 3,790 | 170 | 460 | 1,080 | 2,140 | 100 | 260 | 610 | 3,010 | 110 | 300 | 720 | 6,800 | 220 | 640 | 1,510 |
| 75 | 100 | SR-91 | I-15 to McKinley St | 1,350 | 110 | 410 | 2,210 | 760 | 60 | 230 | 1,250 | 730 | 50 | 190 | 1,090 | 1,160 | 90 | 330 | 2,010 |
| 76 | 99 | | McKinley St to Pierce St | 1,580 | 120 | 440 | 2,270 | 890 | 70 | 250 | 1,280 | 850 | 50 | 210 | 1,120 | 1,320 | 100 | 360 | 2,090 |
| 77 | 98 | | Pierce St to Magnolia Ave | 1,580 | 120 | 440 | 2,270 | 890 | 70 | 250 | 1,280 | 850 | 50 | 210 | 1,120 | 1,320 | 100 | 360 | 2,090 |
| 78 | 97 | | Magnolia Ave to La Sierra Ave | 1,680 | 130 | 460 | 2,300 | 950 | 70 | 260 | 1,300 | 920 | 60 | 220 | 1,140 | 1,410 | 100 | 370 | 2,100 |
| 79 | 96 | | La Sierra Ave to Tyler St | 1,860 | 130 | 470 | 2,320 | 1,050 | 70 | 270 | 1,310 | 1,020 | 60 | 230 | 1,150 | 1,530 | 100 | 390 | 2,120 |
| 80 | 95 | | Tyler St to Van Buren Blvd | 2,050 | 140 | 500 | 2,360 | 1,160 | 80 | 280 | 1,330 | 1,120 | 60 | 240 | 1,170 | 1,610 | 100 | 400 | 2,150 |
| 81 | 94 | | Van Buren Blvd to Adam St | 2,200 | 140 | 520 | 2,400 | 1,240 | 80 | 290 | 1,350 | 1,210 | 60 | 250 | 1,190 | 1,680 | 110 | 410 | 2,170 |
| 82 | 93 | | Adam St to Madison St | 2,300 | 140 | 540 | 2,420 | 1,300 | 80 | 300 | 1,370 | 1,270 | 70 | 260 | 1,210 | 1,730 | 110 | 430 | 2,200 |
| 83 | 92 | | Madison St to Indiana Ave (off-ramp) | 2,340 | 150 | 550 | 2,450 | 1,320 | 80 | 310 | 1,380 | 1,300 | 70 | 270 | 1,220 | 1,740 | 110 | 430 | 2,210 |
| 84 | 91 | | Arlington Ave to Central Ave | 2,620 | 150 | 560 | 2,470 | 1,480 | 80 | 320 | 1,390 | 1,360 | 70 | 270 | 1,230 | 1,660 | 90 | 380 | 2,010 |
| 85 | 90 | | Central Ave to 14th St | 2,640 | 150 | 560 | 2,460 | 1,490 | 80 | 320 | 1,390 | 1,340 | 70 | 270 | 1,220 | 1,640 | 90 | 380 | 2,000 |
| 86 | 89 | | 14th St to University Ave | 2,410 | 130 | 500 | 2,240 | 1,360 | 70 | 280 | 1,260 | 1,330 | 60 | 240 | 1,110 | 1,660 | 80 | 340 | 1,860 |
| 87 | 88 | | University Ave to Spruce St (off-ramp) | 2,430 | 130 | 500 | 2,260 | 1,370 | 70 | 280 | 1,280 | 1,370 | 60 | 240 | 1,120 | 1,790 | 90 | 350 | 1,880 |
| 101 | 128 | | SR-60 to Beaumont Ave | 1,920 | 100 | 310 | 940 | 1,080 | 60 | 170 | 530 | 1,660 | 60 | 190 | 590 | 2,930 | 100 | 300 | 1,090 |
| 102 | 127 | | Beaumont Ave to Pennsylvania Ave | 1,530 | 90 | 280 | 910 | 860 | 50 | 160 | 510 | 1,200 | 50 | 160 | 570 | 2,520 | 90 | 280 | 1,060 |
| 103 | 126 | | Pennsylvania Ave to Highland Springs Ave | 1,530 | 90 | 280 | 910 | 860 | 50 | 160 | 510 | 1,200 | 50 | 160 | 570 | 2,520 | 90 | 280 | 1,060 |
| 104 | 125 | | Highland Springs Ave to Sunset Ave | 1,110 | 70 | 240 | 890 | 630 | 40 | 140 | 500 | 900 | 40 | 140 | 550 | 2,040 | 70 | 250 | 1,040 |
| 105 | 124 | | Sunset Ave to 22nd St | 910 | 70 | 230 | 880 | 510 | 40 | 130 | 490 | 730 | 40 | 130 | 540 | 1,610 | 60 | 220 | 1,000 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106 | 123 | I-10 | 22nd St to S 8th St | 820 | 60 | 220 | 870 | 460 | 40 | 120 | 490 | 670 | 40 | 130 | 540 | 1,500 | 60 | 210 | 990 |
| 107 | 122 | | S 8th St to S Hargrave St | 660 | 60 | 200 | 840 | 370 | 30 | 110 | 470 | 550 | 30 | 120 | 520 | 1,410 | 50 | 200 | 970 |
| 108 | 121 | | S Hargrave St to Field Rd | 560 | 50 | 190 | 820 | 310 | 30 | 100 | 460 | 470 | 30 | 110 | 510 | 1,330 | 50 | 190 | 960 |
| 109 | 120 | | Field Rd to Main St (Cabazon) | 520 | 50 | 160 | 800 | 300 | 30 | 90 | 450 | 450 | 30 | 90 | 490 | 1,230 | 50 | 150 | 920 |
| 110 | 119 | | Main St (Cabazon) to Main St | 470 | 50 | 150 | 790 | 260 | 30 | 90 | 450 | 410 | 30 | 90 | 490 | 1,230 | 50 | 150 | 920 |
| 111 | 118 | | Main St to Haugen-Lehmann Way | 460 | 50 | 150 | 790 | 260 | 30 | 90 | 450 | 400 | 30 | 90 | 490 | 1,210 | 50 | 150 | 910 |
| 112 | 117 | | Haugen-Lehmann Way to SR-111 | 450 | 50 | 150 | 790 | 250 | 30 | 90 | 450 | 400 | 30 | 80 | 490 | 1,200 | 40 | 150 | 910 |
| 113 | 116 | | SR-111 to Tipton Rd | 370 | 40 | 120 | 710 | 210 | 20 | 70 | 400 | 340 | 20 | 70 | 430 | 1,020 | 40 | 120 | 790 |
| 114 | 115 | | Tipton Rd to SR-62 | 370 | 40 | 120 | 710 | 210 | 20 | 70 | 400 | 340 | 20 | 70 | 430 | 1,020 | 40 | 120 | 790 |
| 129 | 160 | SR-215 | Scott Rd to Newport Rd | 2,550 | 40 | 160 | 320 | 1,440 | 20 | 90 | 180 | 910 | 20 | 90 | 210 | 1,390 | 20 | 130 | 250 |
| 130 | 159 | | Newport Rd to MacCall Blvd | 3,080 | 50 | 180 | 340 | 1,740 | 30 | 100 | 190 | 1,080 | 20 | 100 | 220 | 1,620 | 30 | 140 | 250 |
| 131 | 158 | | MacCall Blvd to Ethanac Rd | 3,390 | 60 | 200 | 370 | 1,910 | 30 | 110 | 210 | 1,220 | 30 | 110 | 230 | 1,800 | 30 | 160 | 260 |
| 132 | 157 | | Ethanac Rd to SR-74/Case | 3,480 | 60 | 210 | 380 | 1,970 | 30 | 120 | 210 | 1,270 | 30 | 110 | 240 | 1,850 | 40 | 160 | 270 |
| 133 | 156 | | SR-74/Case Rd to Redlands Blvd | 3,560 | 60 | 220 | 390 | 2,010 | 30 | 120 | 220 | 1,290 | 30 | 120 | 240 | 1,440 | 30 | 120 | 270 |
| 167 | 186 | | Redlands Blvd to D St | 2,070 | 40 | 150 | 440 | 1,170 | 20 | 80 | 250 | 840 | 20 | 90 | 270 | 480 | 10 | 50 | 310 |
| 168 | 185 | | D St to Nuevo St/Harvil Ave | 2,320 | 50 | 190 | 590 | 1,310 | 30 | 110 | 330 | 1,020 | 30 | 110 | 360 | 620 | 20 | 70 | 400 |
| 169 | 184 | | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 1,440 | 40 | 130 | 600 | 810 | 20 | 70 | 340 | 990 | 30 | 100 | 360 | 590 | 20 | 70 | 390 |
| 171 | 182 | | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 1,330 | 30 | 120 | 640 | 750 | 20 | 70 | 360 | 580 | 20 | 60 | 410 | 320 | 10 | 40 | 330 |
| 172 | 181 | | Harley Knox Blvd to Van Buren Blvd | 1,360 | 40 | 130 | 650 | 770 | 20 | 70 | 370 | 590 | 20 | 80 | 480 | 330 | 10 | 50 | 390 |
| 173 | 180 | | Van Buren Blvd to Cactus Ave | 1,870 | 50 | 150 | 670 | 1,060 | 30 | 80 | 380 | 710 | 20 | 80 | 490 | 750 | 30 | 80 | 420 |
| 174 | 179 | | Cactus Ave to Alessandro Blvd | 1,720 | 50 | 150 | 670 | 970 | 30 | 80 | 380 | 700 | 20 | 90 | 490 | 470 | 20 | 70 | 440 |
| 175 | 178 | | Alessandro Blvd to Eucalyptus Ave | 2,560 | 70 | 200 | 750 | 1,440 | 40 | 110 | 420 | 1,060 | 40 | 110 | 540 | 710 | 30 | 90 | 540 |
| 176 | 177 | | Eucalyptus Ave to SR-60 | 2,540 | 70 | 200 | 750 | 1,440 | 40 | 110 | 420 | 1,100 | 40 | 120 | 550 | 760 | 30 | 100 | 590 |
| 134 | 155 | | SR-60 to Columbia Ave | 1,050 | 80 | 220 | 870 | 590 | 40 | 130 | 490 | 580 | 30 | 90 | 470 | 380 | 30 | 90 | 880 |
| 135 | 154 | | Columbia Ave to Center St | 1,020 | 80 | 210 | 860 | 580 | 40 | 120 | 480 | 570 | 30 | 80 | 450 | 370 | 20 | 90 | 870 |
| 136 | 153 | | Center St to Iowa Ave/La Cadena Dr | 1,010 | 70 | 210 | 850 | 570 | 40 | 120 | 480 | 560 | 30 | 80 | 440 | 340 | 20 | 90 | 870 |
| 137 | 152 | | Iowa Ave/La Cadena Dr to Barton Rd | 880 | 60 | 170 | 780 | 500 | 30 | 100 | 440 | 490 | 20 | 60 | 410 | 300 | 20 | 70 | 810 |
| 138 | 151 | | Barton Rd to Mt Vernon Ave/Washington St | 810 | 60 | 160 | 760 | 460 | 30 | 90 | 430 | 460 | 20 | 60 | 400 | 270 | 20 | 70 | 800 |
| 139 | 150 | | Mt Vernon Ave/Washington St to I-10 | 800 | 60 | 160 | 730 | 450 | 30 | 90 | 410 | 570 | 20 | 70 | 390 | 1,200 | 60 | 180 | 780 |
| 140 | 149 | | I-10 to Auto Plaza Dr/Orange Show Rd | 860 | 60 | 170 | 730 | 490 | 30 | 100 | 410 | 620 | 30 | 90 | 400 | 1,140 | 60 | 180 | 800 |
| 141 | 148 | | Auto Plaza Dr/Orange Show Rd to Mill St | 850 | 60 | 150 | 670 | 480 | 30 | 80 | 380 | 610 | 30 | 70 | 370 | 1,070 | 60 | 160 | 710 |
| 142 | 147 | | Mill St to 2rd St | 840 | 60 | 150 | 660 | 470 | 30 | 80 | 370 | 600 | 30 | 70 | 360 | 1,080 | 60 | 160 | 700 |
| 143 | 146 | | 2rd St to Baseline Rd | 800 | 50 | 130 | 580 | 450 | 30 | 80 | 330 | 590 | 20 | 70 | 330 | 1,020 | 50 | 140 | 640 |
| 144 | 145 | | Baseline Rd to Highland Ave/SR-210 | 690 | 40 | 100 | 510 | 390 | 20 | 60 | 290 | 540 | 20 | 50 | 290 | 890 | 40 | 110 | 580 |

**Daily Freeway to Ports Traffic Volumes**

| Segment ID | | | | 2012 Build Out Daily Project Only Project | | | | 2012 Phase 1 Daily Project Only Project | | | | 2022 Phase 1 Daily Project Only Project | | | | 2035 Build Out Daily Project Only Project | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB/NB | WB/SB | Route | Segment | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT |
| 230 | 208 | SR-60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 229 | 207 | | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 228 | 206 | | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 227 | 205 | | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 226 | 204 | | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 225 | 203 | | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 224 | 202 | | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 223 | 201 | | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 222 | 200 | | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 221 | 199 | | Peck Rd to I-605 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 220 | 198 | | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 219 | 197 | | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 218 | 196 | | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 217 | 195 | | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 216 | 194 | | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 215 | 193 | | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 214 | 192 | | Noglaes St to Fairway Dr | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 213 | 191 | | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 212 | 190 | | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 211 | 189 | | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 210 | 188 | | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 209 | 187 | | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 263 | 336 | SR-91 | I-710 to Cherry Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 264 | 335 | | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 265 | 334 | | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 266 | 333 | | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 267 | 332 | | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 268 | 331 | | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 269 | 330 | | Bellflower Blvd to I-605 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 270 | 329 | | I-605 to Pioneer Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 271 | 328 | | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 272 | 327 | | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 273 | 326 | | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 274 | 325 | | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 275 | 324 | | Carmenita Rd to Valley View St | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 276 | 323 | | Valley View St to Knott Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 277 | 322 | | Knott Ave to Beach Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 278 | 321 | | Beach Blvd to I-5 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 279 | 320 | | I-5 to Brookhurst Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 280 | 319 | | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 281 | 318 | | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 282 | 317 | | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 283 | 316 | | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 284 | 315 | | State College Blvd to SR-57 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 285 | 314 | | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 286 | 313 | | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 287 | 312 | | Tustin Ave to SR-55 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 288 | 311 | | SR-55 to Lakeview Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 289 | 310 | | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 290 | 309 | | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 291 | 308 | | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 292 | 307 | | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 293 | 306 | | Green River Rd to SR-71 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 294 | 305 | | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 295 | 304 | | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 296 | 303 | | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 297 | 302 | | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 299 | 300 | | S Main St to I-15 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 262 | 246 | | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |
| 261 | 245 | | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 260 | 244 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |
| 259 | 243 | | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |
| 258 | 242 | | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |
| 257 | 241 | | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |
| 256 | 240 | | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 242 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 786 |
| 255 | 239 | | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 254 | 238 | | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 253 | 237 | | I-105 to Imperial Hwy | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 252 | 236 | | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 251 | 235 | | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 250 | 234 | | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 249 | 233 | | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 248 | 232 | | E Washington Blvd to I-5 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |
| 247 | 231 | | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 393 |

## WLC - PM Peak Hour Link Forecasts

| Segment ID | Segment | From | To | 2012 With Build-Out Project Only Trips | | | | 2012 With Phase 1 Project Only Trips | | | | 2022 With Phase 1 Proj Only Trips | | | | 2035 With Build-Out Proj Only Trips | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks | Cars | Light Trucks | Medium Trucks | Heavy Trucks | Cars | Light Trucks | Medium Trucks | Heavy Trucks | Cars | Light Trucks | Medium Trucks | Heavy Trucks |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 1,315 | 110 | 219 | 692 | 1,056 | 74 | 169 | 530 | 1,139 | 67 | 160 | 528 | 1,114 | 81 | 162 | 506 |
| 2 | Street A | Eucalyptus Ave | Street F | 1,399 | 181 | 242 | 833 | 1,093 | 139 | 185 | 620 | 1,224 | 141 | 184 | 638 | 1,418 | 167 | 223 | 814 |
| 3 | Street E | west of Street A | | 526 | 66 | 85 | 280 | 569 | 62 | 92 | 303 | 585 | 62 | 90 | 313 | 538 | 63 | 80 | 292 |
| 4 | Street E | north of Alessandro Blvd | | 373 | 24 | 27 | 19 | 412 | 24 | 30 | 25 | 465 | 28 | 42 | 31 | 431 | 29 | 43 | 21 |
| 5 | Street E | Street D | Street A | 685 | 40 | 49 | 19 | 326 | 18 | 24 | 25 | 368 | 21 | 33 | 30 | 686 | 47 | 73 | 21 |
| 6 | Street A | Street F | Street C | 686 | 76 | 111 | 350 | 491 | 50 | 67 | 171 | 568 | 50 | 69 | 177 | 606 | 58 | 83 | 259 |
| 7 | Street A | south of Street C | | | | | | | | | | | | | | | | | |
| 8 | Street D | Street E | Cactus Ave | 1,006 | 60 | 73 | 0 | 623 | 34 | 43 | 0 | 641 | 39 | 60 | 0 | 950 | 69 | 105 | 0 |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 682 | 34 | 54 | 0 | 437 | 20 | 33 | 0 | 395 | 23 | 44 | 0 | 563 | 33 | 69 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 96 | 7 | 7 | 0 | 52 | 3 | 3 | 0 | 71 | 5 | 6 | 0 | 123 | 11 | 15 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 27 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 9 | 1 | 2 | 0 | 22 | 3 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 55 | 5 | 4 | 0 | 23 | 3 | 1 | 0 | 44 | 16 | 10 | 0 | 19 | 2 | 2 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 203 | 11 | 23 | 142 | 104 | 5 | 11 | 75 | 106 | 5 | 11 | 95 | 235 | 18 | 41 | 302 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 250 | 16 | 27 | 142 | 125 | 8 | 13 | 75 | 136 | 20 | 19 | 95 | 339 | 40 | 57 | 302 |
| 15 | Eucalyptus Ave | west of Street A | | 261 | 81 | 33 | 173 | 134 | 62 | 17 | 100 | 160 | 74 | 26 | 122 | 363 | 98 | 68 | 336 |
| 18 | Street B | east of Street A | | 82 | 14 | 12 | 28 | | | | | | | | | 160 | 19 | 21 | 40 |
| 18a | Street B | west of Gilman Springs Rd | | 18 | 3 | 3 | 4 | | | | | | | | | 127 | 10 | 15 | 22 |
| 19 | Street F | east of Street A | | 191 | 19 | 30 | 105 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 234 | 26 | 41 | 155 |
| 20 | Street F | north of Street C | | 150 | 8 | 12 | 5 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 250 | 21 | 31 | 69 |
| 21 | Street C | east of Street A | | 776 | 58 | 89 | 183 | 178 | 8 | 15 | 20 | 232 | 8 | 16 | 30 | 664 | 50 | 79 | 114 |
| 22 | Street C | west of Street F | | 776 | 58 | 89 | 183 | 178 | 8 | 15 | 20 | 232 | 8 | 17 | 30 | 664 | 50 | 79 | 115 |
| 23 | Street F | Street C | Street G | | | | | | | | | | | | | | | | |
| 24 | Street C | Street F | Street H | 528 | 35 | 56 | 108 | 176 | 7 | 15 | 19 | 231 | 7 | 17 | 29 | 758 | 49 | 74 | 152 |
| 25 | Street C | Street H | Gilman Springs Rd | 566 | 37 | 64 | 170 | 176 | 6 | 16 | 20 | 232 | 7 | 16 | 29 | 909 | 59 | 88 | 230 |
| 26 | Street H | Street C | Street G | | | | | | | | | | | | | | | | |
| 27 | Street G | east of Street H | | | | | | | | | | | | | | | | | |
| 28 | Street G | Street F | Street H | | | | | | | | | | | | | | | | |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 245 | 20 | 34 | 135 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 318 | 22 | 41 | 146 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 262 | 23 | 30 | 122 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 414 | 29 | 52 | 155 |
| 31 | Gilman Springs Rd | south of Street C | | 327 | 16 | 23 | 19 | 180 | 7 | 12 | 11 | 234 | 7 | 17 | 29 | 707 | 42 | 59 | 96 |
| 32 | Cactus Ave | west of Redlands Blvd | | 197 | 14 | 11 | 0 | 112 | 8 | 6 | 0 | 155 | 9 | 10 | 0 | 249 | 22 | 22 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 98 | 6 | 7 | 0 | 45 | 3 | 3 | 0 | 55 | 3 | 4 | 0 | 106 | 8 | 14 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 21 | 2 | 2 | 68 | 5 | 0 | 1 | 43 | 5 | 0 | 1 | 45 | 21 | 2 | 3 | 73 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 153 | 15 | 27 | 0 | 92 | 9 | 18 | 0 | 98 | 8 | 16 | 0 | 286 | 27 | 52 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 74 | 10 | 22 | 61 | 48 | 6 | 16 | 39 | 40 | 4 | 13 | 40 | 29 | 4 | 11 | 69 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 250 | 29 | 52 | 0 | 146 | 18 | 36 | 0 | 189 | 15 | 31 | 0 | 331 | 33 | 53 | 1 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 198 | 22 | 37 | 67 | 124 | 12 | 25 | 43 | 130 | 10 | 23 | 45 | 145 | 15 | 30 | 73 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 19 | 2 | 2 | 7 | 9 | 1 | 0 | 7 | 9 | 1 | 0 | 8 | 32 | 3 | 5 | 14 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 11 | 1 | 1 | 4 | 6 | 0 | 0 | 2 | 12 | 1 | 1 | 12 | 30 | 3 | 6 | 7 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 27 | 1 | 1 | 0 | 8 | 1 | 0 | 0 | 9 | 1 | 1 | 0 | 151 | 13 | 25 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 58 | 3 | 4 | 6 | 26 | 1 | 2 | 7 | 28 | 1 | 2 | 7 | 102 | 7 | 12 | 13 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 1,006 | 60 | 73 | 0 | 623 | 34 | 43 | 0 | 641 | 39 | 60 | 0 | 950 | 69 | 105 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 28 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 1 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 675 | 31 | 53 | 0 | 411 | 17 | 32 | 0 | 357 | 20 | 42 | 0 | 567 | 33 | 70 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 28 | 4 | 0 | 0 | 21 | 3 | 0 | 0 | 33 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 147 | 13 | 29 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 4 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 147 | 13 | 29 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 136 | 14 | 22 | 0 | 81 | 8 | 14 | 0 | 88 | 7 | 14 | 0 | 96 | 9 | 18 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 4 | 1 | 0 | 2 | 5 | 1 | 1 | 4 | 7 | 0 | 0 | 0 | 63 | 3 | 3 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 75 | 14 | 10 | 0 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 217 | 12 | 25 | 120 | 106 | 5 | 12 | 55 | 107 | 5 | 11 | 52 | 16 | 1 | 2 | 14 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 3 | 1 | 0 | 29 | 1 | 0 | 0 | 19 | 0 | 0 | 0 | 1 | 70 | 9 | 1 | 7 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | | | | | | | | | | 99 | 23 | 16 | 0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | Alessandro Blvd | Nason St | Oliver St | 76 | 4 | 4 | 6 | 36 | 2 | 2 | 7 | 40 | 2 | 3 | 7 | 117 | 8 | 13 | 13 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 81 | 4 | 5 | 6 | 41 | 2 | 2 | 7 | 47 | 2 | 4 | 7 | 128 | 9 | 14 | 13 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 9 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 3 | 5 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 96 | 6 | 6 | 0 | 60 | 3 | 3 | 0 | 96 | 5 | 7 | 0 | 96 | 8 | 10 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 145 | 9 | 9 | 0 | 91 | 5 | 5 | 0 | 139 | 7 | 10 | 0 | 190 | 18 | 18 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 5 | 2 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 665 | 31 | 52 | 0 | 404 | 16 | 31 | 0 | 350 | 19 | 42 | 0 | 564 | 33 | 70 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 46 | 2 | 1 | 0 | 34 | 1 | 0 | 0 | 27 | 1 | 1 | 0 | 39 | 2 | 4 | 0 |
| 75 | Ironwood Ave | Graham St | Heacock St | 16 | 1 | 1 | 0 | 13 | 1 | 2 | 0 | 11 | 1 | 1 | 0 | 10 | 1 | 1 | 0 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 7 | 1 | 1 | 0 | 5 | 0 | 1 | 0 | 5 | 0 | 1 | 0 | 2 | 0 | 0 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 62 | 3 | 2 | 1 | 47 | 2 | 2 | 1 | 38 | 1 | 1 | 1 | 47 | 3 | 4 | 0 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 83 | 4 | 3 | 0 | 59 | 2 | 2 | 0 | 51 | 2 | 2 | 1 | 56 | 4 | 5 | 1 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 182 | 6 | 7 | 9 | 128 | 3 | 3 | 5 | 109 | 3 | 3 | 20 | 110 | 5 | 8 | 7 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 35 | 2 | 2 | 4 | 28 | 2 | 2 | 2 | 23 | 1 | 1 | 10 | 18 | 2 | 2 | 5 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 158 | 8 | 8 | 31 | 126 | 5 | 4 | 20 | 126 | 5 | 8 | 28 | 62 | 3 | 0 | 78 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 0 | 1 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 | 1 | 1 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 60 | 3 | 2 | 4 | 38 | 2 | 1 | 3 | 32 | 1 | 3 | 3 | 61 | 2 | 4 | 6 |
| 96 | N California Ave | W 6th St | E 8th St | 44 | 1 | 0 | 1 | 28 | 1 | 0 | 0 | 27 | 1 | 1 | 1 | 17 | 0 | 1 | 1 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 7 | 0 | 1 | 1 | 5 | 0 | 1 | 1 | 7 | 0 | 0 | 1 | 41 | 1 | 3 | 5 |
| 98 | N California Ave | W 6th St | I-10 | 9 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 3 | 0 | 1 | 1 | 2 | 0 | 0 | 0 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 11 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 15 | 0 | 1 | 1 | 32 | 1 | 1 | 2 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 27 | 1 | 1 | 3 | 26 | 1 | 1 | 2 | 35 | 1 | 1 | 10 | 6 | 0 | 0 | 3 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 71 | 3 | 5 | 8 | 44 | 2 | 3 | 7 | 40 | 2 | 3 | 9 | 69 | 4 | 8 | 10 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 33 | 4 | 6 | 12 | 20 | 2 | 3 | 8 | 14 | 1 | 2 | 4 | 7 | 1 | 1 | 17 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 31 | 1 | 2 | 5 | 10 | 0 | 1 | 5 | 16 | 1 | 2 | 6 | 64 | 4 | 8 | 10 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 31 | 1 | 2 | 5 | 11 | 0 | 1 | 5 | 18 | 1 | 2 | 6 | 65 | 4 | 9 | 10 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 8 | 0 | 1 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 27 | 1 | 2 | 5 | 9 | 0 | 1 | 5 | 15 | 1 | 2 | 6 | 69 | 4 | 9 | 10 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 29 | 1 | 3 | 10 | 11 | 1 | 2 | 8 | 15 | 1 | 2 | 9 | 70 | 4 | 10 | 14 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 2 | 0 | 1 | 2 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 1 | 2 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 4 | 0 | 1 | 4 | 3 | 0 | 1 | 3 | 2 | 0 | 0 | 3 | 4 | 0 | 0 | 2 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 29 | 1 | 2 | 7 | 10 | 0 | 1 | 6 | 16 | 1 | 2 | 6 | 73 | 4 | 10 | 12 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 32 | 1 | 3 | 8 | 11 | 1 | 1 | 6 | 16 | 1 | 2 | 7 | 76 | 5 | 10 | 14 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 3 | 7 | 0 | 0 | 11 | 4 | 0 | 0 | 5 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 35 | 2 | 3 | 7 | 13 | 1 | 1 | 6 | 17 | 1 | 2 | 6 | 80 | 5 | 10 | 12 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 2 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 40 | 2 | 3 | 7 | 16 | 1 | 1 | 6 | 19 | 1 | 2 | 6 | 83 | 5 | 11 | 12 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 47 | 2 | 3 | 6 | 19 | 1 | 1 | 7 | 22 | 1 | 2 | 7 | 89 | 6 | 11 | 13 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 2 | 0 | 0 | 20 | 1 | 0 | 0 | 14 | 1 | 0 | 0 | 22 | 1 | 0 | 0 | 66 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 51 | 2 | 3 | 6 | 22 | 1 | 1 | 6 | 26 | 1 | 2 | 6 | 95 | 6 | 11 | 13 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 8 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 15 | 1 | 1 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 63 | 3 | 4 | 6 | 30 | 1 | 2 | 7 | 32 | 2 | 2 | 7 | 117 | 8 | 13 | 13 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 14 | 1 | 0 | 0 | 7 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 18 | 1 | 1 | 0 | 9 | 0 | 0 | 0 | 26 | 1 | 1 | 1 | 29 | 1 | 3 | 3 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 43 | 1 | 1 | 1 | 21 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 29 | 1 | 2 | 0 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 39 | 1 | 1 | 1 | 19 | 1 | 1 | 1 | 25 | 1 | 1 | 0 | 45 | 2 | 4 | 1 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 43 | 2 | 3 | 1 | 21 | 1 | 1 | 1 | 26 | 1 | 2 | 0 | 52 | 3 | 6 | 1 |
| 144 | Cactus Ave | Frederick St | Graham St | 43 | 2 | 3 | 0 | 21 | 1 | 1 | 0 | 26 | 1 | 2 | 0 | 52 | 3 | 7 | 1 |
| 145 | Cactus Ave | Graham St | Heacock St | 44 | 2 | 3 | 0 | 22 | 1 | 2 | 0 | 31 | 1 | 3 | 0 | 55 | 4 | 8 | 0 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 50 | 2 | 4 | 0 | 25 | 1 | 2 | 0 | 35 | 2 | 3 | 0 | 59 | 4 | 8 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 59 | 3 | 4 | 0 | 32 | 1 | 2 | 0 | 41 | 2 | 4 | 0 | 64 | 5 | 9 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 64 | 3 | 5 | 0 | 34 | 2 | 2 | 0 | 44 | 2 | 4 | 0 | 67 | 5 | 9 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 1 | 0 | 0 | 22 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 65 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 77 | 4 | 5 | 0 | 44 | 2 | 3 | 0 | 53 | 3 | 4 | 0 | 77 | 6 | 9 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 131 | 8 | 8 | 0 | 81 | 4 | 5 | 0 | 124 | 5 | 9 | 0 | 115 | 9 | 13 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 42 | 3 | 1 | 0 | 28 | 2 | 1 | 0 | 64 | 2 | 4 | 0 | 30 | 3 | 3 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 143 | 9 | 9 | 0 | 90 | 5 | 5 | 0 | 139 | 7 | 10 | 0 | 133 | 11 | 14 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 13 | 1 | 2 | 1 | 9 | 0 | 1 | 1 | 12 | 0 | 1 | 2 | 27 | 1 | 2 | 4 |
| 159 | Beaumont Ave | E 6th St | I-10 | 19 | 1 | 0 | 1 | 10 | 0 | 0 | 1 | 27 | 1 | 1 | 2 | 23 | 1 | 1 | 1 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 69 | 4 | 7 | 0 | 35 | 2 | 4 | 0 | 12 | 1 | 1 | 0 | 131 | 7 | 17 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 264 | 16 | 32 | 0 | 138 | 8 | 19 | 0 | 93 | 8 | 21 | 0 | 336 | 22 | 50 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 188 | 11 | 24 | 0 | 98 | 5 | 13 | 0 | 77 | 8 | 20 | 0 | 206 | 15 | 32 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 649 | 29 | 51 | 0 | 393 | 16 | 29 | 0 | 345 | 19 | 42 | 0 | 552 | 32 | 69 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 176 | 10 | 24 | 0 | 90 | 5 | 13 | 0 | 72 | 7 | 19 | 0 | 62 | 5 | 12 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | 10 | 21 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 368 | 13 | 18 | 0 | 242 | 7 | 10 | 0 | 239 | 9 | 20 | 0 | 206 | 10 | 19 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 354 | 13 | 16 | 0 | 232 | 7 | 9 | 0 | 222 | 9 | 19 | 0 | 206 | 10 | 19 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | | | | | | | | | | 4 | 0 | 0 | 0 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 209 | 24 | 45 | 61 | 129 | 14 | 29 | 39 | 128 | 11 | 27 | 40 | 126 | 13 | 28 | 69 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 32 | 3 | 4 | 6 | 24 | 2 | 3 | 5 | 26 | 1 | 3 | 5 | 12 | 1 | 2 | 3 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 243 | 27 | 49 | 67 | 153 | 16 | 33 | 43 | 156 | 13 | 30 | 45 | 138 | 14 | 29 | 73 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 13 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | | | | | | | | | | 165 | 8 | 14 | 19 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | | | | | | | | | | 100 | 12 | 22 | 27 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | | | | | | | | | | 347 | 12 | 23 | 29 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | | | | | | | | | | 95 | 4 | 8 | 10 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 319 | 14 | 24 | 19 | 177 | 6 | 13 | 13 | 229 | 6 | 16 | 29 | 500 | 18 | 40 | 90 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 262 | 11 | 21 | 14 | 151 | 5 | 13 | 11 | 184 | 5 | 13 | 18 | 393 | 14 | 35 | 57 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 58 | 3 | 3 | 6 | 26 | 1 | 1 | 2 | 45 | 1 | 2 | 11 | 107 | 4 | 5 | 34 |
| 194 | Crescent Ave | West of Alessandro Rd | | 41 | 5 | 9 | 0 | 24 | 3 | 6 | 0 | 30 | 2 | 6 | 0 | 26 | 3 | 6 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 73 | 6 | 11 | 0 | 44 | 4 | 7 | 0 | 44 | 3 | 7 | 0 | 51 | 5 | 10 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 114 | 12 | 20 | 0 | 68 | 7 | 13 | 0 | 74 | 6 | 13 | 0 | 77 | 8 | 16 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 17 | 1 | 1 | 0 | 10 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 16 | 1 | 2 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 136 | 14 | 22 | 0 | 81 | 8 | 14 | 0 | 88 | 7 | 14 | 0 | 96 | 9 | 18 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 12 | 2 | 4 | 0 | 6 | 1 | 1 | 0 | 21 | 2 | 4 | 0 | 146 | 13 | 29 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 145 | 13 | 29 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 12 | 2 | 4 | 0 | 6 | 1 | 1 | 0 | 21 | 2 | 4 | 0 | 1 | 0 | 0 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 1 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 25 | 1 | 2 | 3 | 15 | 1 | 1 | 2 | 15 | 1 | 1 | 3 | 41 | 2 | 6 | 4 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 38 | 2 | 2 | 4 | 24 | 1 | 1 | 2 | 19 | 1 | 1 | 4 | 8 | 0 | 1 | 2 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 8 | 0 | 1 | 2 | 4 | 0 | 0 | 1 | 6 | 0 | 1 | 2 | 32 | 2 | 6 | 3 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 23 | 1 | 4 | 3 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 5 | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 4 | 0 | 1 | 2 | 9 | 1 | 1 | 0 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 10 | 1 | 2 | 5 | 5 | 0 | 0 | 0 | 7 | 0 | 1 | 2 | 11 | 1 | 1 | 4 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 77 | 4 | 7 | 14 | 47 | 2 | 2 | 3 | 43 | 2 | 5 | 12 | 74 | 4 | 12 | 44 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago A | Century Ave | 7 | 0 | 1 | 2 | 4 | 0 | 0 | 1 | 4 | 0 | 1 | 2 | 7 | 1 | 1 | 0 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 61 | 3 | 7 | 11 | 38 | 2 | 5 | 7 | 36 | 2 | 5 | 12 | 67 | 4 | 13 | 44 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 27 | 1 | 3 | 5 | 15 | 1 | 2 | 3 | 17 | 1 | 2 | 4 | 9 | 0 | 1 | 3 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 32 | 2 | 2 | 3 | 21 | 1 | 2 | 2 | 17 | 1 | 3 | 7 | 55 | 4 | 11 | 40 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 32 | 2 | 1 | 5 | 20 | 1 | 1 | 3 | 16 | 1 | 2 | 6 | 50 | 3 | 9 | 29 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 4 | 8 | 2 | 6 | 30 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 31 | 2 | 2 | 5 | 20 | 1 | 1 | 4 | 15 | 1 | 2 | 4 | 45 | 2 | 6 | 10 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 6 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 80 | 4 | 7 | 14 | 49 | 2 | 4 | 3 | 45 | 2 | 5 | 12 | 75 | 4 | 11 | 42 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 24 | 1 | 1 | 1 | 15 | 0 | 0 | 1 | 14 | 0 | 0 | 1 | 18 | 1 | 2 | 7 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 101 | 5 | 9 | 17 | 63 | 2 | 4 | 4 | 61 | 2 | 6 | 14 | 81 | 4 | 11 | 41 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 11 | 1 | 1 | 1 | 7 | 0 | 0 | 0 | 11 | 1 | 2 | 7 | 21 | 1 | 2 | 8 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 34 | 2 | 2 | 2 | 17 | 1 | 1 | 1 | 33 | 1 | 3 | 8 | 31 | 2 | 4 | 12 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 87 | 5 | 9 | 17 | 59 | 3 | 3 | 4 | 54 | 2 | 7 | 17 | 53 | 3 | 8 | 29 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 8 | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 10 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 66 | 2 | 5 | 12 | 46 | 1 | 3 | 5 | 42 | 1 | 4 | 9 | 48 | 2 | 6 | 20 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 71 | 8 | 12 | 31 | 46 | 4 | 6 | 10 | 42 | 3 | 10 | 24 | 42 | 5 | 13 | 59 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 19 | 1 | 2 | 7 | 12 | 1 | 1 | 3 | 13 | 1 | 2 | 5 | 17 | 1 | 3 | 7 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 135 | 0 | 6 | 12 | 95 | 0 | 4 | 4 | 75 | 2 | 6 | 12 | 78 | 0 | 5 | 11 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 54 | 4 | 9 | 35 | 33 | 2 | 6 | 26 | 34 | 2 | 7 | 22 | 31 | 2 | 5 | 14 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 55 | 4 | 9 | 34 | 34 | 2 | 6 | 26 | 35 | 2 | 7 | 22 | 32 | 2 | 5 | 13 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 56 | 5 | 9 | 34 | 35 | 2 | 6 | 26 | 36 | 2 | 7 | 23 | 34 | 2 | 5 | 16 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 3 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 2 | 0 | 0 | 1 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 57 | 5 | 9 | 33 | 35 | 3 | 6 | 27 | 32 | 2 | 6 | 20 | 35 | 2 | 5 | 14 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 35 | 2 | 3 | 13 | 21 | 1 | 2 | 9 | 16 | 1 | 1 | 5 | 24 | 1 | 2 | 5 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 36 | 5 | 12 | 41 | 23 | 3 | 9 | 33 | 19 | 2 | 6 | 21 | 23 | 2 | 5 | 20 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 70 | 3 | 6 | 25 | 43 | 2 | 4 | 18 | 35 | 1 | 4 | 13 | 46 | 2 | 4 | 10 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 48 | 5 | 2 | 8 | 40 | 4 | 4 | 12 | 46 | 3 | 3 | 11 | 30 | 4 | 5 | 8 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 31 | 2 | 2 | 6 | 25 | 1 | 1 | 4 | 27 | 1 | 2 | 15 | 15 | 1 | 2 | 7 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 63 | 4 | 7 | 1 | 49 | 2 | 3 | 1 | 52 | 3 | 5 | 1 | 31 | 2 | 2 | 1 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 45 | 4 | 5 | 18 | 34 | 2 | 3 | 12 | 30 | 2 | 3 | 15 | 16 | 2 | 2 | 38 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 21 | 1 | 2 | 1 | 17 | 1 | 1 | 1 | 17 | 1 | 1 | 1 | 15 | 1 | 2 | 7 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 39 | 4 | 6 | 9 | 30 | 3 | 3 | 5 | 27 | 2 | 3 | 10 | 19 | 2 | 2 | 34 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 33 | 2 | 3 | 25 | 28 | 2 | 2 | 16 | 21 | 1 | 1 | 24 | 5 | 1 | 1 | 66 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 294 | Via Del Lago | South of Iris Ave | | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 11 | 1 | 1 | 0 | 7 | 1 | 0 | 0 | 46 | 1 | 3 | 0 | 5 | 1 | 2 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 16 | 1 | 1 | 0 | 10 | 1 | 1 | 0 | 49 | 1 | 4 | 0 | 10 | 1 | 2 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 3 | 0 | 0 | 21 | 1 | 0 | 0 | 14 | 1 | 0 | 0 | 22 | 3 | 0 | 0 | 65 |
| 304 | Iris Ave | Indian St | Perris Blvd | 33 | 2 | 3 | 0 | 20 | 1 | 2 | 0 | 3 | 0 | 1 | 0 | 54 | 1 | 3 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 28 | 2 | 4 | 21 | 9 | 1 | 2 | 14 | 5 | 0 | 1 | 22 | 77 | 6 | 14 | 64 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 183 | 11 | 26 | 21 | 86 | 5 | 14 | 14 | 57 | 6 | 15 | 22 | 113 | 8 | 19 | 64 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 7 | 0 | 1 | 1 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 141 | 6 | 6 | 15 | 77 | 3 | 3 | 8 | 98 | 3 | 7 | 9 | 193 | 7 | 19 | 36 |
| 326 | Ramona Expy | Sanderson Ave | State St | 52 | 1 | 3 | 4 | 27 | 1 | 2 | 2 | 7 | 0 | 0 | 0 | 20 | 1 | 4 | 3 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 91 | 4 | 4 | 11 | 51 | 2 | 2 | 6 | 86 | 2 | 7 | 9 | 168 | 6 | 15 | 32 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 261 | 11 | 20 | 14 | 151 | 5 | 12 | 11 | 184 | 5 | 13 | 18 | 392 | 14 | 35 | 57 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 143 | 8 | 11 | 7 | 84 | 4 | 7 | 5 | 99 | 3 | 9 | 11 | 234 | 10 | 23 | 34 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 238 | 7 | 14 | 12 | 134 | 3 | 8 | 8 | 169 | 3 | 9 | 11 | 315 | 9 | 24 | 44 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 123 | 6 | 7 | 2 | 73 | 3 | 4 | 2 | 84 | 2 | 6 | 7 | 189 | 6 | 13 | 17 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 39 | 5 | 8 | 8 | 22 | 2 | 4 | 6 | 30 | 2 | 4 | 8 | 86 | 7 | 19 | 31 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 71 | 3 | 5 | 8 | 44 | 2 | 3 | 5 | 39 | 1 | 3 | 7 | 68 | 4 | 8 | 9 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB Or | Mid County Pkwy | 3rd St | | | | | | | | | | | | | 64 | 2 | 3 | 37 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ram | | | | | | | | | | | | | 93 | 3 | 5 | 33 |
| 377 | Mid County Pkwy WB Off | Mid County Pkwy | 3rd St | | | | | | | | | | | | | 1 | 0 | 0 | 0 |
| 378 | 3rd St | Mid County Pkwy EB Ran | Mid County Pkwy WB Ram | | | | | | | | | | | | | 61 | 2 | 3 | 15 |
| 379 | Mid County Pkwy EB Off | Mid County Pkwy | 3rd St | | | | | | | | | | | | | 13 | 1 | 2 | 26 |
| 380 | Mid County Pkwy EB On- | 3rd St | Mid County Pkwy | | | | | | | | | | | | | 4 | 0 | 0 | 0 |
| 381 | 3rd St | Mid County Pkwy EB Ran | MM Blvd | | | | | | | | | | | | | 52 | 1 | 2 | 2 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 21 | 3 | 6 | 10 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 160 | 9 | 20 | 15 | 77 | 4 | 11 | 10 | 33 | 2 | 7 | 11 | 134 | 9 | 20 | 60 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 390 | Ramona Expy | Webster Ave | Indian St | 28 | 2 | 3 | 1 | 9 | 1 | 1 | 1 | 25 | 1 | 3 | 1 | 33 | 2 | 4 | 5 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 14 | 2 | 5 | 3 | 5 | 1 | 3 | 2 | 17 | 1 | 5 | 2 | 37 | 3 | 10 | 11 |
| 393 | Indian St | Ramona Expy | Morgan St | 6 | 2 | 8 | 6 | 4 | 1 | 5 | 4 | 3 | 1 | 4 | 4 | 5 | 1 | 6 | 6 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 157 | 9 | 20 | 14 | 75 | 4 | 11 | 10 | 30 | 2 | 7 | 9 | 207 | 13 | 28 | 46 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 198 | 9 | 19 | 12 | 98 | 4 | 10 | 8 | 76 | 4 | 11 | 6 | 168 | 9 | 18 | 31 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 122 | 4 | 10 | 1 | 75 | 2 | 6 | 0 | 95 | 4 | 12 | 1 | 9 | 1 | 1 | 0 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 319 | 11 | 17 | 0 | 209 | 6 | 9 | 0 | 195 | 8 | 18 | 0 | 183 | 9 | 18 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 29 | 1 | 1 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 117 | 4 | 4 | 0 | 78 | 2 | 2 | 0 | 38 | 1 | 2 | 0 | 134 | 6 | 14 | 0 |
| 401 | Morgan St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 22 | 1 | 0 | 0 | 14 | 1 | 0 | 0 | 11 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 406 | Ironwood Ave | East of Thedore St | | 4 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 5 | 1 | 0 | 0 | 45 | 7 | 1 | 1 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 27 | 1 | 1 | 0 | 7 | 0 | 0 | 0 | 9 | 1 | 1 | 0 | 19 | 1 | 1 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 32 | 2 | 0 | 0 | 21 | 1 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 11 | 1 | 2 | 3 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 196 | 9 | 15 | 8 | 97 | 4 | 7 | 6 | 69 | 4 | 9 | 5 | 148 | 8 | 15 | 27 |
| 416 | Mid County Pkwy WB Or | Mid County Pkwy | Perris Blvd | | | | | | | | | 8 | 0 | 1 | 0 | 51 | 2 | 3 | 10 |
| 417 | Mid County Pkwy WB Off | Perris Blvd | Mid County Pkwy | | | | | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 7 |
| 419 | Mid County Pkwy EB Off | Mid County Pkwy | Perris Blvd | | | | | | | | | 9 | 1 | 2 | 0 | 6 | 1 | 1 | 1 |
| 420 | Mid County Pkwy EB On- | Perris Blvd | Mid County Pkwy | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 8 | 1 | 1 | 23 | 6 | 0 | 1 | 14 | 4 | 0 | 0 | 23 | 5 | 0 | 0 | 66 |
| 425 | Mid County Pkwy WB Or | West of Evan | | | | | | | | | | 21 | 0 | 2 | 0 | 4 | 0 | 1 | 0 |
| 426 | Mid County Pkwy WB Of | East of Evan | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 427 | Day St | south of Alessandro Blvd | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 428 | Mid County Pkwy EB Off | West of Evan | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 429 | Mid County Pkwy EB On- | East of Evan | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 43 | 3 | 3 | 5 | 18 | 1 | 2 | 5 | 23 | 1 | 3 | 8 | 62 | 4 | 8 | 7 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | | | | | | | | | | 1 | 0 | 0 | 0 |
| 433 | Evans Rd | Rider St | Orange Ave | 50 | 1 | 1 | 0 | 34 | 1 | 1 | 0 | 19 | 0 | 1 | 0 | 121 | 5 | 13 | 3 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 22 | 0 | 1 | 0 | 14 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 103 | 5 | 12 | 4 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 19 | 0 | 1 | 0 | 12 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | | | | | | | | | | 100 | 5 | 12 | 4 |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | | | | | | | | | | 1 | 0 | 0 | 0 |
| 453 | Evans Rd | North of San Jancito Ave | | | | | | | | | | | | | | 92 | 4 | 11 | 4 |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | | | | | | | | | | 3 | 0 | 0 | 0 |
| 455 | Evans Rd | South of San Jancito Ave | | | | | | | | | | | | | | 88 | 4 | 11 | 4 |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | | | | | | | | | | 5 | 1 | 1 | 0 |
| 477 | Ellis Ave | West of Evan Rd | | | | | | | | | | | | | | 9 | 1 | 1 | 2 |
| 478 | Evans Rd | North of Ellis Ave | | | | | | | | | | | | | | 90 | 5 | 12 | 6 |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | | | | | | | | | | 54 | 2 | 7 | 0 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 482 | Ellis Ave | East of SR-215 | | | | | | | | | | | | | | 1 | 0 | 0 | 0 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | | | | | | | | | | 97 | 2 | 9 | 0 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | | | | | | | | | | 61 | 3 | 9 | 0 |
| 488 | Nason St | North of Iris Ave | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | | | | | | | | | | 194 | 10 | 19 | 0 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 23 | 2 | 1 | 21 | 19 | 1 | 1 | 12 | 16 | 1 | 1 | 23 | 6 | 0 | 0 | 66 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 27 | 2 | 1 | 22 | 23 | 1 | 1 | 13 | 16 | 1 | 1 | 24 | 4 | 0 | 0 | 66 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | | | | | | | | | | 0 | 0 | 0 | 0 |
| 504 | Krameria Ave | west of Perris Blvd | | 11 | 1 | 1 | 0 | 6 | 0 | 0 | 0 | 15 | 1 | 4 | 0 | 26 | 3 | 8 | 0 |

**Peak PM Hour Freeway Traffic Volumes**

| Segment ID | | Route | Segment | 2012 Build Out Peak PM Hour Traffic Volumes | | | | 2012 Phase 1 Peak PM Hour Traffic Volumes | | | | 2022 Phase 1 Peak PM Hour Traffic Volumes | | | | 2035 Build OUt Peak PM Hour Traffic Volumes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Project - Only | | | | Project - Only | | | | Project - Only | | | | Project - Only | | | |
| EB/NB | WB/SB | | | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT |
| 1 | 74 | SR-60 | SR-71/S Garey Ave to S Reservoir Rd | 60 | 10 | 30 | 280 | 30 | 10 | 10 | 140 | 50 | 10 | 10 | 160 | 50 | 10 | 20 | 200 |
| 2 | 73 | | S Reservoir Rd to Ramona Ave | 40 | 10 | 30 | 290 | 20 | 10 | 10 | 140 | 40 | 10 | 10 | 160 | 40 | 10 | 20 | 200 |
| 3 | 72 | | Ramona Ave to Central Ave | 50 | 10 | 30 | 290 | 20 | 10 | 10 | 140 | 50 | 10 | 10 | 160 | 40 | 10 | 20 | 200 |
| 4 | 71 | | Central Ave to Mountain Ave | 50 | 10 | 30 | 290 | 20 | 10 | 10 | 140 | 50 | 10 | 10 | 160 | 50 | 10 | 20 | 210 |
| 5 | 70 | | Mountain Ave to Euclid Ave | 60 | 10 | 30 | 300 | 30 | 10 | 20 | 150 | 60 | 10 | 20 | 170 | 50 | 10 | 20 | 210 |
| 6 | 69 | | Euclid Ave to Grove Ave | 60 | 20 | 30 | 300 | 30 | 10 | 20 | 150 | 60 | 10 | 20 | 170 | 50 | 10 | 20 | 210 |
| 7 | 68 | | Grove Ave to Vineyard Ave | 60 | 20 | 30 | 300 | 30 | 10 | 20 | 150 | 70 | 10 | 20 | 170 | 50 | 10 | 20 | 210 |
| 8 | 67 | | Vineyard Ave to Archibald Ave | 70 | 20 | 30 | 310 | 30 | 10 | 20 | 150 | 70 | 10 | 20 | 170 | 60 | 10 | 20 | 220 |
| 9 | 66 | | Archibald Ave to Haven Ave | 70 | 20 | 40 | 320 | 30 | 10 | 20 | 160 | 70 | 10 | 20 | 180 | 70 | 10 | 20 | 230 |
| 10 | 65 | | Haven Ave to Miliken Ave | 80 | 20 | 40 | 330 | 30 | 10 | 20 | 160 | 80 | 10 | 20 | 190 | 70 | 10 | 30 | 240 |
| 11 | 64 | | Miliken Ave to SR-15 | 80 | 20 | 40 | 330 | 40 | 10 | 20 | 160 | 80 | 10 | 20 | 190 | 80 | 10 | 30 | 240 |
| 12 | 63 | | I-15 to Etiwanda Ave | 110 | 20 | 50 | 360 | 60 | 10 | 20 | 180 | 110 | 10 | 20 | 200 | 110 | 10 | 30 | 270 |
| 13 | 62 | | Etiwanda Ave to Mission Blvd/Country Village Rd | 130 | 20 | 50 | 380 | 60 | 10 | 30 | 180 | 120 | 10 | 30 | 210 | 110 | 20 | 40 | 280 |
| 14 | 61 | | Mission Blvd/Country Village Rd to Pedley Rd | 130 | 20 | 50 | 390 | 60 | 10 | 30 | 190 | 130 | 10 | 30 | 220 | 120 | 20 | 40 | 290 |
| 15 | 60 | | Pedley Rd to Pyrite St | 130 | 20 | 50 | 390 | 60 | 10 | 30 | 190 | 130 | 10 | 30 | 220 | 120 | 20 | 40 | 290 |
| 16 | 59 | | Pyrite St to Valley Way | 140 | 20 | 60 | 390 | 70 | 10 | 30 | 190 | 140 | 10 | 30 | 220 | 120 | 20 | 40 | 300 |
| 17 | 58 | | Valley Way to Rubidoux Blvd | 170 | 30 | 60 | 400 | 80 | 10 | 30 | 200 | 160 | 10 | 30 | 220 | 160 | 20 | 50 | 320 |
| 18 | 57 | | Rubidoux Blvd to Market St | 190 | 30 | 60 | 410 | 90 | 10 | 30 | 200 | 180 | 10 | 30 | 220 | 180 | 20 | 50 | 320 |
| 19 | 56 | | Market St to Main St | 210 | 30 | 70 | 420 | 100 | 10 | 30 | 200 | 200 | 10 | 30 | 230 | 190 | 20 | 50 | 330 |
| 20 | 55 | | Main St to SR-91 | 240 | 30 | 80 | 440 | 120 | 20 | 40 | 220 | 230 | 20 | 40 | 240 | 220 | 20 | 60 | 350 |
| 21 | 54 | | SR-91 to W Blaine St/3rd St | 430 | 50 | 120 | 630 | 250 | 30 | 70 | 350 | 370 | 20 | 60 | 340 | 320 | 30 | 80 | 540 |
| 22 | 53 | | W Blaine St/3rd St to University Ave | 440 | 50 | 120 | 650 | 260 | 30 | 70 | 350 | 380 | 20 | 60 | 350 | 320 | 30 | 90 | 560 |
| 23 | 52 | | University Ave to Martin Luther King Blvd | 440 | 50 | 130 | 650 | 250 | 30 | 70 | 350 | 370 | 30 | 60 | 350 | 330 | 30 | 90 | 570 |
| 24 | 51 | | Martin Luther King Blvd to Central Ave | 490 | 60 | 140 | 690 | 270 | 30 | 80 | 360 | 410 | 30 | 70 | 370 | 370 | 40 | 90 | 580 |
| 25 | 50 | | Central Ave to Fair Isle Dr/Box Springs Rd | 560 | 60 | 150 | 710 | 320 | 30 | 80 | 370 | 450 | 30 | 70 | 390 | 430 | 40 | 100 | 610 |
| 26 | 49 | | Fair Isle Dr/Box Springs Rd to I-215 | 610 | 60 | 150 | 700 | 330 | 30 | 80 | 350 | 500 | 30 | 70 | 390 | 480 | 40 | 90 | 550 |
| 27 | 48 | | I-215 to Day St | 700 | 70 | 160 | 770 | 420 | 40 | 90 | 400 | 550 | 30 | 80 | 430 | 480 | 40 | 110 | 660 |
| 28 | 47 | | Day St to Pigeon Pass Rd/Frederick St | 690 | 70 | 160 | 770 | 400 | 40 | 90 | 400 | 540 | 30 | 80 | 430 | 480 | 50 | 120 | 660 |
| 29 | 46 | | Pigeon Pass Rd/Frederick St to Heacock St | 710 | 70 | 170 | 780 | 420 | 40 | 90 | 410 | 570 | 40 | 90 | 430 | 480 | 50 | 120 | 660 |
| 30 | 45 | | Heacock St to Perris Blvd | 820 | 80 | 170 | 790 | 480 | 40 | 90 | 410 | 650 | 40 | 90 | 440 | 560 | 50 | 120 | 670 |
| 31 | 44 | | Perris Blvd to Nason St | 940 | 90 | 190 | 810 | 560 | 50 | 100 | 420 | 760 | 40 | 100 | 470 | 610 | 50 | 130 | 740 |
| 32 | 43 | | Nason St to Moreno Beach Dr | 1,010 | 90 | 190 | 810 | 600 | 50 | 100 | 420 | 820 | 50 | 100 | 470 | 650 | 60 | 130 | 740 |
| 33 | 42 | | Moreno Beach Dr to Redlands Blvd | 1,060 | 90 | 190 | 820 | 770 | 50 | 120 | 470 | 1,000 | 50 | 110 | 540 | 700 | 60 | 130 | 760 |
| 34 | 41 | | Redlands Blvd to Theodore St | 1,040 | 90 | 170 | 750 | 860 | 50 | 120 | 480 | 970 | 40 | 100 | 490 | 580 | 40 | 100 | 530 |
| 35 | 40 | | Theodore St to Gilman Springs Rd | 420 | 30 | 60 | 190 | 170 | 10 | 20 | 50 | 230 | 10 | 30 | 70 | 470 | 30 | 60 | 180 |
| 36 | 39 | | Gilman Springs Rd to Jack Rabbit Trail | 290 | 20 | 40 | 90 | 150 | 10 | 20 | 50 | 220 | 10 | 30 | 60 | 520 | 30 | 50 | 130 |
| 37 | 38 | | Jack Rabbit Trail to I-10 | 290 | 20 | 40 | 90 | 150 | 10 | 20 | 50 | 220 | 10 | 20 | 60 | 520 | 30 | 50 | 130 |
| 75 | 100 | SR-91 | I-15 to McKinley St | 80 | 10 | 30 | 160 | 40 | 10 | 20 | 90 | 50 | 0 | 10 | 80 | 60 | 10 | 20 | 170 |
| 76 | 99 | | McKinley St to Pierce St | 90 | 10 | 30 | 160 | 50 | 10 | 20 | 100 | 60 | 10 | 10 | 80 | 70 | 10 | 30 | 170 |
| 77 | 98 | | Pierce St to Magnolia Ave | 90 | 10 | 30 | 160 | 50 | 10 | 20 | 100 | 60 | 10 | 10 | 80 | 70 | 10 | 30 | 170 |
| 78 | 97 | | Magnolia Ave to La Sierra Ave | 100 | 10 | 30 | 160 | 60 | 10 | 20 | 100 | 70 | 10 | 20 | 80 | 70 | 10 | 30 | 170 |
| 79 | 96 | | La Sierra Ave to Tyler St | 110 | 10 | 30 | 170 | 60 | 10 | 20 | 100 | 80 | 10 | 20 | 80 | 80 | 10 | 30 | 170 |
| 80 | 95 | | Tyler St to Van Buren Blvd | 120 | 10 | 40 | 170 | 70 | 10 | 20 | 100 | 90 | 10 | 20 | 90 | 80 | 10 | 30 | 180 |
| 81 | 94 | | Van Buren Blvd to Adam St | 130 | 10 | 40 | 170 | 80 | 10 | 20 | 100 | 100 | 10 | 20 | 90 | 80 | 10 | 30 | 180 |
| 82 | 93 | | Adam St to Madison St | 140 | 10 | 40 | 170 | 80 | 10 | 20 | 100 | 100 | 10 | 20 | 90 | 80 | 10 | 30 | 180 |
| 83 | 92 | | Madison St to Indiana Ave (off-ramp) | 140 | 10 | 40 | 170 | 80 | 10 | 20 | 100 | 100 | 10 | 20 | 90 | 80 | 10 | 30 | 170 |
| 84 | 91 | | Arlington Ave to Central Ave | 160 | 10 | 40 | 170 | 100 | 10 | 20 | 100 | 100 | 10 | 20 | 90 | 80 | 10 | 20 | 150 |
| 85 | 90 | | Central Ave to 14th St | 160 | 10 | 40 | 170 | 100 | 10 | 20 | 100 | 100 | 10 | 20 | 90 | 80 | 10 | 20 | 150 |
| 86 | 89 | | 14th St to University Ave | 140 | 10 | 30 | 140 | 90 | 10 | 20 | 100 | 110 | 0 | 10 | 70 | 90 | 10 | 20 | 140 |
| 87 | 88 | | University Ave to Spruce St (off-ramp) | 140 | 10 | 30 | 140 | 90 | 10 | 20 | 100 | 110 | 0 | 10 | 70 | 100 | 10 | 20 | 140 |
| 101 | 128 | | SR-60 to Beaumont Ave | 160 | 10 | 30 | 80 | 70 | 10 | 10 | 40 | 140 | 10 | 20 | 50 | 230 | 10 | 20 | 90 |
| 102 | 127 | | Beaumont Ave to Pennsylvania Ave | 130 | 10 | 20 | 80 | 60 | 10 | 10 | 40 | 100 | 10 | 10 | 50 | 200 | 10 | 20 | 90 |
| 103 | 126 | | Pennsylvania Ave to Highland Springs Ave | 130 | 10 | 20 | 80 | 60 | 10 | 10 | 40 | 100 | 10 | 10 | 50 | 200 | 10 | 20 | 90 |
| 104 | 125 | | Highland Springs Ave to Sunset Ave | 90 | 10 | 20 | 80 | 50 | 0 | 10 | 40 | 70 | 0 | 10 | 50 | 160 | 10 | 20 | 90 |
| 105 | 124 | | Sunset Ave to 22nd St | 70 | 10 | 20 | 70 | 40 | 0 | 10 | 40 | 60 | 0 | 10 | 50 | 130 | 10 | 20 | 80 |
| 106 | 123 | | 22nd St to S 8th St | 70 | 10 | 20 | 70 | 30 | 0 | 10 | 40 | 50 | 0 | 10 | 50 | 110 | 10 | 20 | 80 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 | 122 | I-10 | S 8th St to S Hargrave St | 50 | 10 | 20 | 70 | 30 | 0 | 10 | 40 | 40 | 0 | 10 | 40 | 110 | 10 | 20 | 80 |
| 108 | 121 | | S Hargrave St to Field Rd | 40 | 10 | 10 | 70 | 20 | 0 | 10 | 40 | 40 | 0 | 10 | 40 | 100 | 10 | 10 | 80 |
| 109 | 120 | | Field Rd to Main St (Cabazon) | 40 | 10 | 10 | 70 | 20 | 0 | 10 | 30 | 30 | 0 | 10 | 40 | 90 | 0 | 10 | 80 |
| 110 | 119 | | Main St (Cabazon) to Main St | 40 | 10 | 10 | 70 | 20 | 0 | 10 | 30 | 30 | 0 | 10 | 40 | 90 | 0 | 10 | 80 |
| 111 | 118 | | Main St to Haugen-Lehmann Way | 40 | 10 | 10 | 70 | 20 | 0 | 10 | 30 | 30 | 0 | 10 | 40 | 90 | 0 | 10 | 80 |
| 112 | 117 | | Haugen-Lehmann Way to SR-111 | 40 | 10 | 10 | 70 | 20 | 0 | 10 | 30 | 30 | 0 | 10 | 40 | 90 | 0 | 10 | 80 |
| 113 | 116 | | SR-111 to Tipton Rd | 30 | 0 | 10 | 60 | 20 | 0 | 10 | 30 | 20 | 0 | 10 | 40 | 70 | 0 | 10 | 70 |
| 114 | 115 | | Tipton Rd to SR-62 | 30 | 0 | 10 | 60 | 20 | 0 | 10 | 30 | 20 | 0 | 10 | 40 | 70 | 0 | 10 | 70 |
| 129 | 160 | SR-215 | Scott Rd to Newport Rd | 150 | 0 | 10 | 30 | 100 | 0 | 10 | 10 | 40 | 0 | 10 | 10 | 80 | 0 | 10 | 10 |
| 130 | 159 | | Newport Rd to MacCall Blvd | 180 | 0 | 10 | 30 | 110 | 0 | 10 | 10 | 50 | 0 | 10 | 10 | 90 | 0 | 10 | 10 |
| 131 | 158 | | MacCall Blvd to Ethanac Rd | 200 | 10 | 10 | 30 | 130 | 0 | 10 | 20 | 50 | 0 | 10 | 10 | 100 | 0 | 10 | 10 |
| 132 | 157 | | Ethanac Rd to SR-74/Case | 200 | 10 | 20 | 30 | 130 | 0 | 10 | 20 | 50 | 0 | 10 | 10 | 100 | 0 | 10 | 10 |
| 133 | 156 | | SR-74/Case Rd to Redlands Blvd | 200 | 10 | 20 | 30 | 140 | 0 | 10 | 20 | 50 | 0 | 10 | 10 | 60 | 0 | 10 | 10 |
| 167 | 186 | | Redlands Blvd to D St | 90 | 0 | 10 | 30 | 80 | 0 | 10 | 20 | 30 | 0 | 0 | 10 | 10 | 0 | 0 | 20 |
| 168 | 185 | | D St to Nuevo St/Harvil Ave | 100 | 0 | 10 | 40 | 90 | 0 | 10 | 30 | 40 | 0 | 10 | 20 | 10 | 0 | 0 | 20 |
| 169 | 184 | | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 50 | 0 | 0 | 40 | 50 | 0 | 0 | 30 | 30 | 0 | 0 | 20 | 10 | 0 | 0 | 20 |
| 171 | 182 | | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 30 | 0 | 0 | 40 | 30 | 0 | 0 | 30 | 10 | 0 | 0 | 20 | 0 | 0 | 0 | 10 |
| 172 | 181 | | Harley Knox Blvd to Van Buren Blvd | 30 | 0 | 0 | 50 | 30 | 0 | 0 | 30 | 10 | 0 | 0 | 30 | 0 | 0 | 0 | 10 |
| 173 | 180 | | Van Buren Blvd to Cactus Ave | 70 | 0 | 10 | 50 | 50 | 0 | 0 | 30 | 10 | 0 | 0 | 30 | 30 | 0 | 0 | 20 |
| 174 | 179 | | Cactus Ave to Alessandro Blvd | 50 | 0 | 10 | 50 | 50 | 0 | 0 | 30 | 10 | 0 | 0 | 30 | 0 | 0 | 0 | 20 |
| 175 | 178 | | Alessandro Blvd to Eucalyptus Ave | 90 | 10 | 10 | 60 | 90 | 0 | 10 | 30 | 30 | 0 | 0 | 30 | 10 | 0 | 0 | 30 |
| 176 | 177 | | Eucalyptus Ave to SR-60 | 90 | 10 | 10 | 60 | 90 | 0 | 10 | 30 | 40 | 0 | 0 | 30 | 20 | 0 | 0 | 30 |
| 134 | 155 | | SR-60 to Columbia Ave | 50 | 10 | 10 | 60 | 50 | 0 | 10 | 40 | 30 | 0 | 0 | 30 | 10 | 0 | 0 | 50 |
| 135 | 154 | | Columbia Ave to Center St | 50 | 10 | 10 | 60 | 40 | 0 | 10 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 0 | 50 |
| 136 | 153 | | Center St to Iowa Ave/La Cadena Dr | 50 | 10 | 10 | 60 | 40 | 0 | 10 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 0 | 50 |
| 137 | 152 | | Iowa Ave/La Cadena Dr to Barton Rd | 40 | 0 | 10 | 50 | 40 | 0 | 10 | 30 | 20 | 0 | 0 | 30 | 0 | 0 | 0 | 50 |
| 138 | 151 | | Barton Rd to Mt Vernon Ave/Washington St | 40 | 0 | 10 | 50 | 30 | 0 | 10 | 30 | 20 | 0 | 0 | 30 | 0 | 0 | 0 | 50 |
| 139 | 150 | | Mt Vernon Ave/Washington St to I-10 | 40 | 0 | 10 | 50 | 30 | 0 | 10 | 30 | 30 | 0 | 0 | 30 | 90 | 10 | 10 | 50 |
| 140 | 149 | | I-10 to Auto Plaza Dr/Orange Show Rd | 50 | 10 | 10 | 50 | 30 | 0 | 10 | 30 | 40 | 0 | 10 | 30 | 80 | 10 | 10 | 50 |
| 141 | 148 | | Auto Plaza Dr/Orange Show Rd to Mill St | 50 | 10 | 10 | 50 | 30 | 0 | 10 | 30 | 40 | 0 | 10 | 30 | 70 | 10 | 10 | 50 |
| 142 | 147 | | Mill St to 2rd St | 50 | 10 | 10 | 50 | 30 | 0 | 10 | 30 | 40 | 0 | 0 | 30 | 70 | 10 | 10 | 50 |
| 143 | 146 | | 2rd St to Baseline Rd | 50 | 10 | 10 | 50 | 30 | 0 | 10 | 20 | 30 | 0 | 0 | 30 | 70 | 10 | 10 | 50 |
| 144 | 145 | | Baseline Rd to Highland Ave/SR-210 | 40 | 0 | 10 | 40 | 30 | 0 | 0 | 20 | 30 | 0 | 0 | 20 | 60 | 0 | 10 | 40 |

**Peak PM Freeway to Ports Traffic Volumes**

| Segment ID | | | | 2012 Build Out Peak PM Project Only | | | | 2012 Phase 1 Peak PM Project Only | | | | 2022 Phase 1 Peak PM Project Only | | | | 2035 Build Out Peak PM Project Only | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Project | | | | Project | | | | Project | | | | Project | | | |
| EB/NB | WB/SB | Route | Segment | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT | Cars | LT | MT | HT |
| 230 | 208 | SR-60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 229 | 207 | | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 228 | 206 | | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 227 | 205 | | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 226 | 204 | | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 225 | 203 | | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 224 | 202 | | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 223 | 201 | | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 222 | 200 | | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 221 | 199 | | Peck Rd to I-605 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 220 | 198 | | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 219 | 197 | | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 218 | 196 | | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 217 | 195 | | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 216 | 194 | | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 215 | 193 | | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 214 | 192 | | Noglaes St to Fairway Dr | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 213 | 191 | | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 212 | 190 | | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 211 | 189 | | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 210 | 188 | | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 209 | 187 | | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 263 | 336 | SR-91 | I-710 to Cherry Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 264 | 335 | | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 265 | 334 | | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 266 | 333 | | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 267 | 332 | | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 268 | 331 | | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 269 | 330 | | Bellflower Blvd to I-605 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 270 | 329 | | I-605 to Pioneer Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 271 | 328 | | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 272 | 327 | | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 273 | 326 | | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 274 | 325 | | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 275 | 324 | | Carmenita Rd to Valley View St | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 276 | 323 | | Valley View St to Knott Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 277 | 322 | | Knott Ave to Beach Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 278 | 321 | | Beach Blvd to I-5 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 279 | 320 | | I-5 to Brookhurst Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 280 | 319 | | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 281 | 318 | | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 282 | 317 | | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 283 | 316 | | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 284 | 315 | | State College Blvd to SR-57 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 285 | 314 | | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 286 | 313 | | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 287 | 312 | | Tustin Ave to SR-55 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 288 | 311 | | SR-55 to Lakeview Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 289 | 310 | | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 290 | 309 | | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 291 | 308 | | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 292 | 307 | | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 293 | 306 | | Green River Rd to SR-71 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 294 | 305 | | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 295 | 304 | | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 296 | 303 | | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 297 | 302 | | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 299 | 300 | | S Main St to I-15 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 262 | 246 | | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |
| 261 | 245 | | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 260 | 244 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |
| 259 | 243 | | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |
| 258 | 242 | | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |
| 257 | 241 | | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |
| 256 | 240 | | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 99 |
| 255 | 239 | | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 254 | 238 | | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 253 | 237 | | I-105 to Imperial Hwy | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 252 | 236 | | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 251 | 235 | | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 250 | 234 | | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 249 | 233 | | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 248 | 232 | | E Washington Blvd to I-5 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |
| 247 | 231 | | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 50 |

# F.2 - Project Phase 1 (2012) Emissions

**Appendix F-2 contains the calculated localized unmitigated and mitigated emissions for project construction and operation during the Project Phase 1 in 2012 project condition. Emissions are provided for CO, NO2, PM10, and PM2.5.**

**The individual air pollutant AERMOD project files are not provided to reduce paper consumption but are available on a separate CD.**

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Daily CO emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Daily CO**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.07E-02 | 2.88E-01 |
| Light Logistics | Phase 1 | 1.53E-04 | 6.48E-04 |
| Utilities Service Station | Phase 1 | 1.16E-04 | 5.69E-04 |
| Gas Station w/Convenience Store | Phase 1 | 2.06E-04 | 2.24E-04 |
| Convenience Store | Phase 1 | 3.24E-04 | 3.63E-04 |
| Fire Station | Phase 1 | 1.53E-07 | 1.64E-04 |
| Total | | 8.15E-02 | 2.90E-01 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 6.91E-02 | 1.56E-01 |
| Light Logistics | Phase 1 | 2.63E-04 | 7.51E-04 |
| Utilities Service Station | Phase 1 | 3.74E-04 | 1.68E-03 |
| Gas Station w/Convenience Store | Phase 1 | 1.03E-03 | 1.43E-03 |
| Convenience Store | Phase 1 | 1.62E-03 | 2.26E-03 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 7.24E-02 | 1.63E-01 |

**Total Onsite Mobile Sources**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 8.15E-02 | 2.90E-01 | |
| | Idling Emissions (g/sec) | 7.24E-02 | 1.63E-01 | |
| | Total Vehicle Emissions (g/sec) | 1.54E-01 | 4.53E-01 | 6.07E-01 |
| **Other Onsite Sources** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g./sec) | 1.54E-01 | 4.54E-01 | 6.08E-01 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | **1.30E-07** |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Daily CO**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Daily CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 1.540 | 53 | 330 | 0.21 | 1.68E+01 | 3.70E-02 | 1.94E-04 | |
| | **LDT1** | 15 | 2.170 | 3 | 330 | 0.21 | 1.14E+00 | 2.50E-03 | 1.32E-05 | |
| | **LDT2** | 15 | 0.700 | 3 | 330 | 0.21 | 3.61E-01 | 7.95E-04 | 4.18E-06 | |
| | **MDT** | 15 | 1.180 | 5 | 330 | 0.21 | 1.18E+00 | 2.59E-03 | 1.36E-05 | |
| | **LHDT1** | 15 | 1.440 | 274 | 330 | 0.21 | 8.08E+01 | 1.78E-01 | 9.36E-04 | |
| | **LHDT2** | 15 | 1.390 | 93 | 330 | 0.21 | 2.65E+01 | 5.85E-02 | 3.07E-04 | |
| | **MHDT** | 15 | 3.410 | 1425 | 330 | 0.21 | 9.96E+02 | 2.19E+00 | 1.15E-02 | |
| | **HHDT** | 15 | 6.170 | 4628 | 330 | 0.21 | 5.85E+03 | 1.29E+01 | 6.77E-02 | |
| | | | | | | | | | | 8.07E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 1.540 | 0 | 175 | 0.11 | 3.78E-02 | 8.33E-05 | 4.37E-07 | |
| | **LDT1** | 15 | 2.170 | 0 | 175 | 0.11 | 2.56E-03 | 5.64E-06 | 2.96E-08 | |
| | **LDT2** | 15 | 0.700 | 0 | 175 | 0.11 | 8.13E-04 | 1.79E-06 | 9.41E-09 | |
| | **MDT** | 15 | 1.180 | 0 | 175 | 0.11 | 2.65E-03 | 5.84E-06 | 3.07E-08 | |
| | **LHDT1** | 15 | 1.440 | 2 | 175 | 0.11 | 2.68E-01 | 5.91E-04 | 3.10E-06 | |
| | **LHDT2** | 15 | 1.390 | 1 | 175 | 0.11 | 8.80E-02 | 1.94E-04 | 1.02E-06 | |
| | **MHDT** | 15 | 3.410 | 6 | 175 | 0.11 | 2.18E+00 | 4.79E-03 | 2.52E-05 | |
| | **HHDT** | 15 | 6.170 | 16 | 175 | 0.11 | 1.06E+01 | 2.34E-02 | 1.23E-04 | 1.53E-04 |
| **Travel at Utility** | **LDA** | 15 | 1.540 | 0 | 100 | 0.06 | 3.18E-02 | 7.01E-05 | 3.68E-07 | |
| | **LDT1** | 15 | 2.170 | 0 | 100 | 0.06 | 2.16E-03 | 4.75E-06 | 2.50E-08 | |
| | **LDT2** | 15 | 0.700 | 0 | 100 | 0.06 | 6.85E-04 | 1.51E-06 | 7.92E-09 | |
| | **MDT** | 15 | 1.180 | 0 | 100 | 0.06 | 2.23E-03 | 4.92E-06 | 2.58E-08 | |
| | **LHDT1** | 15 | 1.440 | 6 | 100 | 0.06 | 5.12E-01 | 1.13E-03 | 5.92E-06 | |
| | **LHDT2** | 15 | 1.390 | 2 | 100 | 0.06 | 1.68E-01 | 3.70E-04 | 1.94E-06 | |
| | **MHDT** | 15 | 3.410 | 5 | 100 | 0.06 | 1.03E+00 | 2.26E-03 | 1.19E-05 | |
| | **HHDT** | 15 | 6.170 | 22 | 100 | 0.06 | 8.28E+00 | 1.82E-02 | 9.58E-05 | 1.16E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 1.540 | 0 | 50 | 0.03 | 9.22E-03 | 2.03E-05 | 1.07E-07 | |
| | **LDT1** | 15 | 2.170 | 0 | 50 | 0.03 | 6.25E-04 | 1.38E-06 | 7.23E-09 | |
| | **LDT2** | 15 | 0.700 | 0 | 50 | 0.03 | 1.98E-04 | 4.37E-07 | 2.29E-09 | |
| | **MDT** | 15 | 1.180 | 0 | 50 | 0.03 | 6.47E-04 | 1.42E-06 | 7.48E-09 | |
| | **LHDT1** | 15 | 1.440 | 1 | 50 | 0.03 | 3.59E-02 | 7.90E-05 | 4.15E-07 | |
| | **LHDT2** | 15 | 1.390 | 0 | 50 | 0.03 | 1.18E-02 | 2.59E-05 | 1.36E-07 | |
| | **MHDT** | 15 | 3.410 | 14 | 50 | 0.03 | 1.46E+00 | 3.21E-03 | 1.69E-05 | |
| | **HHDT** | 15 | 6.170 | 85 | 50 | 0.03 | 1.63E+01 | 3.59E-02 | 1.89E-04 | 2.06E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 1.540 | 0 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **LDT1** | 15 | 2.170 | 0 | 50 | 0.03 | 1.04E-03 | 2.28E-06 | 1.20E-08 | |
| | **LDT2** | 15 | 0.700 | 0 | 50 | 0.03 | 3.29E-04 | 7.24E-07 | 3.80E-09 | |
| | **MDT** | 15 | 1.180 | 0 | 50 | 0.03 | 1.07E-03 | 2.36E-06 | 1.24E-08 | |
| | **LHDT1** | 15 | 1.440 | 1 | 50 | 0.03 | 5.47E-02 | 1.21E-04 | 6.34E-07 | |
| | **LHDT2** | 15 | 1.390 | 0 | 50 | 0.03 | 1.80E-02 | 3.96E-05 | 2.08E-07 | |
| | **MHDT** | 15 | 3.410 | 23 | 50 | 0.03 | 2.39E+00 | 5.25E-03 | 2.76E-05 | |
| | **HHDT** | 15 | 6.170 | 133 | 50 | 0.03 | 2.55E+01 | 5.61E-02 | 2.95E-04 | 3.24E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 1.540 | 0 | 50 | 0.03 | 1.14E-02 | 2.51E-05 | 1.32E-07 | |
| | **LDT1** | 15 | 2.170 | 0 | 50 | 0.03 | 7.71E-04 | 1.70E-06 | 8.92E-09 | |
| | **LDT2** | 15 | 0.700 | 0 | 50 | 0.03 | 2.45E-04 | 5.39E-07 | 2.83E-09 | |
| | **MDT** | 15 | 1.180 | 0 | 50 | 0.03 | 7.98E-04 | 1.76E-06 | 9.24E-09 | |
| | **LHDT1** | 15 | 1.440 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.390 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 6.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-07 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 1.69E+01 | 3.72E-02 | 1.95E-04 | |
| | **LDT1** | | | 3 | | | 1.14E+00 | 2.52E-03 | 1.32E-05 | |
| | **LDT2** | | | 3 | | | 3.63E-01 | 8.00E-04 | 4.20E-06 | |
| | **MDT** | | | 5 | | | 1.18E+00 | 2.61E-03 | 1.37E-05 | |
| | **LHDT1** | | | 283 | | | 8.17E+01 | 1.80E-01 | 9.46E-04 | |
| | **LHDT2** | | | 96 | | | 2.68E+01 | 5.91E-02 | 3.10E-04 | |
| | **MHDT** | | | 1472 | | | 1.00E+03 | 2.21E+00 | 1.16E-02 | |
| | **HHDT** | | | 4883 | | | 5.91E+03 | 1.30E+01 | 6.84E-02 | |
| | **Total** | | | 6800 | | | 7.05E+03 | 1.55E+01 | 8.15E-02 | 8.15E-02 |

**Diesel truck Idling Emissions** **Daily CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 137 | 3.00E+02 | 6.61E-01 | 3.47E-03 | |
| | **LHDT2** | 26.300 | 5 | 47 | 1.02E+02 | 2.25E-01 | 1.18E-03 | |
| | **MHDT** | 28.290 | 5 | 713 | 1.68E+03 | 3.70E+00 | 1.94E-02 | |
| | **HHDT** | 20.170 | 5 | 2314 | 3.89E+03 | 8.57E+00 | 4.50E-02 | |
| | | | | 3210 | 5.97E+03 | 1.32E+01 | 6.91E-02 | 6.91E-02 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 1 | 1.88E+00 | 4.14E-03 | 2.17E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.38E-01 | 1.41E-03 | 7.39E-06 | |
| | **MHDT** | 28.290 | 5 | 3 | 6.92E+00 | 1.52E-02 | 8.01E-05 | |
| | **HHDT** | 20.170 | 5 | 8 | 1.33E+01 | 2.93E-02 | 1.54E-04 | |
| | | | | 12 | 2.27E+01 | 5.01E-02 | 2.63E-04 | 2.63E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 3 | 6.27E+00 | 1.38E-02 | 7.25E-05 | |
| | **LHDT2** | 26.300 | 5 | 1 | 2.13E+00 | 4.69E-03 | 2.47E-05 | |
| | **MHDT** | 28.290 | 5 | 2 | 5.72E+00 | 1.26E-02 | 6.62E-05 | |
| | **HHDT** | 20.170 | 5 | 11 | 1.82E+01 | 4.00E-02 | 2.10E-04 | |
| | | | | 17 | 3.23E+01 | 7.11E-02 | 3.74E-04 | 3.74E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 8.79E-01 | 1.94E-03 | 1.02E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.99E-01 | 6.58E-04 | 3.46E-06 | |
| | **MHDT** | 28.290 | 5 | 7 | 1.62E+01 | 3.57E-02 | 1.88E-04 | |
| | **HHDT** | 20.170 | 5 | 43 | 7.15E+01 | 1.57E-01 | 8.27E-04 | |
| | | | | 50 | 8.89E+01 | 1.96E-01 | 1.03E-03 | 1.03E-03 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 1 | 1.34E+00 | 2.95E-03 | 1.55E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 4.56E-01 | 1.00E-03 | 5.28E-06 | |
| | **MHDT** | 28.290 | 5 | 11 | 2.66E+01 | 5.85E-02 | 3.07E-04 | |
| | **HHDT** | 20.170 | 5 | 66 | 1.12E+02 | 2.46E-01 | 1.29E-03 | |
| | | | | 79 | 1.40E+02 | 3.09E-01 | 1.62E-03 | 1.62E-03 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 28.290 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 20.170 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 6.26E+03 | 1.38E+01 | 7.24E-02 | 7.24E-02 |

**World Logistics Center** 2012 **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **Daily CO**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Daily CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 2.600 | 17546 | 330 | 0.21 | 9.35E+03 | 2.06E+01 | 1.08E-01 | |
| | **LDT1** | 15 | 7.260 | 2058 | 330 | 0.21 | 3.06E+03 | 6.74E+00 | 3.54E-02 | |
| | **LDT2** | 15 | 3.370 | 6111 | 330 | 0.21 | 4.22E+03 | 9.30E+00 | 4.89E-02 | |
| | **MDT** | 15 | 4.290 | 4846 | 330 | 0.21 | 4.26E+03 | 9.39E+00 | 4.93E-02 | |
| | **LHDT1** | 15 | 4.410 | 886 | 330 | 0.21 | 8.01E+02 | 1.76E+00 | 9.27E-03 | |
| | **LHDT2** | 15 | 3.260 | 93 | 330 | 0.21 | 6.24E+01 | 1.37E-01 | 7.22E-04 | |
| | **MHDT** | 15 | 14.040 | 344 | 330 | 0.21 | 9.91E+02 | 2.18E+00 | 1.15E-02 | |
| | **HHDT** | 15 | 100.640 | 104 | 330 | 0.21 | 2.16E+03 | 4.75E+00 | 2.49E-02 | |
| | | | | | | | | | | 2.88E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 2.600 | 75 | 175 | 0.11 | 2.11E+01 | 4.64E-02 | 2.44E-04 | |
| | **LDT1** | 15 | 7.260 | 9 | 175 | 0.11 | 6.90E+00 | 1.52E-02 | 7.98E-05 | |
| | **LDT2** | 15 | 3.370 | 26 | 175 | 0.11 | 9.51E+00 | 2.09E-02 | 1.10E-04 | |
| | **MDT** | 15 | 4.290 | 21 | 175 | 0.11 | 9.60E+00 | 2.11E-02 | 1.11E-04 | |
| | **LHDT1** | 15 | 4.410 | 6 | 175 | 0.11 | 2.66E+00 | 5.85E-03 | 3.08E-05 | |
| | **LHDT2** | 15 | 3.260 | 1 | 175 | 0.11 | 2.07E-01 | 4.56E-04 | 2.40E-06 | |
| | **MHDT** | 15 | 14.040 | 1 | 175 | 0.11 | 2.16E+00 | 4.77E-03 | 2.51E-05 | |
| | **HHDT** | 15 | 100.640 | 0 | 175 | 0.11 | 3.91E+00 | 8.62E-03 | 4.53E-05 | 6.48E-04 |
| **Travel at Utility** | **LDA** | 15 | 2.600 | 110 | 100 | 0.06 | 1.77E+01 | 3.91E-02 | 2.05E-04 | |
| | **LDT1** | 15 | 7.260 | 13 | 100 | 0.06 | 5.81E+00 | 1.28E-02 | 6.72E-05 | |
| | **LDT2** | 15 | 3.370 | 38 | 100 | 0.06 | 8.01E+00 | 1.76E-02 | 9.27E-05 | |
| | **MDT** | 15 | 4.290 | 30 | 100 | 0.06 | 8.09E+00 | 1.78E-02 | 9.36E-05 | |
| | **LHDT1** | 15 | 4.410 | 19 | 100 | 0.06 | 5.07E+00 | 1.12E-02 | 5.87E-05 | |
| | **LHDT2** | 15 | 3.260 | 2 | 100 | 0.06 | 3.95E-01 | 8.70E-04 | 4.57E-06 | |
| | **MHDT** | 15 | 14.040 | 1 | 100 | 0.06 | 1.02E+00 | 2.25E-03 | 1.18E-05 | |
| | **HHDT** | 15 | 100.640 | 0 | 100 | 0.06 | 3.05E+00 | 6.72E-03 | 3.53E-05 | 5.69E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 2.600 | 64 | 50 | 0.03 | 5.14E+00 | 1.13E-02 | 5.95E-05 | |
| | **LDT1** | 15 | 7.260 | 7 | 50 | 0.03 | 1.68E+00 | 3.71E-03 | 1.95E-05 | |
| | **LDT2** | 15 | 3.370 | 22 | 50 | 0.03 | 2.32E+00 | 5.11E-03 | 2.68E-05 | |
| | **MDT** | 15 | 4.290 | 18 | 50 | 0.03 | 2.34E+00 | 5.16E-03 | 2.71E-05 | |
| | **LHDT1** | 15 | 4.410 | 3 | 50 | 0.03 | 3.55E-01 | 7.83E-04 | 4.11E-06 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 2.77E-02 | 6.10E-05 | 3.20E-07 | |
| | **MHDT** | 15 | 14.040 | 3 | 50 | 0.03 | 1.45E+00 | 3.19E-03 | 1.68E-05 | |
| | **HHDT** | 15 | 100.640 | 2 | 50 | 0.03 | 6.00E+00 | 1.32E-02 | 6.94E-05 | 2.24E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 2.600 | 105 | 50 | 0.03 | 8.52E+00 | 1.88E-02 | 9.86E-05 | |
| | **LDT1** | 15 | 7.260 | 12 | 50 | 0.03 | 2.79E+00 | 6.14E-03 | 3.23E-05 | |
| | **LDT2** | 15 | 3.370 | 37 | 50 | 0.03 | 3.85E+00 | 8.47E-03 | 4.45E-05 | |
| | **MDT** | 15 | 4.290 | 29 | 50 | 0.03 | 3.88E+00 | 8.55E-03 | 4.49E-05 | |
| | **LHDT1** | 15 | 4.410 | 4 | 50 | 0.03 | 5.42E-01 | 1.19E-03 | 6.28E-06 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 4.23E-02 | 9.31E-05 | 4.89E-07 | |
| | **MHDT** | 15 | 14.040 | 5 | 50 | 0.03 | 2.37E+00 | 5.23E-03 | 2.75E-05 | |
| | **HHDT** | 15 | 100.640 | 3 | 50 | 0.03 | 9.38E+00 | 2.07E-02 | 1.09E-04 | 3.63E-04 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at Fire Station** | **LDA** | 15 | 2.600 | 78 | 50 | 0.03 | 6.34E+00 | 1.40E-02 | 7.34E-05 | |
| | **LDT1** | 15 | 7.260 | 9 | 50 | 0.03 | 2.08E+00 | 4.57E-03 | 2.40E-05 | |
| | **LDT2** | 15 | 3.370 | 27 | 50 | 0.03 | 2.86E+00 | 6.30E-03 | 3.31E-05 | |
| | **MDT** | 15 | 4.290 | 22 | 50 | 0.03 | 2.89E+00 | 6.36E-03 | 3.34E-05 | |
| | **LHDT1** | 15 | 4.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.64E-04 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 9.41E+03 | 2.07E+01 | 1.09E-01 | |
| | **LDT1** | | | 2108 | | | 3.08E+03 | 6.79E+00 | 3.57E-02 | |
| | **LDT2** | | | 6262 | | | 4.25E+03 | 9.36E+00 | 4.92E-02 | |
| | **MDT** | | | 4966 | | | 4.29E+03 | 9.45E+00 | 4.96E-02 | |
| | **LHDT1** | | | 917 | | | 8.10E+02 | 1.78E+00 | 9.37E-03 | |
| | **LHDT2** | | | 97 | | | 6.31E+01 | 1.39E-01 | 7.30E-04 | |
| | **MHDT** | | | 356 | | | 9.98E+02 | 2.20E+00 | 1.16E-02 | |
| | **HHDT** | | | 110 | | | 2.18E+03 | 4.80E+00 | 2.52E-02 | |
| | **Total** | | | 32792 | | | 2.51E+04 | 5.52E+01 | 2.90E-01 | 2.90E-01 |

## Non-Diesel truck Idling Emissions

**Daily CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 132.940 | 5 | 443 | 4.91E+03 | 1.08E+01 | 5.68E-02 | |
| | **LHDT2** | 134.460 | 5 | 47 | 5.23E+02 | 1.15E+00 | 6.06E-03 | |
| | **MHDT** | 328.730 | 5 | 172 | 4.72E+03 | 1.04E+01 | 5.46E-02 | |
| | **HHDT** | 773.000 | 5 | 52 | 3.36E+03 | 7.41E+00 | 3.89E-02 | |
| | | | | 714 | 1.35E+04 | 2.98E+01 | 1.56E-01 | 1.56E-01 |
| **Idle at Light Logistics** | **LHDT1** | 132.940 | 5 | 3 | 3.07E+01 | 6.76E-02 | 3.55E-04 | |
| | **LHDT2** | 134.460 | 5 | 0 | 3.27E+00 | 7.21E-03 | 3.79E-05 | |
| | **MHDT** | 328.730 | 5 | 1 | 1.94E+01 | 4.28E-02 | 2.25E-04 | |
| | **HHDT** | 773.000 | 5 | 0 | 1.15E+01 | 2.54E-02 | 1.33E-04 | |
| | | | | 4 | 6.49E+01 | 1.43E-01 | 7.51E-04 | 7.51E-04 |
| **Idle at Utility** | **LHDT1** | 132.940 | 5 | 9 | 1.02E+02 | 2.26E-01 | 1.19E-03 | |
| | **LHDT2** | 134.460 | 5 | 1 | 1.09E+01 | 2.41E-02 | 1.26E-04 | |
| | **MHDT** | 328.730 | 5 | 1 | 1.61E+01 | 3.54E-02 | 1.86E-04 | |
| | **HHDT** | 773.000 | 5 | 0 | 1.57E+01 | 3.46E-02 | 1.82E-04 | |
| | | | | 11 | 1.45E+02 | 3.20E-01 | 1.68E-03 | 1.68E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 132.940 | 5 | 1 | 1.44E+01 | 3.17E-02 | 1.66E-04 | |
| | **LHDT2** | 134.460 | 5 | 0 | 1.53E+00 | 3.37E-03 | 1.77E-05 | |
| | **MHDT** | 328.730 | 5 | 2 | 4.55E+01 | 1.00E-01 | 5.27E-04 | |
| | **HHDT** | 773.000 | 5 | 1 | 6.18E+01 | 1.36E-01 | 7.15E-04 | |
| | | | | 4 | 1.23E+02 | 2.71E-01 | 1.43E-03 | 1.43E-03 |
| **Idle at Convenience Store** | **LHDT1** | 132.940 | 5 | 2 | 2.19E+01 | 4.83E-02 | 2.54E-04 | |
| | **LHDT2** | 134.460 | 5 | 0 | 2.34E+00 | 5.15E-03 | 2.71E-05 | |
| | **MHDT** | 328.730 | 5 | 3 | 7.45E+01 | 1.64E-01 | 8.63E-04 | |
| | **HHDT** | 773.000 | 5 | 2 | 9.67E+01 | 2.13E-01 | 1.12E-03 | |
| | | | | 6 | 1.95E+02 | 4.31E-01 | 2.26E-03 | 2.26E-03 |
| **Idle at Firestation** | **LHDT1** | 132.940 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 134.460 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 328.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 773.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 1.40E+04 | 3.09E+01 | 1.63E-01 | 1.63E-01 |

**World Logistics Center** **2012** **Peak Hour CO** Based on PB Traffic Results 10/3/2013
**Project-Only Emissions** **Phase 1** REV 5 Without Mitigation
**Internal Roadway Circulation** with EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 1.19E-01 | 2.04E-01 | 3.23E-01 |
| 2 | 3.10E-01 | 5.06E-01 | 8.16E-01 |
| 3 | 4.88E-01 | 8.22E-01 | 1.31E+00 |
| 5 | 2.11E-02 | 1.34E-01 | 1.56E-01 |
| 6 | 1.34E-01 | 2.97E-01 | 4.31E-01 |
| 8 | 1.43E-02 | 2.78E-01 | 2.92E-01 |
| 11 | 4.42E-07 | 8.73E-04 | 8.73E-04 |
| 12 | 3.26E-04 | 8.13E-03 | 8.46E-03 |
| 14 | 7.83E-02 | 1.20E-01 | 1.99E-01 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.76E-06 | 3.47E-03 | 3.47E-03 |
| 21 | 2.05E-02 | 9.91E-02 | 1.20E-01 |
| 24 | 3.05E-02 | 1.51E-01 | 1.81E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 4.97E-07 | 9.81E-04 | 9.82E-04 |
| 30 | 2.08E-06 | 4.11E-03 | 4.11E-03 |
| 31 | 8.28E-03 | 6.19E-02 | 7.02E-02 |
| | | Total | 3.91E+00 |

| ID | Arterial | From | To | 2012 With Project Phase 1 (Pk PM) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 1,056 | 74 | 169 | 530 |
| 2 | Street A | Eucalyptus Ave | Street F | 1,093 | 139 | 185 | 620 |
| 3 | Street E | west of Street A | | 569 | 62 | 92 | 303 |
| 5 | Street E | Street D | Street A | 326 | 18 | 24 | 25 |
| 6 | Street A | Street F | Street C | 491 | 50 | 67 | 171 |
| 8 | Street D | Street E | Cactus Ave | 623 | 34 | 43 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 2 | 0 | 0 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 23 | 3 | 1 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 125 | 8 | 13 | 75 |
| 18 | Street B | east of Street A | Theodore St | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | | 4 | 0 | 0 | 0 |
| 21 | Street C | east of Street A | | 178 | 8 | 15 | 20 |
| 24 | Street C | Street F | Street H | 176 | 7 | 15 | 19 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 4 | 0 | 0 | 0 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 4 | 0 | 0 | 0 |
| 31 | Gilman Springs Rd | south of Street C | | 180 | 7 | 12 | 11 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012 Peak Hour CO Phase 1** Without Mitigation
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1829 | 1,056 | 74 | 169 | 530 | 327 | 0.203 | 2 | 0 | 0 | 0 | 15 | 5 | 136 | 518 | 677 |
| 2 | 2037 | 1,093 | 139 | 185 | 620 | 731 | 0.454 | 2 | 0 | 0 | 0 | 28 | 10 | 149 | 606 | 795 |
| 3 | 1026 | 569 | 62 | 92 | 303 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 74 | 296 | 388 |
| 5 | 393 | 326 | 18 | 24 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 4 | 1 | 19 | 24 | 49 |
| 6 | 779 | 491 | 50 | 67 | 171 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 10 | 3 | 54 | 167 | 236 |
| 8 | 700 | 623 | 34 | 43 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 7 | 2 | 35 | 0 | 45 |
| 11 | 2 | 2 | 0 | 0 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 27 | 23 | 3 | 1 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 14 | 221 | 125 | 8 | 13 | 75 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 2 | 1 | 10 | 73 | 86 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 4 | 4 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 221 | 178 | 8 | 15 | 20 | 1258 | 0.781 | 0 | 0 | 0 | 0 | 2 | 1 | 12 | 20 | 34 |
| 24 | 217 | 176 | 7 | 15 | 19 | 1946 | 1.209 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 19 | 33 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 210 | 180 | 7 | 12 | 11 | 820 | 0.509 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 11 | 23 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5300 | 1.1100 | 0.1600 | 0.2600 | 0.8700 | 0.8200 | 1.9500 | 3.5200 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.48E-05 | 5.52E-06 | 7.83E-07 | 2.46E-06 | 7.39E-04 | 2.37E-04 | 1.50E-02 | 1.03E-01 | 1.19E-01 |
| 2 | 1 | 1.27E-04 | 1.28E-05 | 1.81E-06 | 5.70E-06 | 3.10E-03 | 9.94E-04 | 3.67E-02 | 2.69E-01 | 3.10E-01 |
| 3 | 1 | 2.12E-04 | 2.14E-05 | 3.03E-06 | 9.54E-06 | 4.45E-03 | 1.43E-03 | 5.86E-02 | 4.23E-01 | 4.88E-01 |
| 5 | 1 | 4.93E-05 | 4.97E-06 | 7.04E-07 | 2.22E-06 | 5.24E-04 | 1.68E-04 | 6.20E-03 | 1.42E-02 | 2.11E-02 |
| 6 | 1 | 8.57E-05 | 8.63E-06 | 1.22E-06 | 3.85E-06 | 1.68E-03 | 5.38E-04 | 2.00E-02 | 1.12E-01 | 1.34E-01 |
| 8 | 1 | 1.08E-04 | 1.09E-05 | 1.54E-06 | 4.85E-06 | 1.13E-03 | 3.63E-04 | 1.27E-02 | 0.00E+00 | 1.43E-02 |
| 11 | 1 | 3.81E-07 | 3.84E-08 | 5.45E-09 | 1.71E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.42E-07 |
| 12 | 1 | 3.01E-06 | 3.03E-07 | 4.30E-08 | 1.35E-07 | 7.55E-05 | 2.42E-05 | 2.23E-04 | 0.00E+00 | 3.26E-04 |
| 14 | 1 | 3.21E-05 | 3.23E-06 | 4.58E-07 | 1.44E-06 | 3.95E-04 | 1.27E-04 | 5.70E-03 | 7.21E-02 | 7.83E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.52E-06 | 1.53E-07 | 2.16E-08 | 6.80E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.76E-06 |
| 21 | 1 | 3.55E-05 | 3.58E-06 | 5.08E-07 | 1.60E-06 | 3.07E-04 | 9.85E-05 | 5.11E-03 | 1.49E-02 | 2.05E-02 |
| 24 | 1 | 5.44E-05 | 5.48E-06 | 7.76E-07 | 2.44E-06 | 4.16E-04 | 1.33E-04 | 7.91E-03 | 2.20E-02 | 3.05E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.29E-07 | 4.32E-08 | 6.12E-09 | 1.93E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.97E-07 |
| 30 | 1 | 1.80E-06 | 1.81E-07 | 2.56E-08 | 8.06E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.08E-06 |
| 31 | 1 | 2.34E-05 | 2.36E-06 | 3.35E-07 | 1.05E-06 | 1.75E-04 | 5.62E-05 | 2.67E-03 | 5.36E-03 | 8.28E-03 |

**World Logistics Center** **2012 Peak Hour CO Phase 1** Without Mitigation
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1829 | 1,056 | 74 | 169 | 530 | 327 | 0.203 | 605 | 71 | 211 | 167 | 49 | 5 | 33 | 12 | 1152 |
| 2 | 2037 | 1,093 | 139 | 185 | 620 | 731 | 0.454 | 626 | 73 | 218 | 173 | 91 | 10 | 36 | 14 | 1242 |
| 3 | 1026 | 569 | 62 | 92 | 303 | 2352 | 1.461 | 326 | 38 | 114 | 90 | 41 | 4 | 18 | 7 | 638 |
| 5 | 393 | 326 | 18 | 24 | 25 | 953 | 0.592 | 187 | 22 | 65 | 52 | 12 | 1 | 5 | 1 | 344 |
| 6 | 779 | 491 | 50 | 67 | 171 | 1099 | 0.683 | 281 | 33 | 98 | 78 | 33 | 3 | 13 | 4 | 543 |
| 8 | 700 | 623 | 34 | 43 | 0 | 1091 | 0.678 | 357 | 42 | 124 | 99 | 22 | 2 | 8 | 0 | 655 |
| 11 | 2 | 2 | 0 | 0 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 12 | 27 | 23 | 3 | 1 | 0 | 824 | 0.512 | 13 | 2 | 5 | 4 | 2 | 0 | 0 | 0 | 25 |
| 14 | 221 | 125 | 8 | 13 | 75 | 1618 | 1.005 | 72 | 8 | 25 | 20 | 5 | 1 | 3 | 2 | 135 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 4 | 4 | 0 | 0 | 0 | 2386 | 1.482 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 21 | 221 | 178 | 8 | 15 | 20 | 1258 | 0.781 | 102 | 12 | 36 | 28 | 5 | 1 | 3 | 0 | 187 |
| 24 | 217 | 176 | 7 | 15 | 19 | 1946 | 1.209 | 101 | 12 | 35 | 28 | 5 | 0 | 3 | 0 | 184 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 31 | 210 | 180 | 7 | 12 | 11 | 820 | 0.509 | 103 | 12 | 36 | 28 | 5 | 0 | 2 | 0 | 187 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 1.6600 | 4.2900 | 2.1400 | 2.7800 | 3.1400 | 2.3900 | 10.5700 | 74.4600 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.67E-02 | 1.72E-02 | 2.54E-02 | 2.62E-02 | 8.63E-03 | 6.92E-04 | 1.96E-02 | 4.92E-02 | 2.04E-01 |
| 2 | 1 | 1.31E-01 | 3.97E-02 | 5.89E-02 | 6.07E-02 | 3.62E-02 | 2.91E-03 | 4.80E-02 | 1.29E-01 | 5.06E-01 |
| 3 | 1 | 2.20E-01 | 6.66E-02 | 9.86E-02 | 1.02E-01 | 5.20E-02 | 4.17E-03 | 7.68E-02 | 2.02E-01 | 8.22E-01 |
| 5 | 1 | 5.10E-02 | 1.55E-02 | 2.29E-02 | 2.36E-02 | 6.12E-03 | 4.91E-04 | 8.12E-03 | 6.76E-03 | 1.34E-01 |
| 6 | 1 | 8.86E-02 | 2.68E-02 | 3.98E-02 | 4.10E-02 | 1.96E-02 | 1.57E-03 | 2.61E-02 | 5.33E-02 | 2.97E-01 |
| 8 | 1 | 1.12E-01 | 3.38E-02 | 5.01E-02 | 5.16E-02 | 1.32E-02 | 1.06E-03 | 1.66E-02 | 0.00E+00 | 2.78E-01 |
| 11 | 1 | 3.94E-04 | 1.19E-04 | 1.77E-04 | 1.82E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.73E-04 |
| 12 | 1 | 3.11E-03 | 9.43E-04 | 1.40E-03 | 1.44E-03 | 8.81E-04 | 7.07E-05 | 2.92E-04 | 0.00E+00 | 8.13E-03 |
| 14 | 1 | 3.32E-02 | 1.01E-02 | 1.49E-02 | 1.54E-02 | 4.62E-03 | 3.70E-04 | 7.46E-03 | 3.44E-02 | 1.20E-01 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.57E-03 | 4.75E-04 | 7.03E-04 | 7.25E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.47E-03 |
| 21 | 1 | 3.68E-02 | 1.11E-02 | 1.65E-02 | 1.70E-02 | 3.59E-03 | 2.88E-04 | 6.70E-03 | 7.14E-03 | 9.91E-02 |
| 24 | 1 | 5.62E-02 | 1.70E-02 | 2.52E-02 | 2.60E-02 | 4.86E-03 | 3.90E-04 | 1.04E-02 | 1.05E-02 | 1.51E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.43E-04 | 1.34E-04 | 1.99E-04 | 2.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.81E-04 |
| 30 | 1 | 1.86E-03 | 5.62E-04 | 8.33E-04 | 8.58E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.11E-03 |
| 31 | 1 | 2.42E-02 | 7.34E-03 | 1.09E-02 | 1.12E-02 | 2.05E-03 | 1.64E-04 | 3.49E-03 | 2.56E-03 | 6.19E-02 |

**World Logistics Center** REV 5 **2012 Phase 1** No Mitigation
**Peak Hour Nox** Emissions

## Emission Assumptions

With EMFAC2014

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emissin Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Peak Hour Nox**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 6.98E-01 | 4.16E-02 |
| Light Logistics | Phase 1 | 1.15E-03 | 1.27E-04 |
| Utilities Service Station | Phase 1 | 7.68E-04 | 1.21E-04 |
| Gas Station w/Convenience Store | Phase 1 | 1.55E-03 | 3.70E-05 |
| Convenience Store | Phase 1 | 1.71E-03 | 4.57E-05 |
| Fire Station | Phase 1 | 2.68E-07 | 7.84E-05 |
| Total | | 7.03E-01 | 4.20E-02 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 7.67E-01 | 7.71E-03 |
| Light Logistics | Phase 1 | 2.44E-03 | 2.83E-05 |
| Utilities Service Station | Phase 1 | 3.29E-03 | 5.28E-05 |
| Gas Station w/Convenience Store | Phase 1 | 1.03E-02 | 8.72E-05 |
| Convenience Store | Phase 1 | 1.10E-02 | 1.07E-04 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 7.94E-01 | 7.98E-03 |

| **Total Onsite Emission** | | Emissions (g/sec) | Emissions (g/sec) | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.03E-01 | 4.20E-02 | |
| | Idling Emissions (g/sec) | 7.94E-01 | 7.98E-03 | |
| | Total Vehicle Emissions (g/sec) | 1.50E+00 | 5.00E-02 | |
| **Other Onsitie Sources** | Yard Trucks (LPG) (g/sec) | | 1.77E+00 | |
| | Fork Lifts (LPG) (g/sec) | | 1.40E-01 | |
| | Total Other Onsite Sources (g/sec) | | 1.91E+00 | |
| | | | | Total |
| | Total Emissions (g/sec) | 1.50E+00 | 1.96E+00 | 3.45E+00 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 7.37E-07 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 3 | 330 | 0.21 | 3.34E-01 | 7.37E-04 | 9.29E-05 | |
| | **LDT1** | 15 | 1.080 | 0 | 330 | 0.21 | 3.77E-02 | 8.30E-05 | 1.05E-05 | |
| | **LDT2** | 15 | 0.170 | 0 | 330 | 0.21 | 5.75E-03 | 1.27E-05 | 1.60E-06 | |
| | **MDT** | 15 | 0.190 | 0 | 330 | 0.21 | 1.11E-02 | 2.45E-05 | 3.09E-06 | |
| | **LHDT1** | 15 | 4.180 | 34 | 330 | 0.21 | 2.89E+01 | 6.36E-02 | 8.02E-03 | |
| | **LHDT2** | 15 | 3.880 | 11 | 330 | 0.21 | 8.76E+00 | 1.93E-02 | 2.43E-03 | |
| | **MHDT** | 15 | 11.540 | 181 | 330 | 0.21 | 4.29E+02 | 9.44E-01 | 1.19E-01 | |
| | **HHDT** | 15 | 17.170 | 581 | 330 | 0.21 | 2.04E+03 | 4.50E+00 | 5.68E-01 | |
| | | | | | | | | | | 6.98E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 1.12E-03 | 2.46E-06 | 3.11E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 1.26E-04 | 2.78E-07 | 3.50E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 1.92E-05 | 4.23E-08 | 5.34E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 3.72E-05 | 8.20E-08 | 1.03E-08 | |
| | **LHDT1** | 15 | 4.180 | 0 | 175 | 0.11 | 8.51E-02 | 1.88E-04 | 2.37E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 175 | 0.11 | 2.59E-02 | 5.69E-05 | 7.18E-06 | |
| | **MHDT** | 15 | 11.540 | 1 | 175 | 0.11 | 6.99E-01 | 1.54E-03 | 1.94E-04 | |
| | **HHDT** | 15 | 17.170 | 2 | 175 | 0.11 | 3.31E+00 | 7.30E-03 | 9.20E-04 | 1.15E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 9.88E-04 | 2.18E-06 | 2.74E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 1.11E-04 | 2.45E-07 | 3.09E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 1.70E-05 | 3.74E-08 | 4.72E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 3.29E-05 | 7.24E-08 | 9.14E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 100 | 0.06 | 1.52E-01 | 3.36E-04 | 4.24E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 100 | 0.06 | 4.63E-02 | 1.02E-04 | 1.29E-05 | |
| | **MHDT** | 15 | 11.540 | 1 | 100 | 0.06 | 5.64E-01 | 1.24E-03 | 1.57E-04 | |
| | **HHDT** | 15 | 17.170 | 2 | 100 | 0.06 | 2.00E+00 | 4.41E-03 | 5.56E-04 | 7.68E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 2.67E-04 | 5.88E-07 | 7.42E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.01E-05 | 6.63E-08 | 8.36E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 4.59E-06 | 1.01E-08 | 1.27E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 8.89E-06 | 1.96E-08 | 2.47E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 5.57E-04 | 1.23E-06 | 1.55E-07 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 1.69E-04 | 3.73E-07 | 4.70E-08 | |
| | **MHDT** | 15 | 11.540 | 2 | 50 | 0.03 | 6.80E-01 | 1.50E-03 | 1.89E-04 | |
| | **HHDT** | 15 | 17.170 | 9 | 50 | 0.03 | 4.89E+00 | 1.08E-02 | 1.36E-03 | 1.55E-03 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.32E-04 | 7.32E-07 | 9.23E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.74E-05 | 8.25E-08 | 1.04E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 5.71E-06 | 1.26E-08 | 1.59E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.11E-05 | 2.44E-08 | 3.07E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 2.39E-02 | 5.26E-05 | 6.63E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 7.25E-03 | 1.60E-05 | 2.01E-06 | |
| | **MHDT** | 15 | 11.540 | 1 | 50 | 0.03 | 5.18E-01 | 1.14E-03 | 1.44E-04 | |
| | **HHDT** | 15 | 17.170 | 11 | 50 | 0.03 | 5.62E+00 | 1.24E-02 | 1.56E-03 | 1.71E-03 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 8.30E-04 | 1.83E-06 | 2.31E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 9.36E-05 | 2.06E-07 | 2.60E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 1.43E-05 | 3.14E-08 | 3.97E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 2.76E-05 | 6.09E-08 | 7.68E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 11.540 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-07 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 3.38E-01 | 7.45E-04 | 9.39E-05 | |
| | **LDT1** | | | 0 | | | 3.81E-02 | 8.39E-05 | 1.06E-05 | |
| | **LDT2** | | | 0 | | | 5.81E-03 | 1.28E-05 | 1.61E-06 | |
| | **MDT** | | | 0 | | | 1.13E-02 | 2.48E-05 | 3.13E-06 | |
| | **LHDT1** | | | 35 | | | 2.91E+01 | 6.41E-02 | 8.09E-03 | |
| | **LHDT2** | | | 11 | | | 8.84E+00 | 1.95E-02 | 2.46E-03 | |
| | **MHDT** | | | 186 | | | 4.31E+02 | 9.50E-01 | 1.20E-01 | |
| | **HHDT** | | | 604 | | | 2.06E+03 | 4.54E+00 | 5.72E-01 | |
| | **Total** | | | 840 | | | 2.53E+03 | 5.57E+00 | 7.03E-01 | 7.03E-01 |

**Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 17 | 1.05E+02 | 2.32E-01 | 2.93E-02 | |
| | **LHDT2** | 75.050 | 5 | 6 | 3.45E+01 | 7.59E-02 | 9.57E-03 | |
| | **MHDT** | 111.200 | 5 | 91 | 8.40E+02 | 1.85E+00 | 2.33E-01 | |
| | **HHDT** | 73.560 | 5 | 290 | 1.78E+03 | 3.92E+00 | 4.95E-01 | |
| | | | | 403 | 2.76E+03 | 6.08E+00 | 7.67E-01 | 7.67E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 0 | 5.86E-01 | 1.29E-03 | 1.63E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.92E-01 | 4.22E-04 | 5.32E-05 | |
| | **MHDT** | 111.200 | 5 | 0 | 2.58E+00 | 5.69E-03 | 7.17E-04 | |
| | **HHDT** | 73.560 | 5 | 1 | 5.44E+00 | 1.20E-02 | 1.51E-03 | |
| | | | | 1 | 8.80E+00 | 1.94E-02 | 2.44E-03 | 2.44E-03 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 1.84E+00 | 4.05E-03 | 5.10E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 6.01E-01 | 1.32E-03 | 1.67E-04 | |
| | **MHDT** | 111.200 | 5 | 0 | 3.64E+00 | 8.03E-03 | 1.01E-03 | |
| | **HHDT** | 73.560 | 5 | 1 | 5.75E+00 | 1.27E-02 | 1.60E-03 | |
| | | | | 2 | 1.18E+01 | 2.61E-02 | 3.29E-03 | 3.29E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 1.34E-02 | 2.95E-05 | 3.73E-06 | |
| | **LHDT2** | 75.050 | 5 | 0 | 4.39E-03 | 9.67E-06 | 1.22E-06 | |
| | **MHDT** | 111.200 | 5 | 1 | 8.79E+00 | 1.94E-02 | 2.44E-03 | |
| | **HHDT** | 73.560 | 5 | 5 | 2.81E+01 | 6.19E-02 | 7.80E-03 | |
| | | | | 6 | 3.69E+01 | 8.13E-02 | 1.03E-02 | 1.03E-02 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 5.75E-01 | 1.27E-03 | 1.60E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.88E-01 | 4.14E-04 | 5.22E-05 | |
| | **MHDT** | 111.200 | 5 | 1 | 6.70E+00 | 1.47E-02 | 1.86E-03 | |
| | **HHDT** | 73.560 | 5 | 5 | 3.23E+01 | 7.12E-02 | 8.98E-03 | |
| | | | | 6 | 3.98E+01 | 8.76E-02 | 1.10E-02 | 1.10E-02 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 2.86E+03 | 6.29E+00 | 7.94E-01 | 7.94E-01 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 1004 | 330 | 0.21 | 4.08E+01 | 8.98E-02 | 1.13E-02 | |
| | **LDT1** | 15 | 0.549 | 119 | 330 | 0.21 | 1.34E+01 | 2.95E-02 | 3.72E-03 | |
| | **LDT2** | 15 | 0.393 | 363 | 330 | 0.21 | 2.92E+01 | 6.44E-02 | 8.12E-03 | |
| | **MDT** | 15 | 0.528 | 280 | 330 | 0.21 | 3.03E+01 | 6.67E-02 | 8.41E-03 | |
| | **LHDT1** | 15 | 0.559 | 109 | 330 | 0.21 | 1.25E+01 | 2.75E-02 | 3.46E-03 | |
| | **LHDT2** | 15 | 0.558 | 11 | 330 | 0.21 | 1.30E+00 | 2.87E-03 | 3.62E-04 | |
| | **MHDT** | 15 | 1.612 | 41 | 330 | 0.21 | 1.37E+01 | 3.01E-02 | 3.80E-03 | |
| | **HHDT** | 15 | 4.218 | 10 | 330 | 0.21 | 8.62E+00 | 1.90E-02 | 2.39E-03 | |
| | | | | | | | | | | 4.16E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 6 | 175 | 0.11 | 1.36E-01 | 3.00E-04 | 3.78E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 175 | 0.11 | 4.47E-02 | 9.85E-05 | 1.24E-05 | |
| | **LDT2** | 15 | 0.393 | 2 | 175 | 0.11 | 9.77E-02 | 2.15E-04 | 2.71E-05 | |
| | **MDT** | 15 | 0.528 | 2 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LHDT1** | 15 | 0.559 | 1 | 175 | 0.11 | 3.68E-02 | 8.10E-05 | 1.02E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 175 | 0.11 | 3.84E-03 | 8.47E-06 | 1.07E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 175 | 0.11 | 2.23E-02 | 4.91E-05 | 6.19E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 1.40E-02 | 3.08E-05 | 3.88E-06 | 1.27E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 10 | 100 | 0.06 | 1.20E-01 | 2.65E-04 | 3.34E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 100 | 0.06 | 3.95E-02 | 8.71E-05 | 1.10E-05 | |
| | **LDT2** | 15 | 0.393 | 4 | 100 | 0.06 | 8.63E-02 | 1.90E-04 | 2.40E-05 | |
| | **MDT** | 15 | 0.528 | 3 | 100 | 0.06 | 8.94E-02 | 1.97E-04 | 2.48E-05 | |
| | **LHDT1** | 15 | 0.559 | 2 | 100 | 0.06 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 6.89E-03 | 1.52E-05 | 1.91E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 1.80E-02 | 3.96E-05 | 4.99E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 8.44E-03 | 1.86E-05 | 2.34E-06 | 1.21E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 5 | 50 | 0.03 | 3.25E-02 | 7.17E-05 | 9.04E-06 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.07E-02 | 2.35E-05 | 2.97E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 6.48E-06 | |
| | **MDT** | 15 | 0.528 | 1 | 50 | 0.03 | 2.42E-02 | 5.32E-05 | 6.71E-06 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 2.41E-04 | 5.30E-07 | 6.69E-08 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 2.52E-05 | 5.54E-08 | 6.99E-09 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 6.03E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.06E-02 | 4.54E-05 | 5.72E-06 | 3.70E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 7 | 50 | 0.03 | 4.05E-02 | 8.92E-05 | 1.12E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.33E-02 | 2.93E-05 | 3.69E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.90E-02 | 6.39E-05 | 8.06E-06 | |
| | **MDT** | 15 | 0.528 | 2 | 50 | 0.03 | 3.01E-02 | 6.62E-05 | 8.35E-06 | |
| | **LHDT1** | 15 | 0.559 | 1 | 50 | 0.03 | 1.03E-02 | 2.27E-05 | 2.87E-06 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 1.08E-03 | 2.37E-06 | 2.99E-07 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 1.65E-02 | 3.64E-05 | 4.59E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.37E-02 | 5.22E-05 | 6.58E-06 | 4.57E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 16 | 50 | 0.03 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LDT1** | 15 | 0.549 | 2 | 50 | 0.03 | 3.32E-02 | 7.32E-05 | 9.23E-06 | |
| | **LDT2** | 15 | 0.393 | 6 | 50 | 0.03 | 7.25E-02 | 1.60E-04 | 2.02E-05 | |
| | **MDT** | 15 | 0.528 | 5 | 50 | 0.03 | 7.52E-02 | 1.66E-04 | 2.09E-05 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.84E-05 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 4.12E+01 | 9.07E-02 | 1.14E-02 | |
| | **LDT1** | | | 124 | | | 1.35E+01 | 2.98E-02 | 3.76E-03 | |
| | **LDT2** | | | 379 | | | 2.95E+01 | 6.50E-02 | 8.20E-03 | |
| | **MDT** | | | 292 | | | 3.06E+01 | 6.74E-02 | 8.50E-03 | |
| | **LHDT1** | | | 112 | | | 1.26E+01 | 2.77E-02 | 3.50E-03 | |
| | **LHDT2** | | | 12 | | | 1.32E+00 | 2.90E-03 | 3.65E-04 | |
| | **MHDT** | | | 42 | | | 1.37E+01 | 3.03E-02 | 3.82E-03 | |
| | **HHDT** | | | 10 | | | 8.68E+00 | 1.91E-02 | 2.41E-03 | |
| | **Total** | | | 2020 | | | 1.51E+02 | 3.33E-01 | 4.20E-02 | 4.20E-02 |

**Non-Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 54 | 6.16E+00 | 1.36E-02 | 1.71E-03 | |
| | **LHDT2** | 1.380 | 5 | 6 | 6.56E-01 | 1.44E-03 | 1.82E-04 | |
| | **MHDT** | 1.870 | 5 | 21 | 3.22E+00 | 7.10E-03 | 8.95E-04 | |
| | **HHDT** | 42.650 | 5 | 5 | 1.77E+01 | 3.90E-02 | 4.92E-03 | |
| | | | | 86 | 2.77E+01 | 6.11E-02 | 7.71E-03 | 7.71E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 0 | 3.43E-02 | 7.55E-05 | 9.53E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.65E-03 | 8.03E-06 | 1.01E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 9.91E-03 | 2.18E-05 | 2.75E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 5.41E-02 | 1.19E-04 | 1.50E-05 | |
| | | | | 0 | 1.02E-01 | 2.25E-04 | 2.83E-05 | 2.83E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 1 | 1.07E-01 | 2.37E-04 | 2.99E-05 | |
| | **LHDT2** | 1.380 | 5 | 0 | 1.14E-02 | 2.52E-05 | 3.18E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 1.40E-02 | 3.08E-05 | 3.89E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 5.72E-02 | 1.26E-04 | 1.59E-05 | |
| | | | | 1 | 1.90E-01 | 4.19E-04 | 5.28E-05 | 5.28E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 7.85E-04 | 1.73E-06 | 2.18E-07 | |
| | **LHDT2** | 1.380 | 5 | 0 | 8.35E-05 | 1.84E-07 | 2.32E-08 | |
| | **MHDT** | 1.870 | 5 | 0 | 3.37E-02 | 7.43E-05 | 9.37E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 2.79E-01 | 6.16E-04 | 7.76E-05 | |
| | | | | 0 | 3.14E-01 | 6.92E-04 | 8.72E-05 | 8.72E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 3.36E-02 | 7.41E-05 | 9.35E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.58E-03 | 7.88E-06 | 9.94E-07 | |
| | **MHDT** | 1.870 | 5 | 0 | 2.57E-02 | 5.66E-05 | 7.14E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 3.21E-01 | 7.08E-04 | 8.93E-05 | |
| | | | | 1 | 3.84E-01 | 8.47E-04 | 1.07E-04 | 1.07E-04 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 2.87E+01 | 6.33E-02 | 7.98E-03 | 7.98E-03 |

## World Logistics Center

Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truc Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there trucks tested but one had active low pressure faults during testing, so the other truck testing results were u

, 2013

k Emission
e were two LPG
used.

## World Logistics Center

Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Higl |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 |
| | | | | | |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 |
| | | | | | |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 |
| | | | | | |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). I
lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com
PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 5
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6
HP 51-120 for forklift.

hland Fairview 10/11/13)

| PM2.5 | CO2 |
|---|---|
| 0.5101 | 510.8225 |

| PM2.5 | CO2e |
|---|---|
| 0.883797 | -0.30722 |

| PM2.5 | CO2e |
|---|---|
| 0.0593 | 667.7574 |

| PM2.5 | CO2e |
|---|---|
| 0.15 | 1639.48 |
| 0.02 | 213.13 |
| | |
| 0.0364 | 409.8695 |
| 0.0043 | 48.6603 |
| | |
| 0.0204 | 229.5269 |
| 0.0026 | 28.9459 |
| 0.0024 | 27.2498 |
| 0.0003 | 3.4365 |
| | |
| 0.0160 | 180.3426 |
| 0.0020 | 22.7432 |
| 0.0019 | 21.4105 |
| 0.0002 | 2.7001 |

http://www.cat-

ı/_cat/PDFs/CLT-PDF030/CLT-

51-120
5, Min Year 2015, Max Year 2019,

**World Logistics Center** | **2012** | **Peak Hour Nox** | Based on PB Traffic Results 10/3/2013
**Project-Only Emissions** | **Phase 1** | REV 5 | Without Mitigation
**Internal Roadway Circulation** | | | With EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 4.22E-01 | 2.13E-02 | 4.44E-01 |
| 2 | 1.10E+00 | 5.41E-02 | 1.16E+00 |
| 3 | 1.73E+00 | 8.73E-02 | 1.82E+00 |
| 5 | 7.84E-02 | 1.43E-02 | 9.27E-02 |
| 6 | 4.80E-01 | 3.19E-02 | 5.12E-01 |
| 8 | 6.12E-02 | 2.98E-02 | 9.11E-02 |
| 11 | 4.49E-07 | 8.68E-05 | 8.73E-05 |
| 12 | 1.46E-03 | 9.02E-04 | 2.36E-03 |
| 14 | 2.75E-01 | 1.22E-02 | 2.87E-01 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.78E-06 | 3.45E-04 | 3.47E-04 |
| 21 | 7.51E-02 | 1.05E-02 | 8.55E-02 |
| 24 | 1.12E-01 | 1.59E-02 | 1.28E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 5.04E-07 | 9.76E-05 | 9.81E-05 |
| 30 | 2.11E-06 | 4.09E-04 | 4.11E-04 |
| 31 | 3.09E-02 | 6.51E-03 | 3.74E-02 |
| | | Total | 4.66E+00 |

| ID | Arterial | From | To | 2012 With Project Phase 1(Pk PM) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 1,056 | 74 | 169 | 530 |
| 2 | Street A | Eucalyptus Ave | Street F | 1,093 | 139 | 185 | 620 |
| 3 | Street E | west of Street A | | 569 | 62 | 92 | 303 |
| 5 | Street E | Street D | Street A | 326 | 18 | 24 | 25 |
| 6 | Street A | Street F | Street C | 491 | 50 | 67 | 171 |
| 8 | Street D | Street E | Cactus Ave | 623 | 34 | 43 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 2 | 0 | 0 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 23 | 3 | 1 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 125 | 8 | 13 | 75 |
| 18 | Street B | east of Street A | Theodore St | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | | 4 | 0 | 0 | 0 |
| 21 | Street C | east of Street A | | 178 | 8 | 15 | 20 |
| 24 | Street C | Street F | Street H | 176 | 7 | 15 | 19 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 4 | 0 | 0 | 0 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 4 | 0 | 0 | 0 |
| 31 | Gilman Springs Rd | south of Street C | | 180 | 7 | 12 | 11 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012 Peak Hour Nox Phase 1** Without Mitigation
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1829 | 1,056 | 74 | 169 | 530 | 327 | 0.203 | 2 | 0 | 0 | 0 | 15 | 5 | 136 | 518 | 677 |
| 2 | 2037 | 1,093 | 139 | 185 | 620 | 731 | 0.454 | 2 | 0 | 0 | 0 | 28 | 10 | 149 | 606 | 795 |
| 3 | 1026 | 569 | 62 | 92 | 303 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 74 | 296 | 388 |
| 5 | 393 | 326 | 18 | 24 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 4 | 1 | 19 | 24 | 49 |
| 6 | 779 | 491 | 50 | 67 | 171 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 10 | 3 | 54 | 167 | 236 |
| 8 | 700 | 623 | 34 | 43 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 7 | 2 | 35 | 0 | 45 |
| 11 | 2 | 2 | 0 | 0 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 27 | 23 | 3 | 1 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 14 | 221 | 125 | 8 | 13 | 75 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 2 | 1 | 10 | 73 | 86 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 4 | 4 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 221 | 178 | 8 | 15 | 20 | 1258 | 0.781 | 0 | 0 | 0 | 0 | 2 | 1 | 12 | 20 | 34 |
| 24 | 217 | 176 | 7 | 15 | 19 | 1946 | 1.209 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 19 | 33 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 210 | 180 | 7 | 12 | 11 | 820 | 0.509 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 11 | 23 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5400 | 1.2800 | 0.1400 | 0.1700 | 4.5500 | 4.2100 | 8.1800 | 12.1200 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.58E-05 | 6.37E-06 | 6.85E-07 | 1.61E-06 | 3.86E-03 | 1.22E-03 | 6.28E-02 | 3.54E-01 | 4.22E-01 |
| 2 | 1 | 1.29E-04 | 1.47E-05 | 1.58E-06 | 3.72E-06 | 1.62E-02 | 5.11E-03 | 1.54E-01 | 9.27E-01 | 1.10E+00 |
| 3 | 1 | 2.16E-04 | 2.47E-05 | 2.65E-06 | 6.24E-06 | 2.33E-02 | 7.33E-03 | 2.46E-01 | 1.46E+00 | 1.73E+00 |
| 5 | 1 | 5.02E-05 | 5.73E-06 | 6.16E-07 | 1.45E-06 | 2.74E-03 | 8.62E-04 | 2.60E-02 | 4.87E-02 | 7.84E-02 |
| 6 | 1 | 8.73E-05 | 9.95E-06 | 1.07E-06 | 2.52E-06 | 8.78E-03 | 2.76E-03 | 8.37E-02 | 3.84E-01 | 4.80E-01 |
| 8 | 1 | 1.10E-04 | 1.25E-05 | 1.35E-06 | 3.17E-06 | 5.92E-03 | 1.86E-03 | 5.33E-02 | 0.00E+00 | 6.12E-02 |
| 11 | 1 | 3.88E-07 | 4.43E-08 | 4.76E-09 | 1.12E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.49E-07 |
| 12 | 1 | 3.07E-06 | 3.49E-07 | 3.76E-08 | 8.83E-08 | 3.95E-04 | 1.24E-04 | 9.37E-04 | 0.00E+00 | 1.46E-03 |
| 14 | 1 | 3.27E-05 | 3.73E-06 | 4.01E-07 | 9.43E-07 | 2.07E-03 | 6.50E-04 | 2.39E-02 | 2.48E-01 | 2.75E-01 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.54E-06 | 1.76E-07 | 1.89E-08 | 4.45E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.78E-06 |
| 21 | 1 | 3.62E-05 | 4.13E-06 | 4.44E-07 | 1.04E-06 | 1.61E-03 | 5.06E-04 | 2.15E-02 | 5.15E-02 | 7.51E-02 |
| 24 | 1 | 5.54E-05 | 6.31E-06 | 6.79E-07 | 1.60E-06 | 2.18E-03 | 6.84E-04 | 3.32E-02 | 7.56E-02 | 1.12E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.37E-07 | 4.98E-08 | 5.36E-09 | 1.26E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.04E-07 |
| 30 | 1 | 1.83E-06 | 2.08E-07 | 2.24E-08 | 5.27E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.11E-06 |
| 31 | 1 | 2.39E-05 | 2.72E-06 | 2.93E-07 | 6.88E-07 | 9.17E-04 | 2.88E-04 | 1.12E-02 | 1.84E-02 | 3.09E-02 |

**World Logistics Center** **2012 Peak Hour Nox Phase 1** Without Mitigation
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1829 | 1,056 | 74 | 169 | 530 | 327 | 0.203 | 605 | 71 | 211 | 167 | 49 | 5 | 33 | 12 | 1152 |
| 2 | 2037 | 1,093 | 139 | 185 | 620 | 731 | 0.454 | 626 | 73 | 218 | 173 | 91 | 10 | 36 | 14 | 1242 |
| 3 | 1026 | 569 | 62 | 92 | 303 | 2352 | 1.461 | 326 | 38 | 114 | 90 | 41 | 4 | 18 | 7 | 638 |
| 5 | 393 | 326 | 18 | 24 | 25 | 953 | 0.592 | 187 | 22 | 65 | 52 | 12 | 1 | 5 | 1 | 344 |
| 6 | 779 | 491 | 50 | 67 | 171 | 1099 | 0.683 | 281 | 33 | 98 | 78 | 33 | 3 | 13 | 4 | 543 |
| 8 | 700 | 623 | 34 | 43 | 0 | 1091 | 0.678 | 357 | 42 | 124 | 99 | 22 | 2 | 8 | 0 | 655 |
| 11 | 2 | 2 | 0 | 0 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 12 | 27 | 23 | 3 | 1 | 0 | 824 | 0.512 | 13 | 2 | 5 | 4 | 2 | 0 | 0 | 0 | 25 |
| 14 | 221 | 125 | 8 | 13 | 75 | 1618 | 1.005 | 72 | 8 | 25 | 20 | 5 | 1 | 3 | 2 | 135 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 4 | 4 | 0 | 0 | 0 | 2386 | 1.482 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 21 | 221 | 178 | 8 | 15 | 20 | 1258 | 0.781 | 102 | 12 | 36 | 28 | 5 | 1 | 3 | 0 | 187 |
| 24 | 217 | 176 | 7 | 15 | 19 | 1946 | 1.209 | 101 | 12 | 35 | 28 | 5 | 0 | 3 | 0 | 184 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 31 | 210 | 180 | 7 | 12 | 11 | 820 | 0.509 | 103 | 12 | 36 | 28 | 5 | 0 | 2 | 0 | 187 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1400 | 0.3800 | 0.2500 | 0.3400 | 0.5500 | 0.5000 | 1.7400 | 6.0100 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.78E-03 | 1.52E-03 | 2.97E-03 | 3.21E-03 | 1.51E-03 | 1.45E-04 | 3.23E-03 | 3.97E-03 | 2.13E-02 |
| 2 | 1 | 1.11E-02 | 3.52E-03 | 6.88E-03 | 7.42E-03 | 6.35E-03 | 6.08E-04 | 7.90E-03 | 1.04E-02 | 5.41E-02 |
| 3 | 1 | 1.85E-02 | 5.90E-03 | 1.15E-02 | 1.24E-02 | 9.11E-03 | 8.73E-04 | 1.26E-02 | 1.63E-02 | 8.73E-02 |
| 5 | 1 | 4.30E-03 | 1.37E-03 | 2.67E-03 | 2.88E-03 | 1.07E-03 | 1.03E-04 | 1.34E-03 | 5.45E-04 | 1.43E-02 |
| 6 | 1 | 7.47E-03 | 2.38E-03 | 4.65E-03 | 5.01E-03 | 3.43E-03 | 3.29E-04 | 4.30E-03 | 4.30E-03 | 3.19E-02 |
| 8 | 1 | 9.41E-03 | 2.99E-03 | 5.85E-03 | 6.31E-03 | 2.32E-03 | 2.22E-04 | 2.74E-03 | 0.00E+00 | 2.98E-02 |
| 11 | 1 | 3.32E-05 | 1.06E-05 | 2.07E-05 | 2.23E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.68E-05 |
| 12 | 1 | 2.62E-04 | 8.35E-05 | 1.63E-04 | 1.76E-04 | 1.54E-04 | 1.48E-05 | 4.81E-05 | 0.00E+00 | 9.02E-04 |
| 14 | 1 | 2.80E-03 | 8.91E-04 | 1.74E-03 | 1.88E-03 | 8.08E-04 | 7.75E-05 | 1.23E-03 | 2.78E-03 | 1.22E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.32E-04 | 4.20E-05 | 8.22E-05 | 8.86E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.45E-04 |
| 21 | 1 | 3.10E-03 | 9.87E-04 | 1.93E-03 | 2.08E-03 | 6.29E-04 | 6.02E-05 | 1.10E-03 | 5.76E-04 | 1.05E-02 |
| 24 | 1 | 4.74E-03 | 1.51E-03 | 2.95E-03 | 3.18E-03 | 8.51E-04 | 8.15E-05 | 1.71E-03 | 8.46E-04 | 1.59E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.74E-05 | 1.19E-05 | 2.32E-05 | 2.51E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.76E-05 |
| 30 | 1 | 1.57E-04 | 4.98E-05 | 9.73E-05 | 1.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-04 |
| 31 | 1 | 2.04E-03 | 6.50E-04 | 1.27E-03 | 1.37E-03 | 3.59E-04 | 3.44E-05 | 5.75E-04 | 2.07E-04 | 6.51E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emision Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | |
|---|---|---|---|
| | 2012 | Phase 1 | No Mitigation |

**Vehicle Running Exhaust Emissions**

| | | Pollutant | Annual Nox |
|---|---|---|---|

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 2.31E-01 | 2.63E-02 |
| Light Logistics | Phase 1 | 4.39E-04 | 6.02E-05 |
| Utilities Service Station | Phase 1 | 3.30E-04 | 5.41E-05 |
| Gas Station w/Convenience Store | Phase 1 | 5.84E-04 | 1.79E-05 |
| Convenience Store | Phase 1 | 9.16E-04 | 2.92E-05 |
| Fire Station | Phase 1 | 5.02E-08 | 1.54E-05 |
| Total | | 2.33E-01 | 2.65E-02 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 2.54E-01 | 3.10E-03 |
| Light Logistics | Phase 1 | 9.60E-04 | 1.27E-05 |
| Utilities Service Station | Phase 1 | 1.30E-03 | 2.45E-05 |
| Gas Station w/Convenience Store | Phase 1 | 3.79E-03 | 4.44E-05 |
| Convenience Store | Phase 1 | 5.98E-03 | 6.95E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 2.66E-01 | 3.25E-03 |

**Total Onsite Mobile Emission**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 2.33E-01 | 2.65E-02 | |
| | Idling Emissions (g/sec) | 2.66E-01 | 3.25E-03 | |
| | Total Vehicle Emissions (g/sec) | 4.99E-01 | 2.98E-02 | 5.29E-01 |
| **Other Onsite Sources** | Yard Trucks (LPG) (g/sec) | | 5.15E-01 | |
| | Forklifts (LPG) (g/sec) | | 1.66E-02 | |
| | Total Other Onsite Sources (g/sec) | | 5.32E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 4.99E-01 | 5.61E-01 | 1.06E+00 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 2.26E-07 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 53 | 330 | 0.21 | 5.56E+00 | 1.22E-02 | 6.43E-05 | |
| | **LDT1** | 15 | 1.080 | 3 | 330 | 0.21 | 5.66E-01 | 1.25E-03 | 6.55E-06 | |
| | **LDT2** | 15 | 0.170 | 3 | 330 | 0.21 | 8.76E-02 | 1.93E-04 | 1.01E-06 | |
| | **MDT** | 15 | 0.190 | 5 | 330 | 0.21 | 1.90E-01 | 4.18E-04 | 2.19E-06 | |
| | **LHDT1** | 15 | 4.180 | 274 | 330 | 0.21 | 2.35E+02 | 5.17E-01 | 2.72E-03 | |
| | **LHDT2** | 15 | 3.880 | 93 | 330 | 0.21 | 7.41E+01 | 1.63E-01 | 8.57E-04 | |
| | **MHDT** | 15 | 11.540 | 1425 | 330 | 0.21 | 3.37E+03 | 7.43E+00 | 3.90E-02 | |
| | **HHDT** | 15 | 17.170 | 4628 | 330 | 0.21 | 1.63E+04 | 3.59E+01 | 1.89E-01 | |
| | | | | | | | | | | 2.31E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 1.25E-02 | 2.76E-05 | 1.45E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 1.27E-03 | 2.81E-06 | 1.48E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 1.97E-04 | 4.35E-07 | 2.28E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 4.27E-04 | 9.40E-07 | 4.94E-09 | |
| | **LHDT1** | 15 | 4.180 | 2 | 175 | 0.11 | 7.79E-01 | 1.71E-03 | 9.01E-06 | |
| | **LHDT2** | 15 | 3.880 | 1 | 175 | 0.11 | 2.46E-01 | 5.41E-04 | 2.84E-06 | |
| | **MHDT** | 15 | 11.540 | 6 | 175 | 0.11 | 7.37E+00 | 1.62E-02 | 8.52E-05 | |
| | **HHDT** | 15 | 17.170 | 16 | 175 | 0.11 | 2.96E+01 | 6.51E-02 | 3.42E-04 | 4.39E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 1.05E-02 | 2.32E-05 | 1.22E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 1.07E-03 | 2.36E-06 | 1.24E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 1.66E-04 | 3.66E-07 | 1.92E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 3.60E-04 | 7.92E-07 | 4.16E-09 | |
| | **LHDT1** | 15 | 4.180 | 6 | 100 | 0.06 | 1.48E+00 | 3.27E-03 | 1.72E-05 | |
| | **LHDT2** | 15 | 3.880 | 2 | 100 | 0.06 | 4.69E-01 | 1.03E-03 | 5.42E-06 | |
| | **MHDT** | 15 | 11.540 | 5 | 100 | 0.06 | 3.48E+00 | 7.66E-03 | 4.03E-05 | |
| | **HHDT** | 15 | 17.170 | 22 | 100 | 0.06 | 2.30E+01 | 5.08E-02 | 2.67E-04 | 3.30E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.05E-03 | 6.72E-06 | 3.53E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.11E-04 | 6.85E-07 | 3.60E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 4.81E-05 | 1.06E-07 | 5.57E-10 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.04E-04 | 2.29E-07 | 1.21E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 50 | 0.03 | 1.04E-01 | 2.29E-04 | 1.20E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 3.29E-02 | 7.24E-05 | 3.80E-07 | |
| | **MHDT** | 15 | 11.540 | 14 | 50 | 0.03 | 4.93E+00 | 1.09E-02 | 5.71E-05 | |
| | **HHDT** | 15 | 17.170 | 85 | 50 | 0.03 | 4.53E+01 | 9.99E-02 | 5.25E-04 | 5.84E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 5.06E-03 | 1.11E-05 | 5.86E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 5.15E-04 | 1.14E-06 | 5.97E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 7.98E-05 | 1.76E-07 | 9.24E-10 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.73E-04 | 3.80E-07 | 2.00E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 50 | 0.03 | 1.59E-01 | 3.50E-04 | 1.84E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 5.02E-02 | 1.10E-04 | 5.81E-07 | |
| | **MHDT** | 15 | 11.540 | 23 | 50 | 0.03 | 8.07E+00 | 1.78E-02 | 9.34E-05 | |
| | **HHDT** | 15 | 17.170 | 133 | 50 | 0.03 | 7.09E+01 | 1.56E-01 | 8.21E-04 | 9.16E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.77E-03 | 8.30E-06 | 4.36E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.84E-04 | 8.45E-07 | 4.44E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 5.94E-05 | 1.31E-07 | 6.87E-10 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.28E-04 | 2.83E-07 | 1.49E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 11.540 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.02E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 5.59E+00 | 1.23E-02 | 6.47E-05 | |
| | **LDT1** | | | 3 | | | 5.69E-01 | 1.25E-03 | 6.59E-06 | |
| | **LDT2** | | | 3 | | | 8.82E-02 | 1.94E-04 | 1.02E-06 | |
| | **MDT** | | | 5 | | | 1.91E-01 | 4.20E-04 | 2.21E-06 | |
| | **LHDT1** | | | 283 | | | 2.37E+02 | 5.22E-01 | 2.75E-03 | |
| | **LHDT2** | | | 96 | | | 7.49E+01 | 1.65E-01 | 8.67E-04 | |
| | **MHDT** | | | 1472 | | | 3.40E+03 | 7.48E+00 | 3.93E-02 | |
| | **HHDT** | | | 4883 | | | 1.65E+04 | 3.62E+01 | 1.90E-01 | |
| | **Total** | | | 6800 | | | 2.02E+04 | 4.44E+01 | 2.33E-01 | 2.33E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 137 | 8.56E+02 | 1.89E+00 | 9.91E-03 | |
| | **LHDT2** | 75.050 | 5 | 47 | 2.91E+02 | 6.41E-01 | 3.37E-03 | |
| | **MHDT** | 111.200 | 5 | 713 | 6.60E+03 | 1.45E+01 | 7.64E-02 | |
| | **HHDT** | 73.560 | 5 | 2314 | 1.42E+04 | 3.12E+01 | 1.64E-01 | |
| | | | | 3210 | 2.19E+04 | 4.83E+01 | 2.54E-01 | 2.54E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 1 | 5.36E+00 | 1.18E-02 | 6.20E-05 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.82E+00 | 4.01E-03 | 2.11E-05 | |
| | **MHDT** | 111.200 | 5 | 3 | 2.72E+01 | 5.99E-02 | 3.15E-04 | |
| | **HHDT** | 73.560 | 5 | 8 | 4.86E+01 | 1.07E-01 | 5.62E-04 | |
| | | | | 12 | 8.29E+01 | 1.83E-01 | 9.60E-04 | 9.60E-04 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 3 | 1.79E+01 | 3.94E-02 | 2.07E-04 | |
| | **LHDT2** | 75.050 | 5 | 1 | 6.08E+00 | 1.34E-02 | 7.04E-05 | |
| | **MHDT** | 111.200 | 5 | 2 | 2.25E+01 | 4.95E-02 | 2.60E-04 | |
| | **HHDT** | 73.560 | 5 | 11 | 6.62E+01 | 1.46E-01 | 7.66E-04 | |
| | | | | 17 | 1.13E+02 | 2.48E-01 | 1.30E-03 | 1.30E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 2.51E+00 | 5.52E-03 | 2.90E-05 | |
| | **LHDT2** | 75.050 | 5 | 0 | 8.53E-01 | 1.88E-03 | 9.87E-06 | |
| | **MHDT** | 111.200 | 5 | 7 | 6.37E+01 | 1.40E-01 | 7.38E-04 | |
| | **HHDT** | 73.560 | 5 | 43 | 2.61E+02 | 5.74E-01 | 3.02E-03 | |
| | | | | 50 | 3.28E+02 | 7.22E-01 | 3.79E-03 | 3.79E-03 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 1 | 3.83E+00 | 8.43E-03 | 4.43E-05 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.30E+00 | 2.87E-03 | 1.51E-05 | |
| | **MHDT** | 111.200 | 5 | 11 | 1.04E+02 | 2.30E-01 | 1.21E-03 | |
| | **HHDT** | 73.560 | 5 | 66 | 4.07E+02 | 8.97E-01 | 4.72E-03 | |
| | | | | 79 | 5.17E+02 | 1.14E+00 | 5.98E-03 | 5.98E-03 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 2.30E+04 | 5.06E+01 | 2.66E-01 | 2.66E-01 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 17546 | 330 | 0.21 | 7.12E+02 | 1.57E+00 | 8.24E-03 | |
| | **LDT1** | 15 | 0.549 | 2058 | 330 | 0.21 | 2.31E+02 | 5.10E-01 | 2.68E-03 | |
| | **LDT2** | 15 | 0.393 | 6111 | 330 | 0.21 | 4.92E+02 | 1.08E+00 | 5.70E-03 | |
| | **MDT** | 15 | 0.528 | 4846 | 330 | 0.21 | 5.24E+02 | 1.15E+00 | 6.07E-03 | |
| | **LHDT1** | 15 | 0.559 | 886 | 330 | 0.21 | 1.02E+02 | 2.24E-01 | 1.18E-03 | |
| | **LHDT2** | 15 | 0.558 | 93 | 330 | 0.21 | 1.07E+01 | 2.35E-02 | 1.24E-04 | |
| | **MHDT** | 15 | 1.612 | 344 | 330 | 0.21 | 1.14E+02 | 2.51E-01 | 1.32E-03 | |
| | **HHDT** | 15 | 4.218 | 104 | 330 | 0.21 | 9.03E+01 | 1.99E-01 | 1.05E-03 | |
| | | | | | | | | | | 2.63E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 75 | 175 | 0.11 | 1.60E+00 | 3.53E-03 | 1.86E-05 | |
| | **LDT1** | 15 | 0.549 | 9 | 175 | 0.11 | 5.21E-01 | 1.15E-03 | 6.03E-06 | |
| | **LDT2** | 15 | 0.393 | 26 | 175 | 0.11 | 1.11E+00 | 2.44E-03 | 1.28E-05 | |
| | **MDT** | 15 | 0.528 | 21 | 175 | 0.11 | 1.18E+00 | 2.60E-03 | 1.37E-05 | |
| | **LHDT1** | 15 | 0.559 | 6 | 175 | 0.11 | 3.37E-01 | 7.42E-04 | 3.90E-06 | |
| | **LHDT2** | 15 | 0.558 | 1 | 175 | 0.11 | 3.54E-02 | 7.80E-05 | 4.10E-07 | |
| | **MHDT** | 15 | 1.612 | 1 | 175 | 0.11 | 2.49E-01 | 5.48E-04 | 2.88E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 1.64E-01 | 3.61E-04 | 1.90E-06 | 6.02E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 110 | 100 | 0.06 | 1.35E+00 | 2.98E-03 | 1.56E-05 | |
| | **LDT1** | 15 | 0.549 | 13 | 100 | 0.06 | 4.39E-01 | 9.67E-04 | 5.08E-06 | |
| | **LDT2** | 15 | 0.393 | 38 | 100 | 0.06 | 9.34E-01 | 2.06E-03 | 1.08E-05 | |
| | **MDT** | 15 | 0.528 | 30 | 100 | 0.06 | 9.94E-01 | 2.19E-03 | 1.15E-05 | |
| | **LHDT1** | 15 | 0.559 | 19 | 100 | 0.06 | 6.43E-01 | 1.42E-03 | 7.44E-06 | |
| | **LHDT2** | 15 | 0.558 | 2 | 100 | 0.06 | 6.76E-02 | 1.49E-04 | 7.82E-07 | |
| | **MHDT** | 15 | 1.612 | 1 | 100 | 0.06 | 1.17E-01 | 2.59E-04 | 1.36E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 1.28E-01 | 2.81E-04 | 1.48E-06 | 5.41E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 64 | 50 | 0.03 | 3.91E-01 | 8.62E-04 | 4.53E-06 | |
| | **LDT1** | 15 | 0.549 | 7 | 50 | 0.03 | 1.27E-01 | 2.80E-04 | 1.47E-06 | |
| | **LDT2** | 15 | 0.393 | 22 | 50 | 0.03 | 2.70E-01 | 5.96E-04 | 3.13E-06 | |
| | **MDT** | 15 | 0.528 | 18 | 50 | 0.03 | 2.88E-01 | 6.34E-04 | 3.33E-06 | |
| | **LHDT1** | 15 | 0.559 | 3 | 50 | 0.03 | 4.51E-02 | 9.93E-05 | 5.22E-07 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 4.74E-03 | 1.04E-05 | 5.48E-08 | |
| | **MHDT** | 15 | 1.612 | 3 | 50 | 0.03 | 1.66E-01 | 3.67E-04 | 1.93E-06 | |
| | **HHDT** | 15 | 4.218 | 2 | 50 | 0.03 | 2.51E-01 | 5.54E-04 | 2.91E-06 | 1.79E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 105 | 50 | 0.03 | 6.49E-01 | 1.43E-03 | 7.51E-06 | |
| | **LDT1** | 15 | 0.549 | 12 | 50 | 0.03 | 2.11E-01 | 4.64E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.393 | 37 | 50 | 0.03 | 4.48E-01 | 9.88E-04 | 5.19E-06 | |
| | **MDT** | 15 | 0.528 | 29 | 50 | 0.03 | 4.77E-01 | 1.05E-03 | 5.52E-06 | |
| | **LHDT1** | 15 | 0.559 | 4 | 50 | 0.03 | 6.88E-02 | 1.52E-04 | 7.96E-07 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 7.23E-03 | 1.59E-05 | 8.37E-08 | |
| | **MHDT** | 15 | 1.612 | 5 | 50 | 0.03 | 2.73E-01 | 6.00E-04 | 3.15E-06 | |
| | **HHDT** | 15 | 4.218 | 3 | 50 | 0.03 | 3.93E-01 | 8.66E-04 | 4.55E-06 | 2.92E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 78 | 50 | 0.03 | 4.83E-01 | 1.06E-03 | 5.59E-06 | |
| | **LDT1** | 15 | 0.549 | 9 | 50 | 0.03 | 1.57E-01 | 3.46E-04 | 1.82E-06 | |
| | **LDT2** | 15 | 0.393 | 27 | 50 | 0.03 | 3.34E-01 | 7.35E-04 | 3.86E-06 | |
| | **MDT** | 15 | 0.528 | 22 | 50 | 0.03 | 3.55E-01 | 7.82E-04 | 4.11E-06 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.54E-05 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 7.17E+02 | 1.58E+00 | 8.29E-03 | |
| | **LDT1** | | | 2108 | | | 2.33E+02 | 5.13E-01 | 2.70E-03 | |
| | **LDT2** | | | 6262 | | | 4.95E+02 | 1.09E+00 | 5.73E-03 | |
| | **MDT** | | | 4966 | | | 5.27E+02 | 1.16E+00 | 6.10E-03 | |
| | **LHDT1** | | | 917 | | | 1.03E+02 | 2.26E-01 | 1.19E-03 | |
| | **LHDT2** | | | 97 | | | 1.08E+01 | 2.38E-02 | 1.25E-04 | |
| | **MHDT** | | | 356 | | | 1.15E+02 | 2.52E-01 | 1.33E-03 | |
| | **HHDT** | | | 110 | | | 9.13E+01 | 2.01E-01 | 1.06E-03 | |
| | **Total** | | | 32792 | | | 2.29E+03 | 5.05E+00 | 2.65E-02 | 2.65E-02 |

**Non-Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 443 | 5.02E+01 | 1.11E-01 | 5.81E-04 | |
| | **LHDT2** | 1.380 | 5 | 47 | 5.37E+00 | 1.18E-02 | 6.22E-05 | |
| | **MHDT** | 1.870 | 5 | 172 | 2.68E+01 | 5.91E-02 | 3.11E-04 | |
| | **HHDT** | 42.650 | 5 | 52 | 1.86E+02 | 4.09E-01 | 2.15E-03 | |
| | | | | 714 | 2.68E+02 | 5.90E-01 | 3.10E-03 | 3.10E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 3 | 3.14E-01 | 6.92E-04 | 3.64E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.36E-02 | 7.40E-05 | 3.89E-07 | |
| | **MHDT** | 1.870 | 5 | 1 | 1.11E-01 | 2.43E-04 | 1.28E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 6.35E-01 | 1.40E-03 | 7.35E-06 | |
| | | | | 4 | 1.09E+00 | 2.41E-03 | 1.27E-05 | 1.27E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 9 | 1.05E+00 | 2.31E-03 | 1.21E-05 | |
| | **LHDT2** | 1.380 | 5 | 1 | 1.12E-01 | 2.47E-04 | 1.30E-06 | |
| | **MHDT** | 1.870 | 5 | 1 | 9.13E-02 | 2.01E-04 | 1.06E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 8.67E-01 | 1.91E-03 | 1.00E-05 | |
| | | | | 11 | 2.12E+00 | 4.67E-03 | 2.45E-05 | 2.45E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 1 | 1.47E-01 | 3.24E-04 | 1.70E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 1.57E-02 | 3.46E-05 | 1.82E-07 | |
| | **MHDT** | 1.870 | 5 | 2 | 2.59E-01 | 5.70E-04 | 3.00E-06 | |
| | **HHDT** | 42.650 | 5 | 1 | 3.41E+00 | 7.51E-03 | 3.95E-05 | |
| | | | | 4 | 3.83E+00 | 8.44E-03 | 4.44E-05 | 4.44E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 2 | 2.24E-01 | 4.94E-04 | 2.60E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 2.40E-02 | 5.29E-05 | 2.78E-07 | |
| | **MHDT** | 1.870 | 5 | 3 | 4.24E-01 | 9.34E-04 | 4.91E-06 | |
| | **HHDT** | 42.650 | 5 | 2 | 5.33E+00 | 1.17E-02 | 6.17E-05 | |
| | | | | 6 | 6.01E+00 | 1.32E-02 | 6.95E-05 | 6.95E-05 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.81E+02 | 6.19E-01 | 3.25E-03 | 3.25E-03 |

## World Logistics Center

Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truc Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were tw but one had active low pressure faults during testing, so the other truck testing results were used.

, 2013

k Emission Testing.
/o LPG trucks tested

## World Logistics Center

Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Higl |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 |
| | | | | | |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 |
| | | | | | |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 |
| | | | | | |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). I
lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com
PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 5
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6
HP 51-120 for forklift.

hland Fairview 10/11/13)

| PM2.5 | CO2 |
|---|---|
| 0.5101 | 510.8225 |

| PM2.5 | CO2e |
|---|---|
| 0.883797 | -0.30722 |

| PM2.5 | CO2e |
|---|---|
| 0.0593 | 667.7574 |

| PM2.5 | CO2e |
|---|---|
| 0.15 | 1639.48 |
| 0.02 | 213.13 |
| | |
| 0.0364 | 409.8695 |
| 0.0043 | 48.6603 |
| | |
| 0.0204 | 229.5269 |
| 0.0026 | 28.9459 |
| 0.0024 | 27.2498 |
| 0.0003 | 3.4365 |
| | |
| 0.0160 | 180.3426 |
| 0.0020 | 22.7432 |
| 0.0019 | 21.4105 |
| 0.0002 | 2.7001 |

http://www.cat-

ı/_cat/PDFs/CLT-PDF030/CLT-

51-120
5, Min Year 2015, Max Year 2019,

**World Logistics Center** | **2012** | **Annual Nox** | Based on PB Traffic Results 10/3/2013
**Project Only** | **Phase 1** | REV 5 | Without Mitigation
**Internal Roadway Circulation** | | | With EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 2.30E-01 | 1.28E-02 | 2.42E-01 |
| 2 | 5.48E-01 | 3.06E-02 | 5.79E-01 |
| 3 | 9.14E-01 | 5.02E-02 | 9.64E-01 |
| 5 | 1.94E-02 | 6.67E-03 | 2.61E-02 |
| 6 | 2.12E-01 | 1.76E-02 | 2.30E-01 |
| 8 | 2.65E-02 | 1.47E-02 | 4.12E-02 |
| 11 | 1.25E-04 | 6.35E-05 | 1.88E-04 |
| 12 | 1.16E-03 | 5.03E-04 | 1.66E-03 |
| 14 | 3.21E-02 | 2.91E-03 | 3.50E-02 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 6.13E-07 | 1.19E-04 | 1.19E-04 |
| 21 | 3.27E-02 | 5.56E-03 | 3.83E-02 |
| 24 | 4.65E-02 | 8.42E-03 | 5.50E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 2.18E-03 | 2.10E-04 | 2.39E-03 |
| 30 | 9.15E-03 | 8.80E-04 | 1.00E-02 |
| 31 | 2.30E-02 | 3.76E-03 | 2.67E-02 |
| | | | 2.25E+00 |

| ID | Arterial | From | To | 2012 With Project Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 16,625 | 727 | 2,291 | 6,889 |
| 2 | Street A | Eucalyptus Ave | Street F | 16,852 | 1,291 | 2,411 | 7,329 |
| 3 | Street E | west of Street A | | 8,580 | 607 | 1,255 | 3,797 |
| 5 | Street E | Street D | Street A | 3,952 | 134 | 237 | 93 |
| 6 | Street A | Street F | Street C | 7,443 | 427 | 796 | 1,777 |
| 8 | Street D | Street E | Cactus Ave | 7,702 | 281 | 459 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 30 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 318 | 25 | 25 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 906 | 34 | 63 | 194 |
| 18 | Street B | east of Street A | | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 33 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | 2,376 | 71 | 188 | 193 |
| 24 | Street C | Street F | Street H | 2,355 | 61 | 182 | 173 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 152 | 5 | 17 | 28 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 152 | 5 | 17 | 28 |
| 31 | Gilman Springs Rd | south of Street C | | 2,504 | 65 | 169 | 228 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **Annual Nox** **Phase 1** Without Mitigation
Project Only
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 29 | 1 | 1 | 3 | 148 | 50 | 1845 | 6737 | 8815 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 29 | 1 | 1 | 3 | 263 | 89 | 1942 | 7167 | 9496 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 123 | 42 | 1011 | 3713 | 4907 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 7 | 0 | 0 | 1 | 27 | 9 | 191 | 91 | 326 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 13 | 1 | 1 | 1 | 87 | 30 | 641 | 1738 | 2511 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 5 | 2 | 20 | 0 | 28 |
| 14 | 1197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 7 | 2 | 51 | 190 | 252 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 14 | 5 | 151 | 189 | 364 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 12 | 4 | 147 | 169 | 337 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 4 | 0 | 0 | 0 | 13 | 4 | 136 | 223 | 382 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5400 | 1.2800 | 0.1400 | 0.1700 | 4.5500 | 4.2100 | 8.1800 | 12.1200 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.66E-05 | 4.18E-06 | 4.49E-07 | 1.06E-06 | 1.58E-03 | 4.98E-04 | 3.55E-02 | 1.92E-01 | 2.30E-01 |
| 2 | 1 | 8.30E-05 | 9.46E-06 | 1.02E-06 | 2.39E-06 | 6.28E-03 | 1.98E-03 | 8.35E-02 | 4.57E-01 | 5.48E-01 |
| 3 | 1 | 1.36E-04 | 1.55E-05 | 1.67E-06 | 3.92E-06 | 9.50E-03 | 2.99E-03 | 1.40E-01 | 7.61E-01 | 9.14E-01 |
| 5 | 1 | 2.54E-05 | 2.89E-06 | 3.11E-07 | 7.32E-07 | 8.50E-04 | 2.67E-04 | 1.07E-02 | 7.55E-03 | 1.94E-02 |
| 6 | 1 | 5.51E-05 | 6.28E-06 | 6.76E-07 | 1.59E-06 | 3.12E-03 | 9.82E-04 | 4.14E-02 | 1.66E-01 | 2.12E-01 |
| 8 | 1 | 5.66E-05 | 6.45E-06 | 6.94E-07 | 1.63E-06 | 2.04E-03 | 6.42E-04 | 2.37E-02 | 0.00E+00 | 2.65E-02 |
| 11 | 1 | 2.43E-07 | 2.77E-08 | 2.98E-09 | 7.00E-09 | 7.99E-06 | 2.51E-06 | 1.14E-04 | 0.00E+00 | 1.25E-04 |
| 12 | 1 | 1.77E-06 | 2.01E-07 | 2.17E-08 | 5.09E-08 | 1.37E-04 | 4.31E-05 | 9.76E-04 | 0.00E+00 | 1.16E-03 |
| 14 | 1 | 9.88E-06 | 1.13E-06 | 1.21E-07 | 2.85E-07 | 3.66E-04 | 1.15E-04 | 4.83E-03 | 2.67E-02 | 3.21E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 5.31E-07 | 6.05E-08 | 6.51E-09 | 1.53E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.13E-07 |
| 21 | 1 | 2.01E-05 | 2.30E-06 | 2.47E-07 | 5.81E-07 | 5.94E-04 | 1.87E-04 | 1.12E-02 | 2.07E-02 | 3.27E-02 |
| 24 | 1 | 3.09E-05 | 3.52E-06 | 3.79E-07 | 8.90E-07 | 7.90E-04 | 2.49E-04 | 1.68E-02 | 2.87E-02 | 4.65E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 6.91E-07 | 7.88E-08 | 8.48E-09 | 1.99E-08 | 2.25E-05 | 7.07E-06 | 5.44E-04 | 1.61E-03 | 2.18E-03 |
| 30 | 1 | 2.90E-06 | 3.30E-07 | 3.55E-08 | 8.35E-08 | 9.41E-05 | 2.96E-05 | 2.28E-03 | 6.75E-03 | 9.15E-03 |
| 31 | 1 | 1.38E-05 | 1.58E-06 | 1.70E-07 | 3.99E-07 | 3.55E-04 | 1.12E-04 | 6.56E-03 | 1.59E-02 | 2.30E-02 |

**World Logistics Center** **2012** **Annual Nox** **Phase 1** Without Mitigation
Project Only
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26,532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 9525 | 1117 | 3318 | 2631 | 478 | 50 | 446 | 152 | 17717 |
| 2 | 27,883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 9655 | 1132 | 3363 | 2667 | 850 | 90 | 469 | 162 | 18387 |
| 3 | 14,239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 4916 | 576 | 1712 | 1358 | 399 | 42 | 244 | 84 | 9332 |
| 5 | 4,416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 2264 | 266 | 789 | 625 | 88 | 9 | 46 | 2 | 4090 |
| 6 | 10,443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 4264 | 500 | 1485 | 1178 | 281 | 30 | 155 | 39 | 7932 |
| 8 | 8,442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 182 | 21 | 63 | 50 | 16 | 2 | 5 | 0 | 340 |
| 14 | 1,197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 519 | 61 | 181 | 143 | 22 | 2 | 12 | 4 | 945 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 33 |
| 21 | 2,828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 1361 | 160 | 474 | 376 | 47 | 5 | 37 | 4 | 2464 |
| 24 | 2,771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 1349 | 158 | 470 | 373 | 40 | 4 | 35 | 4 | 2434 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 31 | 2,966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 1435 | 168 | 500 | 396 | 43 | 5 | 33 | 5 | 2584 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1400 | 0.3800 | 0.2500 | 0.3400 | 0.5500 | 0.5000 | 1.7400 | 6.0100 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.14E-03 | 9.98E-04 | 1.95E-03 | 2.10E-03 | 6.19E-04 | 5.93E-05 | 1.82E-03 | 2.15E-03 | 1.28E-02 |
| 2 | 1 | 7.10E-03 | 2.26E-03 | 4.42E-03 | 4.77E-03 | 2.46E-03 | 2.35E-04 | 4.29E-03 | 5.11E-03 | 3.06E-02 |
| 3 | 1 | 1.16E-02 | 3.70E-03 | 7.24E-03 | 7.81E-03 | 3.72E-03 | 3.56E-04 | 7.19E-03 | 8.52E-03 | 5.02E-02 |
| 5 | 1 | 2.17E-03 | 6.91E-04 | 1.35E-03 | 1.46E-03 | 3.32E-04 | 3.18E-05 | 5.50E-04 | 8.45E-05 | 6.67E-03 |
| 6 | 1 | 4.72E-03 | 1.50E-03 | 2.93E-03 | 3.16E-03 | 1.22E-03 | 1.17E-04 | 2.13E-03 | 1.86E-03 | 1.76E-02 |
| 8 | 1 | 4.85E-03 | 1.54E-03 | 3.01E-03 | 3.25E-03 | 7.98E-04 | 7.64E-05 | 1.22E-03 | 0.00E+00 | 1.47E-02 |
| 11 | 1 | 2.08E-05 | 6.61E-06 | 1.29E-05 | 1.39E-05 | 3.13E-06 | 2.99E-07 | 5.85E-06 | 0.00E+00 | 6.35E-05 |
| 12 | 1 | 1.51E-04 | 4.81E-05 | 9.40E-05 | 1.01E-04 | 5.36E-05 | 5.14E-06 | 5.01E-05 | 0.00E+00 | 5.03E-04 |
| 14 | 1 | 8.45E-04 | 2.69E-04 | 5.26E-04 | 5.67E-04 | 1.43E-04 | 1.37E-05 | 2.48E-04 | 2.99E-04 | 2.91E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 4.54E-05 | 1.45E-05 | 2.82E-05 | 3.05E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.19E-04 |
| 21 | 1 | 1.72E-03 | 5.49E-04 | 1.07E-03 | 1.16E-03 | 2.32E-04 | 2.23E-05 | 5.76E-04 | 2.32E-04 | 5.56E-03 |
| 24 | 1 | 2.64E-03 | 8.41E-04 | 1.64E-03 | 1.77E-03 | 3.09E-04 | 2.96E-05 | 8.62E-04 | 3.21E-04 | 8.42E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 5.92E-05 | 1.88E-05 | 3.68E-05 | 3.97E-05 | 8.78E-06 | 8.42E-07 | 2.79E-05 | 1.80E-05 | 2.10E-04 |
| 30 | 1 | 2.48E-04 | 7.89E-05 | 1.54E-04 | 1.66E-04 | 3.68E-05 | 3.52E-06 | 1.17E-04 | 7.55E-05 | 8.80E-04 |
| 31 | 1 | 1.18E-03 | 3.77E-04 | 7.36E-04 | 7.94E-04 | 1.39E-04 | 1.33E-05 | 3.37E-04 | 1.78E-04 | 3.76E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emssion Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | | |
|---|---|---|---|---|
| | | **2012** | **Phase 1** | **No Mitigation** |

**Vehicle Running Exhaust Emissions**

| | | | **Pollutant** | **PM2.5** |
|---|---|---|---|---|
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 1 | 8.89E-03 | 2.05E-03 | |
| Light Logistics | Phase 1 | 1.70E-05 | 4.72E-06 | |
| Utilities Service Station | Phase 1 | 1.22E-05 | 4.24E-06 | |
| Gas Station w/Convenience Store | Phase 1 | 2.18E-05 | 1.18E-06 | |
| Convenience Store | Phase 1 | 3.43E-05 | 1.95E-06 | |
| Fire Station | Phase 1 | 1.71E-08 | 1.29E-06 | |
| Total | | 8.97E-03 | 2.07E-03 | |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.21E-03 | 3.95E-05 |
| Light Logistics | Phase 1 | 1.19E-05 | 2.15E-07 |
| Utilities Service Station | Phase 1 | 1.62E-05 | 5.82E-07 |
| Gas Station w/Convenience Store | Phase 1 | 4.99E-05 | 2.45E-07 |
| Convenience Store | Phase 1 | 7.85E-05 | 0.00E+00 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.36E-03 | 4.06E-05 |

**Total Onsite Mobile Sources**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 8.97E-03 | 2.07E-03 | |
| | Idling Emissions (g/sec) | 3.36E-03 | 4.06E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.23E-02 | 2.11E-03 | 1.44E-02 |
| **Other Onsite Sources** | Yard Trucks (LPG) (g/sec) | | 9.30E-04 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Source (g/sec) | | 1.23E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.23E-02 | 3.34E-03 | 1.57E-02 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 3.35E-09 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.174 | 53 | 330 | 0.21 | 1.90E+00 | 4.18E-03 | 2.19E-05 | |
| | LDT1 | 15 | 0.362 | 3 | 330 | 0.21 | 1.90E-01 | 4.18E-04 | 2.20E-06 | |
| | LDT2 | 15 | 0.048 | 3 | 330 | 0.21 | 2.47E-02 | 5.45E-05 | 2.86E-07 | |
| | MDT | 15 | 0.069 | 5 | 330 | 0.21 | 6.88E-02 | 1.52E-04 | 7.97E-07 | |
| | LHDT1 | 15 | 0.105 | 274 | 330 | 0.21 | 5.88E+00 | 1.30E-02 | 6.81E-05 | |
| | LHDT2 | 15 | 0.110 | 93 | 330 | 0.21 | 2.10E+00 | 4.63E-03 | 2.44E-05 | |
| | MHDT | 15 | 0.600 | 1425 | 330 | 0.21 | 1.75E+02 | 3.86E-01 | 2.03E-03 | |
| | HHDT | 15 | 0.614 | 4628 | 330 | 0.21 | 5.82E+02 | 1.28E+00 | 6.74E-03 | |
| | | | | | | | | | | 8.89E-03 |
| Travel at Light Logistics | LDA | 15 | 0.174 | 0 | 175 | 0.11 | 4.27E-03 | 9.41E-06 | 4.94E-08 | |
| | LDT1 | 15 | 0.362 | 0 | 175 | 0.11 | 4.27E-04 | 9.41E-07 | 4.95E-09 | |
| | LDT2 | 15 | 0.048 | 0 | 175 | 0.11 | 5.57E-05 | 1.23E-07 | 6.45E-10 | |
| | MDT | 15 | 0.069 | 0 | 175 | 0.11 | 1.55E-04 | 3.42E-07 | 1.79E-09 | |
| | LHDT1 | 15 | 0.105 | 2 | 175 | 0.11 | 1.95E-02 | 4.30E-05 | 2.26E-07 | |
| | LHDT2 | 15 | 0.110 | 1 | 175 | 0.11 | 6.98E-03 | 1.54E-05 | 8.08E-08 | |
| | MHDT | 15 | 0.600 | 6 | 175 | 0.11 | 3.83E-01 | 8.43E-04 | 4.43E-06 | |
| | HHDT | 15 | 0.614 | 16 | 175 | 0.11 | 1.06E+00 | 2.33E-03 | 1.22E-05 | 1.70E-05 |
| Travel at Utility | LDA | 15 | 0.174 | 0 | 100 | 0.06 | 3.57E-03 | 7.87E-06 | 4.14E-08 | |
| | LDT1 | 15 | 0.362 | 0 | 100 | 0.06 | 3.58E-04 | 7.88E-07 | 4.14E-09 | |
| | LDT2 | 15 | 0.048 | 0 | 100 | 0.06 | 4.66E-05 | 1.03E-07 | 5.40E-10 | |
| | MDT | 15 | 0.069 | 0 | 100 | 0.06 | 1.30E-04 | 2.86E-07 | 1.50E-09 | |
| | LHDT1 | 15 | 0.105 | 6 | 100 | 0.06 | 3.70E-02 | 8.15E-05 | 4.28E-07 | |
| | LHDT2 | 15 | 0.110 | 2 | 100 | 0.06 | 1.32E-02 | 2.91E-05 | 1.53E-07 | |
| | MHDT | 15 | 0.600 | 5 | 100 | 0.06 | 1.80E-01 | 3.96E-04 | 2.08E-06 | |
| | HHDT | 15 | 0.614 | 21 | 100 | 0.06 | 8.19E-01 | 1.80E-03 | 9.48E-06 | 1.22E-05 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.174 | 0 | 50 | 0.03 | 1.04E-03 | 2.29E-06 | 1.21E-08 | |
| | LDT1 | 15 | 0.362 | 0 | 50 | 0.03 | 1.04E-04 | 2.30E-07 | 1.21E-09 | |
| | LDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 1.36E-05 | 2.99E-08 | 1.57E-10 | |
| | MDT | 15 | 0.069 | 0 | 50 | 0.03 | 3.78E-05 | 8.33E-08 | 4.38E-10 | |
| | LHDT1 | 15 | 0.105 | 1 | 50 | 0.03 | 2.61E-03 | 5.75E-06 | 3.02E-08 | |
| | LHDT2 | 15 | 0.110 | 0 | 50 | 0.03 | 9.33E-04 | 2.06E-06 | 1.08E-08 | |
| | MHDT | 15 | 0.600 | 14 | 50 | 0.03 | 2.56E-01 | 5.65E-04 | 2.97E-06 | |
| | HHDT | 15 | 0.614 | 85 | 50 | 0.03 | 1.62E+00 | 3.57E-03 | 1.88E-05 | 2.18E-05 |
| Travel at Convenience Store | LDA | 15 | 0.174 | 0 | 50 | 0.03 | 1.73E-03 | 3.80E-06 | 2.00E-08 | |
| | LDT1 | 15 | 0.362 | 0 | 50 | 0.03 | 1.73E-04 | 3.81E-07 | 2.00E-09 | |
| | LDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 2.25E-05 | 4.96E-08 | 2.61E-10 | |
| | MDT | 15 | 0.069 | 0 | 50 | 0.03 | 6.27E-05 | 1.38E-07 | 7.26E-10 | |
| | LHDT1 | 15 | 0.105 | 1 | 50 | 0.03 | 3.98E-03 | 8.77E-06 | 4.61E-08 | |
| | LHDT2 | 15 | 0.110 | 0 | 50 | 0.03 | 1.42E-03 | 3.14E-06 | 1.65E-08 | |
| | MHDT | 15 | 0.600 | 23 | 50 | 0.03 | 4.20E-01 | 9.24E-04 | 4.86E-06 | |
| | HHDT | 15 | 0.614 | 133 | 50 | 0.03 | 2.53E+00 | 5.58E-03 | 2.93E-05 | 3.43E-05 |
| Travel at Fire Station | LDA | 15 | 0.174 | 0 | 50 | 0.03 | 1.29E-03 | 2.83E-06 | 1.49E-08 | |
| | LDT1 | 15 | 0.362 | 0 | 50 | 0.03 | 1.29E-04 | 2.83E-07 | 1.49E-09 | |
| | LDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 1.68E-05 | 3.69E-08 | 1.94E-10 | |
| | MDT | 15 | 0.069 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | LHDT1 | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.614 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-08 |
| Total - All Buildings | LDA | | | 54 | | | 1.91E+00 | 4.20E-03 | 2.21E-05 | |
| | LDT1 | | | 3 | | | 1.91E-01 | 4.20E-04 | 2.21E-06 | |
| | LDT2 | | | 3 | | | 2.49E-02 | 5.48E-05 | 2.88E-07 | |
| | MDT | | | 5 | | | 6.93E-02 | 1.53E-04 | 8.02E-07 | |
| | LHDT1 | | | 283 | | | 5.94E+00 | 1.31E-02 | 6.88E-05 | |
| | LHDT2 | | | 96 | | | 2.13E+00 | 4.68E-03 | 2.46E-05 | |
| | MHDT | | | 1472 | | | 1.77E+02 | 3.89E-01 | 2.04E-03 | |
| | HHDT | | | 4883 | | | 5.88E+02 | 1.30E+00 | 6.81E-03 | |
| | Total | | | 6799 | | | 7.75E+02 | 1.71E+00 | 8.97E-03 | 8.97E-03 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.812 | 5 | 137 | 9.27E+00 | 2.04E-02 | 1.07E-04 | |
| | **LHDT2** | 0.816 | 5 | 47 | 3.17E+00 | 6.97E-03 | 3.66E-05 | |
| | **MHDT** | 1.132 | 5 | 713 | 6.72E+01 | 1.48E-01 | 7.78E-04 | |
| | **HHDT** | 1.023 | 5 | 2314 | 1.97E+02 | 4.34E-01 | 2.28E-03 | |
| | | | | 3210 | 2.77E+02 | 6.10E-01 | 3.21E-03 | 3.21E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.812 | 5 | 1 | 5.80E-02 | 1.28E-04 | 6.71E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 1.98E-02 | 4.36E-05 | 2.29E-07 | |
| | **MHDT** | 1.132 | 5 | 3 | 2.77E-01 | 6.10E-04 | 3.20E-06 | |
| | **HHDT** | 1.023 | 5 | 8 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | | | | 12 | 1.03E+00 | 2.27E-03 | 1.19E-05 | 1.19E-05 |
| **Idle at Utility** | **LHDT1** | 0.812 | 5 | 3 | 1.92E-01 | 4.24E-04 | 2.23E-06 | |
| | **LHDT2** | 0.816 | 5 | 1 | 6.57E-02 | 1.45E-04 | 7.60E-07 | |
| | **MHDT** | 1.132 | 5 | 2 | 2.27E-01 | 5.01E-04 | 2.63E-06 | |
| | **HHDT** | 1.023 | 5 | 11 | 9.15E-01 | 2.02E-03 | 1.06E-05 | |
| | | | | 17 | 1.40E+00 | 3.09E-03 | 1.62E-05 | 1.62E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 2.71E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 9.27E-03 | 2.04E-05 | 1.07E-07 | |
| | **MHDT** | 1.132 | 5 | 7 | 6.49E-01 | 1.43E-03 | 7.51E-06 | |
| | **HHDT** | 1.023 | 5 | 43 | 3.62E+00 | 7.98E-03 | 4.19E-05 | |
| | | | | 50 | 4.31E+00 | 9.49E-03 | 4.99E-05 | 4.99E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.812 | 5 | 1 | 4.14E-02 | 9.12E-05 | 4.79E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 1.42E-02 | 3.12E-05 | 1.64E-07 | |
| | **MHDT** | 1.132 | 5 | 11 | 1.06E+00 | 2.34E-03 | 1.23E-05 | |
| | **HHDT** | 1.023 | 5 | 66 | 5.67E+00 | 1.25E-02 | 6.56E-05 | |
| | | | | 79 | 6.78E+00 | 1.49E-02 | 7.85E-05 | 7.85E-05 |
| **Idle at Firestation** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.132 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 2.90E+02 | 6.40E-01 | 3.36E-03 | 3.36E-03 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.026 | 17546 | 330 | 0.21 | 9.35E+01 | 2.06E-01 | 1.08E-03 | |
| | **LDT1** | 15 | 0.034 | 2058 | 330 | 0.21 | 1.43E+01 | 3.16E-02 | 1.66E-04 | |
| | **LDT2** | 15 | 0.026 | 6111 | 330 | 0.21 | 3.26E+01 | 7.17E-02 | 3.77E-04 | |
| | **MDT** | 15 | 0.024 | 4846 | 330 | 0.21 | 2.38E+01 | 5.25E-02 | 2.76E-04 | |
| | **LHDT1** | 15 | 0.040 | 886 | 330 | 0.21 | 7.27E+00 | 1.60E-02 | 8.41E-05 | |
| | **LHDT2** | 15 | 0.044 | 93 | 330 | 0.21 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **MHDT** | 15 | 0.064 | 344 | 330 | 0.21 | 4.52E+00 | 9.95E-03 | 5.23E-05 | |
| | **HHDT** | 15 | 0.026 | 104 | 330 | 0.21 | 5.57E-01 | 1.23E-03 | 6.44E-06 | |
| | | | | | | | | | | 2.05E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.026 | 75 | 175 | 0.11 | 2.11E-01 | 4.64E-04 | 2.44E-06 | |
| | **LDT1** | 15 | 0.034 | 9 | 175 | 0.11 | 3.23E-02 | 7.11E-05 | 3.74E-07 | |
| | **LDT2** | 15 | 0.026 | 26 | 175 | 0.11 | 7.34E-02 | 1.62E-04 | 8.49E-07 | |
| | **MDT** | 15 | 0.024 | 21 | 175 | 0.11 | 5.37E-02 | 1.18E-04 | 6.22E-07 | |
| | **LHDT1** | 15 | 0.040 | 6 | 175 | 0.11 | 2.41E-02 | 5.31E-05 | 2.79E-07 | |
| | **LHDT2** | 15 | 0.044 | 1 | 175 | 0.11 | 2.79E-03 | 6.16E-06 | 3.23E-08 | |
| | **MHDT** | 15 | 0.064 | 1 | 175 | 0.11 | 9.87E-03 | 2.17E-05 | 1.14E-07 | |
| | **HHDT** | 15 | 0.026 | 0 | 175 | 0.11 | 1.01E-03 | 2.23E-06 | 1.17E-08 | 4.72E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.026 | 109 | 100 | 0.06 | 1.76E-01 | 3.88E-04 | 2.04E-06 | |
| | **LDT1** | 15 | 0.034 | 13 | 100 | 0.06 | 2.70E-02 | 5.96E-05 | 3.13E-07 | |
| | **LDT2** | 15 | 0.026 | 38 | 100 | 0.06 | 6.14E-02 | 1.35E-04 | 7.11E-07 | |
| | **MDT** | 15 | 0.024 | 30 | 100 | 0.06 | 4.50E-02 | 9.90E-05 | 5.20E-07 | |
| | **LHDT1** | 15 | 0.040 | 18 | 100 | 0.06 | 4.57E-02 | 1.01E-04 | 5.29E-07 | |
| | **LHDT2** | 15 | 0.044 | 2 | 100 | 0.06 | 5.30E-03 | 1.17E-05 | 6.13E-08 | |
| | **MHDT** | 15 | 0.064 | 1 | 100 | 0.06 | 4.63E-03 | 1.02E-05 | 5.36E-08 | |
| | **HHDT** | 15 | 0.026 | 0 | 100 | 0.06 | 7.83E-04 | 1.72E-06 | 9.06E-09 | 4.24E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.026 | 64 | 50 | 0.03 | 5.14E-02 | 1.13E-04 | 5.95E-07 | |
| | **LDT1** | 15 | 0.034 | 7 | 50 | 0.03 | 7.88E-03 | 1.74E-05 | 9.12E-08 | |
| | **LDT2** | 15 | 0.026 | 22 | 50 | 0.03 | 1.79E-02 | 3.94E-05 | 2.07E-07 | |
| | **MDT** | 15 | 0.024 | 18 | 50 | 0.03 | 1.31E-02 | 2.89E-05 | 1.52E-07 | |
| | **LHDT1** | 15 | 0.040 | 3 | 50 | 0.03 | 3.22E-03 | 7.10E-06 | 3.73E-08 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 3.74E-04 | 8.23E-07 | 4.32E-09 | |
| | **MHDT** | 15 | 0.064 | 3 | 50 | 0.03 | 6.61E-03 | 1.46E-05 | 7.65E-08 | |
| | **HHDT** | 15 | 0.026 | 2 | 50 | 0.03 | 1.55E-03 | 3.41E-06 | 1.79E-08 | 1.18E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.026 | 105 | 50 | 0.03 | 8.52E-02 | 1.88E-04 | 9.86E-07 | |
| | **LDT1** | 15 | 0.034 | 12 | 50 | 0.03 | 1.31E-02 | 2.88E-05 | 1.51E-07 | |
| | **LDT2** | 15 | 0.026 | 37 | 50 | 0.03 | 2.97E-02 | 6.53E-05 | 3.43E-07 | |
| | **MDT** | 15 | 0.024 | 29 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 2.51E-07 | |
| | **LHDT1** | 15 | 0.040 | 4 | 50 | 0.03 | 4.92E-03 | 1.08E-05 | 5.69E-08 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 5.70E-04 | 1.26E-06 | 6.60E-09 | |
| | **MHDT** | 15 | 0.064 | 5 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.026 | 3 | 50 | 0.03 | 2.42E-03 | 5.34E-06 | 2.80E-08 | 1.95E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.026 | 78 | 50 | 0.03 | 6.34E-02 | 1.40E-04 | 7.34E-07 | |
| | **LDT1** | 15 | 0.034 | 9 | 50 | 0.03 | 9.72E-03 | 2.14E-05 | 1.13E-07 | |
| | **LDT2** | 15 | 0.026 | 27 | 50 | 0.03 | 2.21E-02 | 4.86E-05 | 2.56E-07 | |
| | **MDT** | 15 | 0.024 | 22 | 50 | 0.03 | 1.62E-02 | 3.56E-05 | 1.87E-07 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E-06 |
| **Total - All Buildings** | **LDA** | | | 17977 | | | 9.41E+01 | 2.07E-01 | 1.09E-03 | |
| | **LDT1** | | | 2108 | | | 1.44E+01 | 3.18E-02 | 1.67E-04 | |
| | **LDT2** | | | 6261 | | | 3.28E+01 | 7.22E-02 | 3.79E-04 | |
| | **MDT** | | | 4965 | | | 2.40E+01 | 5.28E-02 | 2.78E-04 | |
| | **LHDT1** | | | 917 | | | 7.34E+00 | 1.62E-02 | 8.50E-05 | |
| | **LHDT2** | | | 97 | | | 8.51E-01 | 1.88E-03 | 9.85E-06 | |
| | **MHDT** | | | 356 | | | 4.55E+00 | 1.00E-02 | 5.27E-05 | |
| | **HHDT** | | | 110 | | | 5.63E-01 | 1.24E-03 | 6.51E-06 | |
| | **Total** | | | 32791 | | | 1.79E+02 | 3.93E-01 | 2.07E-03 | 2.07E-03 |

**Non-Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.055 | 5 | 443 | 2.03E+00 | 4.47E-03 | 2.35E-05 | |
| | **LHDT2** | 0.045 | 5 | 47 | 1.75E-01 | 3.86E-04 | 2.03E-06 | |
| | **MHDT** | 0.060 | 5 | 172 | 8.61E-01 | 1.90E-03 | 9.96E-06 | |
| | **HHDT** | 0.080 | 5 | 52 | 3.48E-01 | 7.67E-04 | 4.03E-06 | |
| | | | | 714 | 3.41E+00 | 7.52E-03 | 3.95E-05 | 3.95E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.055 | 5 | 3 | 1.27E-02 | 2.80E-05 | 1.47E-07 | |
| | **LHDT2** | 0.045 | 5 | 0 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | **MHDT** | 0.060 | 5 | 1 | 3.55E-03 | 7.81E-06 | 4.10E-08 | |
| | **HHDT** | 0.080 | 5 | 0 | 1.19E-03 | 2.63E-06 | 1.38E-08 | |
| | | | | 4 | 1.85E-02 | 4.08E-05 | 2.15E-07 | 2.15E-07 |
| **Idle at Utility** | **LHDT1** | 0.055 | 5 | 9 | 4.21E-02 | 9.28E-05 | 4.88E-07 | |
| | **LHDT2** | 0.045 | 5 | 1 | 3.63E-03 | 8.00E-06 | 4.21E-08 | |
| | **MHDT** | 0.060 | 5 | 1 | 2.91E-03 | 6.42E-06 | 3.37E-08 | |
| | **HHDT** | 0.080 | 5 | 0 | 1.62E-03 | 3.56E-06 | 1.87E-08 | |
| | | | | 11 | 5.03E-02 | 1.11E-04 | 5.82E-07 | 5.82E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.055 | 5 | 1 | 5.94E-03 | 1.31E-05 | 6.88E-08 | |
| | **LHDT2** | 0.045 | 5 | 0 | 5.13E-04 | 1.13E-06 | 5.93E-09 | |
| | **MHDT** | 0.060 | 5 | 2 | 8.31E-03 | 1.83E-05 | 9.62E-08 | |
| | **HHDT** | 0.080 | 5 | 1 | 6.40E-03 | 1.41E-05 | 7.40E-08 | |
| | | | | 4 | 2.12E-02 | 4.66E-05 | 2.45E-07 | 2.45E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.055 | 5 | 2 | 9.08E-03 | 2.00E-05 | 1.05E-07 | |
| | **LHDT2** | 0.045 | 5 | 0 | 7.83E-04 | 1.72E-06 | 9.06E-09 | |
| | **MHDT** | 0.060 | 5 | 3 | 1.36E-02 | 3.00E-05 | 1.57E-07 | |
| | **HHDT** | 0.080 | 5 | 2 | 1.00E-02 | 2.20E-05 | 1.16E-07 | |
| | | | | 6 | 3.35E-02 | 7.37E-05 | 3.87E-07 | 3.87E-07 |
| **Idle at Firestation** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.54E+00 | 7.79E-03 | 4.10E-05 | 4.10E-05 |

**World Logistics Center**
Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10, 2013 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.

**World Logistics Center**
Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Highland Fairview 10/11/13) |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 | 0.5101 | 510.8225 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 | 0.883797 | -0.30722 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 | 0.0593 | 667.7574 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 | 0.15 | 1639.48 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 | 0.02 | 213.13 |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 | 0.0364 | 409.8695 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 | 0.0043 | 48.6603 |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 | 0.0204 | 229.5269 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 | 0.0026 | 28.9459 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 | 0.0024 | 27.2498 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 | 0.0003 | 3.4365 |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 | 0.0160 | 180.3426 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 | 0.0020 | 22.7432 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 | 0.0019 | 21.4105 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 | 0.0002 | 2.7001 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). http://www.cat-lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com/_cat/PDFs/CLT-PDF030/CLT-PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 51-120
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6, Min Year 2015, Max Year 2019, HP 51-120 for forklift.

**World Logistics Center** **2012** **PM2.5** Based on PB Traffic Results 10/3/2013
**Project Only** **Phase 1** REV 5 Without Mitigation
**Internal Roadway Circulation** **With EMFAC2014**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 7.58E-03 | 9.79E-04 | 6.45E-03 | 1.50E-02 |
| 2 | 1.80E-02 | 2.31E-03 | 1.54E-02 | 3.58E-02 |
| 3 | 3.01E-02 | 3.76E-03 | 2.56E-02 | 5.94E-02 |
| 5 | 7.36E-04 | 6.37E-04 | 1.15E-03 | 2.52E-03 |
| 6 | 7.09E-03 | 1.47E-03 | 6.56E-03 | 1.51E-02 |
| 8 | 1.12E-03 | 1.42E-03 | 2.17E-03 | 4.71E-03 |
| 11 | 5.30E-06 | 6.11E-06 | 9.52E-06 | 2.09E-05 |
| 12 | 4.70E-05 | 4.71E-05 | 7.81E-05 | 1.72E-04 |
| 14 | 2.34E-03 | 4.20E-04 | 2.27E-03 | 5.02E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.48E-07 | 1.95E-05 | 2.24E-05 | 4.20E-05 |
| 21 | 1.16E-03 | 5.09E-04 | 1.31E-03 | 2.98E-03 |
| 24 | 1.66E-03 | 7.76E-04 | 1.92E-03 | 4.36E-03 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 7.48E-05 | 1.79E-05 | 7.02E-05 | 1.63E-04 |
| 30 | 3.13E-04 | 7.49E-05 | 2.94E-04 | 6.82E-04 |
| 31 | 7.98E-04 | 3.46E-04 | 9.15E-04 | 2.06E-03 |
| | | | Total | 1.48E-01 |

| ID | Arterial | From | To | 2012 With Project Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 16,625 | 727 | 2,291 | 6,889 |
| 2 | Street A | Eucalyptus Ave | Street F | 16,852 | 1,291 | 2,411 | 7,329 |
| 3 | Street E | west of Street A | | 8,580 | 607 | 1,255 | 3,797 |
| 5 | Street E | Street D | Street A | 3,952 | 134 | 237 | 93 |
| 6 | Street A | Street F | Street C | 7,443 | 427 | 796 | 1,777 |
| 8 | Street D | Street E | Cactus Ave | 7,702 | 281 | 459 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 30 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 318 | 25 | 25 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,030 | 436 | 93 | 446 |
| 18 | Street B | east of Street A | | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 52 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | 2,376 | 71 | 188 | 193 |
| 24 | Street C | Street F | Street H | 2,355 | 61 | 182 | 173 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 152 | 5 | 17 | 28 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 152 | 5 | 17 | 28 |
| 31 | Gilman Springs Rd | south of Street C | | 2,504 | 65 | 169 | 228 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM2.5** **Phase 1** Without Mitigation
Project Only
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 29 | 1 | 1 | 3 | 148 | 50 | 1845 | 6737 | 8815 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 29 | 1 | 1 | 3 | 263 | 89 | 1942 | 7167 | 9496 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 123 | 42 | 1011 | 3713 | 4907 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 7 | 0 | 0 | 1 | 27 | 9 | 191 | 91 | 326 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 13 | 1 | 1 | 1 | 87 | 30 | 641 | 1738 | 2511 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 5 | 2 | 20 | 0 | 28 |
| 14 | 2005 | 1,030 | 436 | 93 | 446 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 89 | 30 | 75 | 436 | 632 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 52 | 52 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 14 | 5 | 151 | 189 | 364 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 12 | 4 | 147 | 169 | 337 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 4 | 0 | 0 | 0 | 13 | 4 | 136 | 223 | 382 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0820 | 0.1750 | 0.0320 | 0.0397 | 0.0778 | 0.0832 | 0.3649 | 0.3758 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.56E-06 | 5.71E-07 | 1.03E-07 | 2.47E-07 | 2.70E-05 | 9.84E-06 | 1.58E-03 | 5.95E-03 | 7.58E-03 |
| 2 | 1 | 1.26E-05 | 1.29E-06 | 2.33E-07 | 5.59E-07 | 1.07E-04 | 3.91E-05 | 3.72E-03 | 1.42E-02 | 1.80E-02 |
| 3 | 1 | 2.07E-05 | 2.12E-06 | 3.81E-07 | 9.17E-07 | 1.62E-04 | 5.91E-05 | 6.24E-03 | 2.36E-02 | 3.01E-02 |
| 5 | 1 | 3.85E-06 | 3.96E-07 | 7.11E-08 | 1.71E-07 | 1.45E-05 | 5.28E-06 | 4.77E-04 | 2.34E-04 | 7.36E-04 |
| 6 | 1 | 8.37E-06 | 8.59E-07 | 1.55E-07 | 3.72E-07 | 5.34E-05 | 1.94E-05 | 1.85E-03 | 5.16E-03 | 7.09E-03 |
| 8 | 1 | 8.60E-06 | 8.82E-07 | 1.59E-07 | 3.82E-07 | 3.49E-05 | 1.27E-05 | 1.06E-03 | 0.00E+00 | 1.12E-03 |
| 11 | 1 | 3.69E-08 | 3.78E-09 | 6.81E-10 | 1.64E-09 | 1.37E-07 | 4.97E-08 | 5.08E-06 | 0.00E+00 | 5.30E-06 |
| 12 | 1 | 2.68E-07 | 2.75E-08 | 4.95E-09 | 1.19E-08 | 2.34E-06 | 8.52E-07 | 4.35E-05 | 0.00E+00 | 4.70E-05 |
| 14 | 1 | 1.71E-06 | 1.75E-07 | 3.15E-08 | 7.57E-08 | 8.02E-05 | 2.92E-05 | 3.18E-04 | 1.91E-03 | 2.34E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.27E-07 | 1.30E-08 | 2.34E-09 | 5.63E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.48E-07 |
| 21 | 1 | 3.06E-06 | 3.14E-07 | 5.65E-08 | 1.36E-07 | 1.02E-05 | 3.70E-06 | 5.00E-04 | 6.42E-04 | 1.16E-03 |
| 24 | 1 | 4.69E-06 | 4.81E-07 | 8.66E-08 | 2.08E-07 | 1.35E-05 | 4.91E-06 | 7.48E-04 | 8.90E-04 | 1.66E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.05E-07 | 1.08E-08 | 1.94E-09 | 4.66E-09 | 3.84E-07 | 1.40E-07 | 2.42E-05 | 4.99E-05 | 7.48E-05 |
| 30 | 1 | 4.40E-07 | 4.51E-08 | 8.12E-09 | 1.95E-08 | 1.61E-06 | 5.85E-07 | 1.02E-04 | 2.09E-04 | 3.13E-04 |
| 31 | 1 | 2.10E-06 | 2.16E-07 | 3.88E-08 | 9.33E-08 | 6.06E-06 | 2.21E-06 | 2.93E-04 | 4.94E-04 | 7.98E-04 |

**World Logistics Center** **2012** **PM2.5** **Phase 1** Without Mitigation
Project Only
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26,532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 9525 | 1117 | 3318 | 2631 | 478 | 50 | 446 | 152 | 17717 |
| 2 | 27,883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 9655 | 1132 | 3363 | 2667 | 850 | 90 | 469 | 162 | 18387 |
| 3 | 14,239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 4916 | 576 | 1712 | 1358 | 399 | 42 | 244 | 84 | 9332 |
| 5 | 4,416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 2264 | 266 | 789 | 625 | 88 | 9 | 46 | 2 | 4090 |
| 6 | 10,443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 4264 | 500 | 1485 | 1178 | 281 | 30 | 155 | 39 | 7932 |
| 8 | 8,442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 182 | 21 | 63 | 50 | 16 | 2 | 5 | 0 | 340 |
| 14 | 2,005 | 1,030 | 436 | 93 | 446 | 1618 | 1.005 | 590 | 69 | 206 | 163 | 287 | 30 | 18 | 10 | 1373 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 52 | 52 | 0 | 0 | 0 | 2386 | 1.482 | 30 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | 52 |
| 21 | 2,828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 1361 | 160 | 474 | 376 | 47 | 5 | 37 | 4 | 2464 |
| 24 | 2,771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 1349 | 158 | 470 | 373 | 40 | 4 | 35 | 4 | 2434 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 31 | 2,966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 1435 | 168 | 500 | 396 | 43 | 5 | 33 | 5 | 2584 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0220 | 0.0250 | 0.0220 | 0.0200 | 0.0380 | 0.0420 | 0.0620 | 0.0350 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.93E-04 | 6.57E-05 | 1.72E-04 | 1.24E-04 | 4.27E-05 | 4.98E-06 | 6.50E-05 | 1.25E-05 | 9.79E-04 |
| 2 | 1 | 1.12E-03 | 1.49E-04 | 3.89E-04 | 2.80E-04 | 1.70E-04 | 1.98E-05 | 1.53E-04 | 2.98E-05 | 2.31E-03 |
| 3 | 1 | 1.83E-03 | 2.44E-04 | 6.37E-04 | 4.59E-04 | 2.57E-04 | 2.99E-05 | 2.56E-04 | 4.96E-05 | 3.76E-03 |
| 5 | 1 | 3.41E-04 | 4.55E-05 | 1.19E-04 | 8.57E-05 | 2.30E-05 | 2.67E-06 | 1.96E-05 | 4.92E-07 | 6.37E-04 |
| 6 | 1 | 7.41E-04 | 9.88E-05 | 2.58E-04 | 1.86E-04 | 8.44E-05 | 9.83E-06 | 7.59E-05 | 1.08E-05 | 1.47E-03 |
| 8 | 1 | 7.62E-04 | 1.01E-04 | 2.65E-04 | 1.91E-04 | 5.51E-05 | 6.42E-06 | 4.34E-05 | 0.00E+00 | 1.42E-03 |
| 11 | 1 | 3.27E-06 | 4.35E-07 | 1.14E-06 | 8.20E-07 | 2.16E-07 | 2.52E-08 | 2.08E-07 | 0.00E+00 | 6.11E-06 |
| 12 | 1 | 2.37E-05 | 3.16E-06 | 8.27E-06 | 5.96E-06 | 3.70E-06 | 4.31E-07 | 1.79E-06 | 0.00E+00 | 4.71E-05 |
| 14 | 1 | 1.51E-04 | 2.01E-05 | 5.26E-05 | 3.79E-05 | 1.27E-04 | 1.48E-05 | 1.31E-05 | 4.01E-06 | 4.20E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.12E-05 | 1.50E-06 | 3.92E-06 | 2.82E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.95E-05 |
| 21 | 1 | 2.71E-04 | 3.61E-05 | 9.43E-05 | 6.80E-05 | 1.61E-05 | 1.87E-06 | 2.05E-05 | 1.35E-06 | 5.09E-04 |
| 24 | 1 | 4.15E-04 | 5.53E-05 | 1.45E-04 | 1.04E-04 | 2.13E-05 | 2.49E-06 | 3.07E-05 | 1.87E-06 | 7.76E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 9.30E-06 | 1.24E-06 | 3.24E-06 | 2.33E-06 | 6.07E-07 | 7.07E-08 | 9.95E-07 | 1.05E-07 | 1.79E-05 |
| 30 | 1 | 3.89E-05 | 5.19E-06 | 1.36E-05 | 9.78E-06 | 2.54E-06 | 2.96E-07 | 4.17E-06 | 4.40E-07 | 7.49E-05 |
| 31 | 1 | 1.86E-04 | 2.48E-05 | 6.48E-05 | 4.67E-05 | 9.58E-06 | 1.12E-06 | 1.20E-05 | 1.04E-06 | 3.46E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 16,625 | 3377 | 727 | 148 | 2,291 | 465 | 6,889 | 1399 | 5390 | 8.54 | 0.035 | 0.0002 | 1.2 | 6.45E-03 |
| 2 | A | 731 | 0.45 | 16,852 | 7653 | 1,291 | 586 | 2,411 | 1095 | 7,329 | 3328 | 12662 | 8.68 | 0.035 | 0.0002 | 2.9 | 1.54E-02 |
| 3 | A | 2352 | 1.46 | 8,580 | 12536 | 607 | 887 | 1,255 | 1834 | 3,797 | 5548 | 20804 | 8.76 | 0.035 | 0.0002 | 4.9 | 2.56E-02 |
| 5 | A | 953 | 0.59 | 3,952 | 2340 | 134 | 79 | 237 | 140 | 93 | 55 | 2614 | 3.20 | 0.035 | 0.0001 | 0.2 | 1.15E-03 |
| 6 | A | 1099 | 0.68 | 7,443 | 5081 | 427 | 292 | 796 | 543 | 1,777 | 1213 | 7130 | 6.60 | 0.035 | 0.0002 | 1.2 | 6.56E-03 |
| 8 | A | 1091 | 0.68 | 7,702 | 5220 | 281 | 190 | 459 | 311 | 0 | 0 | 5722 | 2.77 | 0.035 | 0.0001 | 0.4 | 2.17E-03 |
| 11 | A | 1201 | 0.75 | 30 | 22 | 1 | 1 | 2 | 1 | 0 | 0 | 25 | 2.82 | 0.035 | 0.0001 | 0.0 | 9.52E-06 |
| 12 | A | 824 | 0.51 | 318 | 163 | 25 | 13 | 25 | 13 | 0 | 0 | 188 | 3.02 | 0.035 | 0.0001 | 0.0 | 7.81E-05 |
| 14 | A | 1618 | 1.01 | 1,030 | 1035 | 436 | 438 | 93 | 93 | 446 | 448 | 2015 | 8.04 | 0.035 | 0.0002 | 0.4 | 2.27E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 52 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 2.13 | 0.035 | 0.0001 | 0.0 | 2.24E-05 |
| 21 | A | 1258 | 0.78 | 2,376 | 1857 | 71 | 55 | 188 | 147 | 193 | 151 | 2210 | 4.30 | 0.035 | 0.0001 | 0.2 | 1.31E-03 |
| 24 | A | 1946 | 1.21 | 2,355 | 2847 | 61 | 74 | 182 | 220 | 173 | 209 | 3350 | 4.16 | 0.035 | 0.0001 | 0.4 | 1.92E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 152 | 64 | 5 | 2 | 17 | 7 | 28 | 12 | 85 | 5.95 | 0.035 | 0.0002 | 0.0 | 7.02E-05 |
| 30 | A | 2827 | 1.76 | 152 | 267 | 5 | 9 | 17 | 30 | 28 | 49 | 355 | 5.95 | 0.035 | 0.0002 | 0.1 | 2.94E-04 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 65 | 33 | 169 | 86 | 228 | 116 | 1511 | 4.38 | 0.035 | 0.0001 | 0.2 | 9.15E-04 |

**World Logistics Center** REV 5 **2012 Phase 1** No Mitigation
With EMFAC2014 **PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.03E-02 | 4.12E-03 |
| Light Logistics | Phase 1 | 1.98E-05 | 9.49E-06 |
| Utilities Service Station | Phase 1 | 1.44E-05 | 8.64E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.51E-05 | 2.40E-06 |
| Convenience Store | Phase 1 | 3.95E-05 | 3.96E-06 |
| Fire Station | Phase 1 | 2.03E-08 | 2.56E-06 |
| Total | | 1.04E-02 | 4.15E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.25E-03 | 4.26E-05 |
| Light Logistics | Phase 1 | 1.21E-05 | 2.32E-07 |
| Utilities Service Station | Phase 1 | 1.66E-05 | 6.38E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.02E-05 | 2.61E-07 |
| Convenience Store | Phase 1 | 7.91E-05 | 4.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.41E-03 | 4.42E-05 |

**Total Onsite Mobile Sources**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.04E-02 | 4.15E-03 | |
| | Idling Emissions (g/sec) | 3.41E-03 | 4.42E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.38E-02 | 4.19E-03 | |
| **Other Onsite Sources** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g./sec) | 1.38E-02 | 5.53E-03 | 1.93E-02 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | **4.13E-09** |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** PM10

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.206 | 53 | 330 | 0.21 | 2.24E+00 | 4.94E-03 | 2.59E-05 | |
| | LDT1 | 15 | 0.403 | 3 | 330 | 0.21 | 2.11E-01 | 4.65E-04 | 2.44E-06 | |
| | LDT2 | 15 | 0.074 | 3 | 330 | 0.21 | 3.80E-02 | 8.37E-05 | 4.40E-07 | |
| | MDT | 15 | 0.096 | 5 | 330 | 0.21 | 9.55E-02 | 2.10E-04 | 1.11E-06 | |
| | LHDT1 | 15 | 0.160 | 274 | 330 | 0.21 | 9.01E+00 | 1.98E-02 | 1.04E-04 | |
| | LHDT2 | 15 | 0.173 | 93 | 330 | 0.21 | 3.31E+00 | 7.28E-03 | 3.83E-05 | |
| | MHDT | 15 | 0.710 | 1425 | 330 | 0.21 | 2.08E+02 | 4.57E-01 | 2.40E-03 | |
| | HHDT | 15 | 0.703 | 4628 | 330 | 0.21 | 6.67E+02 | 1.47E+00 | 7.72E-03 | |
| | | | | | | | | | | 1.03E-02 |
| Travel at Light Logistics | LDA | 15 | 0.206 | 0 | 175 | 0.11 | 5.05E-03 | 1.11E-05 | 5.84E-08 | |
| | LDT1 | 15 | 0.403 | 0 | 175 | 0.11 | 4.75E-04 | 1.05E-06 | 5.50E-09 | |
| | LDT2 | 15 | 0.074 | 0 | 175 | 0.11 | 8.56E-05 | 1.89E-07 | 9.91E-10 | |
| | MDT | 15 | 0.096 | 0 | 175 | 0.11 | 2.15E-04 | 4.74E-07 | 2.49E-09 | |
| | LHDT1 | 15 | 0.160 | 2 | 175 | 0.11 | 2.99E-02 | 6.58E-05 | 3.46E-07 | |
| | LHDT2 | 15 | 0.173 | 1 | 175 | 0.11 | 1.10E-02 | 2.42E-05 | 1.27E-07 | |
| | MHDT | 15 | 0.710 | 6 | 175 | 0.11 | 4.53E-01 | 9.99E-04 | 5.25E-06 | |
| | HHDT | 15 | 0.703 | 16 | 175 | 0.11 | 1.21E+00 | 2.67E-03 | 1.40E-05 | 1.98E-05 |
| Travel at Utility | LDA | 15 | 0.206 | 0 | 100 | 0.06 | 4.25E-03 | 9.37E-06 | 4.92E-08 | |
| | LDT1 | 15 | 0.403 | 0 | 100 | 0.06 | 4.00E-04 | 8.82E-07 | 4.63E-09 | |
| | LDT2 | 15 | 0.074 | 0 | 100 | 0.06 | 7.21E-05 | 1.59E-07 | 8.35E-10 | |
| | MDT | 15 | 0.096 | 0 | 100 | 0.06 | 1.81E-04 | 3.99E-07 | 2.10E-09 | |
| | LHDT1 | 15 | 0.160 | 6 | 100 | 0.06 | 5.70E-02 | 1.26E-04 | 6.60E-07 | |
| | LHDT2 | 15 | 0.173 | 2 | 100 | 0.06 | 2.09E-02 | 4.61E-05 | 2.42E-07 | |
| | MHDT | 15 | 0.710 | 5 | 100 | 0.06 | 2.14E-01 | 4.72E-04 | 2.48E-06 | |
| | HHDT | 15 | 0.703 | 22 | 100 | 0.06 | 9.43E-01 | 2.08E-03 | 1.09E-05 | 1.44E-05 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 1.23E-03 | 2.71E-06 | 1.43E-08 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 1.16E-04 | 2.55E-07 | 1.34E-09 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 2.09E-05 | 4.60E-08 | 2.42E-10 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 5.25E-05 | 1.16E-07 | 6.07E-10 | |
| | LHDT1 | 15 | 0.160 | 1 | 50 | 0.03 | 4.00E-03 | 8.80E-06 | 4.62E-08 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 1.47E-03 | 3.23E-06 | 1.70E-08 | |
| | MHDT | 15 | 0.710 | 14 | 50 | 0.03 | 3.04E-01 | 6.69E-04 | 3.51E-06 | |
| | HHDT | 15 | 0.703 | 85 | 50 | 0.03 | 1.86E+00 | 4.09E-03 | 2.15E-05 | 2.51E-05 |
| Travel at Convenience Store | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 2.04E-03 | 4.50E-06 | 2.36E-08 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 2.22E-09 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 3.46E-05 | 7.63E-08 | 4.01E-10 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 8.70E-05 | 1.92E-07 | 1.01E-09 | |
| | LHDT1 | 15 | 0.160 | 1 | 50 | 0.03 | 6.10E-03 | 1.34E-05 | 7.06E-08 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 2.24E-03 | 4.93E-06 | 2.59E-08 | |
| | MHDT | 15 | 0.710 | 23 | 50 | 0.03 | 4.97E-01 | 1.09E-03 | 5.75E-06 | |
| | HHDT | 15 | 0.703 | 133 | 50 | 0.03 | 2.90E+00 | 6.39E-03 | 3.36E-05 | 3.95E-05 |
| Travel at Fire Station | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 1.52E-03 | 3.35E-06 | 1.76E-08 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 1.43E-04 | 3.15E-07 | 1.66E-09 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 2.58E-05 | 5.68E-08 | 2.98E-10 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 6.47E-05 | 1.43E-07 | 7.49E-10 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-08 |
| Total - All Buildings | LDA | | | 54 | | | 2.26E+00 | 4.97E-03 | 2.61E-05 | |
| | LDT1 | | | 3 | | | 2.12E-01 | 4.68E-04 | 2.46E-06 | |
| | LDT2 | | | 3 | | | 3.83E-02 | 8.43E-05 | 4.43E-07 | |
| | MDT | | | 5 | | | 9.61E-02 | 2.12E-04 | 1.11E-06 | |
| | LHDT1 | | | 283 | | | 9.10E+00 | 2.01E-02 | 1.05E-04 | |
| | LHDT2 | | | 96 | | | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | MHDT | | | 1472 | | | 2.09E+02 | 4.60E-01 | 2.42E-03 | |
| | HHDT | | | 4883 | | | 6.74E+02 | 1.48E+00 | 7.80E-03 | |
| | Total | | | 6800 | | | 8.98E+02 | 1.98E+00 | 1.04E-02 | 1.04E-02 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 137 | 9.69E+00 | 2.13E-02 | 1.12E-04 | |
| | **LHDT2** | 0.853 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 1.184 | 5 | 713 | 7.03E+01 | 1.55E-01 | 8.14E-04 | |
| | **HHDT** | 1.023 | 5 | 2314 | 1.97E+02 | 4.34E-01 | 2.28E-03 | |
| | | | | 3210 | 2.81E+02 | 6.18E-01 | 3.25E-03 | 3.25E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 1 | 6.06E-02 | 1.33E-04 | 7.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.40E-07 | |
| | **MHDT** | 1.184 | 5 | 3 | 2.90E-01 | 6.38E-04 | 3.35E-06 | |
| | **HHDT** | 1.023 | 5 | 8 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | | | | 12 | 1.05E+00 | 2.30E-03 | 1.21E-05 | 1.21E-05 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 3 | 2.02E-01 | 4.46E-04 | 2.34E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 6.91E-02 | 1.52E-04 | 8.00E-07 | |
| | **MHDT** | 1.184 | 5 | 2 | 2.39E-01 | 5.27E-04 | 2.77E-06 | |
| | **HHDT** | 1.023 | 5 | 11 | 9.21E-01 | 2.03E-03 | 1.07E-05 | |
| | | | | 17 | 1.43E+00 | 3.15E-03 | 1.66E-05 | 1.66E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 2.84E-02 | 6.25E-05 | 3.28E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 9.69E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 1.184 | 5 | 7 | 6.79E-01 | 1.50E-03 | 7.86E-06 | |
| | **HHDT** | 1.023 | 5 | 43 | 3.62E+00 | 7.98E-03 | 4.19E-05 | |
| | | | | 50 | 4.34E+00 | 9.56E-03 | 5.02E-05 | 5.02E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 1 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 1.184 | 5 | 11 | 1.11E+00 | 2.45E-03 | 1.29E-05 | |
| | **HHDT** | 1.023 | 5 | 66 | 5.67E+00 | 1.25E-02 | 6.56E-05 | |
| | | | | 79 | 6.84E+00 | 1.51E-02 | 7.91E-05 | 7.91E-05 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 2.94E+02 | 6.48E-01 | 3.41E-03 | 3.41E-03 |

**World Logistics Center** 2012 **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 17546 | 330 | 0.21 | 1.86E+02 | 4.10E-01 | 2.15E-03 | |
| | **LDT1** | 15 | 0.061 | 2058 | 330 | 0.21 | 2.56E+01 | 5.64E-02 | 2.97E-04 | |
| | **LDT2** | 15 | 0.051 | 6111 | 330 | 0.21 | 6.36E+01 | 1.40E-01 | 7.36E-04 | |
| | **MDT** | 15 | 0.051 | 4846 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.84E-04 | |
| | **LHDT1** | 15 | 0.089 | 886 | 330 | 0.21 | 1.62E+01 | 3.56E-02 | 1.87E-04 | |
| | **LHDT2** | 15 | 0.101 | 93 | 330 | 0.21 | 1.93E+00 | 4.26E-03 | 2.24E-05 | |
| | **MHDT** | 15 | 0.148 | 344 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 1.21E-04 | |
| | **HHDT** | 15 | 0.090 | 104 | 330 | 0.21 | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | | | | | | | | | | 4.12E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 75 | 175 | 0.11 | 4.19E-01 | 9.23E-04 | 4.85E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 175 | 0.11 | 5.77E-02 | 1.27E-04 | 6.68E-07 | |
| | **LDT2** | 15 | 0.051 | 26 | 175 | 0.11 | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.051 | 21 | 175 | 0.11 | 1.14E-01 | 2.50E-04 | 1.31E-06 | |
| | **LHDT1** | 15 | 0.089 | 6 | 175 | 0.11 | 5.36E-02 | 1.18E-04 | 6.21E-07 | |
| | **LHDT2** | 15 | 0.101 | 1 | 175 | 0.11 | 6.41E-03 | 1.41E-05 | 7.42E-08 | |
| | **MHDT** | 15 | 0.148 | 1 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 175 | 0.11 | 3.50E-03 | 7.71E-06 | 4.05E-08 | 9.49E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 110 | 100 | 0.06 | 3.53E-01 | 7.78E-04 | 4.09E-06 | |
| | **LDT1** | 15 | 0.061 | 13 | 100 | 0.06 | 4.86E-02 | 1.07E-04 | 5.63E-07 | |
| | **LDT2** | 15 | 0.051 | 38 | 100 | 0.06 | 1.21E-01 | 2.66E-04 | 1.40E-06 | |
| | **MDT** | 15 | 0.051 | 30 | 100 | 0.06 | 9.57E-02 | 2.11E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 100 | 0.06 | 1.22E-02 | 2.70E-05 | 1.42E-07 | |
| | **MHDT** | 15 | 0.148 | 1 | 100 | 0.06 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 2.73E-03 | 6.01E-06 | 3.16E-08 | 8.64E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 64 | 50 | 0.03 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LDT1** | 15 | 0.061 | 7 | 50 | 0.03 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **LDT2** | 15 | 0.051 | 22 | 50 | 0.03 | 3.49E-02 | 7.69E-05 | 4.04E-07 | |
| | **MDT** | 15 | 0.051 | 18 | 50 | 0.03 | 2.77E-02 | 6.10E-05 | 3.21E-07 | |
| | **LHDT1** | 15 | 0.089 | 3 | 50 | 0.03 | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 8.58E-04 | 1.89E-06 | 9.93E-09 | |
| | **MHDT** | 15 | 0.148 | 3 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **HHDT** | 15 | 0.090 | 2 | 50 | 0.03 | 5.37E-03 | 1.18E-05 | 6.21E-08 | 2.40E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 105 | 50 | 0.03 | 1.70E-01 | 3.73E-04 | 1.96E-06 | |
| | **LDT1** | 15 | 0.061 | 12 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **LDT2** | 15 | 0.051 | 37 | 50 | 0.03 | 5.79E-02 | 1.28E-04 | 6.70E-07 | |
| | **MDT** | 15 | 0.051 | 29 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LHDT1** | 15 | 0.089 | 4 | 50 | 0.03 | 1.09E-02 | 2.41E-05 | 1.27E-07 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 1.31E-03 | 2.88E-06 | 1.52E-08 | |
| | **MHDT** | 15 | 0.148 | 5 | 50 | 0.03 | 2.50E-02 | 5.51E-05 | 2.90E-07 | |
| | **HHDT** | 15 | 0.090 | 3 | 50 | 0.03 | 8.39E-03 | 1.85E-05 | 9.71E-08 | 3.96E-06 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 78 | 50 | 0.03 | 1.26E-01 | 2.78E-04 | 1.46E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 50 | 0.03 | 1.74E-02 | 3.83E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.051 | 27 | 50 | 0.03 | 4.31E-02 | 9.49E-05 | 4.99E-07 | |
| | **MDT** | 15 | 0.051 | 22 | 50 | 0.03 | 3.42E-02 | 7.53E-05 | 3.96E-07 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.56E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.87E+02 | 4.13E-01 | 2.17E-03 | |
| | **LDT1** | | | 2108 | | | 2.58E+01 | 5.68E-02 | 2.98E-04 | |
| | **LDT2** | | | 6262 | | | 6.40E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | | | 4966 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | | | 917 | | | 1.63E+01 | 3.60E-02 | 1.89E-04 | |
| | **LHDT2** | | | 97 | | | 1.95E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | | | 356 | | | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | **HHDT** | | | 110 | | | 1.95E+00 | 4.29E-03 | 2.25E-05 | |
| | **Total** | | | 32792 | | | 3.59E+02 | 7.90E-01 | 4.15E-03 | 4.15E-03 |

## Non-Diesel truck Idling Emissions

**PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 443 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **LHDT2** | 0.050 | 5 | 47 | 1.95E-01 | 4.29E-04 | 2.25E-06 | |
| | **MHDT** | 0.063 | 5 | 172 | 9.04E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 0.085 | 5 | 52 | 3.70E-01 | 8.15E-04 | 4.28E-06 | |
| | | | | 714 | 3.68E+00 | 8.11E-03 | 4.26E-05 | 4.26E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 3 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 1.22E-03 | 2.68E-06 | 1.41E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.72E-03 | 8.20E-06 | 4.31E-08 | |
| | **HHDT** | 0.085 | 5 | 0 | 1.27E-03 | 2.79E-06 | 1.47E-08 | |
| | | | | 4 | 2.01E-02 | 4.42E-05 | 2.32E-07 | 2.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 9 | 4.63E-02 | 1.02E-04 | 5.35E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.06E-03 | 8.95E-06 | 4.70E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **HHDT** | 0.085 | 5 | 0 | 1.73E-03 | 3.80E-06 | 2.00E-08 | |
| | | | | 11 | 5.51E-02 | 1.21E-04 | 6.38E-07 | 6.38E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 1 | 6.49E-03 | 1.43E-05 | 7.51E-08 | |
| | **LHDT2** | 0.050 | 5 | 0 | 5.70E-04 | 1.25E-06 | 6.59E-09 | |
| | **MHDT** | 0.063 | 5 | 2 | 8.72E-03 | 1.92E-05 | 1.01E-07 | |
| | **HHDT** | 0.085 | 5 | 1 | 6.80E-03 | 1.50E-05 | 7.87E-08 | |
| | | | | 4 | 2.26E-02 | 4.97E-05 | 2.61E-07 | 2.61E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 2 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 8.70E-04 | 1.92E-06 | 1.01E-08 | |
| | **MHDT** | 0.063 | 5 | 3 | 1.43E-02 | 3.14E-05 | 1.65E-07 | |
| | **HHDT** | 0.085 | 5 | 2 | 1.06E-02 | 2.34E-05 | 1.23E-07 | |
| | | | | 6 | 3.57E-02 | 7.86E-05 | 4.13E-07 | 4.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.82E+00 | 8.41E-03 | 4.42E-05 | 4.42E-05 |

**World Logistics Center**
Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10, 2013 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.

**World Logistics Center**
Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Highland Fairview 10/11/13) |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 | 0.5101 | 510.8225 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 | 0.883797 | -0.30722 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 | 0.0593 | 667.7574 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 | 0.15 | 1639.48 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 | 0.02 | 213.13 |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 | 0.0364 | 409.8695 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 | 0.0043 | 48.6603 |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 | 0.0204 | 229.5269 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 | 0.0026 | 28.9459 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 | 0.0024 | 27.2498 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 | 0.0003 | 3.4365 |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 | 0.0160 | 180.3426 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 | 0.0020 | 22.7432 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 | 0.0019 | 21.4105 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 | 0.0002 | 2.7001 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). http://www.cat-lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com/_cat/PDFs/CLT-PDF030/CLT-PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 51-120
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6, Min Year 2015, Max Year 2019, HP 51-120 for forklift.

**World Logistics Center Project Only**
**Internal Roadway Circulation**

**2012**
**Phase 1**

**PM10**
REV5
**With EMFAC2014**

Based on PB Traffic Results 10/3/2013
Without Mitigation

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 9.27E-03 | 2.13E-03 | 2.63E-02 | 3.77E-02 |
| 2 | 2.21E-02 | 5.02E-03 | 6.27E-02 | 8.99E-02 |
| 3 | 3.68E-02 | 8.19E-03 | 1.04E-01 | 1.49E-01 |
| 5 | 9.28E-04 | 1.38E-03 | 4.68E-03 | 6.98E-03 |
| 6 | 8.71E-03 | 3.18E-03 | 2.67E-02 | 3.86E-02 |
| 8 | 1.44E-03 | 3.08E-03 | 8.85E-03 | 1.34E-02 |
| 11 | 6.81E-06 | 1.32E-05 | 3.88E-05 | 5.88E-05 |
| 12 | 6.11E-05 | 1.02E-04 | 3.18E-04 | 4.81E-04 |
| 14 | 1.29E-03 | 5.45E-04 | 4.20E-03 | 6.04E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.26E-07 | 2.66E-05 | 5.79E-05 | 8.46E-05 |
| 21 | 1.44E-03 | 1.10E-03 | 5.35E-03 | 7.89E-03 |
| 24 | 2.06E-03 | 1.68E-03 | 7.84E-03 | 1.16E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 9.21E-05 | 3.88E-05 | 2.86E-04 | 4.17E-04 |
| 30 | 3.86E-04 | 1.62E-04 | 1.20E-03 | 1.75E-03 |
| 31 | 9.85E-04 | 7.48E-04 | 3.73E-03 | 5.46E-03 |
| | | | Total | 3.69E-01 |

| ID | Arterial | From | To | 2012 With Project Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 16,625 | 727 | 2,291 | 6,889 |
| 2 | Street A | Eucalyptus Ave | Street F | 16,852 | 1,291 | 2,411 | 7,329 |
| 3 | Street E | west of Street A | | 8,580 | 607 | 1,255 | 3,797 |
| 5 | Street E | Street D | Street A | 3,952 | 134 | 237 | 93 |
| 6 | Street A | Street F | Street C | 7,443 | 427 | 796 | 1,777 |
| 8 | Street D | Street E | Cactus Ave | 7,702 | 281 | 459 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 30 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 318 | 25 | 25 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 906 | 34 | 63 | 194 |
| 18 | Street B | east of Street A | | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 33 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | 2,376 | 71 | 188 | 193 |
| 24 | Street C | Street F | Street H | 2,355 | 61 | 182 | 173 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 152 | 5 | 17 | 28 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 152 | 5 | 17 | 28 |
| 31 | Gilman Springs Rd | south of Street C | | 2,504 | 65 | 169 | 228 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM10** **Phase 1** Without Mitigation
Project Only With EMFAC2014
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 29 | 1 | 1 | 3 | 148 | 50 | 1845 | 6737 | 8815 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 29 | 1 | 1 | 3 | 263 | 89 | 1942 | 7167 | 9496 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 123 | 42 | 1011 | 3713 | 4907 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 7 | 0 | 0 | 1 | 27 | 9 | 191 | 91 | 326 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 13 | 1 | 1 | 1 | 87 | 30 | 641 | 1738 | 2511 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 5 | 2 | 20 | 0 | 28 |
| 14 | 1197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 7 | 2 | 51 | 190 | 252 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 14 | 5 | 151 | 189 | 364 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 12 | 4 | 147 | 169 | 337 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 4 | 0 | 0 | 0 | 13 | 4 | 136 | 223 | 382 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1097 | 0.2067 | 0.0577 | 0.0677 | 0.1324 | 0.1452 | 0.4623 | 0.4540 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.45E-06 | 6.75E-07 | 1.85E-07 | 4.21E-07 | 4.60E-05 | 1.72E-05 | 2.01E-03 | 7.19E-03 | 9.27E-03 |
| 2 | 1 | 1.69E-05 | 1.53E-06 | 4.20E-07 | 9.54E-07 | 1.83E-04 | 6.81E-05 | 4.72E-03 | 1.71E-02 | 2.21E-02 |
| 3 | 1 | 2.76E-05 | 2.50E-06 | 6.88E-07 | 1.56E-06 | 2.77E-04 | 1.03E-04 | 7.90E-03 | 2.85E-02 | 3.68E-02 |
| 5 | 1 | 5.16E-06 | 4.67E-07 | 1.28E-07 | 2.92E-07 | 2.47E-05 | 9.22E-06 | 6.05E-04 | 2.83E-04 | 9.28E-04 |
| 6 | 1 | 1.12E-05 | 1.01E-06 | 2.79E-07 | 6.33E-07 | 9.09E-05 | 3.39E-05 | 2.34E-03 | 6.23E-03 | 8.71E-03 |
| 8 | 1 | 1.15E-05 | 1.04E-06 | 2.86E-07 | 6.50E-07 | 5.94E-05 | 2.21E-05 | 1.34E-03 | 0.00E+00 | 1.44E-03 |
| 11 | 1 | 4.93E-08 | 4.47E-09 | 1.23E-09 | 2.79E-09 | 2.33E-07 | 8.67E-08 | 6.43E-06 | 0.00E+00 | 6.81E-06 |
| 12 | 1 | 3.59E-07 | 3.25E-08 | 8.93E-09 | 2.03E-08 | 3.99E-06 | 1.49E-06 | 5.52E-05 | 0.00E+00 | 6.11E-05 |
| 14 | 1 | 2.01E-06 | 1.82E-07 | 5.00E-08 | 1.13E-07 | 1.07E-05 | 3.97E-06 | 2.73E-04 | 1.00E-03 | 1.29E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.08E-07 | 9.77E-09 | 2.68E-09 | 6.10E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E-07 |
| 21 | 1 | 4.09E-06 | 3.71E-07 | 1.02E-07 | 2.31E-07 | 1.73E-05 | 6.45E-06 | 6.33E-04 | 7.75E-04 | 1.44E-03 |
| 24 | 1 | 6.28E-06 | 5.69E-07 | 1.56E-07 | 3.55E-07 | 2.30E-05 | 8.57E-06 | 9.48E-04 | 1.07E-03 | 2.06E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.41E-07 | 1.27E-08 | 3.50E-09 | 7.94E-09 | 6.54E-07 | 2.44E-07 | 3.07E-05 | 6.03E-05 | 9.21E-05 |
| 30 | 1 | 5.89E-07 | 5.33E-08 | 1.46E-08 | 3.33E-08 | 2.74E-06 | 1.02E-06 | 1.29E-04 | 2.53E-04 | 3.86E-04 |
| 31 | 1 | 2.81E-06 | 2.55E-07 | 7.00E-08 | 1.59E-07 | 1.03E-05 | 3.85E-06 | 3.71E-04 | 5.97E-04 | 9.85E-04 |

**World Logistics Center** **2012** **PM10** **Phase 1** Without Mitigation
Project Only With EMFAC2014
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26,532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 9525 | 1117 | 3318 | 2631 | 478 | 50 | 446 | 152 | 17717 |
| 2 | 27,883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 9655 | 1132 | 3363 | 2667 | 850 | 90 | 469 | 162 | 18387 |
| 3 | 14,239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 4916 | 576 | 1712 | 1358 | 399 | 42 | 244 | 84 | 9332 |
| 5 | 4,416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 2264 | 266 | 789 | 625 | 88 | 9 | 46 | 2 | 4090 |
| 6 | 10,443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 4264 | 500 | 1485 | 1178 | 281 | 30 | 155 | 39 | 7932 |
| 8 | 8,442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 182 | 21 | 63 | 50 | 16 | 2 | 5 | 0 | 340 |
| 14 | 1,197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 519 | 61 | 181 | 143 | 22 | 2 | 12 | 4 | 945 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 33 |
| 21 | 2,828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 1361 | 160 | 474 | 376 | 47 | 5 | 37 | 4 | 2464 |
| 24 | 2,771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 1349 | 158 | 470 | 373 | 40 | 4 | 35 | 4 | 2434 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 31 | 2,966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 1435 | 168 | 500 | 396 | 43 | 5 | 33 | 5 | 2584 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0507 | 0.0467 | 0.0467 | 0.0870 | 0.0990 | 0.1450 | 0.0870 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.05E-03 | 1.33E-04 | 3.65E-04 | 2.89E-04 | 9.79E-05 | 1.17E-05 | 1.52E-04 | 3.11E-05 | 2.13E-03 |
| 2 | 1 | 2.37E-03 | 3.02E-04 | 8.26E-04 | 6.55E-04 | 3.88E-04 | 4.66E-05 | 3.58E-04 | 7.40E-05 | 5.02E-03 |
| 3 | 1 | 3.89E-03 | 4.95E-04 | 1.35E-03 | 1.07E-03 | 5.88E-04 | 7.05E-05 | 5.99E-04 | 1.23E-04 | 8.19E-03 |
| 5 | 1 | 7.25E-04 | 9.23E-05 | 2.53E-04 | 2.00E-04 | 5.26E-05 | 6.30E-06 | 4.58E-05 | 1.22E-06 | 1.38E-03 |
| 6 | 1 | 1.58E-03 | 2.01E-04 | 5.49E-04 | 4.35E-04 | 1.93E-04 | 2.32E-05 | 1.77E-04 | 2.70E-05 | 3.18E-03 |
| 8 | 1 | 1.62E-03 | 2.06E-04 | 5.64E-04 | 4.47E-04 | 1.26E-04 | 1.51E-05 | 1.02E-04 | 0.00E+00 | 3.08E-03 |
| 11 | 1 | 6.94E-06 | 8.83E-07 | 2.42E-06 | 1.92E-06 | 4.94E-07 | 5.93E-08 | 4.87E-07 | 0.00E+00 | 1.32E-05 |
| 12 | 1 | 5.05E-05 | 6.42E-06 | 1.76E-05 | 1.39E-05 | 8.48E-06 | 1.02E-06 | 4.18E-06 | 0.00E+00 | 1.02E-04 |
| 14 | 1 | 2.82E-04 | 3.59E-05 | 9.83E-05 | 7.80E-05 | 2.26E-05 | 2.72E-06 | 2.07E-05 | 4.33E-06 | 5.45E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.52E-05 | 1.93E-06 | 5.28E-06 | 4.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-05 |
| 21 | 1 | 5.76E-04 | 7.33E-05 | 2.00E-04 | 1.59E-04 | 3.68E-05 | 4.41E-06 | 4.80E-05 | 3.35E-06 | 1.10E-03 |
| 24 | 1 | 8.83E-04 | 1.12E-04 | 3.07E-04 | 2.44E-04 | 4.89E-05 | 5.86E-06 | 7.18E-05 | 4.65E-06 | 1.68E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.98E-05 | 2.52E-06 | 6.88E-06 | 5.46E-06 | 1.39E-06 | 1.67E-07 | 2.33E-06 | 2.61E-07 | 3.88E-05 |
| 30 | 1 | 8.28E-05 | 1.05E-05 | 2.88E-05 | 2.29E-05 | 5.82E-06 | 6.98E-07 | 9.75E-06 | 1.09E-06 | 1.62E-04 |
| 31 | 1 | 3.95E-04 | 5.03E-05 | 1.38E-04 | 1.09E-04 | 2.19E-05 | 2.63E-06 | 2.81E-05 | 2.58E-06 | 7.48E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 16,625 | 3377 | 727 | 148 | 2,291 | 465 | 6,889 | 1399 | 5390 | 8.54 | 0.035 | 0.0009 | 5.0 | 2.63E-02 |
| 2 | A | 731 | 0.45 | 16,852 | 7653 | 1,291 | 586 | 2,411 | 1095 | 7,329 | 3328 | 12662 | 8.68 | 0.035 | 0.0009 | 11.9 | 6.27E-02 |
| 3 | A | 2352 | 1.46 | 8,580 | 12536 | 607 | 887 | 1,255 | 1834 | 3,797 | 5548 | 20804 | 8.76 | 0.035 | 0.0010 | 19.8 | 1.04E-01 |
| 5 | A | 953 | 0.59 | 3,952 | 2340 | 134 | 79 | 237 | 140 | 93 | 55 | 2614 | 3.20 | 0.035 | 0.0003 | 0.9 | 4.68E-03 |
| 6 | A | 1099 | 0.68 | 7,443 | 5081 | 427 | 292 | 796 | 543 | 1,777 | 1213 | 7130 | 6.60 | 0.035 | 0.0007 | 5.1 | 2.67E-02 |
| 8 | A | 1091 | 0.68 | 7,702 | 5220 | 281 | 190 | 459 | 311 | 0 | 0 | 5722 | 2.77 | 0.035 | 0.0003 | 1.7 | 8.85E-03 |
| 11 | A | 1201 | 0.75 | 30 | 22 | 1 | 1 | 2 | 1 | 0 | 0 | 25 | 2.82 | 0.035 | 0.0003 | 0.0 | 3.88E-05 |
| 12 | A | 824 | 0.51 | 318 | 163 | 25 | 13 | 25 | 13 | 0 | 0 | 188 | 3.02 | 0.035 | 0.0003 | 0.1 | 3.18E-04 |
| 14 | A | 1618 | 1.01 | 906 | 911 | 34 | 34 | 63 | 63 | 194 | 195 | 1203 | 6.16 | 0.035 | 0.0007 | 0.8 | 4.20E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 33 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 2.13 | 0.035 | 0.0002 | 0.0 | 5.79E-05 |
| 21 | A | 1258 | 0.78 | 2,376 | 1857 | 71 | 55 | 188 | 147 | 193 | 151 | 2210 | 4.30 | 0.035 | 0.0005 | 1.0 | 5.35E-03 |
| 24 | A | 1946 | 1.21 | 2,355 | 2847 | 61 | 74 | 182 | 220 | 173 | 209 | 3350 | 4.16 | 0.035 | 0.0004 | 1.5 | 7.84E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 152 | 64 | 5 | 2 | 17 | 7 | 28 | 12 | 85 | 5.95 | 0.035 | 0.0006 | 0.1 | 2.86E-04 |
| 30 | A | 2827 | 1.76 | 152 | 267 | 5 | 9 | 17 | 30 | 28 | 49 | 355 | 5.95 | 0.035 | 0.0006 | 0.2 | 1.20E-03 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 65 | 33 | 169 | 86 | 228 | 116 | 1511 | 4.38 | 0.035 | 0.0005 | 0.7 | 3.73E-03 |

**World Logistics Center** REV 5 **2012 Phase 1** No Mitigation
With EMFAC2014 **PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.03E-02 | 4.12E-03 |
| Light Logistics | Phase 1 | 1.98E-05 | 9.49E-06 |
| Utilities Service Station | Phase 1 | 1.44E-05 | 8.64E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.51E-05 | 2.40E-06 |
| Convenience Store | Phase 1 | 3.95E-05 | 3.96E-06 |
| Fire Station | Phase 1 | 2.03E-08 | 2.56E-06 |
| Total | | 1.04E-02 | 4.15E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.25E-03 | 4.26E-05 |
| Light Logistics | Phase 1 | 1.21E-05 | 2.32E-07 |
| Utilities Service Station | Phase 1 | 1.66E-05 | 6.38E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.02E-05 | 2.61E-07 |
| Convenience Store | Phase 1 | 7.91E-05 | 4.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.41E-03 | 4.42E-05 |

**Total Onsite Mobile Sources**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.04E-02 | 4.15E-03 | |
| | Idling Emissions (g/sec) | 3.41E-03 | 4.42E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.38E-02 | 4.19E-03 | 1.80E-02 |
| **Other Onsite Sources** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g./sec) | 1.38E-02 | 5.53E-03 | 1.93E-02 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | **4.13E-09** |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.206 | 53 | 330 | 0.21 | 2.24E+00 | 4.94E-03 | 2.59E-05 | |
| | **LDT1** | 15 | 0.403 | 3 | 330 | 0.21 | 2.11E-01 | 4.65E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.074 | 3 | 330 | 0.21 | 3.80E-02 | 8.37E-05 | 4.40E-07 | |
| | **MDT** | 15 | 0.096 | 5 | 330 | 0.21 | 9.55E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.160 | 274 | 330 | 0.21 | 9.01E+00 | 1.98E-02 | 1.04E-04 | |
| | **LHDT2** | 15 | 0.173 | 93 | 330 | 0.21 | 3.31E+00 | 7.28E-03 | 3.83E-05 | |
| | **MHDT** | 15 | 0.710 | 1425 | 330 | 0.21 | 2.08E+02 | 4.57E-01 | 2.40E-03 | |
| | **HHDT** | 15 | 0.703 | 4628 | 330 | 0.21 | 6.67E+02 | 1.47E+00 | 7.72E-03 | |
| | | | | | | | | | | 1.03E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.206 | 0 | 175 | 0.11 | 5.05E-03 | 1.11E-05 | 5.84E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 175 | 0.11 | 4.75E-04 | 1.05E-06 | 5.50E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 175 | 0.11 | 8.56E-05 | 1.89E-07 | 9.91E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 175 | 0.11 | 2.15E-04 | 4.74E-07 | 2.49E-09 | |
| | **LHDT1** | 15 | 0.160 | 2 | 175 | 0.11 | 2.99E-02 | 6.58E-05 | 3.46E-07 | |
| | **LHDT2** | 15 | 0.173 | 1 | 175 | 0.11 | 1.10E-02 | 2.42E-05 | 1.27E-07 | |
| | **MHDT** | 15 | 0.710 | 6 | 175 | 0.11 | 4.53E-01 | 9.99E-04 | 5.25E-06 | |
| | **HHDT** | 15 | 0.703 | 16 | 175 | 0.11 | 1.21E+00 | 2.67E-03 | 1.40E-05 | 1.98E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.206 | 0 | 100 | 0.06 | 4.25E-03 | 9.37E-06 | 4.92E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 100 | 0.06 | 4.00E-04 | 8.82E-07 | 4.63E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 100 | 0.06 | 7.21E-05 | 1.59E-07 | 8.35E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 100 | 0.06 | 1.81E-04 | 3.99E-07 | 2.10E-09 | |
| | **LHDT1** | 15 | 0.160 | 6 | 100 | 0.06 | 5.70E-02 | 1.26E-04 | 6.60E-07 | |
| | **LHDT2** | 15 | 0.173 | 2 | 100 | 0.06 | 2.09E-02 | 4.61E-05 | 2.42E-07 | |
| | **MHDT** | 15 | 0.710 | 5 | 100 | 0.06 | 2.14E-01 | 4.72E-04 | 2.48E-06 | |
| | **HHDT** | 15 | 0.703 | 22 | 100 | 0.06 | 9.43E-01 | 2.08E-03 | 1.09E-05 | 1.44E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.23E-03 | 2.71E-06 | 1.43E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.16E-04 | 2.55E-07 | 1.34E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.09E-05 | 4.60E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 5.25E-05 | 1.16E-07 | 6.07E-10 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 4.00E-03 | 8.80E-06 | 4.62E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 1.47E-03 | 3.23E-06 | 1.70E-08 | |
| | **MHDT** | 15 | 0.710 | 14 | 50 | 0.03 | 3.04E-01 | 6.69E-04 | 3.51E-06 | |
| | **HHDT** | 15 | 0.703 | 85 | 50 | 0.03 | 1.86E+00 | 4.09E-03 | 2.15E-05 | 2.51E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 2.04E-03 | 4.50E-06 | 2.36E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 2.22E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 3.46E-05 | 7.63E-08 | 4.01E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 8.70E-05 | 1.92E-07 | 1.01E-09 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 6.10E-03 | 1.34E-05 | 7.06E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 2.24E-03 | 4.93E-06 | 2.59E-08 | |
| | **MHDT** | 15 | 0.710 | 23 | 50 | 0.03 | 4.97E-01 | 1.09E-03 | 5.75E-06 | |
| | **HHDT** | 15 | 0.703 | 133 | 50 | 0.03 | 2.90E+00 | 6.39E-03 | 3.36E-05 | 3.95E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.52E-03 | 3.35E-06 | 1.76E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.43E-04 | 3.15E-07 | 1.66E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.58E-05 | 5.68E-08 | 2.98E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 6.47E-05 | 1.43E-07 | 7.49E-10 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.26E+00 | 4.97E-03 | 2.61E-05 | |
| | **LDT1** | | | 3 | | | 2.12E-01 | 4.68E-04 | 2.46E-06 | |
| | **LDT2** | | | 3 | | | 3.83E-02 | 8.43E-05 | 4.43E-07 | |
| | **MDT** | | | 5 | | | 9.61E-02 | 2.12E-04 | 1.11E-06 | |
| | **LHDT1** | | | 283 | | | 9.10E+00 | 2.01E-02 | 1.05E-04 | |
| | **LHDT2** | | | 96 | | | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | **MHDT** | | | 1472 | | | 2.09E+02 | 4.60E-01 | 2.42E-03 | |
| | **HHDT** | | | 4883 | | | 6.74E+02 | 1.48E+00 | 7.80E-03 | |
| | **Total** | | | 6800 | | | 8.98E+02 | 1.98E+00 | 1.04E-02 | 1.04E-02 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 137 | 9.69E+00 | 2.13E-02 | 1.12E-04 | |
| | **LHDT2** | 0.853 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 1.184 | 5 | 713 | 7.03E+01 | 1.55E-01 | 8.14E-04 | |
| | **HHDT** | 1.023 | 5 | 2314 | 1.97E+02 | 4.34E-01 | 2.28E-03 | |
| | | | | 3210 | 2.81E+02 | 6.18E-01 | 3.25E-03 | 3.25E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 1 | 6.06E-02 | 1.33E-04 | 7.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.40E-07 | |
| | **MHDT** | 1.184 | 5 | 3 | 2.90E-01 | 6.38E-04 | 3.35E-06 | |
| | **HHDT** | 1.023 | 5 | 8 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | | | | 12 | 1.05E+00 | 2.30E-03 | 1.21E-05 | 1.21E-05 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 3 | 2.02E-01 | 4.46E-04 | 2.34E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 6.91E-02 | 1.52E-04 | 8.00E-07 | |
| | **MHDT** | 1.184 | 5 | 2 | 2.39E-01 | 5.27E-04 | 2.77E-06 | |
| | **HHDT** | 1.023 | 5 | 11 | 9.21E-01 | 2.03E-03 | 1.07E-05 | |
| | | | | 17 | 1.43E+00 | 3.15E-03 | 1.66E-05 | 1.66E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 2.84E-02 | 6.25E-05 | 3.28E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 9.69E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 1.184 | 5 | 7 | 6.79E-01 | 1.50E-03 | 7.86E-06 | |
| | **HHDT** | 1.023 | 5 | 43 | 3.62E+00 | 7.98E-03 | 4.19E-05 | |
| | | | | 50 | 4.34E+00 | 9.56E-03 | 5.02E-05 | 5.02E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 1 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 1.184 | 5 | 11 | 1.11E+00 | 2.45E-03 | 1.29E-05 | |
| | **HHDT** | 1.023 | 5 | 66 | 5.67E+00 | 1.25E-02 | 6.56E-05 | |
| | | | | 79 | 6.84E+00 | 1.51E-02 | 7.91E-05 | 7.91E-05 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 2.94E+02 | 6.48E-01 | 3.41E-03 | 3.41E-03 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Non-Diesel Vehicle Emissions** PM10

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 17546 | 330 | 0.21 | 1.86E+02 | 4.10E-01 | 2.15E-03 | |
| | **LDT1** | 15 | 0.061 | 2058 | 330 | 0.21 | 2.56E+01 | 5.64E-02 | 2.97E-04 | |
| | **LDT2** | 15 | 0.051 | 6111 | 330 | 0.21 | 6.36E+01 | 1.40E-01 | 7.36E-04 | |
| | **MDT** | 15 | 0.051 | 4846 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.84E-04 | |
| | **LHDT1** | 15 | 0.089 | 886 | 330 | 0.21 | 1.62E+01 | 3.56E-02 | 1.87E-04 | |
| | **LHDT2** | 15 | 0.101 | 93 | 330 | 0.21 | 1.93E+00 | 4.26E-03 | 2.24E-05 | |
| | **MHDT** | 15 | 0.148 | 344 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 1.21E-04 | |
| | **HHDT** | 15 | 0.090 | 104 | 330 | 0.21 | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | | | | | | | | | | 4.12E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 75 | 175 | 0.11 | 4.19E-01 | 9.23E-04 | 4.85E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 175 | 0.11 | 5.77E-02 | 1.27E-04 | 6.68E-07 | |
| | **LDT2** | 15 | 0.051 | 26 | 175 | 0.11 | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.051 | 21 | 175 | 0.11 | 1.14E-01 | 2.50E-04 | 1.31E-06 | |
| | **LHDT1** | 15 | 0.089 | 6 | 175 | 0.11 | 5.36E-02 | 1.18E-04 | 6.21E-07 | |
| | **LHDT2** | 15 | 0.101 | 1 | 175 | 0.11 | 6.41E-03 | 1.41E-05 | 7.42E-08 | |
| | **MHDT** | 15 | 0.148 | 1 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 175 | 0.11 | 3.50E-03 | 7.71E-06 | 4.05E-08 | 9.49E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 110 | 100 | 0.06 | 3.53E-01 | 7.78E-04 | 4.09E-06 | |
| | **LDT1** | 15 | 0.061 | 13 | 100 | 0.06 | 4.86E-02 | 1.07E-04 | 5.63E-07 | |
| | **LDT2** | 15 | 0.051 | 38 | 100 | 0.06 | 1.21E-01 | 2.66E-04 | 1.40E-06 | |
| | **MDT** | 15 | 0.051 | 30 | 100 | 0.06 | 9.57E-02 | 2.11E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 100 | 0.06 | 1.22E-02 | 2.70E-05 | 1.42E-07 | |
| | **MHDT** | 15 | 0.148 | 1 | 100 | 0.06 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 2.73E-03 | 6.01E-06 | 3.16E-08 | 8.64E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 64 | 50 | 0.03 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LDT1** | 15 | 0.061 | 7 | 50 | 0.03 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **LDT2** | 15 | 0.051 | 22 | 50 | 0.03 | 3.49E-02 | 7.69E-05 | 4.04E-07 | |
| | **MDT** | 15 | 0.051 | 18 | 50 | 0.03 | 2.77E-02 | 6.10E-05 | 3.21E-07 | |
| | **LHDT1** | 15 | 0.089 | 3 | 50 | 0.03 | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 8.58E-04 | 1.89E-06 | 9.93E-09 | |
| | **MHDT** | 15 | 0.148 | 3 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **HHDT** | 15 | 0.090 | 2 | 50 | 0.03 | 5.37E-03 | 1.18E-05 | 6.21E-08 | 2.40E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 105 | 50 | 0.03 | 1.70E-01 | 3.73E-04 | 1.96E-06 | |
| | **LDT1** | 15 | 0.061 | 12 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **LDT2** | 15 | 0.051 | 37 | 50 | 0.03 | 5.79E-02 | 1.28E-04 | 6.70E-07 | |
| | **MDT** | 15 | 0.051 | 29 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LHDT1** | 15 | 0.089 | 4 | 50 | 0.03 | 1.09E-02 | 2.41E-05 | 1.27E-07 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 1.31E-03 | 2.88E-06 | 1.52E-08 | |
| | **MHDT** | 15 | 0.148 | 5 | 50 | 0.03 | 2.50E-02 | 5.51E-05 | 2.90E-07 | |
| | **HHDT** | 15 | 0.090 | 3 | 50 | 0.03 | 8.39E-03 | 1.85E-05 | 9.71E-08 | 3.96E-06 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 78 | 50 | 0.03 | 1.26E-01 | 2.78E-04 | 1.46E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 50 | 0.03 | 1.74E-02 | 3.83E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.051 | 27 | 50 | 0.03 | 4.31E-02 | 9.49E-05 | 4.99E-07 | |
| | **MDT** | 15 | 0.051 | 22 | 50 | 0.03 | 3.42E-02 | 7.53E-05 | 3.96E-07 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.56E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.87E+02 | 4.13E-01 | 2.17E-03 | |
| | **LDT1** | | | 2108 | | | 2.58E+01 | 5.68E-02 | 2.98E-04 | |
| | **LDT2** | | | 6262 | | | 6.40E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | | | 4966 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | | | 917 | | | 1.63E+01 | 3.60E-02 | 1.89E-04 | |
| | **LHDT2** | | | 97 | | | 1.95E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | | | 356 | | | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | **HHDT** | | | 110 | | | 1.95E+00 | 4.29E-03 | 2.25E-05 | |
| | **Total** | | | 32792 | | | 3.59E+02 | 7.90E-01 | 4.15E-03 | 4.15E-03 |

## Non-Diesel truck Idling Emissions

**PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 443 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **LHDT2** | 0.050 | 5 | 47 | 1.95E-01 | 4.29E-04 | 2.25E-06 | |
| | **MHDT** | 0.063 | 5 | 172 | 9.04E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 0.085 | 5 | 52 | 3.70E-01 | 8.15E-04 | 4.28E-06 | |
| | | | | 714 | 3.68E+00 | 8.11E-03 | 4.26E-05 | 4.26E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 3 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 1.22E-03 | 2.68E-06 | 1.41E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.72E-03 | 8.20E-06 | 4.31E-08 | |
| | **HHDT** | 0.085 | 5 | 0 | 1.27E-03 | 2.79E-06 | 1.47E-08 | |
| | | | | 4 | 2.01E-02 | 4.42E-05 | 2.32E-07 | 2.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 9 | 4.63E-02 | 1.02E-04 | 5.35E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.06E-03 | 8.95E-06 | 4.70E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **HHDT** | 0.085 | 5 | 0 | 1.73E-03 | 3.80E-06 | 2.00E-08 | |
| | | | | 11 | 5.51E-02 | 1.21E-04 | 6.38E-07 | 6.38E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 1 | 6.49E-03 | 1.43E-05 | 7.51E-08 | |
| | **LHDT2** | 0.050 | 5 | 0 | 5.70E-04 | 1.25E-06 | 6.59E-09 | |
| | **MHDT** | 0.063 | 5 | 2 | 8.72E-03 | 1.92E-05 | 1.01E-07 | |
| | **HHDT** | 0.085 | 5 | 1 | 6.80E-03 | 1.50E-05 | 7.87E-08 | |
| | | | | 4 | 2.26E-02 | 4.97E-05 | 2.61E-07 | 2.61E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 2 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 8.70E-04 | 1.92E-06 | 1.01E-08 | |
| | **MHDT** | 0.063 | 5 | 3 | 1.43E-02 | 3.14E-05 | 1.65E-07 | |
| | **HHDT** | 0.085 | 5 | 2 | 1.06E-02 | 2.34E-05 | 1.23E-07 | |
| | | | | 6 | 3.57E-02 | 7.86E-05 | 4.13E-07 | 4.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.82E+00 | 8.41E-03 | 4.42E-05 | 4.42E-05 |

**World Logistics Center**
Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10, 2013 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.

**World Logistics Center**
Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Highland Fairview 10/11/13) |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 | 0.5101 | 510.8225 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 | 0.883797 | -0.30722 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 | 0.0593 | 667.7574 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 | 0.15 | 1639.48 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 | 0.02 | 213.13 |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 | 0.0364 | 409.8695 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 | 0.0043 | 48.6603 |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 | 0.0204 | 229.5269 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 | 0.0026 | 28.9459 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 | 0.0024 | 27.2498 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 | 0.0003 | 3.4365 |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 | 0.0160 | 180.3426 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 | 0.0020 | 22.7432 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 | 0.0019 | 21.4105 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 | 0.0002 | 2.7001 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). http://www.cat-lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com/_cat/PDFs/CLT-PDF030/CLT-PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 51-120
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6, Min Year 2015, Max Year 2019, HP 51-120 for forklift.

**World Logistics Center Project Only**
**Internal Roadway Circulation**

**2012**
**Phase 1**

**PM10**
REV5
**With EMFAC2014**

Based on PB Traffic Results 10/3/2013
Without Mitigation

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 9.27E-03 | 2.13E-03 | 2.63E-02 | 3.77E-02 |
| 2 | 2.21E-02 | 5.02E-03 | 6.27E-02 | 8.99E-02 |
| 3 | 3.68E-02 | 8.19E-03 | 1.04E-01 | 1.49E-01 |
| 5 | 9.28E-04 | 1.38E-03 | 4.68E-03 | 6.98E-03 |
| 6 | 8.71E-03 | 3.18E-03 | 2.67E-02 | 3.86E-02 |
| 8 | 1.44E-03 | 3.08E-03 | 8.85E-03 | 1.34E-02 |
| 11 | 6.81E-06 | 1.32E-05 | 3.88E-05 | 5.88E-05 |
| 12 | 6.11E-05 | 1.02E-04 | 3.18E-04 | 4.81E-04 |
| 14 | 1.29E-03 | 5.45E-04 | 4.20E-03 | 6.04E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.26E-07 | 2.66E-05 | 5.79E-05 | 8.46E-05 |
| 21 | 1.44E-03 | 1.10E-03 | 5.35E-03 | 7.89E-03 |
| 24 | 2.06E-03 | 1.68E-03 | 7.84E-03 | 1.16E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 9.21E-05 | 3.88E-05 | 2.86E-04 | 4.17E-04 |
| 30 | 3.86E-04 | 1.62E-04 | 1.20E-03 | 1.75E-03 |
| 31 | 9.85E-04 | 7.48E-04 | 3.73E-03 | 5.46E-03 |
| | | | Total | 3.69E-01 |

| ID | Arterial | From | To | 2012 With Project Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 16,625 | 727 | 2,291 | 6,889 |
| 2 | Street A | Eucalyptus Ave | Street F | 16,852 | 1,291 | 2,411 | 7,329 |
| 3 | Street E | west of Street A | | 8,580 | 607 | 1,255 | 3,797 |
| 5 | Street E | Street D | Street A | 3,952 | 134 | 237 | 93 |
| 6 | Street A | Street F | Street C | 7,443 | 427 | 796 | 1,777 |
| 8 | Street D | Street E | Cactus Ave | 7,702 | 281 | 459 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 30 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 318 | 25 | 25 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 906 | 34 | 63 | 194 |
| 18 | Street B | east of Street A | | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 33 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | 2,376 | 71 | 188 | 193 |
| 24 | Street C | Street F | Street H | 2,355 | 61 | 182 | 173 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 152 | 5 | 17 | 28 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 152 | 5 | 17 | 28 |
| 31 | Gilman Springs Rd | south of Street C | | 2,504 | 65 | 169 | 228 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM10** **Phase 1** Without Mitigation
Project Only With EMFAC2014
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 29 | 1 | 1 | 3 | 148 | 50 | 1845 | 6737 | 8815 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 29 | 1 | 1 | 3 | 263 | 89 | 1942 | 7167 | 9496 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 123 | 42 | 1011 | 3713 | 4907 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 7 | 0 | 0 | 1 | 27 | 9 | 191 | 91 | 326 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 13 | 1 | 1 | 1 | 87 | 30 | 641 | 1738 | 2511 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 5 | 2 | 20 | 0 | 28 |
| 14 | 1197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 7 | 2 | 51 | 190 | 252 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 14 | 5 | 151 | 189 | 364 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 12 | 4 | 147 | 169 | 337 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 4 | 0 | 0 | 0 | 13 | 4 | 136 | 223 | 382 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1097 | 0.2067 | 0.0577 | 0.0677 | 0.1324 | 0.1452 | 0.4623 | 0.4540 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.45E-06 | 6.75E-07 | 1.85E-07 | 4.21E-07 | 4.60E-05 | 1.72E-05 | 2.01E-03 | 7.19E-03 | 9.27E-03 |
| 2 | 1 | 1.69E-05 | 1.53E-06 | 4.20E-07 | 9.54E-07 | 1.83E-04 | 6.81E-05 | 4.72E-03 | 1.71E-02 | 2.21E-02 |
| 3 | 1 | 2.76E-05 | 2.50E-06 | 6.88E-07 | 1.56E-06 | 2.77E-04 | 1.03E-04 | 7.90E-03 | 2.85E-02 | 3.68E-02 |
| 5 | 1 | 5.16E-06 | 4.67E-07 | 1.28E-07 | 2.92E-07 | 2.47E-05 | 9.22E-06 | 6.05E-04 | 2.83E-04 | 9.28E-04 |
| 6 | 1 | 1.12E-05 | 1.01E-06 | 2.79E-07 | 6.33E-07 | 9.09E-05 | 3.39E-05 | 2.34E-03 | 6.23E-03 | 8.71E-03 |
| 8 | 1 | 1.15E-05 | 1.04E-06 | 2.86E-07 | 6.50E-07 | 5.94E-05 | 2.21E-05 | 1.34E-03 | 0.00E+00 | 1.44E-03 |
| 11 | 1 | 4.93E-08 | 4.47E-09 | 1.23E-09 | 2.79E-09 | 2.33E-07 | 8.67E-08 | 6.43E-06 | 0.00E+00 | 6.81E-06 |
| 12 | 1 | 3.59E-07 | 3.25E-08 | 8.93E-09 | 2.03E-08 | 3.99E-06 | 1.49E-06 | 5.52E-05 | 0.00E+00 | 6.11E-05 |
| 14 | 1 | 2.01E-06 | 1.82E-07 | 5.00E-08 | 1.13E-07 | 1.07E-05 | 3.97E-06 | 2.73E-04 | 1.00E-03 | 1.29E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.08E-07 | 9.77E-09 | 2.68E-09 | 6.10E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E-07 |
| 21 | 1 | 4.09E-06 | 3.71E-07 | 1.02E-07 | 2.31E-07 | 1.73E-05 | 6.45E-06 | 6.33E-04 | 7.75E-04 | 1.44E-03 |
| 24 | 1 | 6.28E-06 | 5.69E-07 | 1.56E-07 | 3.55E-07 | 2.30E-05 | 8.57E-06 | 9.48E-04 | 1.07E-03 | 2.06E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.41E-07 | 1.27E-08 | 3.50E-09 | 7.94E-09 | 6.54E-07 | 2.44E-07 | 3.07E-05 | 6.03E-05 | 9.21E-05 |
| 30 | 1 | 5.89E-07 | 5.33E-08 | 1.46E-08 | 3.33E-08 | 2.74E-06 | 1.02E-06 | 1.29E-04 | 2.53E-04 | 3.86E-04 |
| 31 | 1 | 2.81E-06 | 2.55E-07 | 7.00E-08 | 1.59E-07 | 1.03E-05 | 3.85E-06 | 3.71E-04 | 5.97E-04 | 9.85E-04 |

**World Logistics Center** **2012** **PM10** **Phase 1** Without Mitigation
Project Only With EMFAC2014
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26,532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 9525 | 1117 | 3318 | 2631 | 478 | 50 | 446 | 152 | 17717 |
| 2 | 27,883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 9655 | 1132 | 3363 | 2667 | 850 | 90 | 469 | 162 | 18387 |
| 3 | 14,239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 4916 | 576 | 1712 | 1358 | 399 | 42 | 244 | 84 | 9332 |
| 5 | 4,416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 2264 | 266 | 789 | 625 | 88 | 9 | 46 | 2 | 4090 |
| 6 | 10,443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 4264 | 500 | 1485 | 1178 | 281 | 30 | 155 | 39 | 7932 |
| 8 | 8,442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 182 | 21 | 63 | 50 | 16 | 2 | 5 | 0 | 340 |
| 14 | 1,197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 519 | 61 | 181 | 143 | 22 | 2 | 12 | 4 | 945 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 33 |
| 21 | 2,828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 1361 | 160 | 474 | 376 | 47 | 5 | 37 | 4 | 2464 |
| 24 | 2,771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 1349 | 158 | 470 | 373 | 40 | 4 | 35 | 4 | 2434 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 31 | 2,966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 1435 | 168 | 500 | 396 | 43 | 5 | 33 | 5 | 2584 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0507 | 0.0467 | 0.0467 | 0.0870 | 0.0990 | 0.1450 | 0.0870 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.05E-03 | 1.33E-04 | 3.65E-04 | 2.89E-04 | 9.79E-05 | 1.17E-05 | 1.52E-04 | 3.11E-05 | 2.13E-03 |
| 2 | 1 | 2.37E-03 | 3.02E-04 | 8.26E-04 | 6.55E-04 | 3.88E-04 | 4.66E-05 | 3.58E-04 | 7.40E-05 | 5.02E-03 |
| 3 | 1 | 3.89E-03 | 4.95E-04 | 1.35E-03 | 1.07E-03 | 5.88E-04 | 7.05E-05 | 5.99E-04 | 1.23E-04 | 8.19E-03 |
| 5 | 1 | 7.25E-04 | 9.23E-05 | 2.53E-04 | 2.00E-04 | 5.26E-05 | 6.30E-06 | 4.58E-05 | 1.22E-06 | 1.38E-03 |
| 6 | 1 | 1.58E-03 | 2.01E-04 | 5.49E-04 | 4.35E-04 | 1.93E-04 | 2.32E-05 | 1.77E-04 | 2.70E-05 | 3.18E-03 |
| 8 | 1 | 1.62E-03 | 2.06E-04 | 5.64E-04 | 4.47E-04 | 1.26E-04 | 1.51E-05 | 1.02E-04 | 0.00E+00 | 3.08E-03 |
| 11 | 1 | 6.94E-06 | 8.83E-07 | 2.42E-06 | 1.92E-06 | 4.94E-07 | 5.93E-08 | 4.87E-07 | 0.00E+00 | 1.32E-05 |
| 12 | 1 | 5.05E-05 | 6.42E-06 | 1.76E-05 | 1.39E-05 | 8.48E-06 | 1.02E-06 | 4.18E-06 | 0.00E+00 | 1.02E-04 |
| 14 | 1 | 2.82E-04 | 3.59E-05 | 9.83E-05 | 7.80E-05 | 2.26E-05 | 2.72E-06 | 2.07E-05 | 4.33E-06 | 5.45E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.52E-05 | 1.93E-06 | 5.28E-06 | 4.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-05 |
| 21 | 1 | 5.76E-04 | 7.33E-05 | 2.00E-04 | 1.59E-04 | 3.68E-05 | 4.41E-06 | 4.80E-05 | 3.35E-06 | 1.10E-03 |
| 24 | 1 | 8.83E-04 | 1.12E-04 | 3.07E-04 | 2.44E-04 | 4.89E-05 | 5.86E-06 | 7.18E-05 | 4.65E-06 | 1.68E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.98E-05 | 2.52E-06 | 6.88E-06 | 5.46E-06 | 1.39E-06 | 1.67E-07 | 2.33E-06 | 2.61E-07 | 3.88E-05 |
| 30 | 1 | 8.28E-05 | 1.05E-05 | 2.88E-05 | 2.29E-05 | 5.82E-06 | 6.98E-07 | 9.75E-06 | 1.09E-06 | 1.62E-04 |
| 31 | 1 | 3.95E-04 | 5.03E-05 | 1.38E-04 | 1.09E-04 | 2.19E-05 | 2.63E-06 | 2.81E-05 | 2.58E-06 | 7.48E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 16,625 | 3377 | 727 | 148 | 2,291 | 465 | 6,889 | 1399 | 5390 | 8.54 | 0.035 | 0.0009 | 5.0 | 2.63E-02 |
| 2 | A | 731 | 0.45 | 16,852 | 7653 | 1,291 | 586 | 2,411 | 1095 | 7,329 | 3328 | 12662 | 8.68 | 0.035 | 0.0009 | 11.9 | 6.27E-02 |
| 3 | A | 2352 | 1.46 | 8,580 | 12536 | 607 | 887 | 1,255 | 1834 | 3,797 | 5548 | 20804 | 8.76 | 0.035 | 0.0010 | 19.8 | 1.04E-01 |
| 5 | A | 953 | 0.59 | 3,952 | 2340 | 134 | 79 | 237 | 140 | 93 | 55 | 2614 | 3.20 | 0.035 | 0.0003 | 0.9 | 4.68E-03 |
| 6 | A | 1099 | 0.68 | 7,443 | 5081 | 427 | 292 | 796 | 543 | 1,777 | 1213 | 7130 | 6.60 | 0.035 | 0.0007 | 5.1 | 2.67E-02 |
| 8 | A | 1091 | 0.68 | 7,702 | 5220 | 281 | 190 | 459 | 311 | 0 | 0 | 5722 | 2.77 | 0.035 | 0.0003 | 1.7 | 8.85E-03 |
| 11 | A | 1201 | 0.75 | 30 | 22 | 1 | 1 | 2 | 1 | 0 | 0 | 25 | 2.82 | 0.035 | 0.0003 | 0.0 | 3.88E-05 |
| 12 | A | 824 | 0.51 | 318 | 163 | 25 | 13 | 25 | 13 | 0 | 0 | 188 | 3.02 | 0.035 | 0.0003 | 0.1 | 3.18E-04 |
| 14 | A | 1618 | 1.01 | 906 | 911 | 34 | 34 | 63 | 63 | 194 | 195 | 1203 | 6.16 | 0.035 | 0.0007 | 0.8 | 4.20E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 33 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 2.13 | 0.035 | 0.0002 | 0.0 | 5.79E-05 |
| 21 | A | 1258 | 0.78 | 2,376 | 1857 | 71 | 55 | 188 | 147 | 193 | 151 | 2210 | 4.30 | 0.035 | 0.0005 | 1.0 | 5.35E-03 |
| 24 | A | 1946 | 1.21 | 2,355 | 2847 | 61 | 74 | 182 | 220 | 173 | 209 | 3350 | 4.16 | 0.035 | 0.0004 | 1.5 | 7.84E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 152 | 64 | 5 | 2 | 17 | 7 | 28 | 12 | 85 | 5.95 | 0.035 | 0.0006 | 0.1 | 2.86E-04 |
| 30 | A | 2827 | 1.76 | 152 | 267 | 5 | 9 | 17 | 30 | 28 | 49 | 355 | 5.95 | 0.035 | 0.0006 | 0.2 | 1.20E-03 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 65 | 33 | 169 | 86 | 228 | 116 | 1511 | 4.38 | 0.035 | 0.0005 | 0.7 | 3.73E-03 |

**World Logistics Center** REV 5 **2012 Phase 1** With Mitigation: MY2010 T6 and T7 DSL

**Nox** Emissions

## Emission Assumptions

With EMFAC2014

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions**

**Pollutant** **Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.84E-01 | 4.16E-02 |
| Light Logistics | Phase 1 | 4.74E-04 | 1.27E-04 |
| Utilities Service Station | Phase 1 | 3.35E-04 | 1.21E-04 |
| Gas Station w/Convenience Store | Phase 1 | 6.25E-04 | MFAC2014 Emission Factors |
| Convenience Store | Phase 1 | 7.05E-04 | 4.57E-05 |
| Fire Station | Phase 1 | 2.68E-07 | 7.84E-05 |
| Total | | 2.86E-01 | 4.20E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.49E-01 | 7.71E-03 |
| Light Logistics | Phase 1 | 8.60E-04 | 2.83E-05 |
| Utilities Service Station | Phase 1 | 1.42E-03 | 5.28E-05 |
| Gas Station w/Convenience Store | Phase 1 | 3.04E-03 | 8.72E-05 |
| Convenience Store | Phase 1 | 3.47E-03 | 1.07E-04 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 2.58E-01 | 7.98E-03 |

**Total Onsite Emission**

| | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 2.86E-01 | 4.20E-02 | |
| | Idling Emissions (g/sec) | 2.58E-01 | 7.98E-03 | |
| | Total Vehicle Emissions (g/sec) | 5.44E-01 | 4.99E-02 | |
| **Other Onsitie Sources** | Yard Trucks (LPG) (g/sec) | | 1.74E-01 | |
| | Fork Lifts (LPG) (g/sec) | | 1.40E-01 | |
| | Total Other Onsite Sources (g/sec) | | 3.14E-01 | |
| | | | | Total |
| | Total Emissions (g/sec) | 5.44E-01 | 3.64E-01 | 9.08E-01 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 1.94E-07 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52wee (1) EMFAC2014 Emission Factors**

**Onsite Running Exhaust Emissions** **Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 3 | 330 | 0.21 | 3.34E-01 | 7.37E-04 | 9.29E-05 | |
| | **LDT1** | 15 | 1.080 | 0 | 330 | 0.21 | 3.77E-02 | 8.30E-05 | 1.05E-05 | |
| | **LDT2** | 15 | 0.170 | 0 | 330 | 0.21 | 5.75E-03 | 1.27E-05 | 1.60E-06 | |
| | **MDT** | 15 | 0.190 | 0 | 330 | 0.21 | 1.11E-02 | 2.45E-05 | 3.09E-06 | |
| | **LHDT1** | 15 | 4.180 | 34 | 330 | 0.21 | 2.89E+01 | 6.36E-02 | 8.02E-03 | |
| | **LHDT2** | 15 | 3.880 | 11 | 330 | 0.21 | 8.76E+00 | 1.93E-02 | 2.43E-03 | |
| | **MHDT** | 15 | 3.410 | 181 | 330 | 0.21 | 1.27E+02 | 2.79E-01 | 3.52E-02 | |
| | **HHDT** | 15 | 7.190 | 581 | 330 | 0.21 | 8.56E+02 | 1.89E+00 | 2.38E-01 | |
| | | | | | | | | | | 2.84E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 1.12E-03 | 2.46E-06 | 3.11E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 1.26E-04 | 2.78E-07 | 3.50E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 1.92E-05 | 4.23E-08 | 5.34E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 3.72E-05 | 8.20E-08 | 1.03E-08 | |
| | **LHDT1** | 15 | 4.180 | 0 | 175 | 0.11 | 8.51E-02 | 1.88E-04 | 2.37E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 175 | 0.11 | 2.59E-02 | 5.69E-05 | 7.18E-06 | |
| | **MHDT** | 15 | 3.410 | 1 | 175 | 0.11 | 2.07E-01 | 4.55E-04 | 5.74E-05 | |
| | **HHDT** | 15 | 7.190 | 2 | 175 | 0.11 | 1.39E+00 | 3.06E-03 | 3.85E-04 | 4.74E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 9.88E-04 | 2.18E-06 | 2.74E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 1.11E-04 | 2.45E-07 | 3.09E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 1.70E-05 | 3.74E-08 | 4.72E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 3.29E-05 | 7.24E-08 | 9.14E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 100 | 0.06 | 1.52E-01 | 3.36E-04 | 4.24E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 100 | 0.06 | 4.63E-02 | 1.02E-04 | 1.29E-05 | |
| | **MHDT** | 15 | 3.410 | 1 | 100 | 0.06 | 1.67E-01 | 3.67E-04 | 4.63E-05 | |
| | **HHDT** | 15 | 7.190 | 2 | 100 | 0.06 | 8.38E-01 | 1.85E-03 | 2.33E-04 | 3.35E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 2.67E-04 | 5.88E-07 | 7.42E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.01E-05 | 6.63E-08 | 8.36E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 4.59E-06 | 1.01E-08 | 1.27E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 8.89E-06 | 1.96E-08 | 2.47E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 5.57E-04 | 1.23E-06 | 1.55E-07 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 1.69E-04 | 3.73E-07 | 4.70E-08 | |
| | **MHDT** | 15 | 3.410 | 2 | 50 | 0.03 | 2.01E-01 | 4.43E-04 | 5.58E-05 | |
| | **HHDT** | 15 | 7.190 | 9 | 50 | 0.03 | 2.05E+00 | 4.51E-03 | 5.69E-04 | 6.25E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.32E-04 | 7.32E-07 | 9.23E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.74E-05 | 8.25E-08 | 1.04E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 5.71E-06 | 1.26E-08 | 1.59E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.11E-05 | 2.44E-08 | 3.07E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 2.39E-02 | 5.26E-05 | 6.63E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 7.25E-03 | 1.60E-05 | 2.01E-06 | |
| | **MHDT** | 15 | 3.410 | 1 | 50 | 0.03 | 1.53E-01 | 3.37E-04 | 4.25E-05 | |
| | **HHDT** | 15 | 7.190 | 11 | 50 | 0.03 | 2.35E+00 | 5.19E-03 | 6.54E-04 | 7.05E-04 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 8.30E-04 | 1.83E-06 | 2.31E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 9.36E-05 | 2.06E-07 | 2.60E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 1.43E-05 | 3.14E-08 | 3.97E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 2.76E-05 | 6.09E-08 | 7.68E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 7.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-07 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 3.38E-01 | 7.45E-04 | 9.39E-05 | |
| | **LDT1** | | | 0 | | | 3.81E-02 | 8.39E-05 | 1.06E-05 | |
| | **LDT2** | | | 0 | | | 5.81E-03 | 1.28E-05 | 1.61E-06 | |
| | **MDT** | | | 0 | | | 1.13E-02 | 2.48E-05 | 3.13E-06 | |
| | **LHDT1** | | | 35 | | | 2.91E+01 | 6.41E-02 | 8.09E-03 | |
| | **LHDT2** | | | 11 | | | 8.84E+00 | 1.95E-02 | 2.46E-03 | |
| | **MHDT** | | | 186 | | | 1.27E+02 | 2.81E-01 | 3.54E-02 | |
| | **HHDT** | | | 604 | | | 8.63E+02 | 1.90E+00 | 2.40E-01 | |
| | **Total** | | | 840 | | | 1.03E+03 | 2.27E+00 | 2.86E-01 | 2.86E-01 |

## Diesel truck Idling Emissions

**Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 17 | 1.05E+02 | 2.32E-01 | 2.93E-02 | |
| | **LHDT2** | 75.050 | 5 | 6 | 3.45E+01 | 7.59E-02 | 9.57E-03 | |
| | **MHDT** | 26.280 | 5 | 91 | 1.98E+02 | 4.37E-01 | 5.51E-02 | |
| | **HHDT** | 23.120 | 5 | 290 | 5.60E+02 | 1.23E+00 | 1.55E-01 | |
| | | | | 403 | 8.98E+02 | 1.98E+00 | 2.49E-01 | 2.49E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 0 | 5.86E-01 | 1.29E-03 | 1.63E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.92E-01 | 4.22E-04 | 5.32E-05 | |
| | **MHDT** | 26.280 | 5 | 0 | 6.10E-01 | 1.34E-03 | 1.69E-04 | |
| | **HHDT** | 23.120 | 5 | 1 | 1.71E+00 | 3.77E-03 | 4.75E-04 | |
| | | | | 1 | 3.10E+00 | 6.82E-03 | 8.60E-04 | 8.60E-04 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 1.84E+00 | 4.05E-03 | 5.10E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 6.01E-01 | 1.32E-03 | 1.67E-04 | |
| | **MHDT** | 26.280 | 5 | 0 | 8.61E-01 | 1.90E-03 | 2.39E-04 | |
| | **HHDT** | 23.120 | 5 | 1 | 1.81E+00 | 3.98E-03 | 5.02E-04 | |
| | | | | 2 | 5.11E+00 | 1.12E-02 | 1.42E-03 | 1.42E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 1.34E-02 | 2.95E-05 | 3.73E-06 | |
| | **LHDT2** | 75.050 | 5 | 0 | 4.39E-03 | 9.67E-06 | 1.22E-06 | |
| | **MHDT** | 26.280 | 5 | 1 | 2.08E+00 | 4.58E-03 | 5.77E-04 | |
| | **HHDT** | 23.120 | 5 | 5 | 8.83E+00 | 1.95E-02 | 2.45E-03 | |
| | | | | 6 | 1.09E+01 | 2.41E-02 | 3.04E-03 | 3.04E-03 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 5.75E-01 | 1.27E-03 | 1.60E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.88E-01 | 4.14E-04 | 5.22E-05 | |
| | **MHDT** | 26.280 | 5 | 1 | 1.58E+00 | 3.49E-03 | 4.40E-04 | |
| | **HHDT** | 23.120 | 5 | 5 | 1.02E+01 | 2.24E-02 | 2.82E-03 | |
| | | | | 6 | 1.25E+01 | 2.75E-02 | 3.47E-03 | 3.47E-03 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 26.280 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 23.120 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 9.29E+02 | 2.05E+00 | 2.58E-01 | 2.58E-01 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day** **(1) EMFAC2014 Emission Factors**
1 **hrs/day**

**Onsite Running Exhaust Emissions** **Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 1004 | 330 | 0.21 | 4.08E+01 | 8.98E-02 | 1.13E-02 | |
| | **LDT1** | 15 | 0.549 | 119 | 330 | 0.21 | 1.34E+01 | 2.95E-02 | 3.72E-03 | |
| | **LDT2** | 15 | 0.393 | 363 | 330 | 0.21 | 2.92E+01 | 6.44E-02 | 8.12E-03 | |
| | **MDT** | 15 | 0.528 | 280 | 330 | 0.21 | 3.03E+01 | 6.67E-02 | 8.41E-03 | |
| | **LHDT1** | 15 | 0.559 | 109 | 330 | 0.21 | 1.25E+01 | 2.75E-02 | 3.46E-03 | |
| | **LHDT2** | 15 | 0.558 | 11 | 330 | 0.21 | 1.30E+00 | 2.87E-03 | 3.62E-04 | |
| | **MHDT** | 15 | 1.612 | 41 | 330 | 0.21 | 1.37E+01 | 3.01E-02 | 3.80E-03 | |
| | **HHDT** | 15 | 4.218 | 10 | 330 | 0.21 | 8.62E+00 | 1.90E-02 | 2.39E-03 | |
| | | | | | | | | | | 4.16E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 6 | 175 | 0.11 | 1.36E-01 | 3.00E-04 | 3.78E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 175 | 0.11 | 4.47E-02 | 9.85E-05 | 1.24E-05 | |
| | **LDT2** | 15 | 0.393 | 2 | 175 | 0.11 | 9.77E-02 | 2.15E-04 | 2.71E-05 | |
| | **MDT** | 15 | 0.528 | 2 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LHDT1** | 15 | 0.559 | 1 | 175 | 0.11 | 3.68E-02 | 8.10E-05 | 1.02E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 175 | 0.11 | 3.84E-03 | 8.47E-06 | 1.07E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 175 | 0.11 | 2.23E-02 | 4.91E-05 | 6.19E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 1.40E-02 | 3.08E-05 | 3.88E-06 | 1.27E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 10 | 100 | 0.06 | 1.20E-01 | 2.65E-04 | 3.34E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 100 | 0.06 | 3.95E-02 | 8.71E-05 | 1.10E-05 | |
| | **LDT2** | 15 | 0.393 | 4 | 100 | 0.06 | 8.63E-02 | 1.90E-04 | 2.40E-05 | |
| | **MDT** | 15 | 0.528 | 3 | 100 | 0.06 | 8.94E-02 | 1.97E-04 | 2.48E-05 | |
| | **LHDT1** | 15 | 0.559 | 2 | 100 | 0.06 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 6.89E-03 | 1.52E-05 | 1.91E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 1.80E-02 | 3.96E-05 | 4.99E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 8.44E-03 | 1.86E-05 | 2.34E-06 | 1.21E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 5 | 50 | 0.03 | 3.25E-02 | 7.17E-05 | 9.04E-06 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.07E-02 | 2.35E-05 | 2.97E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 6.48E-06 | |
| | **MDT** | 15 | 0.528 | 1 | 50 | 0.03 | 2.42E-02 | 5.32E-05 | 6.71E-06 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 2.41E-04 | 5.30E-07 | 6.69E-08 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 2.52E-05 | 5.54E-08 | 6.99E-09 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 6.03E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.06E-02 | 4.54E-05 | 5.72E-06 | 3.70E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 7 | 50 | 0.03 | 4.05E-02 | 8.92E-05 | 1.12E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.33E-02 | 2.93E-05 | 3.69E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.90E-02 | 6.39E-05 | 8.06E-06 | |
| | **MDT** | 15 | 0.528 | 2 | 50 | 0.03 | 3.01E-02 | 6.62E-05 | 8.35E-06 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **LHDT1** | 15 | 0.559 | 1 | 50 | 0.03 | 1.03E-02 | 2.27E-05 | 2.87E-06 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 1.08E-03 | 2.37E-06 | 2.99E-07 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 1.65E-02 | 3.64E-05 | 4.59E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.37E-02 | 5.22E-05 | 6.58E-06 | 4.57E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 16 | 50 | 0.03 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LDT1** | 15 | 0.549 | 2 | 50 | 0.03 | 3.32E-02 | 7.32E-05 | 9.23E-06 | |
| | **LDT2** | 15 | 0.393 | 6 | 50 | 0.03 | 7.25E-02 | 1.60E-04 | 2.02E-05 | |
| | **MDT** | 15 | 0.528 | 5 | 50 | 0.03 | 7.52E-02 | 1.66E-04 | 2.09E-05 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.84E-05 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 4.12E+01 | 9.07E-02 | 1.14E-02 | |
| | **LDT1** | | | 124 | | | 1.35E+01 | 2.98E-02 | 3.76E-03 | |
| | **LDT2** | | | 379 | | | 2.95E+01 | 6.50E-02 | 8.20E-03 | |
| | **MDT** | | | 292 | | | 3.06E+01 | 6.74E-02 | 8.50E-03 | |
| | **LHDT1** | | | 112 | | | 1.26E+01 | 2.77E-02 | 3.50E-03 | |
| | **LHDT2** | | | 12 | | | 1.32E+00 | 2.90E-03 | 3.65E-04 | |
| | **MHDT** | | | 42 | | | 1.37E+01 | 3.03E-02 | 3.82E-03 | |
| | **HHDT** | | | 10 | | | 8.68E+00 | 1.91E-02 | 2.41E-03 | |
| | **Total** | | | 2020 | | | 1.51E+02 | 3.33E-01 | 4.20E-02 | 4.20E-02 |

## Non-Diesel truck Idling Emissions

**Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 54 | 6.16E+00 | 1.36E-02 | 1.71E-03 | |
| | **LHDT2** | 1.380 | 5 | 6 | 6.56E-01 | 1.44E-03 | 1.82E-04 | |
| | **MHDT** | 1.870 | 5 | 21 | 3.22E+00 | 7.10E-03 | 8.95E-04 | |
| | **HHDT** | 42.650 | 5 | 5 | 1.77E+01 | 3.90E-02 | 4.92E-03 | |
| | | | | 86 | 2.77E+01 | 6.11E-02 | 7.71E-03 | 7.71E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 0 | 3.43E-02 | 7.55E-05 | 9.53E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.65E-03 | 8.03E-06 | 1.01E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 9.91E-03 | 2.18E-05 | 2.75E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 5.41E-02 | 1.19E-04 | 1.50E-05 | |
| | | | | 0 | 1.02E-01 | 2.25E-04 | 2.83E-05 | 2.83E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 1 | 1.07E-01 | 2.37E-04 | 2.99E-05 | |
| | **LHDT2** | 1.380 | 5 | 0 | 1.14E-02 | 2.52E-05 | 3.18E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 1.40E-02 | 3.08E-05 | 3.89E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 5.72E-02 | 1.26E-04 | 1.59E-05 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 1 | 1.90E-01 | 4.19E-04 | 5.28E-05 | 5.28E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 7.85E-04 | 1.73E-06 | 2.18E-07 | |
| | **LHDT2** | 1.380 | 5 | 0 | 8.35E-05 | 1.84E-07 | 2.32E-08 | |
| | **MHDT** | 1.870 | 5 | 0 | 3.37E-02 | 7.43E-05 | 9.37E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 2.79E-01 | 6.16E-04 | 7.76E-05 | |
| | | | | 0 | 3.14E-01 | 6.92E-04 | 8.72E-05 | 8.72E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 3.36E-02 | 7.41E-05 | 9.35E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.58E-03 | 7.88E-06 | 9.94E-07 | |
| | **MHDT** | 1.870 | 5 | 0 | 2.57E-02 | 5.66E-05 | 7.14E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 3.21E-01 | 7.08E-04 | 8.93E-05 | |
| | | | | 1 | 3.84E-01 | 8.47E-04 | 1.07E-04 | 1.07E-04 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 2.87E+01 | 6.33E-02 | 7.98E-03 | 7.98E-03 |

**World Logistics Center**
Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10, 2013 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square fee (1) EMFAC2014 Emission Factors |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

*Mitigated Emission Factors and Emissions (Tier 4 Interim NOx standard or better)*

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.

| | |
|---|---|
| Max Emissions (lb/sec) - Phase 1 | 0.837899 |
| Ave Emissions (lbs/hr) - Phase 1 | 1.380402 |
| Ave Emissions (g/sec) - Phase 1 | 0.174084 |
| | |
| Max Emissions (lbs/hr) - Phase 2 | 5.220389 |
| Max Emissions (lg/sec) - Phase 2 | 0.658349 |
| Ave Emissions (lbs/hr) - Phase 2 | 1.084601 |
| Ave Emissions (g/sec) - Phase 2 | 0.13678 |

Sources:
- Yard trucks/facility: Highland Fairview, October 10, 2013
- Load factor and Horsepower: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf. The load factor is from Table 5.10. Horsepower is from Table 5.3 (the average horsepower for a propane yard tractor).
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors for unmitigated version: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.
- Emission factors for mitigated Tier 4: CalEEMod Manual, Appendix D, Table 3.5

Notes:
The most common propane fueled yard tractor at the port in 2006 was the Kalmar PT122, year 2004 (http://www.portoflosangeles.org/DOC/REPORT_Air_Emissions_Inventory_Volume2.pdf). According to www.kalmarind-northamerica.com/source.php/1390193/ Kalmar%20Logistics%20brochure.pdf, for the Ottawa tractor, there are 3 types of tractors listed: 4x2 off-road terminal tractor, whic has a Tier 3 off-road engine; 4x2 DOT/EPA Terminal Tractor, which is 2010 Clean Idle Certified; 6x4 DOT/EPA Terminal Tractor, which is 2010 Clean Idle certified. According to the Technical Data for Kalmar 4-wheel Drive TR618i RoRo Tractor, it has a Tier 3 off-road engine.

**World Logistics Center**
Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Highland Fairview 10/11/13) |
| 3 | Light logistics planning areas |
| 15 | non diesel (1) EMFAC2014 Emission Factors |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 | 0.5101 | 510.8225 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 | 0.883797 | -0.30722 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 | 0.0593 | 667.7574 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 | 0.15 | 1639.48 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 | 0.02 | 213.13 |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 | 0.0364 | 409.8695 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 | 0.0043 | 48.6603 |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 | 0.0204 | 229.5269 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 | 0.0026 | 28.9459 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 | 0.0024 | 27.2498 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 | 0.0003 | 3.4365 |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 | 0.0160 | 180.3426 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 | 0.0020 | 22.7432 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 | 0.0019 | 21.4105 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 | 0.0002 | 2.7001 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). http://www.cat-lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com/_cat/PDFs/CLT-PDF030/CLT-PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 51-120
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6, Min Year 2015, Max Year 2019, HP 51-120 for forklift.

**World Logistics Center** **2012** **Nox** Based on PB Traffic Results 10/3/2013
**Project-Related Emissions** **Phase 1** REV 5 With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation** With EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 1.34E-01 | 2.13E-02 | 1.55E-01 |
| 2 | 3.56E-01 | 5.41E-02 | 4.10E-01 |
| 3 | 5.57E-01 | 8.73E-02 | 6.45E-01 |
| 5 | 2.56E-02 | 1.43E-02 | 3.99E-02 |
| 6 | 1.55E-01 | 3.19E-02 | 1.87E-01 |
| 8 | 2.09E-02 | 2.98E-02 | 5.07E-02 |
| 11 | 4.49E-07 | 8.68E-05 | 8.73E-05 |
| 12 | 7.50E-04 | 9.02E-04 | 1.65E-03 |
| 14 | 8.80E-02 | 1.22E-02 | 1.00E-01 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.78E-06 | 3.45E-04 | 3.47E-04 |
| 21 | 2.38E-02 | 1.05E-02 | 3.43E-02 |
| 24 | 3.52E-02 | 1.59E-02 | 5.11E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 5.04E-07 | 9.76E-05 | 9.81E-05 |
| 30 | 2.11E-06 | 4.09E-04 | 4.11E-04 |
| 31 | 9.86E-03 | 6.51E-03 | 1.64E-02 |
| | | Total | 1.69E+00 |

| ID | Arterial | From | To | 2012 With Project Phase 1(Pk PM) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 1,056 | 74 | 169 | 530 |
| 2 | Street A | Eucalyptus Ave | Street F | 1,093 | 139 | 185 | 620 |
| 3 | Street E | west of Street A | | 569 | 62 | 92 | 303 |
| 5 | Street E | Street D | Street A | 326 | 18 | 24 | 25 |
| 6 | Street A | Street F | Street C | 491 | 50 | 67 | 171 |
| 8 | Street D | Street E | Cactus Ave | 623 | 34 | 43 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 2 | 0 | 0 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 23 | 3 | 1 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 125 | 8 | 13 | 75 |
| 18 | Street B | east of Street A | Theodore St | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | | 4 | 0 | 0 | 0 |
| 21 | Street C | east of Street A | | 178 | 8 | 15 | 20 |
| 24 | Street C | Street F | Street H | 176 | 7 | 15 | 19 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 4 | 0 | 0 | 0 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 4 | 0 | 0 | 0 |
| 31 | Gilman Springs Rd | south of Street C | | 180 | 7 | 12 | 11 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **Nox** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1829 | 1,056 | 74 | 169 | 530 | 327 | 0.203 | 2 | 0 | 0 | 0 | 15 | 5 | 136 | 518 | 677 |
| 2 | 2037 | 1,093 | 139 | 185 | 620 | 731 | 0.454 | 2 | 0 | 0 | 0 | 28 | 10 | 149 | 606 | 795 |
| 3 | 1026 | 569 | 62 | 92 | 303 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 74 | 296 | 388 |
| 5 | 393 | 326 | 18 | 24 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 4 | 1 | 19 | 24 | 49 |
| 6 | 779 | 491 | 50 | 67 | 171 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 10 | 3 | 54 | 167 | 236 |
| 8 | 700 | 623 | 34 | 43 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 7 | 2 | 35 | 0 | 45 |
| 11 | 2 | 2 | 0 | 0 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 27 | 23 | 3 | 1 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 14 | 221 | 125 | 8 | 13 | 75 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 2 | 1 | 10 | 73 | 86 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 4 | 4 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 221 | 178 | 8 | 15 | 20 | 1258 | 0.781 | 0 | 0 | 0 | 0 | 2 | 1 | 12 | 20 | 34 |
| 24 | 217 | 176 | 7 | 15 | 19 | 1946 | 1.209 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 19 | 33 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 210 | 180 | 7 | 12 | 11 | 820 | 0.509 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 11 | 23 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5400 | 1.2800 | 0.1400 | 0.1700 | 4.5500 | 4.2100 | 1.9900 | 3.8800 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.58E-05 | 6.37E-06 | 6.85E-07 | 1.61E-06 | 3.86E-03 | 1.22E-03 | 1.53E-02 | 1.13E-01 | 1.34E-01 |
| 2 | 1 | 1.29E-04 | 1.47E-05 | 1.58E-06 | 3.72E-06 | 1.62E-02 | 5.11E-03 | 3.74E-02 | 2.97E-01 | 3.56E-01 |
| 3 | 1 | 2.16E-04 | 2.47E-05 | 2.65E-06 | 6.24E-06 | 2.33E-02 | 7.33E-03 | 5.98E-02 | 4.67E-01 | 5.57E-01 |
| 5 | 1 | 5.02E-05 | 5.73E-06 | 6.16E-07 | 1.45E-06 | 2.74E-03 | 8.62E-04 | 6.33E-03 | 1.56E-02 | 2.56E-02 |
| 6 | 1 | 8.73E-05 | 9.95E-06 | 1.07E-06 | 2.52E-06 | 8.78E-03 | 2.76E-03 | 2.04E-02 | 1.23E-01 | 1.55E-01 |
| 8 | 1 | 1.10E-04 | 1.25E-05 | 1.35E-06 | 3.17E-06 | 5.92E-03 | 1.86E-03 | 1.30E-02 | 0.00E+00 | 2.09E-02 |
| 11 | 1 | 3.88E-07 | 4.43E-08 | 4.76E-09 | 1.12E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.49E-07 |
| 12 | 1 | 3.07E-06 | 3.49E-07 | 3.76E-08 | 8.83E-08 | 3.95E-04 | 1.24E-04 | 2.28E-04 | 0.00E+00 | 7.50E-04 |
| 14 | 1 | 3.27E-05 | 3.73E-06 | 4.01E-07 | 9.43E-07 | 2.07E-03 | 6.50E-04 | 5.82E-03 | 7.95E-02 | 8.80E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.54E-06 | 1.76E-07 | 1.89E-08 | 4.45E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.78E-06 |
| 21 | 1 | 3.62E-05 | 4.13E-06 | 4.44E-07 | 1.04E-06 | 1.61E-03 | 5.06E-04 | 5.22E-03 | 1.65E-02 | 2.38E-02 |
| 24 | 1 | 5.54E-05 | 6.31E-06 | 6.79E-07 | 1.60E-06 | 2.18E-03 | 6.84E-04 | 8.07E-03 | 2.42E-02 | 3.52E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.37E-07 | 4.98E-08 | 5.36E-09 | 1.26E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.04E-07 |
| 30 | 1 | 1.83E-06 | 2.08E-07 | 2.24E-08 | 5.27E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.11E-06 |
| 31 | 1 | 2.39E-05 | 2.72E-06 | 2.93E-07 | 6.88E-07 | 9.17E-04 | 2.88E-04 | 2.72E-03 | 5.91E-03 | 9.86E-03 |

**World Logistics Center** **2012** **Nox** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1829 | 1,056 | 74 | 169 | 530 | 327 | 0.203 | 605 | 71 | 211 | 167 | 49 | 5 | 33 | 12 | 1152 |
| 2 | 2037 | 1,093 | 139 | 185 | 620 | 731 | 0.454 | 626 | 73 | 218 | 173 | 91 | 10 | 36 | 14 | 1242 |
| 3 | 1026 | 569 | 62 | 92 | 303 | 2352 | 1.461 | 326 | 38 | 114 | 90 | 41 | 4 | 18 | 7 | 638 |
| 5 | 393 | 326 | 18 | 24 | 25 | 953 | 0.592 | 187 | 22 | 65 | 52 | 12 | 1 | 5 | 1 | 344 |
| 6 | 779 | 491 | 50 | 67 | 171 | 1099 | 0.683 | 281 | 33 | 98 | 78 | 33 | 3 | 13 | 4 | 543 |
| 8 | 700 | 623 | 34 | 43 | 0 | 1091 | 0.678 | 357 | 42 | 124 | 99 | 22 | 2 | 8 | 0 | 655 |
| 11 | 2 | 2 | 0 | 0 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 12 | 27 | 23 | 3 | 1 | 0 | 824 | 0.512 | 13 | 2 | 5 | 4 | 2 | 0 | 0 | 0 | 25 |
| 14 | 221 | 125 | 8 | 13 | 75 | 1618 | 1.005 | 72 | 8 | 25 | 20 | 5 | 1 | 3 | 2 | 135 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 4 | 4 | 0 | 0 | 0 | 2386 | 1.482 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 21 | 221 | 178 | 8 | 15 | 20 | 1258 | 0.781 | 102 | 12 | 36 | 28 | 5 | 1 | 3 | 0 | 187 |
| 24 | 217 | 176 | 7 | 15 | 19 | 1946 | 1.209 | 101 | 12 | 35 | 28 | 5 | 0 | 3 | 0 | 184 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 31 | 210 | 180 | 7 | 12 | 11 | 820 | 0.509 | 103 | 12 | 36 | 28 | 5 | 0 | 2 | 0 | 187 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1400 | 0.3800 | 0.2500 | 0.3400 | 0.5500 | 0.5000 | 1.7400 | 6.0100 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.78E-03 | 1.52E-03 | 2.97E-03 | 3.21E-03 | 1.51E-03 | 1.45E-04 | 3.23E-03 | 3.97E-03 | 2.13E-02 |
| 2 | 1 | 1.11E-02 | 3.52E-03 | 6.88E-03 | 7.42E-03 | 6.35E-03 | 6.08E-04 | 7.90E-03 | 1.04E-02 | 5.41E-02 |
| 3 | 1 | 1.85E-02 | 5.90E-03 | 1.15E-02 | 1.24E-02 | 9.11E-03 | 8.73E-04 | 1.26E-02 | 1.63E-02 | 8.73E-02 |
| 5 | 1 | 4.30E-03 | 1.37E-03 | 2.67E-03 | 2.88E-03 | 1.07E-03 | 1.03E-04 | 1.34E-03 | 5.45E-04 | 1.43E-02 |
| 6 | 1 | 7.47E-03 | 2.38E-03 | 4.65E-03 | 5.01E-03 | 3.43E-03 | 3.29E-04 | 4.30E-03 | 4.30E-03 | 3.19E-02 |
| 8 | 1 | 9.41E-03 | 2.99E-03 | 5.85E-03 | 6.31E-03 | 2.32E-03 | 2.22E-04 | 2.74E-03 | 0.00E+00 | 2.98E-02 |
| 11 | 1 | 3.32E-05 | 1.06E-05 | 2.07E-05 | 2.23E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.68E-05 |
| 12 | 1 | 2.62E-04 | 8.35E-05 | 1.63E-04 | 1.76E-04 | 1.54E-04 | 1.48E-05 | 4.81E-05 | 0.00E+00 | 9.02E-04 |
| 14 | 1 | 2.80E-03 | 8.91E-04 | 1.74E-03 | 1.88E-03 | 8.08E-04 | 7.75E-05 | 1.23E-03 | 2.78E-03 | 1.22E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.32E-04 | 4.20E-05 | 8.22E-05 | 8.86E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.45E-04 |
| 21 | 1 | 3.10E-03 | 9.87E-04 | 1.93E-03 | 2.08E-03 | 6.29E-04 | 6.02E-05 | 1.10E-03 | 5.76E-04 | 1.05E-02 |
| 24 | 1 | 4.74E-03 | 1.51E-03 | 2.95E-03 | 3.18E-03 | 8.51E-04 | 8.15E-05 | 1.71E-03 | 8.46E-04 | 1.59E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.74E-05 | 1.19E-05 | 2.32E-05 | 2.51E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.76E-05 |
| 30 | 1 | 1.57E-04 | 4.98E-05 | 9.73E-05 | 1.05E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.09E-04 |
| 31 | 1 | 2.04E-03 | 6.50E-04 | 1.27E-03 | 1.37E-03 | 3.59E-04 | 3.44E-05 | 5.75E-04 | 2.07E-04 | 6.51E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center 2012 Phase 1 With Mitigation: MY2010 T6 and T7 DSL

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.94E-03 | 4.12E-03 |
| Light Logistics | Phase 1 | 3.94E-06 | 9.49E-06 |
| Utilities Service Station | Phase 1 | 3.27E-06 | 8.64E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.34E-06 | 2.40E-06 |
| Convenience Store | Phase 1 | 6.84E-06 | 3.96E-06 |
| Fire Station | Phase 1 | 2.03E-08 | 2.56E-06 |
| Total | | 1.96E-03 | 4.15E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.55E-04 | 4.26E-05 |
| Light Logistics | Phase 1 | 9.56E-07 | 2.32E-07 |
| Utilities Service Station | Phase 1 | 3.16E-06 | 6.38E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.11E-07 | 2.61E-07 |
| Convenience Store | Phase 1 | 7.84E-07 | 4.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.60E-04 | 4.42E-05 |

**Total Onsite Mobile Sources**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.96E-03 | 4.15E-03 | |
| | Idling Emissions (g/sec) | 1.60E-04 | 4.42E-05 | |
| | Total Vehicle Emissions (g/sec) | 2.12E-03 | 4.19E-03 | |
| **Other Onsite Sources** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g./sec) | 2.12E-03 | 5.53E-03 | 7.66E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | **1.63E-09** |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.206 | 53 | 330 | 0.21 | 2.24E+00 | 4.94E-03 | 2.59E-05 | |
| | **LDT1** | 15 | 0.403 | 3 | 330 | 0.21 | 2.11E-01 | 4.65E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.074 | 3 | 330 | 0.21 | 3.80E-02 | 8.37E-05 | 4.40E-07 | |
| | **MDT** | 15 | 0.096 | 5 | 330 | 0.21 | 9.55E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.160 | 274 | 330 | 0.21 | 9.01E+00 | 1.98E-02 | 1.04E-04 | |
| | **LHDT2** | 15 | 0.173 | 93 | 330 | 0.21 | 3.31E+00 | 7.28E-03 | 3.83E-05 | |
| | **MHDT** | 15 | 0.150 | 1425 | 330 | 0.21 | 4.37E+01 | 9.62E-02 | 5.06E-04 | |
| | **HHDT** | 15 | 0.115 | 4628 | 330 | 0.21 | 1.09E+02 | 2.41E-01 | 1.27E-03 | |
| | | | | | | | | | | 1.94E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.206 | 0 | 175 | 0.11 | 5.05E-03 | 1.11E-05 | 5.84E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 175 | 0.11 | 4.75E-04 | 1.05E-06 | 5.50E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 175 | 0.11 | 8.56E-05 | 1.89E-07 | 9.91E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 175 | 0.11 | 2.15E-04 | 4.74E-07 | 2.49E-09 | |
| | **LHDT1** | 15 | 0.160 | 2 | 175 | 0.11 | 2.99E-02 | 6.58E-05 | 3.46E-07 | |
| | **LHDT2** | 15 | 0.173 | 1 | 175 | 0.11 | 1.10E-02 | 2.42E-05 | 1.27E-07 | |
| | **MHDT** | 15 | 0.150 | 6 | 175 | 0.11 | 9.54E-02 | 2.10E-04 | 1.10E-06 | |
| | **HHDT** | 15 | 0.115 | 16 | 175 | 0.11 | 1.99E-01 | 4.37E-04 | 2.30E-06 | 3.94E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.206 | 0 | 100 | 0.06 | 4.25E-03 | 9.37E-06 | 4.92E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 100 | 0.06 | 4.00E-04 | 8.82E-07 | 4.63E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 100 | 0.06 | 7.21E-05 | 1.59E-07 | 8.35E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 100 | 0.06 | 1.81E-04 | 3.99E-07 | 2.10E-09 | |
| | **LHDT1** | 15 | 0.160 | 6 | 100 | 0.06 | 5.70E-02 | 1.26E-04 | 6.60E-07 | |
| | **LHDT2** | 15 | 0.173 | 2 | 100 | 0.06 | 2.09E-02 | 4.61E-05 | 2.42E-07 | |
| | **MHDT** | 15 | 0.150 | 5 | 100 | 0.06 | 4.51E-02 | 9.93E-05 | 5.22E-07 | |
| | **HHDT** | 15 | 0.115 | 22 | 100 | 0.06 | 1.55E-01 | 3.41E-04 | 1.79E-06 | 3.27E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.23E-03 | 2.71E-06 | 1.43E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.16E-04 | 2.55E-07 | 1.34E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.09E-05 | 4.60E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 5.25E-05 | 1.16E-07 | 6.07E-10 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 4.00E-03 | 8.80E-06 | 4.62E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 1.47E-03 | 3.23E-06 | 1.70E-08 | |
| | **MHDT** | 15 | 0.150 | 14 | 50 | 0.03 | 6.39E-02 | 1.41E-04 | 7.40E-07 | |
| | **HHDT** | 15 | 0.115 | 85 | 50 | 0.03 | 3.04E-01 | 6.71E-04 | 3.52E-06 | 4.34E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 2.04E-03 | 4.50E-06 | 2.36E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 2.22E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 3.46E-05 | 7.63E-08 | 4.01E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 8.70E-05 | 1.92E-07 | 1.01E-09 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 6.10E-03 | 1.34E-05 | 7.06E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 2.24E-03 | 4.93E-06 | 2.59E-08 | |
| | **MHDT** | 15 | 0.150 | 23 | 50 | 0.03 | 1.05E-01 | 2.30E-04 | 1.21E-06 | |
| | **HHDT** | 15 | 0.115 | 133 | 50 | 0.03 | 4.76E-01 | 1.05E-03 | 5.51E-06 | 6.84E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.52E-03 | 3.35E-06 | 1.76E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.43E-04 | 3.15E-07 | 1.66E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.58E-05 | 5.68E-08 | 2.98E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 6.47E-05 | 1.43E-07 | 7.49E-10 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.150 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.26E+00 | 4.97E-03 | 2.61E-05 | |
| | **LDT1** | | | 3 | | | 2.12E-01 | 4.68E-04 | 2.46E-06 | |
| | **LDT2** | | | 3 | | | 3.83E-02 | 8.43E-05 | 4.43E-07 | |
| | **MDT** | | | 5 | | | 9.61E-02 | 2.12E-04 | 1.11E-06 | |
| | **LHDT1** | | | 283 | | | 9.10E+00 | 2.01E-02 | 1.05E-04 | |
| | **LHDT2** | | | 96 | | | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | **MHDT** | | | 1472 | | | 4.40E+01 | 9.69E-02 | 5.09E-04 | |
| | **HHDT** | | | 4883 | | | 1.11E+02 | 2.43E-01 | 1.28E-03 | |
| | **Total** | | | 6800 | | | 1.70E+02 | 3.73E-01 | 1.96E-03 | 1.96E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 137 | 9.69E+00 | 2.13E-02 | 1.12E-04 | |
| | **LHDT2** | 0.853 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 0.001 | 5 | 713 | 8.31E-02 | 1.83E-04 | 9.62E-07 | |
| | **HHDT** | 0.002 | 5 | 2314 | 2.89E-01 | 6.37E-04 | 3.35E-06 | |
| | | | | 3210 | 1.34E+01 | 2.95E-02 | 1.55E-04 | 1.55E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 1 | 6.06E-02 | 1.33E-04 | 7.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.40E-07 | |
| | **MHDT** | 0.001 | 5 | 3 | 3.42E-04 | 7.54E-07 | 3.96E-09 | |
| | **HHDT** | 0.002 | 5 | 8 | 9.90E-04 | 2.18E-06 | 1.15E-08 | |
| | | | | 12 | 8.26E-02 | 1.82E-04 | 9.56E-07 | 9.56E-07 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 3 | 2.02E-01 | 4.46E-04 | 2.34E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 6.91E-02 | 1.52E-04 | 8.00E-07 | |
| | **MHDT** | 0.001 | 5 | 2 | 2.83E-04 | 6.24E-07 | 3.28E-09 | |
| | **HHDT** | 0.002 | 5 | 11 | 1.35E-03 | 2.97E-06 | 1.56E-08 | |
| | | | | 17 | 2.73E-01 | 6.01E-04 | 3.16E-06 | 3.16E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 2.84E-02 | 6.25E-05 | 3.28E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 9.69E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 0.001 | 5 | 7 | 8.03E-04 | 1.77E-06 | 9.29E-09 | |
| | **HHDT** | 0.002 | 5 | 43 | 5.31E-03 | 1.17E-05 | 6.15E-08 | |
| | | | | 50 | 4.42E-02 | 9.73E-05 | 5.11E-07 | 5.11E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 1 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 0.001 | 5 | 11 | 1.31E-03 | 2.89E-06 | 1.52E-08 | |
| | **HHDT** | 0.002 | 5 | 66 | 8.31E-03 | 1.83E-05 | 9.62E-08 | |
| | | | | 79 | 6.77E-02 | 1.49E-04 | 7.84E-07 | 7.84E-07 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 1.38E+01 | 3.05E-02 | 1.60E-04 | 1.60E-04 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 17546 | 330 | 0.21 | 1.86E+02 | 4.10E-01 | 2.15E-03 | |
| | **LDT1** | 15 | 0.061 | 2058 | 330 | 0.21 | 2.56E+01 | 5.64E-02 | 2.97E-04 | |
| | **LDT2** | 15 | 0.051 | 6111 | 330 | 0.21 | 6.36E+01 | 1.40E-01 | 7.36E-04 | |
| | **MDT** | 15 | 0.051 | 4846 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.84E-04 | |
| | **LHDT1** | 15 | 0.089 | 886 | 330 | 0.21 | 1.62E+01 | 3.56E-02 | 1.87E-04 | |
| | **LHDT2** | 15 | 0.101 | 93 | 330 | 0.21 | 1.93E+00 | 4.26E-03 | 2.24E-05 | |
| | **MHDT** | 15 | 0.148 | 344 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 1.21E-04 | |
| | **HHDT** | 15 | 0.090 | 104 | 330 | 0.21 | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | | | | | | | | | | 4.12E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 75 | 175 | 0.11 | 4.19E-01 | 9.23E-04 | 4.85E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 175 | 0.11 | 5.77E-02 | 1.27E-04 | 6.68E-07 | |
| | **LDT2** | 15 | 0.051 | 26 | 175 | 0.11 | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.051 | 21 | 175 | 0.11 | 1.14E-01 | 2.50E-04 | 1.31E-06 | |
| | **LHDT1** | 15 | 0.089 | 6 | 175 | 0.11 | 5.36E-02 | 1.18E-04 | 6.21E-07 | |
| | **LHDT2** | 15 | 0.101 | 1 | 175 | 0.11 | 6.41E-03 | 1.41E-05 | 7.42E-08 | |
| | **MHDT** | 15 | 0.148 | 1 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 175 | 0.11 | 3.50E-03 | 7.71E-06 | 4.05E-08 | 9.49E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 110 | 100 | 0.06 | 3.53E-01 | 7.78E-04 | 4.09E-06 | |
| | **LDT1** | 15 | 0.061 | 13 | 100 | 0.06 | 4.86E-02 | 1.07E-04 | 5.63E-07 | |
| | **LDT2** | 15 | 0.051 | 38 | 100 | 0.06 | 1.21E-01 | 2.66E-04 | 1.40E-06 | |
| | **MDT** | 15 | 0.051 | 30 | 100 | 0.06 | 9.57E-02 | 2.11E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 100 | 0.06 | 1.22E-02 | 2.70E-05 | 1.42E-07 | |
| | **MHDT** | 15 | 0.148 | 1 | 100 | 0.06 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 2.73E-03 | 6.01E-06 | 3.16E-08 | 8.64E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 64 | 50 | 0.03 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LDT1** | 15 | 0.061 | 7 | 50 | 0.03 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **LDT2** | 15 | 0.051 | 22 | 50 | 0.03 | 3.49E-02 | 7.69E-05 | 4.04E-07 | |
| | **MDT** | 15 | 0.051 | 18 | 50 | 0.03 | 2.77E-02 | 6.10E-05 | 3.21E-07 | |
| | **LHDT1** | 15 | 0.089 | 3 | 50 | 0.03 | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 8.58E-04 | 1.89E-06 | 9.93E-09 | |
| | **MHDT** | 15 | 0.148 | 3 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **HHDT** | 15 | 0.090 | 2 | 50 | 0.03 | 5.37E-03 | 1.18E-05 | 6.21E-08 | 2.40E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 105 | 50 | 0.03 | 1.70E-01 | 3.73E-04 | 1.96E-06 | |
| | **LDT1** | 15 | 0.061 | 12 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **LDT2** | 15 | 0.051 | 37 | 50 | 0.03 | 5.79E-02 | 1.28E-04 | 6.70E-07 | |
| | **MDT** | 15 | 0.051 | 29 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LHDT1** | 15 | 0.089 | 4 | 50 | 0.03 | 1.09E-02 | 2.41E-05 | 1.27E-07 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 1.31E-03 | 2.88E-06 | 1.52E-08 | |
| | **MHDT** | 15 | 0.148 | 5 | 50 | 0.03 | 2.50E-02 | 5.51E-05 | 2.90E-07 | |
| | **HHDT** | 15 | 0.090 | 3 | 50 | 0.03 | 8.39E-03 | 1.85E-05 | 9.71E-08 | 3.96E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 78 | 50 | 0.03 | 1.26E-01 | 2.78E-04 | 1.46E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 50 | 0.03 | 1.74E-02 | 3.83E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.051 | 27 | 50 | 0.03 | 4.31E-02 | 9.49E-05 | 4.99E-07 | |
| | **MDT** | 15 | 0.051 | 22 | 50 | 0.03 | 3.42E-02 | 7.53E-05 | 3.96E-07 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.56E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.87E+02 | 4.13E-01 | 2.17E-03 | |
| | **LDT1** | | | 2108 | | | 2.58E+01 | 5.68E-02 | 2.98E-04 | |
| | **LDT2** | | | 6262 | | | 6.40E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | | | 4966 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | | | 917 | | | 1.63E+01 | 3.60E-02 | 1.89E-04 | |
| | **LHDT2** | | | 97 | | | 1.95E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | | | 356 | | | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | **HHDT** | | | 110 | | | 1.95E+00 | 4.29E-03 | 2.25E-05 | |
| | **Total** | | | 32792 | | | 3.59E+02 | 7.90E-01 | 4.15E-03 | 4.15E-03 |

**Non-Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 443 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **LHDT2** | 0.050 | 5 | 47 | 1.95E-01 | 4.29E-04 | 2.25E-06 | |
| | **MHDT** | 0.063 | 5 | 172 | 9.04E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 0.085 | 5 | 52 | 3.70E-01 | 8.15E-04 | 4.28E-06 | |
| | | | | 714 | 3.68E+00 | 8.11E-03 | 4.26E-05 | 4.26E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 3 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 1.22E-03 | 2.68E-06 | 1.41E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.72E-03 | 8.20E-06 | 4.31E-08 | |
| | **HHDT** | 0.085 | 5 | 0 | 1.27E-03 | 2.79E-06 | 1.47E-08 | |
| | | | | 4 | 2.01E-02 | 4.42E-05 | 2.32E-07 | 2.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 9 | 4.63E-02 | 1.02E-04 | 5.35E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.06E-03 | 8.95E-06 | 4.70E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **HHDT** | 0.085 | 5 | 0 | 1.73E-03 | 3.80E-06 | 2.00E-08 | |
| | | | | 11 | 5.51E-02 | 1.21E-04 | 6.38E-07 | 6.38E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 1 | 6.49E-03 | 1.43E-05 | 7.51E-08 | |
| | **LHDT2** | 0.050 | 5 | 0 | 5.70E-04 | 1.25E-06 | 6.59E-09 | |
| | **MHDT** | 0.063 | 5 | 2 | 8.72E-03 | 1.92E-05 | 1.01E-07 | |
| | **HHDT** | 0.085 | 5 | 1 | 6.80E-03 | 1.50E-05 | 7.87E-08 | |
| | | | | 4 | 2.26E-02 | 4.97E-05 | 2.61E-07 | 2.61E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 2 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 8.70E-04 | 1.92E-06 | 1.01E-08 | |
| | **MHDT** | 0.063 | 5 | 3 | 1.43E-02 | 3.14E-05 | 1.65E-07 | |
| | **HHDT** | 0.085 | 5 | 2 | 1.06E-02 | 2.34E-05 | 1.23E-07 | |
| | | | | 6 | 3.57E-02 | 7.86E-05 | 4.13E-07 | 4.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.82E+00 | 8.41E-03 | 4.42E-05 | 4.42E-05 |

**World Logistics Center**
Operational Emissions
Yard Trucks/Hostlers
Prepared by Michael Brandman Associates
22-Oct-13

*Assumptions*

| | |
|---|---|
| 2 | yard trucks/facility, source: Highland Fairview, October 10, 2013 |
| 1500000 | square feet, on average, per building/facility |
| 40400000 | square feet of warehouses (minus light logistics) |
| 26.9 | number of buildings (based on average) |
| 54 | yard trucks |
| 199 | horsepower |
| 155 | whp (wheel horsepower) |
| 0.39 | load factor |
| 7 | hours/day/truck (maximum) |
| 260 | days of operation per year |

*Emission Factors and Emissions (LPG)*

| | THC | NOx | CO | PM | CO2 |
|---|---|---|---|---|---|
| Emission factor (g/whp-hr) | 0.14 | 3.49 | 0.07 | 0.007 | 864 |
| Emissions (lbs/day) - Project Build Out | 7.02 | 175.01 | 3.51 | 0.351 | 43319 |
| Emissions (tons/year) - Project Build Out | 0.91 | 22.75 | 0.46 | 0.046 | 5631 |
| Max Emissions (lbs/hr) - Project Build Out | 1.003 | 25.001 | 0.501 | 0.050 | 6188.386 |
| Ave Emissions (lbs/hr) Project Build Out | 0.293 | 7.292 | 0.146 | 0.015 | 1804.946 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 1 | 0.562 | 14.001 | 0.281 | 0.028 | 3465.496 |
| Max Emissions (g/sec) Phase 1 | 0.071 | 1.766 | 0.035 | 0.004 | 437.038 |
| Ave Emissions (lbs/hr) Phase 1 | 0.164 | 4.084 | 0.082 | 0.008 | 1010.770 |
| Ave Emissions (g/sec) Phase 1 | 0.0207 | 0.5150 | 0.0103 | 0.0010 | 127.4693 |
| | | | | | |
| Max Emissions (lbs/hr) Phase 2 | 0.4413 | 11.0006 | 0.2206 | 0.0221 | 2722.8900 |
| Max Emissions (g/sec) Phase 2 | 0.0557 | 1.3873 | 0.0278 | 0.0028 | 343.3867 |
| Ave Emissions (lbs/hr) Phase 2 | 0.0721 | 1.7968 | 0.0360 | 0.0036 | 444.7387 |
| Ave Emissions (g/sec) Phase 2 | 0.0091 | 0.2266 | 0.0045 | 0.0005 | 56.0865 |

Sources:
- Load factor: Port of Los Angeles Inventory of Emissions - 2012. Starcrest Consulting Group. http://www.portoflosangeles.org/pdf/2012_Air_Emissions_Inventory.pdf
- Conversion from horsepower to whp: Wheel Horsepower to Crankshaft Horsepower Guestimator. http://www.mk5cortinaestate.co.uk/calculator4.php
- Emission factors and HP: California Air Resources Board. 2005. Cargo Handling Equipment Yard Truck Emission Testing. Cummins 2004 5.9L B LNG truck. www.arb.ca.gov/ports/cargo/documents/yttest.pdf. Note: there were two LPG trucks tested but one had active low pressure faults during testing, so the other truck testing results were used.

**World Logistics Center**
Operational Emissions
Forklifts
Prepared by Michael Brandman Associates
22-Oct-13

*Usage Assumptions*

| | |
|---|---|
| 5 | non diesel forklifts/light logistics planning area (source: Highland Fairview 10/11/13) |
| 3 | Light logistics planning areas |
| 15 | non diesel forklifts - total |
| 4 | hours/day per forklift on average |
| 93 | horsepower |
| 0.2 | load factor |
| 260 | operating days/year |

*Diesel Forklift Emission Factors (g/bhp-hr)*

| ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|
| 0.7684 | 6.60091 | 4.06346 | 0.0049 | 0.5545 | 0.5101 | 510.8225 |

*Percent Reduction in Diesel Emission Factors for Compressed Natural Gas Equipment Based on Data Available in OFFROAD2011*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| % | 0.9122 | 0.5103 | -6.492 | 1 | 0.89309 | 0.883797 | -0.30722 |

*Natural Gas Emission Factors*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| g/bhp-hr | 0.0675 | 3.2325 | 30.4434 | 0.0000 | 0.0593 | 0.0593 | 667.7574 |

*Natural Gas Emissions (assuming all forklifts are natural gas)*

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|
| pounds/day @ Build Out | 0.17 | 7.94 | 74.74 | 0.000 | 0.15 | 0.15 | 1639.48 |
| tons/year @ Build Out | 0.02 | 1.03 | 9.72 | 0.000 | 0.02 | 0.02 | 213.13 |
| Max Emissions (lbs/hr) @ Build Out | 0.0414 | 1.9841 | 18.6862 | 0.0000 | 0.0364 | 0.0364 | 409.8695 |
| Ave Emissions (lbs/hr) @ Build Out | 0.0049 | 0.2356 | 2.2185 | 0.0000 | 0.0043 | 0.0043 | 48.6603 |
| Max Emissions (lbs/hr) @ Phase 1 | 0.0232 | 1.1111 | 10.4643 | 0.0000 | 0.0204 | 0.0204 | 229.5269 |
| Max Emissions (g/sec) @ Phase 1 | 0.0029 | 0.1401 | 1.3197 | 0.0000 | 0.0026 | 0.0026 | 28.9459 |
| Ave Emissions (lbs/hr) @ Phase 1 | 0.0028 | 0.1319 | 1.2423 | 0.0000 | 0.0024 | 0.0024 | 27.2498 |
| Ave Emissions (g/sec) @ Phase 1 | 0.0003 | 0.0166 | 0.1567 | 0.0000 | 0.0003 | 0.0003 | 3.4365 |
| Max Emissions (lbs/hr) @ Phase 2 | 0.0182 | 0.8730 | 8.2219 | 0.0000 | 0.0160 | 0.0160 | 180.3426 |
| Max Emissions (g/sec) @ Phase 2 | 0.0023 | 0.1101 | 1.0369 | 0.0000 | 0.0020 | 0.0020 | 22.7432 |
| Ave Emissions (lbs/hr) @ Phase 2 | 0.0022 | 0.1036 | 0.9761 | 0.0000 | 0.0019 | 0.0019 | 21.4105 |
| Ave Emissions (g/sec) @ Phase 2 | 0.0003 | 0.0131 | 0.1231 | 0.0000 | 0.0002 | 0.0002 | 2.7001 |

Sources:
- Cat Lift Trucks. Carl Modesette. Choosing Electric (AC) Lift Trucks Over Internal Combustion (IC). http://www.cat-lift.com/_cat/pdfs/AC_IC_White_Page.pdf. Accessed October 23, 2013.
- Horsepower: Cat Lift Trucks, LG Gas Cushion Tire Lift Trucks, Model GC35K, http://www.cat-lift.com/_cat/PDFs/CLT-PDF030/CLT-PDF030.html
- Diesel Forklift Emission Factors: CalEEMod Manual Appendix D, Table 3.4, forklifts, year 2015, HP 51-120
- Percent Reduction in Diesel for Compressed Natural Gas: CalEEMod Manual Appendix D, Table 3.6, Min Year 2015, Max Year 2019, HP 51-120 for forklift.

**World Logistics Center** **2012** **PM10** Based on PB Traffic Results 10/3/2013
**Project Only** **Phase 1** REV5 With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation** **With EMFAC2014**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 2.46E-03 | 2.13E-03 | 2.63E-02 | 3.09E-02 |
| 2 | 5.93E-03 | 5.02E-03 | 6.27E-02 | 7.37E-02 |
| 3 | 9.86E-03 | 8.19E-03 | 1.04E-01 | 1.22E-01 |
| 5 | 3.03E-04 | 1.38E-03 | 4.68E-03 | 6.36E-03 |
| 6 | 2.40E-03 | 3.18E-03 | 2.67E-02 | 3.23E-02 |
| 8 | 5.25E-04 | 3.08E-03 | 8.85E-03 | 1.25E-02 |
| 11 | 2.44E-06 | 1.32E-05 | 3.88E-05 | 5.44E-05 |
| 12 | 2.36E-05 | 1.02E-04 | 3.18E-04 | 4.44E-04 |
| 14 | 3.48E-04 | 5.45E-04 | 4.20E-03 | 5.10E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.26E-07 | 2.66E-05 | 5.79E-05 | 8.46E-05 |
| 21 | 4.20E-04 | 1.10E-03 | 5.35E-03 | 6.87E-03 |
| 24 | 6.04E-04 | 1.68E-03 | 7.84E-03 | 1.01E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 2.56E-05 | 3.88E-05 | 2.86E-04 | 3.50E-04 |
| 30 | 1.07E-04 | 1.62E-04 | 1.20E-03 | 1.47E-03 |
| 31 | 2.81E-04 | 7.48E-04 | 3.73E-03 | 4.76E-03 |
| | | | Total | 3.07E-01 |

| ID | Arterial | From | To | 2012 With Project Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 16,625 | 727 | 2,291 | 6,889 |
| 2 | Street A | Eucalyptus Ave | Street F | 16,852 | 1,291 | 2,411 | 7,329 |
| 3 | Street E | west of Street A | | 8,580 | 607 | 1,255 | 3,797 |
| 5 | Street E | Street D | Street A | 3,952 | 134 | 237 | 93 |
| 6 | Street A | Street F | Street C | 7,443 | 427 | 796 | 1,777 |
| 8 | Street D | Street E | Cactus Ave | 7,702 | 281 | 459 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 30 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 318 | 25 | 25 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 906 | 34 | 63 | 194 |
| 18 | Street B | east of Street A | | 0 | 0 | 0 | 0 |
| 19 | Street F | east of Street A | Street C | 33 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | 2,376 | 71 | 188 | 193 |
| 24 | Street C | Street F | Street H | 2,355 | 61 | 182 | 173 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 152 | 5 | 17 | 28 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 152 | 5 | 17 | 28 |
| 31 | Gilman Springs Rd | south of Street C | | 2,504 | 65 | 169 | 228 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM10** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
Existing + Project
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 29 | 1 | 1 | 3 | 148 | 50 | 1845 | 6737 | 8815 |
| 2 | 27883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 29 | 1 | 1 | 3 | 263 | 89 | 1942 | 7167 | 9496 |
| 3 | 14239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 123 | 42 | 1011 | 3713 | 4907 |
| 5 | 4416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 7 | 0 | 0 | 1 | 27 | 9 | 191 | 91 | 326 |
| 6 | 10443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 13 | 1 | 1 | 1 | 87 | 30 | 641 | 1738 | 2511 |
| 8 | 8442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 13 | 1 | 1 | 1 | 57 | 19 | 370 | 0 | 462 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 5 | 2 | 20 | 0 | 28 |
| 14 | 1197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 7 | 2 | 51 | 190 | 252 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 14 | 5 | 151 | 189 | 364 |
| 24 | 2771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 12 | 4 | 147 | 169 | 337 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 27 | 43 |
| 31 | 2966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 4 | 0 | 0 | 0 | 13 | 4 | 136 | 223 | 382 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1097 | 0.2067 | 0.0577 | 0.0677 | 0.1324 | 0.1452 | 0.1484 | 0.1101 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.45E-06 | 6.75E-07 | 1.85E-07 | 4.21E-07 | 4.60E-05 | 1.72E-05 | 6.44E-04 | 1.74E-03 | 2.46E-03 |
| 2 | 1 | 1.69E-05 | 1.53E-06 | 4.20E-07 | 9.54E-07 | 1.83E-04 | 6.81E-05 | 1.52E-03 | 4.15E-03 | 5.93E-03 |
| 3 | 1 | 2.76E-05 | 2.50E-06 | 6.88E-07 | 1.56E-06 | 2.77E-04 | 1.03E-04 | 2.54E-03 | 6.91E-03 | 9.86E-03 |
| 5 | 1 | 5.16E-06 | 4.67E-07 | 1.28E-07 | 2.92E-07 | 2.47E-05 | 9.22E-06 | 1.94E-04 | 6.86E-05 | 3.03E-04 |
| 6 | 1 | 1.12E-05 | 1.01E-06 | 2.79E-07 | 6.33E-07 | 9.09E-05 | 3.39E-05 | 7.52E-04 | 1.51E-03 | 2.40E-03 |
| 8 | 1 | 1.15E-05 | 1.04E-06 | 2.86E-07 | 6.50E-07 | 5.94E-05 | 2.21E-05 | 4.30E-04 | 0.00E+00 | 5.25E-04 |
| 11 | 1 | 4.93E-08 | 4.47E-09 | 1.23E-09 | 2.79E-09 | 2.33E-07 | 8.67E-08 | 2.06E-06 | 0.00E+00 | 2.44E-06 |
| 12 | 1 | 3.59E-07 | 3.25E-08 | 8.93E-09 | 2.03E-08 | 3.99E-06 | 1.49E-06 | 1.77E-05 | 0.00E+00 | 2.36E-05 |
| 14 | 1 | 2.01E-06 | 1.82E-07 | 5.00E-08 | 1.13E-07 | 1.07E-05 | 3.97E-06 | 8.76E-05 | 2.43E-04 | 3.48E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.08E-07 | 9.77E-09 | 2.68E-09 | 6.10E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E-07 |
| 21 | 1 | 4.09E-06 | 3.71E-07 | 1.02E-07 | 2.31E-07 | 1.73E-05 | 6.45E-06 | 2.03E-04 | 1.88E-04 | 4.20E-04 |
| 24 | 1 | 6.28E-06 | 5.69E-07 | 1.56E-07 | 3.55E-07 | 2.30E-05 | 8.57E-06 | 3.04E-04 | 2.61E-04 | 6.04E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.41E-07 | 1.27E-08 | 3.50E-09 | 7.94E-09 | 6.54E-07 | 2.44E-07 | 9.86E-06 | 1.46E-05 | 2.56E-05 |
| 30 | 1 | 5.89E-07 | 5.33E-08 | 1.46E-08 | 3.33E-08 | 2.74E-06 | 1.02E-06 | 4.13E-05 | 6.13E-05 | 1.07E-04 |
| 31 | 1 | 2.81E-06 | 2.55E-07 | 7.00E-08 | 1.59E-07 | 1.03E-05 | 3.85E-06 | 1.19E-04 | 1.45E-04 | 2.81E-04 |

**World Logistics Center** **2012** **PM10** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
Existing + Project
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26,532 | 16,625 | 727 | 2,291 | 6,889 | 327 | 0.203 | 9525 | 1117 | 3318 | 2631 | 478 | 50 | 446 | 152 | 17717 |
| 2 | 27,883 | 16,852 | 1,291 | 2,411 | 7,329 | 731 | 0.454 | 9655 | 1132 | 3363 | 2667 | 850 | 90 | 469 | 162 | 18387 |
| 3 | 14,239 | 8,580 | 607 | 1,255 | 3,797 | 2352 | 1.461 | 4916 | 576 | 1712 | 1358 | 399 | 42 | 244 | 84 | 9332 |
| 5 | 4,416 | 3,952 | 134 | 237 | 93 | 953 | 0.592 | 2264 | 266 | 789 | 625 | 88 | 9 | 46 | 2 | 4090 |
| 6 | 10,443 | 7,443 | 427 | 796 | 1,777 | 1099 | 0.683 | 4264 | 500 | 1485 | 1178 | 281 | 30 | 155 | 39 | 7932 |
| 8 | 8,442 | 7,702 | 281 | 459 | 0 | 1091 | 0.678 | 4413 | 517 | 1537 | 1219 | 185 | 19 | 89 | 0 | 7980 |
| 11 | 33 | 30 | 1 | 2 | 0 | 1201 | 0.746 | 17 | 2 | 6 | 5 | 1 | 0 | 0 | 0 | 31 |
| 12 | 368 | 318 | 25 | 25 | 0 | 824 | 0.512 | 182 | 21 | 63 | 50 | 16 | 2 | 5 | 0 | 340 |
| 14 | 1,197 | 906 | 34 | 63 | 194 | 1618 | 1.005 | 519 | 61 | 181 | 143 | 22 | 2 | 12 | 4 | 945 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 33 | 33 | 0 | 0 | 0 | 2386 | 1.482 | 19 | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 33 |
| 21 | 2,828 | 2,376 | 71 | 188 | 193 | 1258 | 0.781 | 1361 | 160 | 474 | 376 | 47 | 5 | 37 | 4 | 2464 |
| 24 | 2,771 | 2,355 | 61 | 182 | 173 | 1946 | 1.209 | 1349 | 158 | 470 | 373 | 40 | 4 | 35 | 4 | 2434 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 202 | 152 | 5 | 17 | 28 | 675 | 0.419 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 30 | 202 | 152 | 5 | 17 | 28 | 2827 | 1.756 | 87 | 10 | 30 | 24 | 3 | 0 | 3 | 1 | 159 |
| 31 | 2,966 | 2,504 | 65 | 169 | 228 | 820 | 0.509 | 1435 | 168 | 500 | 396 | 43 | 5 | 33 | 5 | 2584 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0507 | 0.0467 | 0.0467 | 0.0870 | 0.0990 | 0.1450 | 0.0870 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.05E-03 | 1.33E-04 | 3.65E-04 | 2.89E-04 | 9.79E-05 | 1.17E-05 | 1.52E-04 | 3.11E-05 | 2.13E-03 |
| 2 | 1 | 2.37E-03 | 3.02E-04 | 8.26E-04 | 6.55E-04 | 3.88E-04 | 4.66E-05 | 3.58E-04 | 7.40E-05 | 5.02E-03 |
| 3 | 1 | 3.89E-03 | 4.95E-04 | 1.35E-03 | 1.07E-03 | 5.88E-04 | 7.05E-05 | 5.99E-04 | 1.23E-04 | 8.19E-03 |
| 5 | 1 | 7.25E-04 | 9.23E-05 | 2.53E-04 | 2.00E-04 | 5.26E-05 | 6.30E-06 | 4.58E-05 | 1.22E-06 | 1.38E-03 |
| 6 | 1 | 1.58E-03 | 2.01E-04 | 5.49E-04 | 4.35E-04 | 1.93E-04 | 2.32E-05 | 1.77E-04 | 2.70E-05 | 3.18E-03 |
| 8 | 1 | 1.62E-03 | 2.06E-04 | 5.64E-04 | 4.47E-04 | 1.26E-04 | 1.51E-05 | 1.02E-04 | 0.00E+00 | 3.08E-03 |
| 11 | 1 | 6.94E-06 | 8.83E-07 | 2.42E-06 | 1.92E-06 | 4.94E-07 | 5.93E-08 | 4.87E-07 | 0.00E+00 | 1.32E-05 |
| 12 | 1 | 5.05E-05 | 6.42E-06 | 1.76E-05 | 1.39E-05 | 8.48E-06 | 1.02E-06 | 4.18E-06 | 0.00E+00 | 1.02E-04 |
| 14 | 1 | 2.82E-04 | 3.59E-05 | 9.83E-05 | 7.80E-05 | 2.26E-05 | 2.72E-06 | 2.07E-05 | 4.33E-06 | 5.45E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.52E-05 | 1.93E-06 | 5.28E-06 | 4.19E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-05 |
| 21 | 1 | 5.76E-04 | 7.33E-05 | 2.00E-04 | 1.59E-04 | 3.68E-05 | 4.41E-06 | 4.80E-05 | 3.35E-06 | 1.10E-03 |
| 24 | 1 | 8.83E-04 | 1.12E-04 | 3.07E-04 | 2.44E-04 | 4.89E-05 | 5.86E-06 | 7.18E-05 | 4.65E-06 | 1.68E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.98E-05 | 2.52E-06 | 6.88E-06 | 5.46E-06 | 1.39E-06 | 1.67E-07 | 2.33E-06 | 2.61E-07 | 3.88E-05 |
| 30 | 1 | 8.28E-05 | 1.05E-05 | 2.88E-05 | 2.29E-05 | 5.82E-06 | 6.98E-07 | 9.75E-06 | 1.09E-06 | 1.62E-04 |
| 31 | 1 | 3.95E-04 | 5.03E-05 | 1.38E-04 | 1.09E-04 | 2.19E-05 | 2.63E-06 | 2.81E-05 | 2.58E-06 | 7.48E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 16,625 | 3377 | 727 | 148 | 2,291 | 465 | 6,889 | 1399 | 5390 | 8.54 | 0.035 | 0.0009 | 5.0 | 2.63E-02 |
| 2 | A | 731 | 0.45 | 16,852 | 7653 | 1,291 | 586 | 2,411 | 1095 | 7,329 | 3328 | 12662 | 8.68 | 0.035 | 0.0009 | 11.9 | 6.27E-02 |
| 3 | A | 2352 | 1.46 | 8,580 | 12536 | 607 | 887 | 1,255 | 1834 | 3,797 | 5548 | 20804 | 8.76 | 0.035 | 0.0010 | 19.8 | 1.04E-01 |
| 5 | A | 953 | 0.59 | 3,952 | 2340 | 134 | 79 | 237 | 140 | 93 | 55 | 2614 | 3.20 | 0.035 | 0.0003 | 0.9 | 4.68E-03 |
| 6 | A | 1099 | 0.68 | 7,443 | 5081 | 427 | 292 | 796 | 543 | 1,777 | 1213 | 7130 | 6.60 | 0.035 | 0.0007 | 5.1 | 2.67E-02 |
| 8 | A | 1091 | 0.68 | 7,702 | 5220 | 281 | 190 | 459 | 311 | 0 | 0 | 5722 | 2.77 | 0.035 | 0.0003 | 1.7 | 8.85E-03 |
| 11 | A | 1201 | 0.75 | 30 | 22 | 1 | 1 | 2 | 1 | 0 | 0 | 25 | 2.82 | 0.035 | 0.0003 | 0.0 | 3.88E-05 |
| 12 | A | 824 | 0.51 | 318 | 163 | 25 | 13 | 25 | 13 | 0 | 0 | 188 | 3.02 | 0.035 | 0.0003 | 0.1 | 3.18E-04 |
| 14 | A | 1618 | 1.01 | 906 | 911 | 34 | 34 | 63 | 63 | 194 | 195 | 1203 | 6.16 | 0.035 | 0.0007 | 0.8 | 4.20E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 33 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 2.13 | 0.035 | 0.0002 | 0.0 | 5.79E-05 |
| 21 | A | 1258 | 0.78 | 2,376 | 1857 | 71 | 55 | 188 | 147 | 193 | 151 | 2210 | 4.30 | 0.035 | 0.0005 | 1.0 | 5.35E-03 |
| 24 | A | 1946 | 1.21 | 2,355 | 2847 | 61 | 74 | 182 | 220 | 173 | 209 | 3350 | 4.16 | 0.035 | 0.0004 | 1.5 | 7.84E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 152 | 64 | 5 | 2 | 17 | 7 | 28 | 12 | 85 | 5.95 | 0.035 | 0.0006 | 0.1 | 2.86E-04 |
| 30 | A | 2827 | 1.76 | 152 | 267 | 5 | 9 | 17 | 30 | 28 | 49 | 355 | 5.95 | 0.035 | 0.0006 | 0.2 | 1.20E-03 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 65 | 33 | 169 | 86 | 228 | 116 | 1511 | 4.38 | 0.035 | 0.0005 | 0.7 | 3.73E-03 |

# F.3 - Project Phase 1 and Phase 2 Full Buildout (2012) Emissions

**Appendix F.3 contains the calculated localized unmitigated and mitigated emissions for project construction and operation during the Project Phase 1 and Phase 2 project build out in 2012 project condition. Emissions are provided for CO, NO2, PM10, and PM2.5.**

**The individual air pollutant AERMOD project files are not provided to reduce paper consumption but are available on a separate CD.**

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour CO emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1**
**No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Peak Hour CO**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.43E-01 | 4.55E-01 |
| Light Logistics | Phase 1 | 4.00E-04 | 1.36E-03 |
| Utilities Service Station | Phase 1 | 2.66E-04 | 1.25E-03 |
| Gas Station w/Convenience Store | Phase 1 | 5.44E-04 | 4.58E-04 |
| Convenience Store | Phase 1 | 6.07E-04 | 5.55E-04 |
| Fire Station | Phase 1 | 8.13E-07 | 8.34E-04 |
| Total | | 2.45E-01 | 4.60E-01 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.09E-01 | 4.32E-01 |
| Light Logistics | Phase 1 | 6.72E-04 | 1.79E-03 |
| Utilities Service Station | Phase 1 | 9.33E-04 | 4.20E-03 |
| Gas Station w/Convenience Store | Phase 1 | 2.76E-03 | 3.08E-03 |
| Convenience Store | Phase 1 | 3.01E-03 | 3.88E-03 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 2.16E-01 | 4.45E-01 |

| **Total Onsite Mobile Emissions** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 2.45E-01 | 4.60E-01 | |
| | Idling Emissions (g/sec) | 2.16E-01 | 4.45E-01 | |
| | Total Vehicle Emissions (g/sec) | 4.61E-01 | 9.05E-01 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 3.54E-02 | |
| | Fork Lifts (LPG) (g/sec) | | 1.32E+00 | |
| | Total Other Onsite Emissions (g/sec) | | 1.36E+00 | |
| | | | | Total |
| | Total Emissions (g/sec) | 4.61E-01 | 2.26E+00 | 2.72E+00 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 5.81E-07 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** Peak Hour CO

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Peak Hour CO Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 1.540 | 3 | 330 | 0.21 | 1.01E+00 | 2.22E-03 | 2.81E-04 | |
| | LDT1 | 15 | 2.170 | 0 | 330 | 0.21 | 7.57E-02 | 1.67E-04 | 2.10E-05 | |
| | LDT2 | 15 | 0.700 | 0 | 330 | 0.21 | 2.37E-02 | 5.21E-05 | 6.58E-06 | |
| | MDT | 15 | 1.180 | 0 | 330 | 0.21 | 6.91E-02 | 1.52E-04 | 1.92E-05 | |
| | LHDT1 | 15 | 1.440 | 34 | 330 | 0.21 | 9.94E+00 | 2.19E-02 | 2.76E-03 | |
| | LHDT2 | 15 | 1.390 | 11 | 330 | 0.21 | 3.14E+00 | 6.92E-03 | 8.72E-04 | |
| | MHDT | 15 | 3.410 | 181 | 330 | 0.21 | 1.27E+02 | 2.79E-01 | 3.52E-02 | |
| | HHDT | 15 | 6.170 | 581 | 330 | 0.21 | 7.35E+02 | 1.62E+00 | 2.04E-01 | |
| | | | | | | | | | | 2.43E-01 |
| Travel at Light Logistics | LDA | 15 | 1.540 | 0 | 175 | 0.11 | 3.38E-03 | 7.44E-06 | 9.38E-07 | |
| | LDT1 | 15 | 2.170 | 0 | 175 | 0.11 | 2.53E-04 | 5.58E-07 | 7.03E-08 | |
| | LDT2 | 15 | 0.700 | 0 | 175 | 0.11 | 7.91E-05 | 1.74E-07 | 2.20E-08 | |
| | MDT | 15 | 1.180 | 0 | 175 | 0.11 | 2.31E-04 | 5.09E-07 | 6.42E-08 | |
| | LHDT1 | 15 | 1.440 | 0 | 175 | 0.11 | 2.93E-02 | 6.46E-05 | 8.15E-06 | |
| | LHDT2 | 15 | 1.390 | 0 | 175 | 0.11 | 9.26E-03 | 2.04E-05 | 2.57E-06 | |
| | MHDT | 15 | 3.410 | 1 | 175 | 0.11 | 2.07E-01 | 4.55E-04 | 5.74E-05 | |
| | HHDT | 15 | 6.170 | 2 | 175 | 0.11 | 1.19E+00 | 2.62E-03 | 3.31E-04 | 4.00E-04 |
| Travel at Utility | LDA | 15 | 1.540 | 0 | 100 | 0.06 | 2.98E-03 | 6.57E-06 | 8.29E-07 | |
| | LDT1 | 15 | 2.170 | 0 | 100 | 0.06 | 2.24E-04 | 4.93E-07 | 6.21E-08 | |
| | LDT2 | 15 | 0.700 | 0 | 100 | 0.06 | 6.99E-05 | 1.54E-07 | 1.94E-08 | |
| | MDT | 15 | 1.180 | 0 | 100 | 0.06 | 2.04E-04 | 4.50E-07 | 5.67E-08 | |
| | LHDT1 | 15 | 1.440 | 1 | 100 | 0.06 | 5.25E-02 | 1.16E-04 | 1.46E-05 | |
| | LHDT2 | 15 | 1.390 | 0 | 100 | 0.06 | 1.66E-02 | 3.65E-05 | 4.61E-06 | |
| | MHDT | 15 | 3.410 | 1 | 100 | 0.06 | 1.67E-01 | 3.67E-04 | 4.63E-05 | |
| | HHDT | 15 | 6.170 | 2 | 100 | 0.06 | 7.19E-01 | 1.58E-03 | 2.00E-04 | 2.66E-04 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 1.540 | 0 | 50 | 0.03 | 8.06E-04 | 1.78E-06 | 2.24E-07 | |
| | LDT1 | 15 | 2.170 | 0 | 50 | 0.03 | 6.05E-05 | 1.33E-07 | 1.68E-08 | |
| | LDT2 | 15 | 0.700 | 0 | 50 | 0.03 | 1.89E-05 | 4.16E-08 | 5.25E-09 | |
| | MDT | 15 | 1.180 | 0 | 50 | 0.03 | 5.52E-05 | 1.22E-07 | 1.53E-08 | |
| | LHDT1 | 15 | 1.440 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 5.33E-08 | |
| | LHDT2 | 15 | 1.390 | 0 | 50 | 0.03 | 6.06E-05 | 1.33E-07 | 1.68E-08 | |
| | MHDT | 15 | 3.410 | 2 | 50 | 0.03 | 2.01E-01 | 4.43E-04 | 5.58E-05 | |
| | HHDT | 15 | 6.170 | 9 | 50 | 0.03 | 1.76E+00 | 3.87E-03 | 4.88E-04 | 5.44E-04 |
| Travel at Convenience Store | LDA | 15 | 1.540 | 0 | 50 | 0.03 | 1.00E-03 | 2.21E-06 | 2.79E-07 | |
| | LDT1 | 15 | 2.170 | 0 | 50 | 0.03 | 7.52E-05 | 1.66E-07 | 2.09E-08 | |
| | LDT2 | 15 | 0.700 | 0 | 50 | 0.03 | 2.35E-05 | 5.18E-08 | 6.53E-09 | |
| | MDT | 15 | 1.180 | 0 | 50 | 0.03 | 6.87E-05 | 1.51E-07 | 1.91E-08 | |
| | LHDT1 | 15 | 1.440 | 0 | 50 | 0.03 | 8.22E-03 | 1.81E-05 | 2.28E-06 | |
| | LHDT2 | 15 | 1.390 | 0 | 50 | 0.03 | 2.60E-03 | 5.72E-06 | 7.21E-07 | |
| | MHDT | 15 | 3.410 | 1 | 50 | 0.03 | 1.53E-01 | 3.37E-04 | 4.25E-05 | |
| | HHDT | 15 | 6.170 | 11 | 50 | 0.03 | 2.02E+00 | 4.45E-03 | 5.61E-04 | 6.07E-04 |
| Travel at Fire Station | LDA | 15 | 1.540 | 0 | 50 | 0.03 | 2.51E-03 | 5.52E-06 | 6.97E-07 | |
| | LDT1 | 15 | 2.170 | 0 | 50 | 0.03 | 1.88E-04 | 4.14E-07 | 5.22E-08 | |
| | LDT2 | 15 | 0.700 | 0 | 50 | 0.03 | 5.88E-05 | 1.29E-07 | 1.63E-08 | |
| | MDT | 15 | 1.180 | 0 | 50 | 0.03 | 1.72E-04 | 3.78E-07 | 4.77E-08 | |
| | LHDT1 | 15 | 1.440 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.390 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 6.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.13E-07 |
| Total - All Buildings | LDA | | | 3 | | | 1.02E+00 | 2.25E-03 | 2.84E-04 | |
| | LDT1 | | | 0 | | | 7.65E-02 | 1.69E-04 | 2.13E-05 | |
| | LDT2 | | | 0 | | | 2.39E-02 | 5.27E-05 | 6.65E-06 | |
| | MDT | | | 0 | | | 6.99E-02 | 1.54E-04 | 1.94E-05 | |
| | LHDT1 | | | 35 | | | 1.00E+01 | 2.21E-02 | 2.79E-03 | |
| | LHDT2 | | | 11 | | | 3.17E+00 | 6.98E-03 | 8.80E-04 | |
| | MHDT | | | 186 | | | 1.27E+02 | 2.81E-01 | 3.54E-02 | |
| | HHDT | | | 604 | | | 7.40E+02 | 1.63E+00 | 2.06E-01 | |
| | Total | | | 840 | | | 8.82E+02 | 1.94E+00 | 2.45E-01 | 2.45E-01 |

**Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 17 | 3.69E+01 | 8.13E-02 | 1.03E-02 | |
| | **LHDT2** | 26.300 | 5 | 6 | 1.21E+01 | 2.66E-02 | 3.35E-03 | |
| | **MHDT** | 28.290 | 5 | 91 | 2.14E+02 | 4.71E-01 | 5.93E-02 | |
| | **HHDT** | 20.170 | 5 | 290 | 4.88E+02 | 1.08E+00 | 1.36E-01 | |
| | | | | 403 | 7.51E+02 | 1.65E+00 | 2.09E-01 | 2.09E-01 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 2.05E-01 | 4.52E-04 | 5.70E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.72E-02 | 1.48E-04 | 1.87E-05 | |
| | **MHDT** | 28.290 | 5 | 0 | 6.57E-01 | 1.45E-03 | 1.82E-04 | |
| | **HHDT** | 20.170 | 5 | 1 | 1.49E+00 | 3.29E-03 | 4.14E-04 | |
| | | | | 1 | 2.42E+00 | 5.33E-03 | 6.72E-04 | 6.72E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 6.44E-01 | 1.42E-03 | 1.79E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.11E-01 | 4.64E-04 | 5.85E-05 | |
| | **MHDT** | 28.290 | 5 | 0 | 9.27E-01 | 2.04E-03 | 2.58E-04 | |
| | **HHDT** | 20.170 | 5 | 1 | 1.58E+00 | 3.47E-03 | 4.38E-04 | |
| | | | | 2 | 3.36E+00 | 7.40E-03 | 9.33E-04 | 9.33E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 4.70E-03 | 1.04E-05 | 1.31E-06 | |
| | **LHDT2** | 26.300 | 5 | 0 | 1.54E-03 | 3.39E-06 | 4.27E-07 | |
| | **MHDT** | 28.290 | 5 | 1 | 2.24E+00 | 4.93E-03 | 6.21E-04 | |
| | **HHDT** | 20.170 | 5 | 5 | 7.70E+00 | 1.70E-02 | 2.14E-03 | |
| | | | | 6 | 9.95E+00 | 2.19E-02 | 2.76E-03 | 2.76E-03 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 2.01E-01 | 4.44E-04 | 5.60E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **MHDT** | 28.290 | 5 | 1 | 1.70E+00 | 3.75E-03 | 4.73E-04 | |
| | **HHDT** | 20.170 | 5 | 5 | 8.86E+00 | 1.95E-02 | 2.46E-03 | |
| | | | | 6 | 1.08E+01 | 2.39E-02 | 3.01E-03 | 3.01E-03 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 28.290 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 20.170 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 7.77E+02 | 1.71E+00 | 2.16E-01 | 2.16E-01 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 2.600 | 1004 | 330 | 0.21 | 5.35E+02 | 1.18E+00 | 1.49E-01 | |
| | **LDT1** | 15 | 7.260 | 119 | 330 | 0.21 | 1.77E+02 | 3.90E-01 | 4.92E-02 | |
| | **LDT2** | 15 | 3.370 | 363 | 330 | 0.21 | 2.51E+02 | 5.52E-01 | 6.96E-02 | |
| | **MDT** | 15 | 4.290 | 280 | 330 | 0.21 | 2.46E+02 | 5.42E-01 | 6.84E-02 | |
| | **LHDT1** | 15 | 4.410 | 109 | 330 | 0.21 | 9.83E+01 | 2.17E-01 | 2.73E-02 | |
| | **LHDT2** | 15 | 3.260 | 11 | 330 | 0.21 | 7.62E+00 | 1.68E-02 | 2.12E-03 | |
| | **MHDT** | 15 | 14.040 | 41 | 330 | 0.21 | 1.19E+02 | 2.62E-01 | 3.31E-02 | |
| | **HHDT** | 15 | 100.640 | 10 | 330 | 0.21 | 2.06E+02 | 4.53E-01 | 5.71E-02 | |
| | | | | | | | | | | 4.55E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 2.600 | 6 | 175 | 0.11 | 1.79E+00 | 3.94E-03 | 4.97E-04 | |
| | **LDT1** | 15 | 7.260 | 1 | 175 | 0.11 | 5.92E-01 | 1.30E-03 | 1.64E-04 | |
| | **LDT2** | 15 | 3.370 | 2 | 175 | 0.11 | 8.37E-01 | 1.84E-03 | 2.33E-04 | |
| | **MDT** | 15 | 4.290 | 2 | 175 | 0.11 | 8.23E-01 | 1.81E-03 | 2.29E-04 | |
| | **LHDT1** | 15 | 4.410 | 1 | 175 | 0.11 | 2.90E-01 | 6.39E-04 | 8.06E-05 | |
| | **LHDT2** | 15 | 3.260 | 0 | 175 | 0.11 | 2.25E-02 | 4.95E-05 | 6.24E-06 | |
| | **MHDT** | 15 | 14.040 | 0 | 175 | 0.11 | 1.94E-01 | 4.28E-04 | 5.39E-05 | |
| | **HHDT** | 15 | 100.640 | 0 | 175 | 0.11 | 3.33E-01 | 7.34E-04 | 9.25E-05 | 1.36E-03 |
| **Travel at Utility** | **LDA** | 15 | 2.600 | 10 | 100 | 0.06 | 1.58E+00 | 3.48E-03 | 4.39E-04 | |
| | **LDT1** | 15 | 7.260 | 1 | 100 | 0.06 | 5.23E-01 | 1.15E-03 | 1.45E-04 | |
| | **LDT2** | 15 | 3.370 | 4 | 100 | 0.06 | 7.40E-01 | 1.63E-03 | 2.06E-04 | |
| | **MDT** | 15 | 4.290 | 3 | 100 | 0.06 | 7.27E-01 | 1.60E-03 | 2.02E-04 | |
| | **LHDT1** | 15 | 4.410 | 2 | 100 | 0.06 | 5.20E-01 | 1.14E-03 | 1.44E-04 | |
| | **LHDT2** | 15 | 3.260 | 0 | 100 | 0.06 | 4.03E-02 | 8.87E-05 | 1.12E-05 | |
| | **MHDT** | 15 | 14.040 | 0 | 100 | 0.06 | 1.57E-01 | 3.45E-04 | 4.35E-05 | |
| | **HHDT** | 15 | 100.640 | 0 | 100 | 0.06 | 2.01E-01 | 4.43E-04 | 5.59E-05 | 1.25E-03 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 2.600 | 5 | 50 | 0.03 | 4.27E-01 | 9.41E-04 | 1.19E-04 | |
| | **LDT1** | 15 | 7.260 | 1 | 50 | 0.03 | 1.41E-01 | 3.11E-04 | 3.93E-05 | |
| | **LDT2** | 15 | 3.370 | 2 | 50 | 0.03 | 2.00E-01 | 4.41E-04 | 5.56E-05 | |
| | **MDT** | 15 | 4.290 | 1 | 50 | 0.03 | 1.97E-01 | 4.33E-04 | 5.46E-05 | |
| | **LHDT1** | 15 | 4.410 | 0 | 50 | 0.03 | 1.90E-03 | 4.18E-06 | 5.27E-07 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 1.47E-04 | 3.24E-07 | 4.08E-08 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 1.89E-01 | 4.16E-04 | 5.25E-05 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 4.92E-01 | 1.08E-03 | 1.37E-04 | 4.58E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 2.600 | 7 | 50 | 0.03 | 5.32E-01 | 1.17E-03 | 1.48E-04 | |
| | **LDT1** | 15 | 7.260 | 1 | 50 | 0.03 | 1.76E-01 | 3.87E-04 | 4.88E-05 | |
| | **LDT2** | 15 | 3.370 | 2 | 50 | 0.03 | 2.49E-01 | 5.48E-04 | 6.91E-05 | |
| | **MDT** | 15 | 4.290 | 2 | 50 | 0.03 | 2.45E-01 | 5.39E-04 | 6.79E-05 | |
| | **LHDT1** | 15 | 4.410 | 1 | 50 | 0.03 | 8.13E-02 | 1.79E-04 | 2.26E-05 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 6.30E-03 | 1.39E-05 | 1.75E-06 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 1.44E-01 | 3.17E-04 | 4.00E-05 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 5.65E-01 | 1.25E-03 | 1.57E-04 | 5.55E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 2.600 | 16 | 50 | 0.03 | 1.33E+00 | 2.93E-03 | 3.69E-04 | |
| | **LDT1** | 15 | 7.260 | 2 | 50 | 0.03 | 4.40E-01 | 9.68E-04 | 1.22E-04 | |
| | **LDT2** | 15 | 3.370 | 6 | 50 | 0.03 | 6.22E-01 | 1.37E-03 | 1.73E-04 | |
| | **MDT** | 15 | 4.290 | 5 | 50 | 0.03 | 6.11E-01 | 1.35E-03 | 1.70E-04 | |
| | **LHDT1** | 15 | 4.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.34E-04 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 5.41E+02 | 1.19E+00 | 1.50E-01 | |
| | **LDT1** | | | 124 | | | 1.79E+02 | 3.94E-01 | 4.97E-02 | |
| | **LDT2** | | | 379 | | | 2.53E+02 | 5.58E-01 | 7.03E-02 | |
| | **MDT** | | | 292 | | | 2.49E+02 | 5.48E-01 | 6.91E-02 | |
| | **LHDT1** | | | 112 | | | 9.92E+01 | 2.19E-01 | 2.76E-02 | |
| | **LHDT2** | | | 12 | | | 7.69E+00 | 1.69E-02 | 2.14E-03 | |
| | **MHDT** | | | 42 | | | 1.20E+02 | 2.64E-01 | 3.33E-02 | |
| | **HHDT** | | | 10 | | | 2.07E+02 | 4.56E-01 | 5.75E-02 | |
| | **Total** | | | 2020 | | | 1.66E+03 | 3.65E+00 | 4.60E-01 | 4.60E-01 |

**Non-Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 132.940 | 5 | 54 | 6.03E+02 | 1.33E+00 | 1.67E-01 | |
| | **LHDT2** | 134.460 | 5 | 6 | 6.39E+01 | 1.41E-01 | 1.77E-02 | |
| | **MHDT** | 328.730 | 5 | 21 | 5.67E+02 | 1.25E+00 | 1.57E-01 | |
| | **HHDT** | 773.000 | 5 | 5 | 3.21E+02 | 7.07E-01 | 8.91E-02 | |
| | | | | 86 | 1.55E+03 | 3.42E+00 | 4.32E-01 | 4.32E-01 |
| **Idle at Light Logistics** | **LHDT1** | 132.940 | 5 | 0 | 3.35E+00 | 7.38E-03 | 9.31E-04 | |
| | **LHDT2** | 134.460 | 5 | 0 | 3.55E-01 | 7.83E-04 | 9.87E-05 | |
| | **MHDT** | 328.730 | 5 | 0 | 1.74E+00 | 3.84E-03 | 4.84E-04 | |
| | **HHDT** | 773.000 | 5 | 0 | 9.81E-01 | 2.16E-03 | 2.72E-04 | |
| | | | | 0 | 6.43E+00 | 1.42E-02 | 1.79E-03 | 1.79E-03 |
| **Idle at Utility** | **LHDT1** | 132.940 | 5 | 1 | 1.05E+01 | 2.31E-02 | 2.92E-03 | |
| | **LHDT2** | 134.460 | 5 | 0 | 1.11E+00 | 2.45E-03 | 3.09E-04 | |
| | **MHDT** | 328.730 | 5 | 0 | 2.46E+00 | 5.42E-03 | 6.83E-04 | |
| | **HHDT** | 773.000 | 5 | 0 | 1.04E+00 | 2.28E-03 | 2.88E-04 | |
| | | | | 1 | 1.51E+01 | 3.33E-02 | 4.20E-03 | 4.20E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 132.940 | 5 | 0 | 7.67E-02 | 1.69E-04 | 2.13E-05 | |
| | **LHDT2** | 134.460 | 5 | 0 | 8.13E-03 | 1.79E-05 | 2.26E-06 | |
| | **MHDT** | 328.730 | 5 | 0 | 5.93E+00 | 1.31E-02 | 1.65E-03 | |
| | **HHDT** | 773.000 | 5 | 0 | 5.06E+00 | 1.12E-02 | 1.41E-03 | |
| | | | | 0 | 1.11E+01 | 2.44E-02 | 3.08E-03 | 3.08E-03 |
| **Idle at Convenience Store** | **LHDT1** | 132.940 | 5 | 0 | 3.29E+00 | 7.24E-03 | 9.14E-04 | |
| | **LHDT2** | 134.460 | 5 | 0 | 3.49E-01 | 7.68E-04 | 9.68E-05 | |
| | **MHDT** | 328.730 | 5 | 0 | 4.52E+00 | 9.95E-03 | 1.25E-03 | |
| | **HHDT** | 773.000 | 5 | 0 | 5.83E+00 | 1.28E-02 | 1.62E-03 | |
| | | | | 1 | 1.40E+01 | 3.08E-02 | 3.88E-03 | 3.88E-03 |
| **Idle at Firestation** | **LHDT1** | 132.940 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 134.460 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 328.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 773.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 1.60E+03 | 3.53E+00 | 4.45E-01 | 4.45E-01 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour CO emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

| | |
|---|---|
| Facility Operations for Warehouses (hr): | 24 |
| Facility operations for All Others (hr): | 24 |

## World Logistics Center

| | | 2012 | Phase 2 | |
|---|---|---|---|---|
| | | | No Mitigation | |
| **Vehicle Running Exhaust Emissions** | | | **Pollutant** | **Peak Hour CO** |

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.86E-01 | 3.48E-01 |
| Light Logistics | Phase 2 | 1.36E-03 | 4.60E-03 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.87E-01 | 3.53E-01 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.59E-01 | 3.30E-01 |
| Light Logistics | Phase 2 | 2.28E-03 | 6.06E-03 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.62E-01 | 3.36E-01 |

| **Total Onsite Emission** | **Emissions (g/sec)** | **Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust (g/sec) | 1.87E-01 | 3.53E-01 |
| Idling Emissions (g/sec) | 1.62E-01 | 3.36E-01 |
| Total Vehicle Emissions (g/sec) | 3.49E-01 | 6.89E-01 |

**Other Onsite Emission Sources**

| | | | |
|---|---|---|---|
| Yard Trucks (LPG) (g/sec) | | 2.78E-02 | |
| Forklifts (LPG) (g/sec) | | 1.04E+00 | |
| Total Other Onsite Emissions (g/sec) | | 1.06E+00 | |
| | | | Total |
| Total All Sources (g/sec) | 3.49E-01 | 1.75E+00 | 2.10E+00 |
| Area (m2) | | | 5152719 |
| Total Emission Rate (g/m2-sec) | | | 4.08E-07 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** Peak Hour CO

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Peak Hour CO Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 1.540 | 2 | 330 | 0.21 | 7.72E-01 | 1.70E-03 | 2.14E-04 | |
| | LDT1 | 15 | 2.170 | 0 | 330 | 0.21 | 5.79E-02 | 1.27E-04 | 1.61E-05 | |
| | LDT2 | 15 | 0.700 | 0 | 330 | 0.21 | 1.81E-02 | 3.98E-05 | 5.03E-06 | |
| | MDT | 15 | 1.180 | 0 | 330 | 0.21 | 5.28E-02 | 1.16E-04 | 1.47E-05 | |
| | LHDT1 | 15 | 1.440 | 26 | 330 | 0.21 | 7.60E+00 | 1.67E-02 | 2.11E-03 | |
| | LHDT2 | 15 | 1.390 | 8 | 330 | 0.21 | 2.40E+00 | 5.28E-03 | 6.66E-04 | |
| | MHDT | 15 | 3.410 | 138 | 330 | 0.21 | 9.68E+01 | 2.13E-01 | 2.69E-02 | |
| | HHDT | 15 | 6.170 | 444 | 330 | 0.21 | 5.61E+02 | 1.24E+00 | 1.56E-01 | |
| | | | | | | | | | | 1.86E-01 |
| Travel at Light Logistics | LDA | 15 | 1.540 | 0 | 175 | 0.11 | 1.15E-02 | 2.52E-05 | 3.18E-06 | |
| | LDT1 | 15 | 2.170 | 0 | 175 | 0.11 | 8.60E-04 | 1.89E-06 | 2.39E-07 | |
| | LDT2 | 15 | 0.700 | 0 | 175 | 0.11 | 2.69E-04 | 5.92E-07 | 7.46E-08 | |
| | MDT | 15 | 1.180 | 0 | 175 | 0.11 | 7.85E-04 | 1.73E-06 | 2.18E-07 | |
| | LHDT1 | 15 | 1.440 | 1 | 175 | 0.11 | 9.96E-02 | 2.19E-04 | 2.77E-05 | |
| | LHDT2 | 15 | 1.390 | 0 | 175 | 0.11 | 3.15E-02 | 6.93E-05 | 8.74E-06 | |
| | MHDT | 15 | 3.410 | 2 | 175 | 0.11 | 7.01E-01 | 1.54E-03 | 1.95E-04 | |
| | HHDT | 15 | 6.170 | 6 | 175 | 0.11 | 4.04E+00 | 8.90E-03 | 1.12E-03 | 1.36E-03 |
| Travel at Utility | LDA | 15 | 1.540 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 2.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.700 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.180 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.440 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.390 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 3.410 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 6.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 1.540 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 2.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.700 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.440 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.390 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 6.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 1.540 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 2.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.700 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.440 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.390 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 6.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 1.540 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 2.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.700 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.440 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.390 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 6.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 3 | | | 7.83E-01 | 1.73E-03 | 2.18E-04 | |
| | LDT1 | | | 0 | | | 5.87E-02 | 1.29E-04 | 1.63E-05 | |
| | LDT2 | | | 0 | | | 1.84E-02 | 4.04E-05 | 5.10E-06 | |
| | MDT | | | 0 | | | 5.36E-02 | 1.18E-04 | 1.49E-05 | |
| | LHDT1 | | | 26 | | | 7.70E+00 | 1.70E-02 | 2.14E-03 | |
| | LHDT2 | | | 9 | | | 2.43E+00 | 5.35E-03 | 6.75E-04 | |
| | MHDT | | | 140 | | | 9.75E+01 | 2.15E-01 | 2.71E-02 | |
| | HHDT | | | 450 | | | 5.65E+02 | 1.25E+00 | 1.57E-01 | |
| | Total | | | 628 | | | 6.74E+02 | 1.48E+00 | 1.87E-01 | 1.87E-01 |

**Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 13 | 2.82E+01 | 6.21E-02 | 7.83E-03 | |
| | **LHDT2** | 26.300 | 5 | 4 | 9.23E+00 | 2.03E-02 | 2.56E-03 | |
| | **MHDT** | 28.290 | 5 | 69 | 1.63E+02 | 3.60E-01 | 4.53E-02 | |
| | **HHDT** | 20.170 | 5 | 222 | 3.73E+02 | 8.22E-01 | 1.04E-01 | |
| | | | | 308 | 5.74E+02 | 1.26E+00 | 1.59E-01 | 1.59E-01 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 6.97E-01 | 1.54E-03 | 1.94E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.28E-01 | 5.02E-04 | 6.34E-05 | |
| | **MHDT** | 28.290 | 5 | 1 | 2.23E+00 | 4.91E-03 | 6.19E-04 | |
| | **HHDT** | 20.170 | 5 | 3 | 5.07E+00 | 1.12E-02 | 1.41E-03 | |
| | | | | 4 | 8.22E+00 | 1.81E-02 | 2.28E-03 | 2.28E-03 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 28.290 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 20.170 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 28.290 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 20.170 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 28.290 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 20.170 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 28.290 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 20.170 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 313 | 5.82E+02 | 1.28E+00 | 1.62E-01 | 1.62E-01 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 2.600 | 767 | 330 | 0.21 | 4.09E+02 | 9.01E-01 | 1.14E-01 | |
| | **LDT1** | 15 | 7.260 | 91 | 330 | 0.21 | 1.35E+02 | 2.98E-01 | 3.76E-02 | |
| | **LDT2** | 15 | 3.370 | 277 | 330 | 0.21 | 1.91E+02 | 4.22E-01 | 5.32E-02 | |
| | **MDT** | 15 | 4.290 | 214 | 330 | 0.21 | 1.88E+02 | 4.14E-01 | 5.23E-02 | |
| | **LHDT1** | 15 | 4.410 | 83 | 330 | 0.21 | 7.52E+01 | 1.66E-01 | 2.09E-02 | |
| | **LHDT2** | 15 | 3.260 | 9 | 330 | 0.21 | 5.82E+00 | 1.28E-02 | 1.62E-03 | |
| | **MHDT** | 15 | 14.040 | 32 | 330 | 0.21 | 9.10E+01 | 2.00E-01 | 2.53E-02 | |
| | **HHDT** | 15 | 100.640 | 8 | 330 | 0.21 | 1.57E+02 | 3.46E-01 | 4.36E-02 | |
| | | | | | | | | | | 3.48E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 2.600 | 21 | 175 | 0.11 | 6.07E+00 | 1.34E-02 | 1.69E-03 | |
| | **LDT1** | 15 | 7.260 | 3 | 175 | 0.11 | 2.01E+00 | 4.43E-03 | 5.58E-04 | |
| | **LDT2** | 15 | 3.370 | 8 | 175 | 0.11 | 2.84E+00 | 6.26E-03 | 7.90E-04 | |
| | **MDT** | 15 | 4.290 | 6 | 175 | 0.11 | 2.79E+00 | 6.16E-03 | 7.76E-04 | |
| | **LHDT1** | 15 | 4.410 | 2 | 175 | 0.11 | 9.85E-01 | 2.17E-03 | 2.74E-04 | |
| | **LHDT2** | 15 | 3.260 | 0 | 175 | 0.11 | 7.63E-02 | 1.68E-04 | 2.12E-05 | |
| | **MHDT** | 15 | 14.040 | 0 | 175 | 0.11 | 6.59E-01 | 1.45E-03 | 1.83E-04 | |
| | **HHDT** | 15 | 100.640 | 0 | 175 | 0.11 | 1.13E+00 | 2.49E-03 | 3.14E-04 | 4.60E-03 |
| **Travel at Utility** | **LDA** | 15 | 2.600 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 7.260 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 3.370 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 4.290 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.410 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.260 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 14.040 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 100.640 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 2.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 7.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 3.370 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 4.290 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 2.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 7.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 3.370 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 4.290 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 2.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 7.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 3.370 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 4.290 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.260 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 14.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 100.640 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 789 | | | 4.15E+02 | 9.14E-01 | 1.15E-01 | |
| | **LDT1** | | | 93 | | | 1.37E+02 | 3.02E-01 | 3.81E-02 | |
| | **LDT2** | | | 285 | | | 1.94E+02 | 4.28E-01 | 5.40E-02 | |
| | **MDT** | | | 220 | | | 1.91E+02 | 4.21E-01 | 5.30E-02 | |
| | **LHDT1** | | | 85 | | | 7.61E+01 | 1.68E-01 | 2.11E-02 | |
| | **LHDT2** | | | 9 | | | 5.90E+00 | 1.30E-02 | 1.64E-03 | |
| | **MHDT** | | | 32 | | | 9.16E+01 | 2.02E-01 | 2.55E-02 | |
| | **HHDT** | | | 8 | | | 1.58E+02 | 3.49E-01 | 4.40E-02 | |
| | **Total** | | | 1521 | | | 1.27E+03 | 2.80E+00 | 3.53E-01 | 3.53E-01 |

**Non-Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 132.940 | 5 | 42 | 4.60E+02 | 1.01E+00 | 1.28E-01 | |
| | **LHDT2** | 134.460 | 5 | 4 | 4.88E+01 | 1.08E-01 | 1.36E-02 | |
| | **MHDT** | 328.730 | 5 | 16 | 4.33E+02 | 9.54E-01 | 1.20E-01 | |
| | **HHDT** | 773.000 | 5 | 4 | 2.45E+02 | 5.40E-01 | 6.81E-02 | |
| | | | | 66 | 1.19E+03 | 2.62E+00 | 3.30E-01 | 3.30E-01 |
| **Idle at Light Logistics** | **LHDT1** | 132.940 | 5 | 1 | 1.14E+01 | 2.51E-02 | 3.16E-03 | |
| | **LHDT2** | 134.460 | 5 | 0 | 1.21E+00 | 2.66E-03 | 3.35E-04 | |
| | **MHDT** | 328.730 | 5 | 0 | 5.91E+00 | 1.30E-02 | 1.64E-03 | |
| | **HHDT** | 773.000 | 5 | 0 | 3.33E+00 | 7.33E-03 | 9.25E-04 | |
| | | | | 1 | 2.18E+01 | 4.81E-02 | 6.06E-03 | 6.06E-03 |
| **Idle at Utility** | **LHDT1** | 132.940 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 134.460 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 328.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 773.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 132.940 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 134.460 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 328.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 773.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 132.940 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 134.460 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 328.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 773.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 132.940 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 134.460 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 328.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 773.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 67 | 1.21E+03 | 2.66E+00 | 3.36E-01 | 3.36E-01 |

**World Logistics Center** **2012** **Peak Hour CO** Based on PB Traffic Results 10/3/2013
**Project-Only Emissions** **Phase 1 + 2** Without Mitigation
**Internal Roadway Circulation** With EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 1.55E-01 | 2.60E-01 | 4.15E-01 |
| 2 | 4.15E-01 | 6.58E-01 | 1.07E+00 |
| 3 | 4.52E-01 | 7.67E-01 | 1.22E+00 |
| 5 | 2.51E-02 | 2.74E-01 | 2.99E-01 |
| 6 | 2.65E-01 | 4.59E-01 | 7.24E-01 |
| 8 | 2.44E-02 | 4.52E-01 | 4.77E-01 |
| 11 | 4.28E-04 | 1.31E-02 | 1.36E-02 |
| 12 | 1.07E-03 | 1.92E-02 | 2.03E-02 |
| 14 | 1.49E-01 | 2.38E-01 | 3.87E-01 |
| 18 | 2.89E-02 | 6.69E-02 | 9.58E-02 |
| 19 | 1.70E-01 | 2.80E-01 | 4.50E-01 |
| 21 | 1.70E-01 | 4.88E-01 | 6.58E-01 |
| 24 | 1.57E-01 | 4.98E-01 | 6.55E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 6.09E-02 | 9.93E-02 | 1.60E-01 |
| 30 | 2.31E-01 | 4.22E-01 | 6.53E-01 |
| 31 | 1.49E-02 | 1.14E-01 | 1.29E-01 |
| | | Total | 7.43E+00 |

| ID | Arterial | From | To | 2012 With Project Phase 1+2 (Pk PM) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 1,315 | 110 | 219 | 692 |
| 2 | Street A | Eucalyptus Ave | Street F | 1,399 | 181 | 242 | 833 |
| 3 | Street E | west of Street A | | 526 | 66 | 85 | 280 |
| 5 | Street E | Street D | Street A | 685 | 40 | 49 | 19 |
| 6 | Street A | Street F | Street C | 686 | 76 | 111 | 350 |
| 8 | Street D | Street E | Cactus Ave | 1,006 | 60 | 73 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 27 | 2 | 1 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 55 | 5 | 4 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 250 | 16 | 27 | 142 |
| 18 | Street B | east of Street A | Theodore St | 82 | 14 | 12 | 28 |
| 19 | Street F | east of Street A | | 191 | 19 | 30 | 105 |
| 21 | Street C | east of Street A | | 776 | 58 | 89 | 183 |
| 24 | Street C | Street F | Street H | 528 | 35 | 56 | 108 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 245 | 20 | 34 | 135 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 262 | 23 | 30 | 122 |
| 31 | Gilman Springs Rd | south of Street C | | 327 | 16 | 23 | 19 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012 Peak Hour CO Phase 1 + 2** Without Mitigation
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 2 | 0 | 0 | 0 | 22 | 8 | 176 | 677 | 886 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 2 | 0 | 0 | 0 | 37 | 13 | 195 | 815 | 1062 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 5 | 68 | 274 | 361 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 1 | 0 | 0 | 0 | 8 | 3 | 39 | 19 | 70 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 15 | 5 | 89 | 342 | 454 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 2 | 0 | 0 | 0 | 12 | 4 | 59 | 0 | 77 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 5 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 3 | 1 | 22 | 139 | 165 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 27 | 41 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 103 | 132 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 12 | 4 | 72 | 179 | 268 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 7 | 2 | 45 | 106 | 161 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 0 | 0 | 0 | 0 | 4 | 1 | 27 | 132 | 165 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 5 | 2 | 24 | 119 | 150 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 1 | 0 | 0 | 0 | 3 | 1 | 19 | 19 | 42 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5300 | 1.1100 | 0.1600 | 0.2600 | 0.8700 | 0.8200 | 1.9500 | 3.5200 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6.83E-05 | 6.87E-06 | 9.75E-07 | 3.07E-06 | 1.10E-03 | 3.52E-04 | 1.94E-02 | 1.34E-01 | 1.55E-01 |
| 2 | 1 | 1.62E-04 | 1.63E-05 | 2.32E-06 | 7.29E-06 | 4.04E-03 | 1.29E-03 | 4.79E-02 | 3.62E-01 | 4.15E-01 |
| 3 | 1 | 1.96E-04 | 1.98E-05 | 2.80E-06 | 8.82E-06 | 4.74E-03 | 1.52E-03 | 5.42E-02 | 3.91E-01 | 4.52E-01 |
| 5 | 1 | 1.04E-04 | 1.04E-05 | 1.48E-06 | 4.65E-06 | 1.16E-03 | 3.73E-04 | 1.27E-02 | 1.08E-02 | 2.51E-02 |
| 6 | 1 | 1.20E-04 | 1.21E-05 | 1.71E-06 | 5.38E-06 | 2.55E-03 | 8.17E-04 | 3.31E-02 | 2.28E-01 | 2.65E-01 |
| 8 | 1 | 1.74E-04 | 1.75E-05 | 2.49E-06 | 7.83E-06 | 2.00E-03 | 6.41E-04 | 2.16E-02 | 0.00E+00 | 2.44E-02 |
| 11 | 1 | 5.15E-06 | 5.18E-07 | 7.35E-08 | 2.31E-07 | 7.33E-05 | 2.35E-05 | 3.25E-04 | 0.00E+00 | 4.28E-04 |
| 12 | 1 | 7.19E-06 | 7.25E-07 | 1.03E-07 | 3.23E-07 | 1.26E-04 | 4.03E-05 | 8.93E-04 | 0.00E+00 | 1.07E-03 |
| 14 | 1 | 6.42E-05 | 6.47E-06 | 9.17E-07 | 2.88E-06 | 7.90E-04 | 2.53E-04 | 1.18E-02 | 1.36E-01 | 1.49E-01 |
| 18 | 1 | 1.84E-05 | 1.85E-06 | 2.62E-07 | 8.25E-07 | 6.04E-04 | 1.93E-04 | 4.59E-03 | 2.35E-02 | 2.89E-02 |
| 19 | 1 | 7.23E-05 | 7.29E-06 | 1.03E-06 | 3.25E-06 | 1.38E-03 | 4.44E-04 | 1.94E-02 | 1.49E-01 | 1.70E-01 |
| 21 | 1 | 1.55E-04 | 1.56E-05 | 2.21E-06 | 6.96E-06 | 2.23E-03 | 7.14E-04 | 3.03E-02 | 1.37E-01 | 1.70E-01 |
| 24 | 1 | 1.63E-04 | 1.64E-05 | 2.33E-06 | 7.33E-06 | 2.08E-03 | 6.67E-04 | 2.95E-02 | 1.25E-01 | 1.57E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.63E-05 | 2.64E-06 | 3.75E-07 | 1.18E-06 | 4.12E-04 | 1.32E-04 | 6.22E-03 | 5.41E-02 | 6.09E-02 |
| 30 | 1 | 1.18E-04 | 1.18E-05 | 1.68E-06 | 5.28E-06 | 1.99E-03 | 6.36E-04 | 2.30E-02 | 2.05E-01 | 2.31E-01 |
| 31 | 1 | 4.26E-05 | 4.29E-06 | 6.08E-07 | 1.91E-06 | 4.01E-04 | 1.28E-04 | 5.11E-03 | 9.25E-03 | 1.49E-02 |

**World Logistics Center** **2012 Peak Hour CO Phase 1 + 2** Without Mitigation
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 753 | 88 | 262 | 208 | 72 | 8 | 43 | 15 | 1450 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 802 | 94 | 279 | 221 | 119 | 13 | 47 | 18 | 1593 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 301 | 35 | 105 | 83 | 43 | 5 | 17 | 6 | 596 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 392 | 46 | 137 | 108 | 26 | 3 | 10 | 0 | 723 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 393 | 46 | 137 | 109 | 50 | 5 | 22 | 8 | 769 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 576 | 68 | 201 | 159 | 39 | 4 | 14 | 0 | 1062 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 29 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 32 | 4 | 11 | 9 | 3 | 0 | 1 | 0 | 59 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 143 | 17 | 50 | 40 | 11 | 1 | 5 | 3 | 270 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 47 | 6 | 16 | 13 | 9 | 1 | 2 | 1 | 95 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 109 | 13 | 38 | 30 | 13 | 1 | 6 | 2 | 213 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 445 | 52 | 155 | 123 | 38 | 4 | 17 | 4 | 838 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 303 | 35 | 105 | 84 | 23 | 2 | 11 | 2 | 566 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 140 | 16 | 49 | 39 | 13 | 1 | 7 | 3 | 269 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 150 | 18 | 52 | 41 | 15 | 2 | 6 | 3 | 287 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 187 | 22 | 65 | 52 | 11 | 1 | 4 | 0 | 343 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 1.6600 | 4.2900 | 2.1400 | 2.7800 | 3.1400 | 2.3900 | 10.5700 | 74.4600 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.06E-02 | 2.14E-02 | 3.17E-02 | 3.26E-02 | 1.28E-02 | 1.03E-03 | 2.54E-02 | 6.42E-02 | 2.60E-01 |
| 2 | 1 | 1.68E-01 | 5.09E-02 | 7.54E-02 | 7.76E-02 | 4.72E-02 | 3.78E-03 | 6.28E-02 | 1.73E-01 | 6.58E-01 |
| 3 | 1 | 2.03E-01 | 6.15E-02 | 9.12E-02 | 9.39E-02 | 5.54E-02 | 4.44E-03 | 7.09E-02 | 1.87E-01 | 7.67E-01 |
| 5 | 1 | 1.07E-01 | 3.25E-02 | 4.81E-02 | 4.96E-02 | 1.36E-02 | 1.09E-03 | 1.66E-02 | 5.14E-03 | 2.74E-01 |
| 6 | 1 | 1.24E-01 | 3.75E-02 | 5.56E-02 | 5.72E-02 | 2.98E-02 | 2.39E-03 | 4.33E-02 | 1.09E-01 | 4.59E-01 |
| 8 | 1 | 1.80E-01 | 5.46E-02 | 8.09E-02 | 8.33E-02 | 2.33E-02 | 1.87E-03 | 2.83E-02 | 0.00E+00 | 4.52E-01 |
| 11 | 1 | 5.32E-03 | 1.61E-03 | 2.39E-03 | 2.46E-03 | 8.56E-04 | 6.87E-05 | 4.26E-04 | 0.00E+00 | 1.31E-02 |
| 12 | 1 | 7.44E-03 | 2.25E-03 | 3.34E-03 | 3.44E-03 | 1.47E-03 | 1.18E-04 | 1.17E-03 | 0.00E+00 | 1.92E-02 |
| 14 | 1 | 6.64E-02 | 2.01E-02 | 2.98E-02 | 3.07E-02 | 9.23E-03 | 7.41E-04 | 1.55E-02 | 6.52E-02 | 2.38E-01 |
| 18 | 1 | 1.90E-02 | 5.76E-03 | 8.53E-03 | 8.79E-03 | 7.05E-03 | 5.65E-04 | 6.01E-03 | 1.12E-02 | 6.69E-02 |
| 19 | 1 | 7.48E-02 | 2.27E-02 | 3.36E-02 | 3.46E-02 | 1.62E-02 | 1.30E-03 | 2.54E-02 | 7.11E-02 | 2.80E-01 |
| 21 | 1 | 1.60E-01 | 4.86E-02 | 7.19E-02 | 7.41E-02 | 2.60E-02 | 2.09E-03 | 3.97E-02 | 6.53E-02 | 4.88E-01 |
| 24 | 1 | 1.69E-01 | 5.11E-02 | 7.57E-02 | 7.80E-02 | 2.43E-02 | 1.95E-03 | 3.87E-02 | 5.96E-02 | 4.98E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.71E-02 | 8.23E-03 | 1.22E-02 | 1.26E-02 | 4.81E-03 | 3.86E-04 | 8.14E-03 | 2.58E-02 | 9.93E-02 |
| 30 | 1 | 1.22E-01 | 3.68E-02 | 5.46E-02 | 5.62E-02 | 2.32E-02 | 1.86E-03 | 3.01E-02 | 9.78E-02 | 4.22E-01 |
| 31 | 1 | 4.40E-02 | 1.33E-02 | 1.98E-02 | 2.04E-02 | 4.68E-03 | 3.75E-04 | 6.69E-03 | 4.42E-03 | 1.14E-01 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | 2012 | Phase 1 | |
|---|---|---|---|---|
| | | | No Mitigation | |
| **Vehicle Running Exhaust Emissions** | | | **Pollutant** | **Peak Hour Nox** |
| | **AERMOD** | **Diesel Vehicles** | **Non-Diesel Vehicles** | |
| **Travel to Building** | **Source ID** | **(g/sec)** | **(g/sec)** | |
| High Cube | Phase 1 | 6.76E-01 | 4.16E-02 | |
| Light Logistics | Phase 1 | 1.11E-03 | 1.27E-04 | |
| Utilities Service Station | Phase 1 | 7.39E-04 | 1.21E-04 | |
| Gas Station w/Convenience Store | Phase 1 | 1.51E-03 | 3.70E-05 | |
| Convenience Store | Phase 1 | 1.69E-03 | 4.57E-05 | |
| Fire Station | Phase 1 | 2.68E-07 | 7.84E-05 | |
| Total | | 6.81E-01 | 4.20E-02 | |

**Vehicle Idling Emission Sources**

| | | **Diesel Vehicles** | **Non-Diesel Vehicles** |
|---|---|---|---|
| | **AERMOD** | **Emissions** | **Emissions** |
| **Building** | **Source IDs** | **(g/sec)** | **(g/sec)** |
| High Cube | Phase 1 | 7.67E-01 | 7.71E-03 |
| Light Logistics | Phase 1 | 2.44E-03 | 2.83E-05 |
| Utilities Service Station | Phase 1 | 3.29E-03 | 5.28E-05 |
| Gas Station w/Convenience Store | Phase 1 | 1.03E-02 | 8.72E-05 |
| Convenience Store | Phase 1 | 1.10E-02 | 1.07E-04 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 7.94E-01 | 7.98E-03 |

| **Total Onsite Mobile Emissions** | | **Emissions** | **Emissions** | |
|---|---|---|---|---|
| | | **(g/sec)** | **(g/sec)** | |
| | Runing Exhaust (g/sec) | 6.81E-01 | 4.20E-02 | |
| | Idling Emissions (g/sec) | 7.94E-01 | 7.98E-03 | |
| | Total Vehicle Emissions (g/sec) | 1.47E+00 | 5.00E-02 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.77E+00 | |
| | Fork Lifts (LPG) (g/sec) | | 1.40E-01 | |
| | Total Other Onsite Emissions (g/sec) | | 1.91E+00 | |
| | | | | Total |
| | Total Emissions (g/sec) | 1.47E+00 | 1.96E+00 | 3.43E+00 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 7.32E-07 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 3 | 330 | 0.21 | 3.34E-01 | 7.37E-04 | 9.29E-05 | |
| | **LDT1** | 15 | 1.080 | 0 | 330 | 0.21 | 3.77E-02 | 8.30E-05 | 1.05E-05 | |
| | **LDT2** | 15 | 0.170 | 0 | 330 | 0.21 | 5.75E-03 | 1.27E-05 | 1.60E-06 | |
| | **MDT** | 15 | 0.190 | 0 | 330 | 0.21 | 1.11E-02 | 2.45E-05 | 3.09E-06 | |
| | **LHDT1** | 15 | 4.180 | 34 | 330 | 0.21 | 2.89E+01 | 6.36E-02 | 8.02E-03 | |
| | **LHDT2** | 15 | 3.880 | 11 | 330 | 0.21 | 8.76E+00 | 1.93E-02 | 2.43E-03 | |
| | **MHDT** | 15 | 9.420 | 181 | 330 | 0.21 | 3.50E+02 | 7.71E-01 | 9.72E-02 | |
| | **HHDT** | 15 | 17.170 | 581 | 330 | 0.21 | 2.04E+03 | 4.50E+00 | 5.68E-01 | |
| | | | | | | | | | | 6.76E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 1.12E-03 | 2.46E-06 | 3.11E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 1.26E-04 | 2.78E-07 | 3.50E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 1.92E-05 | 4.23E-08 | 5.34E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 3.72E-05 | 8.20E-08 | 1.03E-08 | |
| | **LHDT1** | 15 | 4.180 | 0 | 175 | 0.11 | 8.51E-02 | 1.88E-04 | 2.37E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 175 | 0.11 | 2.59E-02 | 5.69E-05 | 7.18E-06 | |
| | **MHDT** | 15 | 9.420 | 1 | 175 | 0.11 | 5.71E-01 | 1.26E-03 | 1.58E-04 | |
| | **HHDT** | 15 | 17.170 | 2 | 175 | 0.11 | 3.31E+00 | 7.30E-03 | 9.20E-04 | 1.11E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 9.88E-04 | 2.18E-06 | 2.74E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 1.11E-04 | 2.45E-07 | 3.09E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 1.70E-05 | 3.74E-08 | 4.72E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 3.29E-05 | 7.24E-08 | 9.14E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 100 | 0.06 | 1.52E-01 | 3.36E-04 | 4.24E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 100 | 0.06 | 4.63E-02 | 1.02E-04 | 1.29E-05 | |
| | **MHDT** | 15 | 9.420 | 1 | 100 | 0.06 | 4.60E-01 | 1.01E-03 | 1.28E-04 | |
| | **HHDT** | 15 | 17.170 | 2 | 100 | 0.06 | 2.00E+00 | 4.41E-03 | 5.56E-04 | 7.39E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 2.67E-04 | 5.88E-07 | 7.42E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.01E-05 | 6.63E-08 | 8.36E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 4.59E-06 | 1.01E-08 | 1.27E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 8.89E-06 | 1.96E-08 | 2.47E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 5.57E-04 | 1.23E-06 | 1.55E-07 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 1.69E-04 | 3.73E-07 | 4.70E-08 | |
| | **MHDT** | 15 | 9.420 | 2 | 50 | 0.03 | 5.55E-01 | 1.22E-03 | 1.54E-04 | |
| | **HHDT** | 15 | 17.170 | 9 | 50 | 0.03 | 4.89E+00 | 1.08E-02 | 1.36E-03 | 1.51E-03 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.32E-04 | 7.32E-07 | 9.23E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.74E-05 | 8.25E-08 | 1.04E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 5.71E-06 | 1.26E-08 | 1.59E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.11E-05 | 2.44E-08 | 3.07E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 2.39E-02 | 5.26E-05 | 6.63E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 7.25E-03 | 1.60E-05 | 2.01E-06 | |
| | **MHDT** | 15 | 9.420 | 1 | 50 | 0.03 | 4.23E-01 | 9.31E-04 | 1.17E-04 | |
| | **HHDT** | 15 | 17.170 | 11 | 50 | 0.03 | 5.62E+00 | 1.24E-02 | 1.56E-03 | 1.69E-03 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 8.30E-04 | 1.83E-06 | 2.31E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 9.36E-05 | 2.06E-07 | 2.60E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 1.43E-05 | 3.14E-08 | 3.97E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 2.76E-05 | 6.09E-08 | 7.68E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-07 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 3.38E-01 | 7.45E-04 | 9.39E-05 | |
| | **LDT1** | | | 0 | | | 3.81E-02 | 8.39E-05 | 1.06E-05 | |
| | **LDT2** | | | 0 | | | 5.81E-03 | 1.28E-05 | 1.61E-06 | |
| | **MDT** | | | 0 | | | 1.13E-02 | 2.48E-05 | 3.13E-06 | |
| | **LHDT1** | | | 35 | | | 2.91E+01 | 6.41E-02 | 8.09E-03 | |
| | **LHDT2** | | | 11 | | | 8.84E+00 | 1.95E-02 | 2.46E-03 | |
| | **MHDT** | | | 186 | | | 3.52E+02 | 7.75E-01 | 9.78E-02 | |
| | **HHDT** | | | 604 | | | 2.06E+03 | 4.54E+00 | 5.72E-01 | |
| | **Total** | | | 840 | | | 2.45E+03 | 5.40E+00 | 6.81E-01 | 6.81E-01 |

**Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 17 | 1.05E+02 | 2.32E-01 | 2.93E-02 | |
| | **LHDT2** | 75.050 | 5 | 6 | 3.45E+01 | 7.59E-02 | 9.57E-03 | |
| | **MHDT** | 111.200 | 5 | 91 | 8.40E+02 | 1.85E+00 | 2.33E-01 | |
| | **HHDT** | 73.560 | 5 | 290 | 1.78E+03 | 3.92E+00 | 4.95E-01 | |
| | | | | 403 | 2.76E+03 | 6.08E+00 | 7.67E-01 | 7.67E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 0 | 5.86E-01 | 1.29E-03 | 1.63E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.92E-01 | 4.22E-04 | 5.32E-05 | |
| | **MHDT** | 111.200 | 5 | 0 | 2.58E+00 | 5.69E-03 | 7.17E-04 | |
| | **HHDT** | 73.560 | 5 | 1 | 5.44E+00 | 1.20E-02 | 1.51E-03 | |
| | | | | 1 | 8.80E+00 | 1.94E-02 | 2.44E-03 | 2.44E-03 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 1.84E+00 | 4.05E-03 | 5.10E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 6.01E-01 | 1.32E-03 | 1.67E-04 | |
| | **MHDT** | 111.200 | 5 | 0 | 3.64E+00 | 8.03E-03 | 1.01E-03 | |
| | **HHDT** | 73.560 | 5 | 1 | 5.75E+00 | 1.27E-02 | 1.60E-03 | |
| | | | | 2 | 1.18E+01 | 2.61E-02 | 3.29E-03 | 3.29E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 1.34E-02 | 2.95E-05 | 3.73E-06 | |
| | **LHDT2** | 75.050 | 5 | 0 | 4.39E-03 | 9.67E-06 | 1.22E-06 | |
| | **MHDT** | 111.200 | 5 | 1 | 8.79E+00 | 1.94E-02 | 2.44E-03 | |
| | **HHDT** | 73.560 | 5 | 5 | 2.81E+01 | 6.19E-02 | 7.80E-03 | |
| | | | | 6 | 3.69E+01 | 8.13E-02 | 1.03E-02 | 1.03E-02 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 5.75E-01 | 1.27E-03 | 1.60E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.88E-01 | 4.14E-04 | 5.22E-05 | |
| | **MHDT** | 111.200 | 5 | 1 | 6.70E+00 | 1.47E-02 | 1.86E-03 | |
| | **HHDT** | 73.560 | 5 | 5 | 3.23E+01 | 7.12E-02 | 8.98E-03 | |
| | | | | 6 | 3.98E+01 | 8.76E-02 | 1.10E-02 | 1.10E-02 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 2.86E+03 | 6.29E+00 | 7.94E-01 | 7.94E-01 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 1004 | 330 | 0.21 | 4.08E+01 | 8.98E-02 | 1.13E-02 | |
| | **LDT1** | 15 | 0.549 | 119 | 330 | 0.21 | 1.34E+01 | 2.95E-02 | 3.72E-03 | |
| | **LDT2** | 15 | 0.393 | 363 | 330 | 0.21 | 2.92E+01 | 6.44E-02 | 8.12E-03 | |
| | **MDT** | 15 | 0.528 | 280 | 330 | 0.21 | 3.03E+01 | 6.67E-02 | 8.41E-03 | |
| | **LHDT1** | 15 | 0.559 | 109 | 330 | 0.21 | 1.25E+01 | 2.75E-02 | 3.46E-03 | |
| | **LHDT2** | 15 | 0.558 | 11 | 330 | 0.21 | 1.30E+00 | 2.87E-03 | 3.62E-04 | |
| | **MHDT** | 15 | 1.612 | 41 | 330 | 0.21 | 1.37E+01 | 3.01E-02 | 3.80E-03 | |
| | **HHDT** | 15 | 4.218 | 10 | 330 | 0.21 | 8.62E+00 | 1.90E-02 | 2.39E-03 | |
| | | | | | | | | | | 4.16E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 6 | 175 | 0.11 | 1.36E-01 | 3.00E-04 | 3.78E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 175 | 0.11 | 4.47E-02 | 9.85E-05 | 1.24E-05 | |
| | **LDT2** | 15 | 0.393 | 2 | 175 | 0.11 | 9.77E-02 | 2.15E-04 | 2.71E-05 | |
| | **MDT** | 15 | 0.528 | 2 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LHDT1** | 15 | 0.559 | 1 | 175 | 0.11 | 3.68E-02 | 8.10E-05 | 1.02E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 175 | 0.11 | 3.84E-03 | 8.47E-06 | 1.07E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 175 | 0.11 | 2.23E-02 | 4.91E-05 | 6.19E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 1.40E-02 | 3.08E-05 | 3.88E-06 | 1.27E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 10 | 100 | 0.06 | 1.20E-01 | 2.65E-04 | 3.34E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 100 | 0.06 | 3.95E-02 | 8.71E-05 | 1.10E-05 | |
| | **LDT2** | 15 | 0.393 | 4 | 100 | 0.06 | 8.63E-02 | 1.90E-04 | 2.40E-05 | |
| | **MDT** | 15 | 0.528 | 3 | 100 | 0.06 | 8.94E-02 | 1.97E-04 | 2.48E-05 | |
| | **LHDT1** | 15 | 0.559 | 2 | 100 | 0.06 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 6.89E-03 | 1.52E-05 | 1.91E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 1.80E-02 | 3.96E-05 | 4.99E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 8.44E-03 | 1.86E-05 | 2.34E-06 | 1.21E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 5 | 50 | 0.03 | 3.25E-02 | 7.17E-05 | 9.04E-06 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.07E-02 | 2.35E-05 | 2.97E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 6.48E-06 | |
| | **MDT** | 15 | 0.528 | 1 | 50 | 0.03 | 2.42E-02 | 5.32E-05 | 6.71E-06 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 2.41E-04 | 5.30E-07 | 6.69E-08 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 2.52E-05 | 5.54E-08 | 6.99E-09 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 6.03E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.06E-02 | 4.54E-05 | 5.72E-06 | 3.70E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 7 | 50 | 0.03 | 4.05E-02 | 8.92E-05 | 1.12E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.33E-02 | 2.93E-05 | 3.69E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.90E-02 | 6.39E-05 | 8.06E-06 | |
| | **MDT** | 15 | 0.528 | 2 | 50 | 0.03 | 3.01E-02 | 6.62E-05 | 8.35E-06 | |
| | **LHDT1** | 15 | 0.559 | 1 | 50 | 0.03 | 1.03E-02 | 2.27E-05 | 2.87E-06 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 1.08E-03 | 2.37E-06 | 2.99E-07 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 1.65E-02 | 3.64E-05 | 4.59E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.37E-02 | 5.22E-05 | 6.58E-06 | 4.57E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 16 | 50 | 0.03 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LDT1** | 15 | 0.549 | 2 | 50 | 0.03 | 3.32E-02 | 7.32E-05 | 9.23E-06 | |
| | **LDT2** | 15 | 0.393 | 6 | 50 | 0.03 | 7.25E-02 | 1.60E-04 | 2.02E-05 | |
| | **MDT** | 15 | 0.528 | 5 | 50 | 0.03 | 7.52E-02 | 1.66E-04 | 2.09E-05 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.84E-05 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 4.12E+01 | 9.07E-02 | 1.14E-02 | |
| | **LDT1** | | | 124 | | | 1.35E+01 | 2.98E-02 | 3.76E-03 | |
| | **LDT2** | | | 379 | | | 2.95E+01 | 6.50E-02 | 8.20E-03 | |
| | **MDT** | | | 292 | | | 3.06E+01 | 6.74E-02 | 8.50E-03 | |
| | **LHDT1** | | | 112 | | | 1.26E+01 | 2.77E-02 | 3.50E-03 | |
| | **LHDT2** | | | 12 | | | 1.32E+00 | 2.90E-03 | 3.65E-04 | |
| | **MHDT** | | | 42 | | | 1.37E+01 | 3.03E-02 | 3.82E-03 | |
| | **HHDT** | | | 10 | | | 8.68E+00 | 1.91E-02 | 2.41E-03 | |
| | **Total** | | | 2020 | | | 1.51E+02 | 3.33E-01 | 4.20E-02 | 4.20E-02 |

**Non-Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 54 | 6.16E+00 | 1.36E-02 | 1.71E-03 | |
| | **LHDT2** | 1.380 | 5 | 6 | 6.56E-01 | 1.44E-03 | 1.82E-04 | |
| | **MHDT** | 1.870 | 5 | 21 | 3.22E+00 | 7.10E-03 | 8.95E-04 | |
| | **HHDT** | 42.650 | 5 | 5 | 1.77E+01 | 3.90E-02 | 4.92E-03 | |
| | | | | 86 | 2.77E+01 | 6.11E-02 | 7.71E-03 | 7.71E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 0 | 3.43E-02 | 7.55E-05 | 9.53E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.65E-03 | 8.03E-06 | 1.01E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 9.91E-03 | 2.18E-05 | 2.75E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 5.41E-02 | 1.19E-04 | 1.50E-05 | |
| | | | | 0 | 1.02E-01 | 2.25E-04 | 2.83E-05 | 2.83E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 1 | 1.07E-01 | 2.37E-04 | 2.99E-05 | |
| | **LHDT2** | 1.380 | 5 | 0 | 1.14E-02 | 2.52E-05 | 3.18E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 1.40E-02 | 3.08E-05 | 3.89E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 5.72E-02 | 1.26E-04 | 1.59E-05 | |
| | | | | 1 | 1.90E-01 | 4.19E-04 | 5.28E-05 | 5.28E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 7.85E-04 | 1.73E-06 | 2.18E-07 | |
| | **LHDT2** | 1.380 | 5 | 0 | 8.35E-05 | 1.84E-07 | 2.32E-08 | |
| | **MHDT** | 1.870 | 5 | 0 | 3.37E-02 | 7.43E-05 | 9.37E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 2.79E-01 | 6.16E-04 | 7.76E-05 | |
| | | | | 0 | 3.14E-01 | 6.92E-04 | 8.72E-05 | 8.72E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 3.36E-02 | 7.41E-05 | 9.35E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.58E-03 | 7.88E-06 | 9.94E-07 | |
| | **MHDT** | 1.870 | 5 | 0 | 2.57E-02 | 5.66E-05 | 7.14E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 3.21E-01 | 7.08E-04 | 8.93E-05 | |
| | | | | 1 | 3.84E-01 | 8.47E-04 | 1.07E-04 | 1.07E-04 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 2.87E+01 | 6.33E-02 | 7.98E-03 | 7.98E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | 2012 | Phase 2<br>No Mitigation<br>Pollutant | Peak Hour Nox |
|---|---|---|---|---|
| **Vehicle Running Exhaust Emissions** | | | | |
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 2 | 5.16E-01 | 3.18E-02 | |
| Light Logistics | Phase 2 | 3.77E-03 | 4.31E-04 | |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Total | | 5.20E-01 | 3.22E-02 | |
| **Vehicle Idling Emission Sources** | | | | |
| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** | |
| High Cube | Phase 2 | 5.86E-01 | 5.89E-03 | |
| Light Logistics | Phase 2 | 8.30E-03 | 9.62E-05 | |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Total | | 5.94E-01 | 5.99E-03 | |
| **Total Onsite Mobile Emissions** | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
| | Runing Exhaust (g/sec) | 5.20E-01 | 3.22E-02 | |
| | Idling Emissions (g/sec) | 5.94E-01 | 5.99E-03 | |
| | Total Vehicle Emissions (g/sec) | 1.11E+00 | 3.82E-02 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.39E+00 | |
| | Forklifts (LPG) (g/sec) | | 1.10E-01 | |
| | Total Other Onsite Emissions (g/sec) | | 1.50E+00 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.11E+00 | 1.54E+00 | 2.65E+00 |
| | Area (m2) | | | 5152719 |
| | Emission Rate (g/m2-sec) | | | 5.14E-07 |

**World Logistics Center** **2012** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 2 | 330 | 0.21 | 2.56E-01 | 5.63E-04 | 7.10E-05 | |
| | **LDT1** | 15 | 1.080 | 0 | 330 | 0.21 | 2.88E-02 | 6.35E-05 | 8.00E-06 | |
| | **LDT2** | 15 | 0.170 | 0 | 330 | 0.21 | 4.39E-03 | 9.68E-06 | 1.22E-06 | |
| | **MDT** | 15 | 0.190 | 0 | 330 | 0.21 | 8.51E-03 | 1.87E-05 | 2.36E-06 | |
| | **LHDT1** | 15 | 4.180 | 26 | 330 | 0.21 | 2.21E+01 | 4.86E-02 | 6.13E-03 | |
| | **LHDT2** | 15 | 3.880 | 8 | 330 | 0.21 | 6.70E+00 | 1.48E-02 | 1.86E-03 | |
| | **MHDT** | 15 | 9.420 | 138 | 330 | 0.21 | 2.67E+02 | 5.89E-01 | 7.43E-02 | |
| | **HHDT** | 15 | 17.170 | 444 | 330 | 0.21 | 1.56E+03 | 3.44E+00 | 4.34E-01 | |
| | | | | | | | | | | 5.16E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 3.80E-03 | 8.36E-06 | 1.05E-06 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 4.28E-04 | 9.42E-07 | 1.19E-07 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 6.52E-05 | 1.44E-07 | 1.81E-08 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 1.26E-04 | 2.78E-07 | 3.51E-08 | |
| | **LHDT1** | 15 | 4.180 | 1 | 175 | 0.11 | 2.89E-01 | 6.37E-04 | 8.03E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 175 | 0.11 | 8.78E-02 | 1.93E-04 | 2.44E-05 | |
| | **MHDT** | 15 | 9.420 | 2 | 175 | 0.11 | 1.94E+00 | 4.27E-03 | 5.38E-04 | |
| | **HHDT** | 15 | 17.170 | 6 | 175 | 0.11 | 1.13E+01 | 2.48E-02 | 3.13E-03 | 3.77E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 2.59E-01 | 5.71E-04 | 7.21E-05 | |
| | **LDT1** | | | 0 | | | 2.92E-02 | 6.44E-05 | 8.12E-06 | |
| | **LDT2** | | | 0 | | | 4.46E-03 | 9.82E-06 | 1.24E-06 | |
| | **MDT** | | | 0 | | | 8.63E-03 | 1.90E-05 | 2.40E-06 | |
| | **LHDT1** | | | 26 | | | 2.23E+01 | 4.92E-02 | 6.21E-03 | |
| | **LHDT2** | | | 9 | | | 6.78E+00 | 1.49E-02 | 1.88E-03 | |
| | **MHDT** | | | 140 | | | 2.69E+02 | 5.93E-01 | 7.48E-02 | |
| | **HHDT** | | | 450 | | | 1.57E+03 | 3.47E+00 | 4.37E-01 | |
| | **Total** | | | 628 | | | 1.87E+03 | 4.12E+00 | 5.20E-01 | 5.20E-01 |

**Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 13 | 8.05E+01 | 1.77E-01 | 2.24E-02 | |
| | **LHDT2** | 75.050 | 5 | 4 | 2.63E+01 | 5.80E-02 | 7.31E-03 | |
| | **MHDT** | 111.200 | 5 | 69 | 6.42E+02 | 1.41E+00 | 1.78E-01 | |
| | **HHDT** | 73.560 | 5 | 222 | 1.36E+03 | 3.00E+00 | 3.78E-01 | |
| | | | | 308 | 2.11E+03 | 4.65E+00 | 5.86E-01 | 5.86E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 0 | 1.99E+00 | 4.38E-03 | 5.53E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 6.51E-01 | 1.43E-03 | 1.81E-04 | |
| | **MHDT** | 111.200 | 5 | 1 | 8.77E+00 | 1.93E-02 | 2.43E-03 | |
| | **HHDT** | 73.560 | 5 | 3 | 1.85E+01 | 4.07E-02 | 5.13E-03 | |
| | | | | 4 | 2.99E+01 | 6.58E-02 | 8.30E-03 | 8.30E-03 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 313 | 2.14E+03 | 4.71E+00 | 5.94E-01 | 5.94E-01 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 767 | 330 | 0.21 | 3.11E+01 | 6.86E-02 | 8.65E-03 | |
| | **LDT1** | 15 | 0.549 | 91 | 330 | 0.21 | 1.02E+01 | 2.25E-02 | 2.84E-03 | |
| | **LDT2** | 15 | 0.393 | 277 | 330 | 0.21 | 2.23E+01 | 4.92E-02 | 6.20E-03 | |
| | **MDT** | 15 | 0.528 | 214 | 330 | 0.21 | 2.31E+01 | 5.10E-02 | 6.43E-03 | |
| | **LHDT1** | 15 | 0.559 | 83 | 330 | 0.21 | 9.53E+00 | 2.10E-02 | 2.65E-03 | |
| | **LHDT2** | 15 | 0.558 | 9 | 330 | 0.21 | 9.96E-01 | 2.19E-03 | 2.77E-04 | |
| | **MHDT** | 15 | 1.612 | 32 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 2.90E-03 | |
| | **HHDT** | 15 | 4.218 | 8 | 330 | 0.21 | 6.58E+00 | 1.45E-02 | 1.83E-03 | |
| | | | | | | | | | | 3.18E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 21 | 175 | 0.11 | 4.63E-01 | 1.02E-03 | 1.28E-04 | |
| | **LDT1** | 15 | 0.549 | 3 | 175 | 0.11 | 1.52E-01 | 3.34E-04 | 4.22E-05 | |
| | **LDT2** | 15 | 0.393 | 8 | 175 | 0.11 | 3.32E-01 | 7.30E-04 | 9.21E-05 | |
| | **MDT** | 15 | 0.528 | 6 | 175 | 0.11 | 3.44E-01 | 7.57E-04 | 9.55E-05 | |
| | **LHDT1** | 15 | 0.559 | 2 | 175 | 0.11 | 1.25E-01 | 2.75E-04 | 3.47E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 175 | 0.11 | 1.31E-02 | 2.88E-05 | 3.63E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 175 | 0.11 | 7.57E-02 | 1.67E-04 | 2.10E-05 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 4.74E-02 | 1.04E-04 | 1.32E-05 | 4.31E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 789 | | | 3.16E+01 | 6.96E-02 | 8.78E-03 | |
| | **LDT1** | | | 93 | | | 1.04E+01 | 2.29E-02 | 2.88E-03 | |
| | **LDT2** | | | 285 | | | 2.27E+01 | 4.99E-02 | 6.29E-03 | |
| | **MDT** | | | 220 | | | 2.35E+01 | 5.17E-02 | 6.52E-03 | |
| | **LHDT1** | | | 85 | | | 9.66E+00 | 2.13E-02 | 2.68E-03 | |
| | **LHDT2** | | | 9 | | | 1.01E+00 | 2.22E-03 | 2.80E-04 | |
| | **MHDT** | | | 32 | | | 1.05E+01 | 2.32E-02 | 2.92E-03 | |
| | **HHDT** | | | 8 | | | 6.63E+00 | 1.46E-02 | 1.84E-03 | |
| | **Total** | | | 1521 | | | 1.16E+02 | 2.55E-01 | 3.22E-02 | 3.22E-02 |

**Non-Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 42 | 4.71E+00 | 1.04E-02 | 1.31E-03 | |
| | **LHDT2** | 1.380 | 5 | 4 | 5.01E-01 | 1.10E-03 | 1.39E-04 | |
| | **MHDT** | 1.870 | 5 | 16 | 2.46E+00 | 5.42E-03 | 6.84E-04 | |
| | **HHDT** | 42.650 | 5 | 4 | 1.35E+01 | 2.98E-02 | 3.76E-03 | |
| | | | | 66 | 2.12E+01 | 4.67E-02 | 5.89E-03 | 5.89E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 1 | 1.16E-01 | 2.56E-04 | 3.23E-05 | |
| | **LHDT2** | 1.380 | 5 | 0 | 1.24E-02 | 2.73E-05 | 3.44E-06 | |
| | **MHDT** | 1.870 | 5 | 0 | 3.36E-02 | 7.41E-05 | 9.35E-06 | |
| | **HHDT** | 42.650 | 5 | 0 | 1.84E-01 | 4.05E-04 | 5.10E-05 | |
| | | | | 1 | 3.46E-01 | 7.63E-04 | 9.62E-05 | 9.62E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 67 | 2.16E+01 | 4.75E-02 | 5.99E-03 | 5.99E-03 |

**World Logistics Center** **2012** **Peak Hour Nox** Based on PB Traffic Results 10/3/2013
**Project-Only Emissions** **Phases 1+2** With EMFAC2014 Without Mitigation
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 5.52E-01 | 2.74E-02 | 5.79E-01 |
| 2 | 1.47E+00 | 7.03E-02 | 1.54E+00 |
| 3 | 1.61E+00 | 8.21E-02 | 1.69E+00 |
| 5 | 9.82E-02 | 2.93E-02 | 1.28E-01 |
| 6 | 9.43E-01 | 4.89E-02 | 9.92E-01 |
| 8 | 1.04E-01 | 4.88E-02 | 1.53E-01 |
| 11 | 1.88E-03 | 1.41E-03 | 3.28E-03 |
| 12 | 4.62E-03 | 2.11E-03 | 6.73E-03 |
| 14 | 5.25E-01 | 2.42E-02 | 5.49E-01 |
| 18 | 1.04E-01 | 7.43E-03 | 1.12E-01 |
| 19 | 6.03E-01 | 2.95E-02 | 6.33E-01 |
| 21 | 6.14E-01 | 5.21E-02 | 6.66E-01 |
| 24 | 5.68E-01 | 5.30E-02 | 6.21E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 2.15E-01 | 1.03E-02 | 2.26E-01 |
| 30 | 8.16E-01 | 4.41E-02 | 8.60E-01 |
| 31 | 5.61E-02 | 1.20E-02 | 6.82E-02 |
| | | Total | 8.83E+00 |

| ID | Arterial | From | To | | 2012 With Project Phase 1+2 (Pk PM) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,315 | 110 | 219 | 692 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,399 | 181 | 242 | 833 |
| 3 | Street E | west of Street A | | | 526 | 66 | 85 | 280 |
| 5 | Street E | Street D | Street A | | 685 | 40 | 49 | 19 |
| 6 | Street A | Street F | Street C | | 686 | 76 | 111 | 350 |
| 8 | Street D | Street E | Cactus Ave | | 1,006 | 60 | 73 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 27 | 2 | 1 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 55 | 5 | 4 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | | 250 | 16 | 27 | 142 |
| 18 | Street B | east of Street A | Theodore St | | 82 | 14 | 12 | 28 |
| 19 | Street F | east of Street A | | | 191 | 19 | 30 | 105 |
| 21 | Street C | east of Street A | | | 776 | 58 | 89 | 183 |
| 24 | Street C | Street F | Street H | | 528 | 35 | 56 | 108 |
| 26 | Street H | Street C | Street G | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 245 | 20 | 34 | 135 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 262 | 23 | 30 | 122 |
| 31 | Gilman Springs Rd | south of Street C | | | 327 | 16 | 23 | 19 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012 Peak Hour Nox Phases 1+2** Without Mitigation
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 2 | 0 | 0 | 0 | 22 | 8 | 176 | 677 | 886 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 2 | 0 | 0 | 0 | 37 | 13 | 195 | 815 | 1062 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 5 | 68 | 274 | 361 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 1 | 0 | 0 | 0 | 8 | 3 | 39 | 19 | 70 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 15 | 5 | 89 | 342 | 454 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 2 | 0 | 0 | 0 | 12 | 4 | 59 | 0 | 77 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 5 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 3 | 1 | 22 | 139 | 165 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 27 | 41 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 103 | 132 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 12 | 4 | 72 | 179 | 268 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 7 | 2 | 45 | 106 | 161 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 0 | 0 | 0 | 0 | 4 | 1 | 27 | 132 | 165 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 5 | 2 | 24 | 119 | 150 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 1 | 0 | 0 | 0 | 3 | 1 | 19 | 19 | 42 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5400 | 1.2800 | 0.1400 | 0.1700 | 4.5500 | 4.2100 | 8.1800 | 12.1200 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6.95E-05 | 7.93E-06 | 8.53E-07 | 2.00E-06 | 5.74E-03 | 1.81E-03 | 8.14E-02 | 4.63E-01 | 5.52E-01 |
| 2 | 1 | 1.65E-04 | 1.89E-05 | 2.03E-06 | 4.77E-06 | 2.11E-02 | 6.65E-03 | 2.01E-01 | 1.25E+00 | 1.47E+00 |
| 3 | 1 | 2.00E-04 | 2.28E-05 | 2.45E-06 | 5.77E-06 | 2.48E-02 | 7.80E-03 | 2.27E-01 | 1.35E+00 | 1.61E+00 |
| 5 | 1 | 1.06E-04 | 1.20E-05 | 1.29E-06 | 3.04E-06 | 6.09E-03 | 1.92E-03 | 5.31E-02 | 3.70E-02 | 9.82E-02 |
| 6 | 1 | 1.22E-04 | 1.39E-05 | 1.50E-06 | 3.51E-06 | 1.33E-02 | 4.20E-03 | 1.39E-01 | 7.87E-01 | 9.43E-01 |
| 8 | 1 | 1.78E-04 | 2.02E-05 | 2.18E-06 | 5.12E-06 | 1.05E-02 | 3.29E-03 | 9.05E-02 | 0.00E+00 | 1.04E-01 |
| 11 | 1 | 5.24E-06 | 5.98E-07 | 6.43E-08 | 1.51E-07 | 3.84E-04 | 1.21E-04 | 1.37E-03 | 0.00E+00 | 1.88E-03 |
| 12 | 1 | 7.33E-06 | 8.36E-07 | 8.99E-08 | 2.11E-07 | 6.58E-04 | 2.07E-04 | 3.75E-03 | 0.00E+00 | 4.62E-03 |
| 14 | 1 | 6.54E-05 | 7.46E-06 | 8.02E-07 | 1.89E-06 | 4.13E-03 | 1.30E-03 | 4.97E-02 | 4.70E-01 | 5.25E-01 |
| 18 | 1 | 1.87E-05 | 2.13E-06 | 2.30E-07 | 5.40E-07 | 3.16E-03 | 9.93E-04 | 1.93E-02 | 8.09E-02 | 1.04E-01 |
| 19 | 1 | 7.37E-05 | 8.40E-06 | 9.04E-07 | 2.12E-06 | 7.24E-03 | 2.28E-03 | 8.14E-02 | 5.12E-01 | 6.03E-01 |
| 21 | 1 | 1.58E-04 | 1.80E-05 | 1.94E-06 | 4.55E-06 | 1.17E-02 | 3.67E-03 | 1.27E-01 | 4.71E-01 | 6.14E-01 |
| 24 | 1 | 1.66E-04 | 1.89E-05 | 2.04E-06 | 4.79E-06 | 1.09E-02 | 3.42E-03 | 1.24E-01 | 4.30E-01 | 5.68E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.67E-05 | 3.05E-06 | 3.28E-07 | 7.71E-07 | 2.16E-03 | 6.78E-04 | 2.61E-02 | 1.86E-01 | 2.15E-01 |
| 30 | 1 | 1.20E-04 | 1.37E-05 | 1.47E-06 | 3.45E-06 | 1.04E-02 | 3.27E-03 | 9.64E-02 | 7.05E-01 | 8.16E-01 |
| 31 | 1 | 4.34E-05 | 4.94E-06 | 5.32E-07 | 1.25E-06 | 2.10E-03 | 6.59E-04 | 2.14E-02 | 3.19E-02 | 5.61E-02 |

**World Logistics Center** **2012 Peak Hour Nox Phases 1+2** Without Mitigation
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 753 | 88 | 262 | 208 | 72 | 8 | 43 | 15 | 1450 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 802 | 94 | 279 | 221 | 119 | 13 | 47 | 18 | 1593 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 301 | 35 | 105 | 83 | 43 | 5 | 17 | 6 | 596 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 392 | 46 | 137 | 108 | 26 | 3 | 10 | 0 | 723 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 393 | 46 | 137 | 109 | 50 | 5 | 22 | 8 | 769 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 576 | 68 | 201 | 159 | 39 | 4 | 14 | 0 | 1062 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 29 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 32 | 4 | 11 | 9 | 3 | 0 | 1 | 0 | 59 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 143 | 17 | 50 | 40 | 11 | 1 | 5 | 3 | 270 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 47 | 6 | 16 | 13 | 9 | 1 | 2 | 1 | 95 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 109 | 13 | 38 | 30 | 13 | 1 | 6 | 2 | 213 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 445 | 52 | 155 | 123 | 38 | 4 | 17 | 4 | 838 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 303 | 35 | 105 | 84 | 23 | 2 | 11 | 2 | 566 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 140 | 16 | 49 | 39 | 13 | 1 | 7 | 3 | 269 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 150 | 18 | 52 | 41 | 15 | 2 | 6 | 3 | 287 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 187 | 22 | 65 | 52 | 11 | 1 | 4 | 0 | 343 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1400 | 0.3800 | 0.2500 | 0.3400 | 0.5500 | 0.5000 | 1.7400 | 6.0100 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.95E-03 | 1.89E-03 | 3.70E-03 | 3.99E-03 | 2.25E-03 | 2.15E-04 | 4.18E-03 | 5.18E-03 | 2.74E-02 |
| 2 | 1 | 1.42E-02 | 4.51E-03 | 8.80E-03 | 9.50E-03 | 8.26E-03 | 7.92E-04 | 1.03E-02 | 1.39E-02 | 7.03E-02 |
| 3 | 1 | 1.71E-02 | 5.45E-03 | 1.07E-02 | 1.15E-02 | 9.70E-03 | 9.29E-04 | 1.17E-02 | 1.51E-02 | 8.21E-02 |
| 5 | 1 | 9.04E-03 | 2.88E-03 | 5.62E-03 | 6.06E-03 | 2.38E-03 | 2.28E-04 | 2.73E-03 | 4.15E-04 | 2.93E-02 |
| 6 | 1 | 1.04E-02 | 3.32E-03 | 6.49E-03 | 7.00E-03 | 5.22E-03 | 5.00E-04 | 7.13E-03 | 8.81E-03 | 4.89E-02 |
| 8 | 1 | 1.52E-02 | 4.84E-03 | 9.45E-03 | 1.02E-02 | 4.09E-03 | 3.92E-04 | 4.65E-03 | 0.00E+00 | 4.88E-02 |
| 11 | 1 | 4.49E-04 | 1.43E-04 | 2.79E-04 | 3.01E-04 | 1.50E-04 | 1.44E-05 | 7.02E-05 | 0.00E+00 | 1.41E-03 |
| 12 | 1 | 6.27E-04 | 2.00E-04 | 3.90E-04 | 4.21E-04 | 2.57E-04 | 2.47E-05 | 1.93E-04 | 0.00E+00 | 2.11E-03 |
| 14 | 1 | 5.60E-03 | 1.78E-03 | 3.48E-03 | 3.76E-03 | 1.62E-03 | 1.55E-04 | 2.55E-03 | 5.26E-03 | 2.42E-02 |
| 18 | 1 | 1.60E-03 | 5.10E-04 | 9.97E-04 | 1.08E-03 | 1.23E-03 | 1.18E-04 | 9.90E-04 | 9.05E-04 | 7.43E-03 |
| 19 | 1 | 6.31E-03 | 2.01E-03 | 3.92E-03 | 4.23E-03 | 2.83E-03 | 2.71E-04 | 4.18E-03 | 5.74E-03 | 2.95E-02 |
| 21 | 1 | 1.35E-02 | 4.30E-03 | 8.40E-03 | 9.06E-03 | 4.56E-03 | 4.37E-04 | 6.54E-03 | 5.27E-03 | 5.21E-02 |
| 24 | 1 | 1.42E-02 | 4.53E-03 | 8.85E-03 | 9.54E-03 | 4.25E-03 | 4.08E-04 | 6.37E-03 | 4.81E-03 | 5.30E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.29E-03 | 7.29E-04 | 1.42E-03 | 1.54E-03 | 8.43E-04 | 8.08E-05 | 1.34E-03 | 2.09E-03 | 1.03E-02 |
| 30 | 1 | 1.03E-02 | 3.26E-03 | 6.38E-03 | 6.88E-03 | 4.06E-03 | 3.89E-04 | 4.95E-03 | 7.90E-03 | 4.41E-02 |
| 31 | 1 | 3.71E-03 | 1.18E-03 | 2.31E-03 | 2.49E-03 | 8.19E-04 | 7.85E-05 | 1.10E-03 | 3.57E-04 | 1.20E-02 |

**World Logistics Center** **2012 Phase 1** No Mitigation

With EMFAC2014 **Annual Nox** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1**
No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.24E-01 | 2.63E-02 |
| Light Logistics | Phase 1 | 4.24E-04 | 6.02E-05 |
| Utilities Service Station | Phase 1 | 3.22E-04 | 5.41E-05 |
| Gas Station w/Convenience Store | Phase 1 | 5.73E-04 | 1.79E-05 |
| Convenience Store | Phase 1 | 8.99E-04 | 2.92E-05 |
| Fire Station | Phase 1 | 5.02E-08 | 1.54E-05 |
| Total | | 2.26E-01 | 2.65E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.54E-01 | 2.98E-03 |
| Light Logistics | Phase 1 | 9.60E-04 | 1.22E-05 |
| Utilities Service Station | Phase 1 | 1.30E-03 | 2.41E-05 |
| Gas Station w/Convenience Store | Phase 1 | 3.79E-03 | 4.32E-05 |
| Convenience Store | Phase 1 | 5.98E-03 | 6.76E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 2.66E-01 | 3.13E-03 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 2.26E-01 | 2.65E-02 | |
| | Idling Emissions (g/sec) | 2.66E-01 | 3.13E-03 | |
| | Total Vehicle Emissions (g/sec) | 4.92E-01 | 2.97E-02 | 5.22E-01 |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 5.15E-01 | |
| | Forklifts (LPG) (g/sec) | | 1.66E-02 | |
| | Total Other Onsite Emissions (g/sec) | | 5.32E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 4.92E-01 | 5.61E-01 | 1.05E+00 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 2.25E-07 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 53 | 330 | 0.21 | 5.56E+00 | 1.22E-02 | 6.43E-05 | |
| | **LDT1** | 15 | 1.080 | 3 | 330 | 0.21 | 5.66E-01 | 1.25E-03 | 6.55E-06 | |
| | **LDT2** | 15 | 0.170 | 3 | 330 | 0.21 | 8.76E-02 | 1.93E-04 | 1.01E-06 | |
| | **MDT** | 15 | 0.190 | 5 | 330 | 0.21 | 1.90E-01 | 4.18E-04 | 2.19E-06 | |
| | **LHDT1** | 15 | 4.180 | 274 | 330 | 0.21 | 2.35E+02 | 5.17E-01 | 2.72E-03 | |
| | **LHDT2** | 15 | 3.880 | 93 | 330 | 0.21 | 7.41E+01 | 1.63E-01 | 8.57E-04 | |
| | **MHDT** | 15 | 9.420 | 1425 | 330 | 0.21 | 2.75E+03 | 6.06E+00 | 3.19E-02 | |
| | **HHDT** | 15 | 17.170 | 4628 | 330 | 0.21 | 1.63E+04 | 3.59E+01 | 1.89E-01 | |
| | | | | | | | | | | 2.24E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 1.25E-02 | 2.76E-05 | 1.45E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 1.27E-03 | 2.81E-06 | 1.48E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 1.97E-04 | 4.35E-07 | 2.28E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 4.27E-04 | 9.40E-07 | 4.94E-09 | |
| | **LHDT1** | 15 | 4.180 | 2 | 175 | 0.11 | 7.79E-01 | 1.71E-03 | 9.01E-06 | |
| | **LHDT2** | 15 | 3.880 | 1 | 175 | 0.11 | 2.46E-01 | 5.41E-04 | 2.84E-06 | |
| | **MHDT** | 15 | 9.420 | 6 | 175 | 0.11 | 6.01E+00 | 1.32E-02 | 6.96E-05 | |
| | **HHDT** | 15 | 17.170 | 16 | 175 | 0.11 | 2.96E+01 | 6.51E-02 | 3.42E-04 | 4.24E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 1.05E-02 | 2.32E-05 | 1.22E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 1.07E-03 | 2.36E-06 | 1.24E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 1.66E-04 | 3.66E-07 | 1.92E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 3.60E-04 | 7.92E-07 | 4.16E-09 | |
| | **LHDT1** | 15 | 4.180 | 6 | 100 | 0.06 | 1.48E+00 | 3.27E-03 | 1.72E-05 | |
| | **LHDT2** | 15 | 3.880 | 2 | 100 | 0.06 | 4.69E-01 | 1.03E-03 | 5.42E-06 | |
| | **MHDT** | 15 | 9.420 | 5 | 100 | 0.06 | 2.84E+00 | 6.25E-03 | 3.29E-05 | |
| | **HHDT** | 15 | 17.170 | 22 | 100 | 0.06 | 2.30E+01 | 5.08E-02 | 2.67E-04 | 3.22E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.05E-03 | 6.72E-06 | 3.53E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.11E-04 | 6.85E-07 | 3.60E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 4.81E-05 | 1.06E-07 | 5.57E-10 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.04E-04 | 2.29E-07 | 1.21E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 50 | 0.03 | 1.04E-01 | 2.29E-04 | 1.20E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 3.29E-02 | 7.24E-05 | 3.80E-07 | |
| | **MHDT** | 15 | 9.420 | 14 | 50 | 0.03 | 4.03E+00 | 8.87E-03 | 4.66E-05 | |
| | **HHDT** | 15 | 17.170 | 85 | 50 | 0.03 | 4.53E+01 | 9.99E-02 | 5.25E-04 | 5.73E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 5.06E-03 | 1.11E-05 | 5.86E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 5.15E-04 | 1.14E-06 | 5.97E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 7.98E-05 | 1.76E-07 | 9.24E-10 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.73E-04 | 3.80E-07 | 2.00E-09 | |
| | **LHDT1** | 15 | 4.180 | 1 | 50 | 0.03 | 1.59E-01 | 3.50E-04 | 1.84E-06 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 5.02E-02 | 1.10E-04 | 5.81E-07 | |
| | **MHDT** | 15 | 9.420 | 23 | 50 | 0.03 | 6.59E+00 | 1.45E-02 | 7.63E-05 | |
| | **HHDT** | 15 | 17.170 | 133 | 50 | 0.03 | 7.09E+01 | 1.56E-01 | 8.21E-04 | 8.99E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 3.77E-03 | 8.30E-06 | 4.36E-08 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 3.84E-04 | 8.45E-07 | 4.44E-09 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 5.94E-05 | 1.31E-07 | 6.87E-10 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 1.28E-04 | 2.83E-07 | 1.49E-09 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.02E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 5.59E+00 | 1.23E-02 | 6.47E-05 | |
| | **LDT1** | | | 3 | | | 5.69E-01 | 1.25E-03 | 6.59E-06 | |
| | **LDT2** | | | 3 | | | 8.82E-02 | 1.94E-04 | 1.02E-06 | |
| | **MDT** | | | 5 | | | 1.91E-01 | 4.20E-04 | 2.21E-06 | |
| | **LHDT1** | | | 283 | | | 2.37E+02 | 5.22E-01 | 2.75E-03 | |
| | **LHDT2** | | | 96 | | | 7.49E+01 | 1.65E-01 | 8.67E-04 | |
| | **MHDT** | | | 1472 | | | 2.77E+03 | 6.11E+00 | 3.21E-02 | |
| | **HHDT** | | | 4883 | | | 1.65E+04 | 3.62E+01 | 1.90E-01 | |
| | **Total** | | | 6800 | | | 1.95E+04 | 4.31E+01 | 2.26E-01 | 2.26E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 137 | 8.56E+02 | 1.89E+00 | 9.91E-03 | |
| | **LHDT2** | 75.050 | 5 | 47 | 2.91E+02 | 6.41E-01 | 3.37E-03 | |
| | **MHDT** | 111.200 | 5 | 713 | 6.60E+03 | 1.45E+01 | 7.64E-02 | |
| | **HHDT** | 73.560 | 5 | 2314 | 1.42E+04 | 3.12E+01 | 1.64E-01 | |
| | | | | 3210 | 2.19E+04 | 4.83E+01 | 2.54E-01 | 2.54E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 1 | 5.36E+00 | 1.18E-02 | 6.20E-05 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.82E+00 | 4.01E-03 | 2.11E-05 | |
| | **MHDT** | 111.200 | 5 | 3 | 2.72E+01 | 5.99E-02 | 3.15E-04 | |
| | **HHDT** | 73.560 | 5 | 8 | 4.86E+01 | 1.07E-01 | 5.62E-04 | |
| | | | | 12 | 8.29E+01 | 1.83E-01 | 9.60E-04 | 9.60E-04 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 3 | 1.79E+01 | 3.94E-02 | 2.07E-04 | |
| | **LHDT2** | 75.050 | 5 | 1 | 6.08E+00 | 1.34E-02 | 7.04E-05 | |
| | **MHDT** | 111.200 | 5 | 2 | 2.25E+01 | 4.95E-02 | 2.60E-04 | |
| | **HHDT** | 73.560 | 5 | 11 | 6.62E+01 | 1.46E-01 | 7.66E-04 | |
| | | | | 17 | 1.13E+02 | 2.48E-01 | 1.30E-03 | 1.30E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 2.51E+00 | 5.52E-03 | 2.90E-05 | |
| | **LHDT2** | 75.050 | 5 | 0 | 8.53E-01 | 1.88E-03 | 9.87E-06 | |
| | **MHDT** | 111.200 | 5 | 7 | 6.37E+01 | 1.40E-01 | 7.38E-04 | |
| | **HHDT** | 73.560 | 5 | 43 | 2.61E+02 | 5.74E-01 | 3.02E-03 | |
| | | | | 50 | 3.28E+02 | 7.22E-01 | 3.79E-03 | 3.79E-03 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 1 | 3.83E+00 | 8.43E-03 | 4.43E-05 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.30E+00 | 2.87E-03 | 1.51E-05 | |
| | **MHDT** | 111.200 | 5 | 11 | 1.04E+02 | 2.30E-01 | 1.21E-03 | |
| | **HHDT** | 73.560 | 5 | 66 | 4.07E+02 | 8.97E-01 | 4.72E-03 | |
| | | | | 79 | 5.17E+02 | 1.14E+00 | 5.98E-03 | 5.98E-03 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 2.30E+04 | 5.06E+01 | 2.66E-01 | 2.66E-01 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 17546 | 330 | 0.21 | 7.12E+02 | 1.57E+00 | 8.24E-03 | |
| | **LDT1** | 15 | 0.549 | 2058 | 330 | 0.21 | 2.31E+02 | 5.10E-01 | 2.68E-03 | |
| | **LDT2** | 15 | 0.393 | 6111 | 330 | 0.21 | 4.92E+02 | 1.08E+00 | 5.70E-03 | |
| | **MDT** | 15 | 0.528 | 4846 | 330 | 0.21 | 5.24E+02 | 1.15E+00 | 6.07E-03 | |
| | **LHDT1** | 15 | 0.559 | 886 | 330 | 0.21 | 1.02E+02 | 2.24E-01 | 1.18E-03 | |
| | **LHDT2** | 15 | 0.558 | 93 | 330 | 0.21 | 1.07E+01 | 2.35E-02 | 1.24E-04 | |
| | **MHDT** | 15 | 1.612 | 344 | 330 | 0.21 | 1.14E+02 | 2.51E-01 | 1.32E-03 | |
| | **HHDT** | 15 | 4.218 | 104 | 330 | 0.21 | 9.03E+01 | 1.99E-01 | 1.05E-03 | |
| | | | | | | | | | | 2.63E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 75 | 175 | 0.11 | 1.60E+00 | 3.53E-03 | 1.86E-05 | |
| | **LDT1** | 15 | 0.549 | 9 | 175 | 0.11 | 5.21E-01 | 1.15E-03 | 6.03E-06 | |
| | **LDT2** | 15 | 0.393 | 26 | 175 | 0.11 | 1.11E+00 | 2.44E-03 | 1.28E-05 | |
| | **MDT** | 15 | 0.528 | 21 | 175 | 0.11 | 1.18E+00 | 2.60E-03 | 1.37E-05 | |
| | **LHDT1** | 15 | 0.559 | 6 | 175 | 0.11 | 3.37E-01 | 7.42E-04 | 3.90E-06 | |
| | **LHDT2** | 15 | 0.558 | 1 | 175 | 0.11 | 3.54E-02 | 7.80E-05 | 4.10E-07 | |
| | **MHDT** | 15 | 1.612 | 1 | 175 | 0.11 | 2.49E-01 | 5.48E-04 | 2.88E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 1.64E-01 | 3.61E-04 | 1.90E-06 | 6.02E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 110 | 100 | 0.06 | 1.35E+00 | 2.98E-03 | 1.56E-05 | |
| | **LDT1** | 15 | 0.549 | 13 | 100 | 0.06 | 4.39E-01 | 9.67E-04 | 5.08E-06 | |
| | **LDT2** | 15 | 0.393 | 38 | 100 | 0.06 | 9.34E-01 | 2.06E-03 | 1.08E-05 | |
| | **MDT** | 15 | 0.528 | 30 | 100 | 0.06 | 9.94E-01 | 2.19E-03 | 1.15E-05 | |
| | **LHDT1** | 15 | 0.559 | 19 | 100 | 0.06 | 6.43E-01 | 1.42E-03 | 7.44E-06 | |
| | **LHDT2** | 15 | 0.558 | 2 | 100 | 0.06 | 6.76E-02 | 1.49E-04 | 7.82E-07 | |
| | **MHDT** | 15 | 1.612 | 1 | 100 | 0.06 | 1.17E-01 | 2.59E-04 | 1.36E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 1.28E-01 | 2.81E-04 | 1.48E-06 | 5.41E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 64 | 50 | 0.03 | 3.91E-01 | 8.62E-04 | 4.53E-06 | |
| | **LDT1** | 15 | 0.549 | 7 | 50 | 0.03 | 1.27E-01 | 2.80E-04 | 1.47E-06 | |
| | **LDT2** | 15 | 0.393 | 22 | 50 | 0.03 | 2.70E-01 | 5.96E-04 | 3.13E-06 | |
| | **MDT** | 15 | 0.528 | 18 | 50 | 0.03 | 2.88E-01 | 6.34E-04 | 3.33E-06 | |
| | **LHDT1** | 15 | 0.559 | 3 | 50 | 0.03 | 4.51E-02 | 9.93E-05 | 5.22E-07 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 4.74E-03 | 1.04E-05 | 5.48E-08 | |
| | **MHDT** | 15 | 1.612 | 3 | 50 | 0.03 | 1.66E-01 | 3.67E-04 | 1.93E-06 | |
| | **HHDT** | 15 | 4.218 | 2 | 50 | 0.03 | 2.51E-01 | 5.54E-04 | 2.91E-06 | 1.79E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 105 | 50 | 0.03 | 6.49E-01 | 1.43E-03 | 7.51E-06 | |
| | **LDT1** | 15 | 0.549 | 12 | 50 | 0.03 | 2.11E-01 | 4.64E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.393 | 37 | 50 | 0.03 | 4.48E-01 | 9.88E-04 | 5.19E-06 | |
| | **MDT** | 15 | 0.528 | 29 | 50 | 0.03 | 4.77E-01 | 1.05E-03 | 5.52E-06 | |
| | **LHDT1** | 15 | 0.559 | 4 | 50 | 0.03 | 6.88E-02 | 1.52E-04 | 7.96E-07 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 7.23E-03 | 1.59E-05 | 8.37E-08 | |
| | **MHDT** | 15 | 1.612 | 5 | 50 | 0.03 | 2.73E-01 | 6.00E-04 | 3.15E-06 | |
| | **HHDT** | 15 | 4.218 | 3 | 50 | 0.03 | 3.93E-01 | 8.66E-04 | 4.55E-06 | 2.92E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 78 | 50 | 0.03 | 4.83E-01 | 1.06E-03 | 5.59E-06 | |
| | **LDT1** | 15 | 0.549 | 9 | 50 | 0.03 | 1.57E-01 | 3.46E-04 | 1.82E-06 | |
| | **LDT2** | 15 | 0.393 | 27 | 50 | 0.03 | 3.34E-01 | 7.35E-04 | 3.86E-06 | |
| | **MDT** | 15 | 0.528 | 22 | 50 | 0.03 | 3.55E-01 | 7.82E-04 | 4.11E-06 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.54E-05 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 7.17E+02 | 1.58E+00 | 8.29E-03 | |
| | **LDT1** | | | 2108 | | | 2.33E+02 | 5.13E-01 | 2.70E-03 | |
| | **LDT2** | | | 6262 | | | 4.95E+02 | 1.09E+00 | 5.73E-03 | |
| | **MDT** | | | 4966 | | | 5.27E+02 | 1.16E+00 | 6.10E-03 | |
| | **LHDT1** | | | 917 | | | 1.03E+02 | 2.26E-01 | 1.19E-03 | |
| | **LHDT2** | | | 97 | | | 1.08E+01 | 2.38E-02 | 1.25E-04 | |
| | **MHDT** | | | 356 | | | 1.15E+02 | 2.52E-01 | 1.33E-03 | |
| | **HHDT** | | | 110 | | | 9.13E+01 | 2.01E-01 | 1.06E-03 | |
| | **Total** | | | 32792 | | | 2.29E+03 | 5.05E+00 | 2.65E-02 | 2.65E-02 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 443 | 5.02E+01 | 1.11E-01 | 5.81E-04 | |
| | **LHDT2** | 1.380 | 5 | 47 | 5.37E+00 | 1.18E-02 | 6.22E-05 | |
| | **MHDT** | 1.130 | 5 | 172 | 1.62E+01 | 3.57E-02 | 1.88E-04 | |
| | **HHDT** | 42.650 | 5 | 52 | 1.86E+02 | 4.09E-01 | 2.15E-03 | |
| | | | | 714 | 2.57E+02 | 5.67E-01 | 2.98E-03 | 2.98E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 3 | 3.14E-01 | 6.92E-04 | 3.64E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 3.36E-02 | 7.40E-05 | 3.89E-07 | |
| | **MHDT** | 1.130 | 5 | 1 | 6.68E-02 | 1.47E-04 | 7.73E-07 | |
| | **HHDT** | 42.650 | 5 | 0 | 6.35E-01 | 1.40E-03 | 7.35E-06 | |
| | | | | 4 | 1.05E+00 | 2.31E-03 | 1.22E-05 | 1.22E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 9 | 1.05E+00 | 2.31E-03 | 1.21E-05 | |
| | **LHDT2** | 1.380 | 5 | 1 | 1.12E-01 | 2.47E-04 | 1.30E-06 | |
| | **MHDT** | 1.130 | 5 | 1 | 5.52E-02 | 1.22E-04 | 6.39E-07 | |
| | **HHDT** | 42.650 | 5 | 0 | 8.67E-01 | 1.91E-03 | 1.00E-05 | |
| | | | | 11 | 2.08E+00 | 4.59E-03 | 2.41E-05 | 2.41E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 1 | 1.47E-01 | 3.24E-04 | 1.70E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 1.57E-02 | 3.46E-05 | 1.82E-07 | |
| | **MHDT** | 1.130 | 5 | 2 | 1.56E-01 | 3.45E-04 | 1.81E-06 | |
| | **HHDT** | 42.650 | 5 | 1 | 3.41E+00 | 7.51E-03 | 3.95E-05 | |
| | | | | 4 | 3.73E+00 | 8.22E-03 | 4.32E-05 | 4.32E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 2 | 2.24E-01 | 4.94E-04 | 2.60E-06 | |
| | **LHDT2** | 1.380 | 5 | 0 | 2.40E-02 | 5.29E-05 | 2.78E-07 | |
| | **MHDT** | 1.130 | 5 | 3 | 2.56E-01 | 5.64E-04 | 2.97E-06 | |
| | **HHDT** | 42.650 | 5 | 2 | 5.33E+00 | 1.17E-02 | 6.17E-05 | |
| | | | | 6 | 5.84E+00 | 1.29E-02 | 6.76E-05 | 6.76E-05 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.130 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.70E+02 | 5.95E-01 | 3.13E-03 | 3.13E-03 |

**World Logistics Center** **2012 Phase 2** No Mitigation

with EMFAC2014 **Annual Nox** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.71E-01 | 2.01E-02 |
| Light Logistics | Phase 2 | 1.44E-03 | 2.04E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.73E-01 | 2.03E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.94E-01 | 2.37E-03 |
| Light Logistics | Phase 2 | 3.26E-03 | 4.30E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.97E-01 | 2.41E-03 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.73E-01 | 2.03E-02 | |
| | Idling Emissions (g/sec) | 1.97E-01 | 2.41E-03 | |
| | Total Vehicle Emissions (g/sec) | 3.70E-01 | 2.28E-02 | 3.93E-01 |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 2.27E-01 | |
| | Forklifts (LPG) (g/sec) | | 1.31E-02 | |
| | Total Other Onsite Emissions (g/sec) | | 2.40E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 3.70E-01 | 2.62E-01 | 6.32E-01 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.23E-07 |

**World Logistics Center** **2012** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 41 | 330 | 0.21 | 4.25E+00 | 9.35E-03 | 4.92E-05 | |
| | **LDT1** | 15 | 1.080 | 2 | 330 | 0.21 | 4.32E-01 | 9.53E-04 | 5.01E-06 | |
| | **LDT2** | 15 | 0.170 | 2 | 330 | 0.21 | 6.70E-02 | 1.47E-04 | 7.75E-07 | |
| | **MDT** | 15 | 0.190 | 4 | 330 | 0.21 | 1.45E-01 | 3.19E-04 | 1.68E-06 | |
| | **LHDT1** | 15 | 4.180 | 209 | 330 | 0.21 | 1.79E+02 | 3.95E-01 | 2.08E-03 | |
| | **LHDT2** | 15 | 3.880 | 71 | 330 | 0.21 | 5.66E+01 | 1.25E-01 | 6.55E-04 | |
| | **MHDT** | 15 | 9.420 | 1089 | 330 | 0.21 | 2.10E+03 | 4.63E+00 | 2.43E-02 | |
| | **HHDT** | 15 | 17.170 | 3536 | 330 | 0.21 | 1.24E+04 | 2.74E+01 | 1.44E-01 | |
| | | | | | | | | | | 1.71E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 1 | 175 | 0.11 | 4.25E-02 | 9.36E-05 | 4.92E-07 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 4.33E-03 | 9.53E-06 | 5.01E-08 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 6.70E-04 | 1.48E-06 | 7.76E-09 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 1.45E-03 | 3.19E-06 | 1.68E-08 | |
| | **LHDT1** | 15 | 4.180 | 6 | 175 | 0.11 | 2.64E+00 | 5.82E-03 | 3.06E-05 | |
| | **LHDT2** | 15 | 3.880 | 2 | 175 | 0.11 | 8.34E-01 | 1.84E-03 | 9.66E-06 | |
| | **MHDT** | 15 | 9.420 | 20 | 175 | 0.11 | 2.04E+01 | 4.50E-02 | 2.36E-04 | |
| | **HHDT** | 15 | 17.170 | 54 | 175 | 0.11 | 1.00E+02 | 2.21E-01 | 1.16E-03 | 1.44E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 9.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 17.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 4.29E+00 | 9.45E-03 | 4.96E-05 | |
| | **LDT1** | | | 2 | | | 4.37E-01 | 9.62E-04 | 5.06E-06 | |
| | **LDT2** | | | 2 | | | 6.76E-02 | 1.49E-04 | 7.83E-07 | |
| | **MDT** | | | 4 | | | 1.46E-01 | 3.22E-04 | 1.69E-06 | |
| | **LHDT1** | | | 215 | | | 1.82E+02 | 4.01E-01 | 2.11E-03 | |
| | **LHDT2** | | | 73 | | | 5.74E+01 | 1.27E-01 | 6.65E-04 | |
| | **MHDT** | | | 1109 | | | 2.12E+03 | 4.68E+00 | 2.46E-02 | |
| | **HHDT** | | | 3590 | | | 1.25E+04 | 2.76E+01 | 1.45E-01 | |
| | **Total** | | | 5037 | | | 1.49E+04 | 3.29E+01 | 1.73E-01 | 1.73E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 105 | 6.54E+02 | 1.44E+00 | 7.58E-03 | |
| | **LHDT2** | 75.050 | 5 | 36 | 2.23E+02 | 4.90E-01 | 2.58E-03 | |
| | **MHDT** | 111.200 | 5 | 545 | 5.05E+03 | 1.11E+01 | 5.84E-02 | |
| | **HHDT** | 73.560 | 5 | 1768 | 1.08E+04 | 2.39E+01 | 1.25E-01 | |
| | | | | 2453 | 1.68E+04 | 3.69E+01 | 1.94E-01 | 1.94E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 3 | 1.82E+01 | 4.01E-02 | 2.11E-04 | |
| | **LHDT2** | 75.050 | 5 | 1 | 6.19E+00 | 1.36E-02 | 7.16E-05 | |
| | **MHDT** | 111.200 | 5 | 10 | 9.24E+01 | 2.03E-01 | 1.07E-03 | |
| | **HHDT** | 73.560 | 5 | 27 | 1.65E+02 | 3.63E-01 | 1.91E-03 | |
| | | | | 41 | 2.82E+02 | 6.20E-01 | 3.26E-03 | 3.26E-03 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 111.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 73.560 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 1.70E+04 | 3.75E+01 | 1.97E-01 | 1.97E-01 |

**World Logistics Center** **2012** **Phase 2** No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 13408 | 330 | 0.21 | 5.44E+02 | 1.20E+00 | 6.30E-03 | |
| | **LDT1** | 15 | 0.549 | 1572 | 330 | 0.21 | 1.77E+02 | 3.90E-01 | 2.05E-03 | |
| | **LDT2** | 15 | 0.393 | 4670 | 330 | 0.21 | 3.76E+02 | 8.29E-01 | 4.35E-03 | |
| | **MDT** | 15 | 0.528 | 3703 | 330 | 0.21 | 4.01E+02 | 8.82E-01 | 4.64E-03 | |
| | **LHDT1** | 15 | 0.559 | 677 | 330 | 0.21 | 7.76E+01 | 1.71E-01 | 8.99E-04 | |
| | **LHDT2** | 15 | 0.558 | 71 | 330 | 0.21 | 8.16E+00 | 1.80E-02 | 9.44E-05 | |
| | **MHDT** | 15 | 1.612 | 263 | 330 | 0.21 | 8.70E+01 | 1.92E-01 | 1.01E-03 | |
| | **HHDT** | 15 | 4.218 | 80 | 330 | 0.21 | 6.90E+01 | 1.52E-01 | 7.99E-04 | |
| | | | | | | | | | | 2.01E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 253 | 175 | 0.11 | 5.45E+00 | 1.20E-02 | 6.30E-05 | |
| | **LDT1** | 15 | 0.549 | 30 | 175 | 0.11 | 1.77E+00 | 3.90E-03 | 2.05E-05 | |
| | **LDT2** | 15 | 0.393 | 88 | 175 | 0.11 | 3.77E+00 | 8.29E-03 | 4.36E-05 | |
| | **MDT** | 15 | 0.528 | 70 | 175 | 0.11 | 4.01E+00 | 8.83E-03 | 4.64E-05 | |
| | **LHDT1** | 15 | 0.559 | 19 | 175 | 0.11 | 1.14E+00 | 2.52E-03 | 1.32E-05 | |
| | **LHDT2** | 15 | 0.558 | 2 | 175 | 0.11 | 1.20E-01 | 2.65E-04 | 1.39E-06 | |
| | **MHDT** | 15 | 1.612 | 5 | 175 | 0.11 | 8.44E-01 | 1.86E-03 | 9.77E-06 | |
| | **HHDT** | 15 | 4.218 | 1 | 175 | 0.11 | 5.57E-01 | 1.23E-03 | 6.44E-06 | 2.04E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 5.50E+02 | 1.21E+00 | 6.36E-03 | |
| | **LDT1** | | | 1602 | | | 1.79E+02 | 3.93E-01 | 2.07E-03 | |
| | **LDT2** | | | 4758 | | | 3.80E+02 | 8.37E-01 | 4.40E-03 | |
| | **MDT** | | | 3773 | | | 4.05E+02 | 8.91E-01 | 4.68E-03 | |
| | **LHDT1** | | | 696 | | | 7.88E+01 | 1.74E-01 | 9.12E-04 | |
| | **LHDT2** | | | 73 | | | 8.28E+00 | 1.82E-02 | 9.58E-05 | |
| | **MHDT** | | | 268 | | | 8.78E+01 | 1.93E-01 | 1.02E-03 | |
| | **HHDT** | | | 81 | | | 6.96E+01 | 1.53E-01 | 8.05E-04 | |
| | **Total** | | | 24913 | | | 1.76E+03 | 3.87E+00 | 2.03E-02 | 2.03E-02 |

**Non-Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.360 | 5 | 339 | 3.84E+01 | 8.45E-02 | 4.44E-04 | |
| | **LHDT2** | 1.380 | 5 | 36 | 4.10E+00 | 9.04E-03 | 4.75E-05 | |
| | **MHDT** | 1.870 | 5 | 132 | 2.05E+01 | 4.52E-02 | 2.37E-04 | |
| | **HHDT** | 42.650 | 5 | 40 | 1.42E+02 | 3.12E-01 | 1.64E-03 | |
| | | | | 546 | 2.05E+02 | 4.51E-01 | 2.37E-03 | 2.37E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.360 | 5 | 9 | 1.07E+00 | 2.35E-03 | 1.23E-05 | |
| | **LHDT2** | 1.380 | 5 | 1 | 1.14E-01 | 2.51E-04 | 1.32E-06 | |
| | **MHDT** | 1.870 | 5 | 2 | 3.75E-01 | 8.26E-04 | 4.34E-06 | |
| | **HHDT** | 42.650 | 5 | 1 | 2.16E+00 | 4.75E-03 | 2.50E-05 | |
| | | | | 13 | 3.71E+00 | 8.18E-03 | 4.30E-05 | 4.30E-05 |
| **Idle at Utility** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 1.360 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.380 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.870 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 42.650 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 2.09E+02 | 4.59E-01 | 2.41E-03 | 2.41E-03 |

**World Logistics Center** **2012** **Annual Nox** Based on PB Traffic Results 10/3/2013
**Project Only** **Phase 1 + 2** REV 5 Without Mitigation With EMFAC2014
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 3.12E-01 | 1.70E-02 | 3.30E-01 |
| 2 | 7.41E-01 | 4.03E-02 | 7.81E-01 |
| 3 | 8.39E-01 | 4.72E-02 | 8.86E-01 |
| 5 | 3.06E-02 | 1.43E-02 | 4.49E-02 |
| 6 | 4.53E-01 | 2.76E-02 | 4.81E-01 |
| 8 | 4.40E-02 | 2.40E-02 | 6.80E-02 |
| 11 | 7.80E-04 | 5.90E-04 | 1.37E-03 |
| 12 | 1.80E-03 | 9.41E-04 | 2.74E-03 |
| 14 | 7.77E-02 | 6.13E-03 | 8.39E-02 |
| 18 | 5.81E-02 | 4.47E-03 | 6.26E-02 |
| 19 | 3.03E-01 | 1.63E-02 | 3.19E-01 |
| 21 | 3.04E-01 | 2.74E-02 | 3.31E-01 |
| 24 | 2.65E-01 | 2.83E-02 | 2.93E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.01E-01 | 5.42E-03 | 1.07E-01 |
| 30 | 4.43E-01 | 2.50E-02 | 4.68E-01 |
| 31 | 4.11E-02 | 6.96E-03 | 4.81E-02 |
| | | | 4.31E+00 |

| ID | Arterial | From | To | | 2012 With Project - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | | | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | Street A | Street F | | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | | 4,604 | 147 | 307 | 402 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **Annual Nox** **Phase 1 + 2** Without Mitigation
Project Only
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5400 | 1.2800 | 0.1400 | 0.1700 | 4.5500 | 4.2100 | 8.1800 | 12.1200 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.75E-05 | 5.41E-06 | 5.82E-07 | 1.37E-06 | 2.45E-03 | 7.72E-04 | 4.80E-02 | 2.61E-01 | 3.12E-01 |
| 2 | 1 | 1.08E-04 | 1.23E-05 | 1.33E-06 | 3.12E-06 | 8.26E-03 | 2.60E-03 | 1.11E-01 | 6.19E-01 | 7.41E-01 |
| 3 | 1 | 1.28E-04 | 1.45E-05 | 1.57E-06 | 3.68E-06 | 9.97E-03 | 3.14E-03 | 1.29E-01 | 6.97E-01 | 8.39E-01 |
| 5 | 1 | 5.45E-05 | 6.21E-06 | 6.68E-07 | 1.57E-06 | 2.05E-03 | 6.46E-04 | 2.37E-02 | 4.14E-03 | 3.06E-02 |
| 6 | 1 | 7.82E-05 | 8.92E-06 | 9.59E-07 | 2.25E-06 | 5.03E-03 | 1.58E-03 | 7.33E-02 | 3.73E-01 | 4.53E-01 |
| 8 | 1 | 9.14E-05 | 1.04E-05 | 1.12E-06 | 2.63E-06 | 3.55E-03 | 1.12E-03 | 3.93E-02 | 0.00E+00 | 4.40E-02 |
| 11 | 1 | 2.35E-06 | 2.68E-07 | 2.88E-08 | 6.77E-08 | 7.19E-05 | 2.26E-05 | 6.83E-04 | 0.00E+00 | 7.80E-04 |
| 12 | 1 | 3.46E-06 | 3.94E-07 | 4.24E-08 | 9.97E-08 | 2.08E-04 | 6.56E-05 | 1.52E-03 | 0.00E+00 | 1.80E-03 |
| 14 | 1 | 2.07E-05 | 2.35E-06 | 2.53E-07 | 5.95E-07 | 6.57E-04 | 2.07E-04 | 9.27E-03 | 6.76E-02 | 7.77E-02 |
| 18 | 1 | 1.28E-05 | 1.45E-06 | 1.56E-07 | 3.68E-07 | 1.23E-03 | 3.87E-04 | 1.14E-02 | 4.51E-02 | 5.81E-02 |
| 19 | 1 | 4.44E-05 | 5.06E-06 | 5.44E-07 | 1.28E-06 | 2.86E-03 | 8.99E-04 | 4.43E-02 | 2.55E-01 | 3.03E-01 |
| 21 | 1 | 8.80E-05 | 1.00E-05 | 1.08E-06 | 2.54E-06 | 4.30E-03 | 1.35E-03 | 6.47E-02 | 2.34E-01 | 3.04E-01 |
| 24 | 1 | 9.48E-05 | 1.08E-05 | 1.16E-06 | 2.73E-06 | 3.94E-03 | 1.24E-03 | 6.20E-02 | 1.98E-01 | 2.65E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.53E-05 | 1.74E-06 | 1.87E-07 | 4.40E-07 | 7.86E-04 | 2.47E-04 | 1.37E-02 | 8.65E-02 | 1.01E-01 |
| 30 | 1 | 7.22E-05 | 8.23E-06 | 8.86E-07 | 2.08E-06 | 3.89E-03 | 1.23E-03 | 5.72E-02 | 3.80E-01 | 4.43E-01 |
| 31 | 1 | 2.54E-05 | 2.90E-06 | 3.12E-07 | 7.33E-07 | 8.02E-04 | 2.52E-04 | 1.19E-02 | 2.81E-02 | 4.11E-02 |

**World Logistics Center** **2012** **Annual Nox** **Phase 1 + 2** Without Mitigation
Project Only
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35,138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 |
| 2 | 36,806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 |
| 3 | 13,319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 |
| 5 | 9,380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 |
| 6 | 16,641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 |
| 8 | 13,674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 |
| 14 | 2,566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 |
| 18 | 2,017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 |
| 19 | 4,585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 |
| 21 | 14,156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 |
| 24 | 9,401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5,463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 |
| 30 | 6,005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 |
| 31 | 5,460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1400 | 0.3800 | 0.2500 | 0.3400 | 0.5500 | 0.5000 | 1.7400 | 6.0100 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.06E-03 | 1.29E-03 | 2.53E-03 | 2.72E-03 | 9.59E-04 | 9.19E-05 | 2.47E-03 | 2.92E-03 | 1.70E-02 |
| 2 | 1 | 9.26E-03 | 2.95E-03 | 5.76E-03 | 6.21E-03 | 3.23E-03 | 3.10E-04 | 5.70E-03 | 6.93E-03 | 4.03E-02 |
| 3 | 1 | 1.09E-02 | 3.48E-03 | 6.79E-03 | 7.33E-03 | 3.90E-03 | 3.74E-04 | 6.61E-03 | 7.80E-03 | 4.72E-02 |
| 5 | 1 | 4.66E-03 | 1.48E-03 | 2.90E-03 | 3.13E-03 | 8.04E-04 | 7.70E-05 | 1.22E-03 | 4.64E-05 | 1.43E-02 |
| 6 | 1 | 6.69E-03 | 2.13E-03 | 4.16E-03 | 4.49E-03 | 1.97E-03 | 1.89E-04 | 3.77E-03 | 4.18E-03 | 2.76E-02 |
| 8 | 1 | 7.82E-03 | 2.49E-03 | 4.86E-03 | 5.24E-03 | 1.39E-03 | 1.33E-04 | 2.02E-03 | 0.00E+00 | 2.40E-02 |
| 11 | 1 | 2.01E-04 | 6.39E-05 | 1.25E-04 | 1.35E-04 | 2.81E-05 | 2.70E-06 | 3.51E-05 | 0.00E+00 | 5.90E-04 |
| 12 | 1 | 2.96E-04 | 9.42E-05 | 1.84E-04 | 1.99E-04 | 8.15E-05 | 7.81E-06 | 7.82E-05 | 0.00E+00 | 9.41E-04 |
| 14 | 1 | 1.77E-03 | 5.63E-04 | 1.10E-03 | 1.19E-03 | 2.57E-04 | 2.46E-05 | 4.77E-04 | 7.56E-04 | 6.13E-03 |
| 18 | 1 | 1.09E-03 | 3.48E-04 | 6.79E-04 | 7.33E-04 | 4.81E-04 | 4.61E-05 | 5.84E-04 | 5.05E-04 | 4.47E-03 |
| 19 | 1 | 3.80E-03 | 1.21E-03 | 2.36E-03 | 2.55E-03 | 1.12E-03 | 1.07E-04 | 2.28E-03 | 2.85E-03 | 1.63E-02 |
| 21 | 1 | 7.53E-03 | 2.40E-03 | 4.68E-03 | 5.05E-03 | 1.68E-03 | 1.61E-04 | 3.32E-03 | 2.61E-03 | 2.74E-02 |
| 24 | 1 | 8.12E-03 | 2.58E-03 | 5.05E-03 | 5.44E-03 | 1.54E-03 | 1.48E-04 | 3.19E-03 | 2.21E-03 | 2.83E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.31E-03 | 4.16E-04 | 8.13E-04 | 8.77E-04 | 3.07E-04 | 2.95E-05 | 7.03E-04 | 9.68E-04 | 5.42E-03 |
| 30 | 1 | 6.18E-03 | 1.97E-03 | 3.85E-03 | 4.15E-03 | 1.52E-03 | 1.46E-04 | 2.94E-03 | 4.26E-03 | 2.50E-02 |
| 31 | 1 | 2.18E-03 | 6.93E-04 | 1.35E-03 | 1.46E-03 | 3.14E-04 | 3.01E-05 | 6.13E-04 | 3.14E-04 | 6.96E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

| | |
|---|---|
| Facility Operations for Warehouses (hr): | 24 |
| Facility operations for All Others (hr): | 24 |

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.89E-03 | 2.05E-03 |
| Light Logistics | Phase 1 | 1.70E-05 | 4.72E-06 |
| Utilities Service Station | Phase 1 | 1.22E-05 | 4.24E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.18E-05 | 1.18E-06 |
| Convenience Store | Phase 1 | 3.43E-05 | 1.95E-06 |
| Fire Station | Phase 1 | 1.71E-08 | 1.29E-06 |
| Total | | 8.97E-03 | 2.07E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.21E-03 | 3.95E-05 |
| Light Logistics | Phase 1 | 1.19E-05 | 2.15E-07 |
| Utilities Service Station | Phase 1 | 1.62E-05 | 5.82E-07 |
| Gas Station w/Convenience Store | Phase 1 | 4.99E-05 | 2.45E-07 |
| Convenience Store | Phase 1 | 7.85E-05 | 0.00E+00 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.36E-03 | 4.06E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 8.97E-03 | 2.07E-03 | |
| | Idling Emissions (g/sec) | 3.36E-03 | 4.06E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.23E-02 | 2.11E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.30E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 1.61E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.23E-02 | 3.71E-03 | 1.60E-02 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 3.43E-09 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.174 | 53 | 330 | 0.21 | 1.90E+00 | 4.18E-03 | 2.19E-05 | |
| | **LDT1** | 15 | 0.362 | 3 | 330 | 0.21 | 1.90E-01 | 4.18E-04 | 2.20E-06 | |
| | **LDT2** | 15 | 0.048 | 3 | 330 | 0.21 | 2.47E-02 | 5.45E-05 | 2.86E-07 | |
| | **MDT** | 15 | 0.069 | 5 | 330 | 0.21 | 6.88E-02 | 1.52E-04 | 7.97E-07 | |
| | **LHDT1** | 15 | 0.105 | 274 | 330 | 0.21 | 5.88E+00 | 1.30E-02 | 6.81E-05 | |
| | **LHDT2** | 15 | 0.110 | 93 | 330 | 0.21 | 2.10E+00 | 4.63E-03 | 2.43E-05 | |
| | **MHDT** | 15 | 0.600 | 1425 | 330 | 0.21 | 1.75E+02 | 3.86E-01 | 2.03E-03 | |
| | **HHDT** | 15 | 0.614 | 4628 | 330 | 0.21 | 5.82E+02 | 1.28E+00 | 6.74E-03 | |
| | | | | | | | | | | 8.89E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.174 | 0 | 175 | 0.11 | 4.27E-03 | 9.41E-06 | 4.94E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 175 | 0.11 | 4.27E-04 | 9.41E-07 | 4.95E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 175 | 0.11 | 5.57E-05 | 1.23E-07 | 6.45E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 175 | 0.11 | 1.55E-04 | 3.42E-07 | 1.79E-09 | |
| | **LHDT1** | 15 | 0.105 | 2 | 175 | 0.11 | 1.95E-02 | 4.30E-05 | 2.26E-07 | |
| | **LHDT2** | 15 | 0.110 | 1 | 175 | 0.11 | 6.98E-03 | 1.54E-05 | 8.08E-08 | |
| | **MHDT** | 15 | 0.600 | 6 | 175 | 0.11 | 3.83E-01 | 8.43E-04 | 4.43E-06 | |
| | **HHDT** | 15 | 0.614 | 16 | 175 | 0.11 | 1.06E+00 | 2.33E-03 | 1.22E-05 | 1.70E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.174 | 0 | 100 | 0.06 | 3.57E-03 | 7.87E-06 | 4.14E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 100 | 0.06 | 3.58E-04 | 7.88E-07 | 4.14E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 4.66E-05 | 1.03E-07 | 5.40E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 100 | 0.06 | 1.30E-04 | 2.86E-07 | 1.50E-09 | |
| | **LHDT1** | 15 | 0.105 | 6 | 100 | 0.06 | 3.70E-02 | 8.15E-05 | 4.28E-07 | |
| | **LHDT2** | 15 | 0.110 | 2 | 100 | 0.06 | 1.32E-02 | 2.91E-05 | 1.53E-07 | |
| | **MHDT** | 15 | 0.600 | 5 | 100 | 0.06 | 1.80E-01 | 3.96E-04 | 2.08E-06 | |
| | **HHDT** | 15 | 0.614 | 21 | 100 | 0.06 | 8.19E-01 | 1.80E-03 | 9.47E-06 | 1.22E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 1.04E-03 | 2.29E-06 | 1.21E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 1.04E-04 | 2.30E-07 | 1.21E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 1.36E-05 | 2.99E-08 | 1.57E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 3.78E-05 | 8.33E-08 | 4.38E-10 | |
| | **LHDT1** | 15 | 0.105 | 1 | 50 | 0.03 | 2.61E-03 | 5.75E-06 | 3.02E-08 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 9.33E-04 | 2.06E-06 | 1.08E-08 | |
| | **MHDT** | 15 | 0.600 | 14 | 50 | 0.03 | 2.56E-01 | 5.65E-04 | 2.97E-06 | |
| | **HHDT** | 15 | 0.614 | 85 | 50 | 0.03 | 1.62E+00 | 3.57E-03 | 1.88E-05 | 2.18E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 1.73E-03 | 3.80E-06 | 2.00E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 1.73E-04 | 3.81E-07 | 2.00E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 2.25E-05 | 4.96E-08 | 2.61E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 6.27E-05 | 1.38E-07 | 7.26E-10 | |
| | **LHDT1** | 15 | 0.105 | 1 | 50 | 0.03 | 3.98E-03 | 8.78E-06 | 4.61E-08 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 1.42E-03 | 3.14E-06 | 1.65E-08 | |
| | **MHDT** | 15 | 0.600 | 23 | 50 | 0.03 | 4.20E-01 | 9.24E-04 | 4.86E-06 | |
| | **HHDT** | 15 | 0.614 | 133 | 50 | 0.03 | 2.53E+00 | 5.58E-03 | 2.93E-05 | 3.43E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 1.29E-03 | 2.83E-06 | 1.49E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 1.29E-04 | 2.83E-07 | 1.49E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 1.68E-05 | 3.69E-08 | 1.94E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | **LHDT1** | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.614 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 1.91E+00 | 4.20E-03 | 2.21E-05 | |
| | **LDT1** | | | 3 | | | 1.91E-01 | 4.20E-04 | 2.21E-06 | |
| | **LDT2** | | | 3 | | | 2.49E-02 | 5.48E-05 | 2.88E-07 | |
| | **MDT** | | | 5 | | | 6.93E-02 | 1.53E-04 | 8.02E-07 | |
| | **LHDT1** | | | 283 | | | 5.95E+00 | 1.31E-02 | 6.88E-05 | |
| | **LHDT2** | | | 96 | | | 2.13E+00 | 4.68E-03 | 2.46E-05 | |
| | **MHDT** | | | 1472 | | | 1.77E+02 | 3.89E-01 | 2.04E-03 | |
| | **HHDT** | | | 4883 | | | 5.88E+02 | 1.30E+00 | 6.81E-03 | |
| | **Total** | | | 6799 | | | 7.75E+02 | 1.71E+00 | 8.97E-03 | 8.97E-03 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.812 | 5 | 137 | 9.27E+00 | 2.04E-02 | 1.07E-04 | |
| | **LHDT2** | 0.816 | 5 | 47 | 3.17E+00 | 6.97E-03 | 3.66E-05 | |
| | **MHDT** | 1.132 | 5 | 713 | 6.72E+01 | 1.48E-01 | 7.78E-04 | |
| | **HHDT** | 1.023 | 5 | 2314 | 1.97E+02 | 4.34E-01 | 2.28E-03 | |
| | | | | 3210 | 2.77E+02 | 6.10E-01 | 3.21E-03 | 3.21E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.812 | 5 | 1 | 5.80E-02 | 1.28E-04 | 6.71E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 1.98E-02 | 4.36E-05 | 2.29E-07 | |
| | **MHDT** | 1.132 | 5 | 3 | 2.77E-01 | 6.10E-04 | 3.20E-06 | |
| | **HHDT** | 1.023 | 5 | 8 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | | | | 12 | 1.03E+00 | 2.27E-03 | 1.19E-05 | 1.19E-05 |
| **Idle at Utility** | **LHDT1** | 0.812 | 5 | 3 | 1.92E-01 | 4.24E-04 | 2.23E-06 | |
| | **LHDT2** | 0.816 | 5 | 1 | 6.57E-02 | 1.45E-04 | 7.60E-07 | |
| | **MHDT** | 1.132 | 5 | 2 | 2.27E-01 | 5.01E-04 | 2.63E-06 | |
| | **HHDT** | 1.023 | 5 | 11 | 9.15E-01 | 2.02E-03 | 1.06E-05 | |
| | | | | 17 | 1.40E+00 | 3.09E-03 | 1.62E-05 | 1.62E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 2.71E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 9.27E-03 | 2.04E-05 | 1.07E-07 | |
| | **MHDT** | 1.132 | 5 | 7 | 6.49E-01 | 1.43E-03 | 7.51E-06 | |
| | **HHDT** | 1.023 | 5 | 43 | 3.62E+00 | 7.98E-03 | 4.19E-05 | |
| | | | | 50 | 4.31E+00 | 9.49E-03 | 4.99E-05 | 4.99E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.812 | 5 | 1 | 4.14E-02 | 9.12E-05 | 4.79E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 1.42E-02 | 3.12E-05 | 1.64E-07 | |
| | **MHDT** | 1.132 | 5 | 11 | 1.06E+00 | 2.34E-03 | 1.23E-05 | |
| | **HHDT** | 1.023 | 5 | 66 | 5.67E+00 | 1.25E-02 | 6.56E-05 | |
| | | | | 79 | 6.78E+00 | 1.49E-02 | 7.85E-05 | 7.85E-05 |
| **Idle at Firestation** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.132 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 2.90E+02 | 6.40E-01 | 3.36E-03 | 3.36E-03 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Non-Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.026 | 17546 | 330 | 0.21 | 9.35E+01 | 2.06E-01 | 1.08E-03 | |
| | **LDT1** | 15 | 0.034 | 2058 | 330 | 0.21 | 1.43E+01 | 3.16E-02 | 1.66E-04 | |
| | **LDT2** | 15 | 0.026 | 6111 | 330 | 0.21 | 3.26E+01 | 7.17E-02 | 3.77E-04 | |
| | **MDT** | 15 | 0.024 | 4846 | 330 | 0.21 | 2.38E+01 | 5.25E-02 | 2.76E-04 | |
| | **LHDT1** | 15 | 0.040 | 886 | 330 | 0.21 | 7.27E+00 | 1.60E-02 | 8.41E-05 | |
| | **LHDT2** | 15 | 0.044 | 93 | 330 | 0.21 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **MHDT** | 15 | 0.064 | 344 | 330 | 0.21 | 4.52E+00 | 9.95E-03 | 5.23E-05 | |
| | **HHDT** | 15 | 0.026 | 104 | 330 | 0.21 | 5.57E-01 | 1.23E-03 | 6.44E-06 | |
| | | | | | | | | | | 2.05E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.026 | 75 | 175 | 0.11 | 2.11E-01 | 4.64E-04 | 2.44E-06 | |
| | **LDT1** | 15 | 0.034 | 9 | 175 | 0.11 | 3.23E-02 | 7.11E-05 | 3.74E-07 | |
| | **LDT2** | 15 | 0.026 | 26 | 175 | 0.11 | 7.34E-02 | 1.62E-04 | 8.49E-07 | |
| | **MDT** | 15 | 0.024 | 21 | 175 | 0.11 | 5.37E-02 | 1.18E-04 | 6.22E-07 | |
| | **LHDT1** | 15 | 0.040 | 6 | 175 | 0.11 | 2.41E-02 | 5.31E-05 | 2.79E-07 | |
| | **LHDT2** | 15 | 0.044 | 1 | 175 | 0.11 | 2.79E-03 | 6.16E-06 | 3.23E-08 | |
| | **MHDT** | 15 | 0.064 | 1 | 175 | 0.11 | 9.87E-03 | 2.17E-05 | 1.14E-07 | |
| | **HHDT** | 15 | 0.026 | 0 | 175 | 0.11 | 1.01E-03 | 2.23E-06 | 1.17E-08 | 4.72E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.026 | 109 | 100 | 0.06 | 1.76E-01 | 3.88E-04 | 2.04E-06 | |
| | **LDT1** | 15 | 0.034 | 13 | 100 | 0.06 | 2.70E-02 | 5.96E-05 | 3.13E-07 | |
| | **LDT2** | 15 | 0.026 | 38 | 100 | 0.06 | 6.14E-02 | 1.35E-04 | 7.11E-07 | |
| | **MDT** | 15 | 0.024 | 30 | 100 | 0.06 | 4.50E-02 | 9.90E-05 | 5.20E-07 | |
| | **LHDT1** | 15 | 0.040 | 18 | 100 | 0.06 | 4.57E-02 | 1.01E-04 | 5.29E-07 | |
| | **LHDT2** | 15 | 0.044 | 2 | 100 | 0.06 | 5.30E-03 | 1.17E-05 | 6.13E-08 | |
| | **MHDT** | 15 | 0.064 | 1 | 100 | 0.06 | 4.63E-03 | 1.02E-05 | 5.36E-08 | |
| | **HHDT** | 15 | 0.026 | 0 | 100 | 0.06 | 7.83E-04 | 1.72E-06 | 9.06E-09 | 4.24E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.026 | 64 | 50 | 0.03 | 5.14E-02 | 1.13E-04 | 5.95E-07 | |
| | **LDT1** | 15 | 0.034 | 7 | 50 | 0.03 | 7.88E-03 | 1.74E-05 | 9.12E-08 | |
| | **LDT2** | 15 | 0.026 | 22 | 50 | 0.03 | 1.79E-02 | 3.94E-05 | 2.07E-07 | |
| | **MDT** | 15 | 0.024 | 18 | 50 | 0.03 | 1.31E-02 | 2.89E-05 | 1.52E-07 | |
| | **LHDT1** | 15 | 0.040 | 3 | 50 | 0.03 | 3.22E-03 | 7.10E-06 | 3.73E-08 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 3.74E-04 | 8.23E-07 | 4.32E-09 | |
| | **MHDT** | 15 | 0.064 | 3 | 50 | 0.03 | 6.61E-03 | 1.46E-05 | 7.65E-08 | |
| | **HHDT** | 15 | 0.026 | 2 | 50 | 0.03 | 1.55E-03 | 3.41E-06 | 1.79E-08 | 1.18E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.026 | 105 | 50 | 0.03 | 8.52E-02 | 1.88E-04 | 9.86E-07 | |
| | **LDT1** | 15 | 0.034 | 12 | 50 | 0.03 | 1.31E-02 | 2.88E-05 | 1.51E-07 | |
| | **LDT2** | 15 | 0.026 | 37 | 50 | 0.03 | 2.97E-02 | 6.53E-05 | 3.43E-07 | |
| | **MDT** | 15 | 0.024 | 29 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 2.51E-07 | |
| | **LHDT1** | 15 | 0.040 | 4 | 50 | 0.03 | 4.92E-03 | 1.08E-05 | 5.69E-08 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 5.70E-04 | 1.26E-06 | 6.60E-09 | |
| | **MHDT** | 15 | 0.064 | 5 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.026 | 3 | 50 | 0.03 | 2.42E-03 | 5.34E-06 | 2.80E-08 | 1.95E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.026 | 78 | 50 | 0.03 | 6.34E-02 | 1.40E-04 | 7.34E-07 | |
| | **LDT1** | 15 | 0.034 | 9 | 50 | 0.03 | 9.72E-03 | 2.14E-05 | 1.13E-07 | |
| | **LDT2** | 15 | 0.026 | 27 | 50 | 0.03 | 2.21E-02 | 4.86E-05 | 2.56E-07 | |
| | **MDT** | 15 | 0.024 | 22 | 50 | 0.03 | 1.62E-02 | 3.56E-05 | 1.87E-07 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E-06 |
| **Total - All Buildings** | **LDA** | | | 17977 | | | 9.41E+01 | 2.07E-01 | 1.09E-03 | |
| | **LDT1** | | | 2108 | | | 1.44E+01 | 3.18E-02 | 1.67E-04 | |
| | **LDT2** | | | 6261 | | | 3.28E+01 | 7.22E-02 | 3.79E-04 | |
| | **MDT** | | | 4965 | | | 2.40E+01 | 5.28E-02 | 2.78E-04 | |
| | **LHDT1** | | | 917 | | | 7.34E+00 | 1.62E-02 | 8.50E-05 | |
| | **LHDT2** | | | 97 | | | 8.51E-01 | 1.88E-03 | 9.85E-06 | |
| | **MHDT** | | | 356 | | | 4.55E+00 | 1.00E-02 | 5.27E-05 | |
| | **HHDT** | | | 110 | | | 5.63E-01 | 1.24E-03 | 6.51E-06 | |
| | **Total** | | | 32791 | | | 1.79E+02 | 3.93E-01 | 2.07E-03 | 2.07E-03 |

**Non-Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.055 | 5 | 443 | 2.03E+00 | 4.47E-03 | 2.35E-05 | |
| | **LHDT2** | 0.045 | 5 | 47 | 1.75E-01 | 3.86E-04 | 2.03E-06 | |
| | **MHDT** | 0.060 | 5 | 172 | 8.61E-01 | 1.90E-03 | 9.96E-06 | |
| | **HHDT** | 0.080 | 5 | 52 | 3.48E-01 | 7.67E-04 | 4.03E-06 | |
| | | | | 714 | 3.41E+00 | 7.52E-03 | 3.95E-05 | 3.95E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.055 | 5 | 3 | 1.27E-02 | 2.80E-05 | 1.47E-07 | |
| | **LHDT2** | 0.045 | 5 | 0 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | **MHDT** | 0.060 | 5 | 1 | 3.55E-03 | 7.81E-06 | 4.10E-08 | |
| | **HHDT** | 0.080 | 5 | 0 | 1.19E-03 | 2.63E-06 | 1.38E-08 | |
| | | | | 4 | 1.85E-02 | 4.08E-05 | 2.15E-07 | 2.15E-07 |
| **Idle at Utility** | **LHDT1** | 0.055 | 5 | 9 | 4.21E-02 | 9.28E-05 | 4.88E-07 | |
| | **LHDT2** | 0.045 | 5 | 1 | 3.63E-03 | 8.00E-06 | 4.21E-08 | |
| | **MHDT** | 0.060 | 5 | 1 | 2.91E-03 | 6.42E-06 | 3.37E-08 | |
| | **HHDT** | 0.080 | 5 | 0 | 1.62E-03 | 3.56E-06 | 1.87E-08 | |
| | | | | 11 | 5.03E-02 | 1.11E-04 | 5.82E-07 | 5.82E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.055 | 5 | 1 | 5.94E-03 | 1.31E-05 | 6.88E-08 | |
| | **LHDT2** | 0.045 | 5 | 0 | 5.13E-04 | 1.13E-06 | 5.93E-09 | |
| | **MHDT** | 0.060 | 5 | 2 | 8.31E-03 | 1.83E-05 | 9.62E-08 | |
| | **HHDT** | 0.080 | 5 | 1 | 6.40E-03 | 1.41E-05 | 7.40E-08 | |
| | | | | 4 | 2.12E-02 | 4.66E-05 | 2.45E-07 | 2.45E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.055 | 5 | 2 | 9.08E-03 | 2.00E-05 | 1.05E-07 | |
| | **LHDT2** | 0.045 | 5 | 0 | 7.83E-04 | 1.72E-06 | 9.06E-09 | |
| | **MHDT** | 0.060 | 5 | 3 | 1.36E-02 | 3.00E-05 | 1.57E-07 | |
| | **HHDT** | 0.080 | 5 | 2 | 1.00E-02 | 2.20E-05 | 1.16E-07 | |
| | | | | 6 | 3.35E-02 | 7.37E-05 | 3.87E-07 | 3.87E-07 |
| **Idle at Firestation** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.54E+00 | 7.79E-03 | 4.10E-05 | 4.10E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 6.79E-03 | 1.57E-03 |
| Light Logistics | Phase 2 | 5.78E-05 | 1.60E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 6.85E-03 | 1.59E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.45E-03 | 3.02E-05 |
| Light Logistics | Phase 2 | 4.05E-05 | 7.28E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.49E-03 | 3.09E-05 |

**Total Onsite Mobile Emissiona**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 6.85E-03 | 1.59E-03 | |
| | Idling Emissions (g/sec) | 2.49E-03 | 3.09E-05 | |
| | Total Vehicle Emissions (g/sec) | 9.34E-03 | 1.62E-03 | 1.10E-02 |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.09E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.40E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 6.49E-04 | |
| | | | | Total |
| | Total All Sources (g/sec) | 9.34E-03 | 2.27E-03 | 1.16E-02 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 2.25E-09 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.174 | 41 | 330 | 0.21 | 1.45E+00 | 3.19E-03 | 1.68E-05 | |
| | LDT1 | 15 | 0.362 | 2 | 330 | 0.21 | 1.45E-01 | 3.19E-04 | 1.68E-06 | |
| | LDT2 | 15 | 0.048 | 2 | 330 | 0.21 | 1.89E-02 | 4.16E-05 | 2.19E-07 | |
| | MDT | 15 | 0.069 | 4 | 330 | 0.21 | 5.26E-02 | 1.16E-04 | 6.09E-07 | |
| | LHDT1 | 15 | 0.105 | 209 | 330 | 0.21 | 4.50E+00 | 9.90E-03 | 5.20E-05 | |
| | LHDT2 | 15 | 0.110 | 71 | 330 | 0.21 | 1.61E+00 | 3.54E-03 | 1.86E-05 | |
| | MHDT | 15 | 0.600 | 1089 | 330 | 0.21 | 1.34E+02 | 2.95E-01 | 1.55E-03 | |
| | HHDT | 15 | 0.614 | 3536 | 330 | 0.21 | 4.45E+02 | 9.80E-01 | 5.15E-03 | |
| | | | | | | | | | | 6.79E-03 |
| Travel at Light Logistics | LDA | 15 | 0.174 | 1 | 175 | 0.11 | 1.45E-02 | 3.19E-05 | 1.68E-07 | |
| | LDT1 | 15 | 0.362 | 0 | 175 | 0.11 | 1.45E-03 | 3.20E-06 | 1.68E-08 | |
| | LDT2 | 15 | 0.048 | 0 | 175 | 0.11 | 1.89E-04 | 4.17E-07 | 2.19E-09 | |
| | MDT | 15 | 0.069 | 0 | 175 | 0.11 | 5.26E-04 | 1.16E-06 | 6.09E-09 | |
| | LHDT1 | 15 | 0.105 | 6 | 175 | 0.11 | 6.63E-02 | 1.46E-04 | 7.67E-07 | |
| | LHDT2 | 15 | 0.110 | 2 | 175 | 0.11 | 2.37E-02 | 5.22E-05 | 2.74E-07 | |
| | MHDT | 15 | 0.600 | 20 | 175 | 0.11 | 1.30E+00 | 2.86E-03 | 1.50E-05 | |
| | HHDT | 15 | 0.614 | 54 | 175 | 0.11 | 3.59E+00 | 7.91E-03 | 4.15E-05 | 5.78E-05 |
| Travel at Utility | LDA | 15 | 0.174 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.362 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.069 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.105 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.110 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.600 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.614 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.174 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.362 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.069 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.614 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.174 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.362 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.069 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.614 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.174 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.362 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.069 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.600 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.614 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 41 | | | 1.46E+00 | 3.22E-03 | 1.69E-05 | |
| | LDT1 | | | 2 | | | 1.46E-01 | 3.22E-04 | 1.69E-06 | |
| | LDT2 | | | 2 | | | 1.91E-02 | 4.21E-05 | 2.21E-07 | |
| | MDT | | | 4 | | | 5.31E-02 | 1.17E-04 | 6.15E-07 | |
| | LHDT1 | | | 215 | | | 4.56E+00 | 1.01E-02 | 5.28E-05 | |
| | LHDT2 | | | 73 | | | 1.63E+00 | 3.59E-03 | 1.89E-05 | |
| | MHDT | | | 1109 | | | 1.35E+02 | 2.98E-01 | 1.57E-03 | |
| | HHDT | | | 3590 | | | 4.49E+02 | 9.88E-01 | 5.19E-03 | |
| | Total | | | 5037 | | | 5.92E+02 | 1.30E+00 | 6.85E-03 | 6.85E-03 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.812 | 5 | 105 | 7.08E+00 | 1.56E-02 | 8.20E-05 | |
| | **LHDT2** | 0.816 | 5 | 36 | 2.42E+00 | 5.33E-03 | 2.80E-05 | |
| | **MHDT** | 1.132 | 5 | 545 | 5.14E+01 | 1.13E-01 | 5.95E-04 | |
| | **HHDT** | 1.023 | 5 | 1768 | 1.51E+02 | 3.32E-01 | 1.74E-03 | |
| | | | | 2453 | 2.12E+02 | 4.66E-01 | 2.45E-03 | 2.45E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.812 | 5 | 3 | 1.97E-01 | 4.34E-04 | 2.28E-06 | |
| | **LHDT2** | 0.816 | 5 | 1 | 6.73E-02 | 1.48E-04 | 7.78E-07 | |
| | **MHDT** | 1.132 | 5 | 10 | 9.40E-01 | 2.07E-03 | 1.09E-05 | |
| | **HHDT** | 1.023 | 5 | 27 | 2.29E+00 | 5.05E-03 | 2.65E-05 | |
| | | | | 41 | 3.50E+00 | 7.70E-03 | 4.05E-05 | 4.05E-05 |
| **Idle at Utility** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.132 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.132 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.132 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.132 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 2.15E+02 | 4.74E-01 | 2.49E-03 | 2.49E-03 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Non-Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.026 | 13408 | 330 | 0.21 | 7.15E+01 | 1.57E-01 | 8.27E-04 | |
| | **LDT1** | 15 | 0.034 | 1572 | 330 | 0.21 | 1.10E+01 | 2.41E-02 | 1.27E-04 | |
| | **LDT2** | 15 | 0.026 | 4670 | 330 | 0.21 | 2.49E+01 | 5.48E-02 | 2.88E-04 | |
| | **MDT** | 15 | 0.024 | 3703 | 330 | 0.21 | 1.82E+01 | 4.01E-02 | 2.11E-04 | |
| | **LHDT1** | 15 | 0.040 | 677 | 330 | 0.21 | 5.55E+00 | 1.22E-02 | 6.43E-05 | |
| | **LHDT2** | 15 | 0.044 | 71 | 330 | 0.21 | 6.44E-01 | 1.42E-03 | 7.45E-06 | |
| | **MHDT** | 15 | 0.064 | 263 | 330 | 0.21 | 3.45E+00 | 7.60E-03 | 4.00E-05 | |
| | **HHDT** | 15 | 0.026 | 80 | 330 | 0.21 | 4.25E-01 | 9.37E-04 | 4.92E-06 | |
| | | | | | | | | | | 1.57E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.026 | 253 | 175 | 0.11 | 7.15E-01 | 1.58E-03 | 8.28E-06 | |
| | **LDT1** | 15 | 0.034 | 30 | 175 | 0.11 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LDT2** | 15 | 0.026 | 88 | 175 | 0.11 | 2.49E-01 | 5.49E-04 | 2.88E-06 | |
| | **MDT** | 15 | 0.024 | 70 | 175 | 0.11 | 1.82E-01 | 4.02E-04 | 2.11E-06 | |
| | **LHDT1** | 15 | 0.040 | 19 | 175 | 0.11 | 8.18E-02 | 1.80E-04 | 9.47E-07 | |
| | **LHDT2** | 15 | 0.044 | 2 | 175 | 0.11 | 9.49E-03 | 2.09E-05 | 1.10E-07 | |
| | **MHDT** | 15 | 0.064 | 5 | 175 | 0.11 | 3.35E-02 | 7.38E-05 | 3.88E-07 | |
| | **HHDT** | 15 | 0.026 | 1 | 175 | 0.11 | 3.43E-03 | 7.56E-06 | 3.97E-08 | 1.60E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 7.22E+01 | 1.59E-01 | 8.35E-04 | |
| | **LDT1** | | | 1602 | | | 1.11E+01 | 2.44E-02 | 1.28E-04 | |
| | **LDT2** | | | 4758 | | | 2.51E+01 | 5.54E-02 | 2.91E-04 | |
| | **MDT** | | | 3773 | | | 1.84E+01 | 4.05E-02 | 2.13E-04 | |
| | **LHDT1** | | | 696 | | | 5.63E+00 | 1.24E-02 | 6.52E-05 | |
| | **LHDT2** | | | 73 | | | 6.53E-01 | 1.44E-03 | 7.56E-06 | |
| | **MHDT** | | | 268 | | | 3.49E+00 | 7.68E-03 | 4.03E-05 | |
| | **HHDT** | | | 81 | | | 4.29E-01 | 9.45E-04 | 4.96E-06 | |
| | **Total** | | | 24913 | | | 1.37E+02 | 3.02E-01 | 1.59E-03 | 1.59E-03 |

**Non-Diesel Truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.055 | 5 | 339 | 1.55E+00 | 3.42E-03 | 1.80E-05 | |
| | **LHDT2** | 0.045 | 5 | 36 | 1.34E-01 | 2.95E-04 | 1.55E-06 | |
| | **MHDT** | 0.060 | 5 | 132 | 6.58E-01 | 1.45E-03 | 7.61E-06 | |
| | **HHDT** | 0.080 | 5 | 40 | 2.66E-01 | 5.86E-04 | 3.08E-06 | |
| | | | | 546 | 2.61E+00 | 5.75E-03 | 3.02E-05 | 3.02E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.055 | 5 | 9 | 4.31E-02 | 9.50E-05 | 4.99E-07 | |
| | **LHDT2** | 0.045 | 5 | 1 | 3.72E-03 | 8.19E-06 | 4.31E-08 | |
| | **MHDT** | 0.060 | 5 | 2 | 1.20E-02 | 2.65E-05 | 1.39E-07 | |
| | **HHDT** | 0.080 | 5 | 1 | 4.05E-03 | 8.91E-06 | 4.68E-08 | |
| | | | | 13 | 6.29E-02 | 1.39E-04 | 7.28E-07 | 7.28E-07 |
| **Idle at Utility** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 2.67E+00 | 5.89E-03 | 3.09E-05 | 3.09E-05 |

**World Logistics Center** **2012** **PM2.5** Based on PB Traffic Results 10/3/2013
**Project Only** **Phase 1 + 2** Rev5 Without Mitigation With EMFAC2014
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.03E-02 | 1.28E-03 | 8.73E-03 | 2.03E-02 |
| 2 | 2.44E-02 | 3.01E-03 | 2.07E-02 | 4.81E-02 |
| 3 | 2.76E-02 | 3.56E-03 | 2.36E-02 | 5.48E-02 |
| 5 | 1.24E-03 | 1.37E-03 | 2.21E-03 | 4.83E-03 |
| 6 | 1.50E-02 | 2.13E-03 | 1.30E-02 | 3.01E-02 |
| 8 | 1.85E-03 | 2.31E-03 | 3.54E-03 | 7.70E-03 |
| 11 | 3.26E-05 | 5.81E-05 | 8.27E-05 | 1.73E-04 |
| 12 | 7.34E-05 | 8.97E-05 | 1.40E-04 | 3.03E-04 |
| 14 | 2.53E-03 | 5.22E-04 | 2.41E-03 | 5.46E-03 |
| 18 | 1.94E-03 | 3.58E-04 | 1.75E-03 | 4.05E-03 |
| 19 | 9.96E-03 | 1.22E-03 | 8.45E-03 | 1.96E-02 |
| 21 | 1.02E-02 | 2.31E-03 | 9.62E-03 | 2.22E-02 |
| 24 | 9.01E-03 | 2.45E-03 | 8.87E-03 | 2.03E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.31E-03 | 4.10E-04 | 2.83E-03 | 6.55E-03 |
| 30 | 1.45E-02 | 1.93E-03 | 1.25E-02 | 2.89E-02 |
| 31 | 1.43E-03 | 6.41E-04 | 1.66E-03 | 3.73E-03 |
| | | | Total | 2.77E-01 |

| ID | Arterial | From | To | | 2012 With Project Phase 1+2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | | | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | Street A | Street F | | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | | 4,604 | 147 | 307 | 402 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM2.5** **Phase 1 + 2** Without Mitigation

Rev5

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0820 | 0.1750 | 0.0320 | 0.0400 | 0.0780 | 0.0830 | 0.3650 | 0.3760 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.21E-06 | 7.40E-07 | 1.33E-07 | 3.22E-07 | 4.20E-05 | 1.52E-05 | 2.14E-03 | 8.10E-03 | 1.03E-02 |
| 2 | 1 | 1.64E-05 | 1.69E-06 | 3.03E-07 | 7.34E-07 | 1.42E-04 | 5.12E-05 | 4.95E-03 | 1.92E-02 | 2.44E-02 |
| 3 | 1 | 1.94E-05 | 1.99E-06 | 3.58E-07 | 8.65E-07 | 1.71E-04 | 6.18E-05 | 5.74E-03 | 2.16E-02 | 2.76E-02 |
| 5 | 1 | 8.27E-06 | 8.49E-07 | 1.53E-07 | 3.69E-07 | 3.52E-05 | 1.27E-05 | 1.06E-03 | 1.28E-04 | 1.24E-03 |
| 6 | 1 | 1.19E-05 | 1.22E-06 | 2.19E-07 | 5.31E-07 | 8.62E-05 | 3.12E-05 | 3.27E-03 | 1.16E-02 | 1.50E-02 |
| 8 | 1 | 1.39E-05 | 1.42E-06 | 2.56E-07 | 6.20E-07 | 6.09E-05 | 2.20E-05 | 1.75E-03 | 0.00E+00 | 1.85E-03 |
| 11 | 1 | 3.56E-07 | 3.66E-08 | 6.58E-09 | 1.59E-08 | 1.23E-06 | 4.46E-07 | 3.05E-05 | 0.00E+00 | 3.26E-05 |
| 12 | 1 | 5.25E-07 | 5.39E-08 | 9.70E-09 | 2.35E-08 | 3.57E-06 | 1.29E-06 | 6.79E-05 | 0.00E+00 | 7.34E-05 |
| 14 | 1 | 3.14E-06 | 3.22E-07 | 5.79E-08 | 1.40E-07 | 1.13E-05 | 4.07E-06 | 4.14E-04 | 2.10E-03 | 2.53E-03 |
| 18 | 1 | 1.94E-06 | 1.99E-07 | 3.58E-08 | 8.65E-08 | 2.11E-05 | 7.63E-06 | 5.07E-04 | 1.40E-03 | 1.94E-03 |
| 19 | 1 | 6.74E-06 | 6.91E-07 | 1.24E-07 | 3.01E-07 | 4.90E-05 | 1.77E-05 | 1.98E-03 | 7.91E-03 | 9.96E-03 |
| 21 | 1 | 1.34E-05 | 1.37E-06 | 2.47E-07 | 5.97E-07 | 7.38E-05 | 2.67E-05 | 2.89E-03 | 7.25E-03 | 1.02E-02 |
| 24 | 1 | 1.44E-05 | 1.48E-06 | 2.66E-07 | 6.43E-07 | 6.75E-05 | 2.44E-05 | 2.77E-03 | 6.14E-03 | 9.01E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.32E-06 | 2.38E-07 | 4.28E-08 | 1.04E-07 | 1.35E-05 | 4.88E-06 | 6.11E-04 | 2.68E-03 | 3.31E-03 |
| 30 | 1 | 1.10E-05 | 1.13E-06 | 2.03E-07 | 4.90E-07 | 6.68E-05 | 2.42E-05 | 2.55E-03 | 1.18E-02 | 1.45E-02 |
| 31 | 1 | 3.86E-06 | 3.96E-07 | 7.13E-08 | 1.73E-07 | 1.37E-05 | 4.98E-06 | 5.32E-04 | 8.71E-04 | 1.43E-03 |

**World Logistics Center** **2012** **PM2.5** **Phase 1 + 2** Without Mitigation

Rev5

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35,138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 |
| 2 | 36,806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 |
| 3 | 13,319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 |
| 5 | 9,380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 |
| 6 | 16,641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 |
| 8 | 13,674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 |
| 14 | 2,566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 |
| 18 | 2,017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 |
| 19 | 4,585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 |
| 21 | 14,156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 |
| 24 | 9,401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5,463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 |
| 30 | 6,005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 |
| 31 | 5,460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0220 | 0.0250 | 0.0220 | 0.0200 | 0.0380 | 0.0420 | 0.0620 | 0.0350 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6.38E-04 | 8.51E-05 | 2.22E-04 | 1.60E-04 | 6.63E-05 | 7.72E-06 | 8.78E-05 | 1.70E-05 | 1.28E-03 |
| 2 | 1 | 1.46E-03 | 1.94E-04 | 5.07E-04 | 3.65E-04 | 2.23E-04 | 2.60E-05 | 2.03E-04 | 4.04E-05 | 3.01E-03 |
| 3 | 1 | 1.72E-03 | 2.29E-04 | 5.98E-04 | 4.31E-04 | 2.69E-04 | 3.14E-05 | 2.35E-04 | 4.54E-05 | 3.56E-03 |
| 5 | 1 | 7.32E-04 | 9.76E-05 | 2.55E-04 | 1.84E-04 | 5.55E-05 | 6.47E-06 | 4.34E-05 | 2.70E-07 | 1.37E-03 |
| 6 | 1 | 1.05E-03 | 1.40E-04 | 3.66E-04 | 2.64E-04 | 1.36E-04 | 1.58E-05 | 1.34E-04 | 2.43E-05 | 2.13E-03 |
| 8 | 1 | 1.23E-03 | 1.64E-04 | 4.28E-04 | 3.08E-04 | 9.59E-05 | 1.12E-05 | 7.19E-05 | 0.00E+00 | 2.31E-03 |
| 11 | 1 | 3.16E-05 | 4.21E-06 | 1.10E-05 | 7.93E-06 | 1.94E-06 | 2.26E-07 | 1.25E-06 | 0.00E+00 | 5.81E-05 |
| 12 | 1 | 4.65E-05 | 6.20E-06 | 1.62E-05 | 1.17E-05 | 5.63E-06 | 6.56E-07 | 2.79E-06 | 0.00E+00 | 8.97E-05 |
| 14 | 1 | 2.78E-04 | 3.70E-05 | 9.67E-05 | 6.97E-05 | 1.77E-05 | 2.07E-06 | 1.70E-05 | 4.40E-06 | 5.22E-04 |
| 18 | 1 | 1.72E-04 | 2.29E-05 | 5.98E-05 | 4.31E-05 | 3.33E-05 | 3.87E-06 | 2.08E-05 | 2.94E-06 | 3.58E-04 |
| 19 | 1 | 5.97E-04 | 7.95E-05 | 2.08E-04 | 1.50E-04 | 7.72E-05 | 9.00E-06 | 8.11E-05 | 1.66E-05 | 1.22E-03 |
| 21 | 1 | 1.18E-03 | 1.58E-04 | 4.12E-04 | 2.97E-04 | 1.16E-04 | 1.35E-05 | 1.18E-04 | 1.52E-05 | 2.31E-03 |
| 24 | 1 | 1.28E-03 | 1.70E-04 | 4.44E-04 | 3.20E-04 | 1.06E-04 | 1.24E-05 | 1.14E-04 | 1.29E-05 | 2.45E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.05E-04 | 2.74E-05 | 7.15E-05 | 5.16E-05 | 2.12E-05 | 2.47E-06 | 2.51E-05 | 5.64E-06 | 4.10E-04 |
| 30 | 1 | 9.72E-04 | 1.29E-04 | 3.38E-04 | 2.44E-04 | 1.05E-04 | 1.23E-05 | 1.05E-04 | 2.48E-05 | 1.93E-03 |
| 31 | 1 | 3.42E-04 | 4.56E-05 | 1.19E-04 | 8.59E-05 | 2.17E-05 | 2.52E-06 | 2.18E-05 | 1.83E-06 | 6.41E-04 |

**World Logistics Center** **2012 Project Phases 1 + 2**

Rev5

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 21,539 | 4375 | 1,127 | 229 | 3,097 | 629 | 9,375 | 1904 | 7138 | 8.73 | 0.035 | 0.0002 | 1.7 | 8.73E-03 |
| 2 | A | 731 | 0.45 | 21,965 | 9974 | 1,698 | 771 | 3,202 | 1454 | 9,941 | 4514 | 16714 | 8.83 | 0.035 | 0.0002 | 3.9 | 2.07E-02 |
| 3 | A | 2352 | 1.46 | 8,051 | 11763 | 637 | 931 | 1,154 | 1686 | 3,477 | 5080 | 19460 | 8.64 | 0.035 | 0.0002 | 4.5 | 2.36E-02 |
| 5 | A | 953 | 0.59 | 8,480 | 5020 | 324 | 192 | 525 | 311 | 51 | 30 | 5553 | 2.90 | 0.035 | 0.0001 | 0.4 | 2.21E-03 |
| 6 | A | 1099 | 0.68 | 10,562 | 7211 | 688 | 470 | 1,408 | 961 | 3,983 | 2719 | 11361 | 8.14 | 0.035 | 0.0002 | 2.5 | 1.30E-02 |
| 8 | A | 1091 | 0.68 | 12,425 | 8421 | 489 | 331 | 760 | 515 | 0 | 0 | 9267 | 2.79 | 0.035 | 0.0001 | 0.7 | 3.54E-03 |
| 11 | A | 1201 | 0.75 | 290 | 216 | 9 | 7 | 12 | 9 | 0 | 0 | 232 | 2.60 | 0.035 | 0.0001 | 0.0 | 8.27E-05 |
| 12 | A | 824 | 0.51 | 623 | 319 | 38 | 19 | 39 | 20 | 0 | 0 | 358 | 2.86 | 0.035 | 0.0001 | 0.0 | 1.40E-04 |
| 14 | A | 1618 | 1.01 | 1,894 | 1904 | 61 | 61 | 121 | 122 | 490 | 493 | 2579 | 6.70 | 0.035 | 0.0002 | 0.5 | 2.41E-03 |
| 18 | A | 1412 | 0.88 | 1,341 | 1176 | 131 | 115 | 170 | 149 | 375 | 329 | 1769 | 7.09 | 0.035 | 0.0002 | 0.3 | 1.75E-03 |
| 19 | A | 2386 | 1.48 | 2,759 | 4089 | 180 | 267 | 392 | 581 | 1,254 | 1859 | 6796 | 8.87 | 0.035 | 0.0002 | 1.6 | 8.45E-03 |
| 21 | A | 1258 | 0.78 | 10,378 | 8110 | 514 | 402 | 1,085 | 848 | 2,179 | 1703 | 11063 | 6.25 | 0.035 | 0.0002 | 1.8 | 9.62E-03 |
| 24 | A | 1946 | 1.21 | 7,231 | 8741 | 304 | 367 | 673 | 814 | 1,193 | 1442 | 11365 | 5.61 | 0.035 | 0.0001 | 1.7 | 8.87E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 3,357 | 1408 | 175 | 73 | 428 | 179 | 1,503 | 630 | 2291 | 8.81 | 0.035 | 0.0002 | 0.5 | 2.83E-03 |
| 30 | A | 2827 | 1.76 | 3,792 | 6659 | 207 | 364 | 427 | 750 | 1,579 | 2773 | 10546 | 8.49 | 0.035 | 0.0002 | 2.4 | 1.25E-02 |
| 31 | A | 820 | 0.51 | 4,604 | 2345 | 147 | 75 | 307 | 156 | 402 | 205 | 2781 | 4.32 | 0.035 | 0.0001 | 0.3 | 1.66E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.03E-02 | 4.12E-03 |
| Light Logistics | Phase 1 | 1.98E-05 | 9.48E-06 |
| Utilities Service Station | Phase 1 | 1.44E-05 | 8.63E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.51E-05 | 2.40E-06 |
| Convenience Store | Phase 1 | 3.95E-05 | 3.96E-06 |
| Fire Station | Phase 1 | 2.03E-08 | 2.55E-06 |
| Total | | 1.04E-02 | 4.15E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.25E-03 | 4.25E-05 |
| Light Logistics | Phase 1 | 1.21E-05 | 2.32E-07 |
| Utilities Service Station | Phase 1 | 1.66E-05 | 6.37E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.02E-05 | 2.59E-07 |
| Convenience Store | Phase 1 | 7.91E-05 | 4.09E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.41E-03 | 4.40E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.04E-02 | 4.15E-03 | |
| | Idling Emissions (g/sec) | 3.41E-03 | 4.40E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.38E-02 | 4.19E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.38E-02 | 5.53E-03 | 1.93E-02 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 4.13E-09 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.206 | 53 | 330 | 0.21 | 2.24E+00 | 4.94E-03 | 2.59E-05 | |
| | **LDT1** | 15 | 0.403 | 3 | 330 | 0.21 | 2.11E-01 | 4.65E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.074 | 3 | 330 | 0.21 | 3.80E-02 | 8.37E-05 | 4.40E-07 | |
| | **MDT** | 15 | 0.096 | 5 | 330 | 0.21 | 9.55E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.160 | 274 | 330 | 0.21 | 9.01E+00 | 1.98E-02 | 1.04E-04 | |
| | **LHDT2** | 15 | 0.173 | 93 | 330 | 0.21 | 3.31E+00 | 7.28E-03 | 3.83E-05 | |
| | **MHDT** | 15 | 0.710 | 1425 | 330 | 0.21 | 2.08E+02 | 4.57E-01 | 2.40E-03 | |
| | **HHDT** | 15 | 0.703 | 4628 | 330 | 0.21 | 6.67E+02 | 1.47E+00 | 7.72E-03 | |
| | | | | | | | | | | 1.03E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.206 | 0 | 175 | 0.11 | 5.05E-03 | 1.11E-05 | 5.84E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 175 | 0.11 | 4.75E-04 | 1.05E-06 | 5.50E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 175 | 0.11 | 8.56E-05 | 1.88E-07 | 9.90E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 175 | 0.11 | 2.15E-04 | 4.74E-07 | 2.49E-09 | |
| | **LHDT1** | 15 | 0.160 | 2 | 175 | 0.11 | 2.99E-02 | 6.58E-05 | 3.46E-07 | |
| | **LHDT2** | 15 | 0.173 | 1 | 175 | 0.11 | 1.10E-02 | 2.42E-05 | 1.27E-07 | |
| | **MHDT** | 15 | 0.710 | 6 | 175 | 0.11 | 4.53E-01 | 9.99E-04 | 5.25E-06 | |
| | **HHDT** | 15 | 0.703 | 16 | 175 | 0.11 | 1.21E+00 | 2.67E-03 | 1.40E-05 | 1.98E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.206 | 0 | 100 | 0.06 | 4.25E-03 | 9.37E-06 | 4.92E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 100 | 0.06 | 4.00E-04 | 8.82E-07 | 4.63E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 100 | 0.06 | 7.21E-05 | 1.59E-07 | 8.34E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 100 | 0.06 | 1.81E-04 | 3.99E-07 | 2.10E-09 | |
| | **LHDT1** | 15 | 0.160 | 6 | 100 | 0.06 | 5.70E-02 | 1.26E-04 | 6.60E-07 | |
| | **LHDT2** | 15 | 0.173 | 2 | 100 | 0.06 | 2.09E-02 | 4.61E-05 | 2.42E-07 | |
| | **MHDT** | 15 | 0.710 | 5 | 100 | 0.06 | 2.14E-01 | 4.72E-04 | 2.48E-06 | |
| | **HHDT** | 15 | 0.703 | 22 | 100 | 0.06 | 9.43E-01 | 2.08E-03 | 1.09E-05 | 1.44E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.23E-03 | 2.71E-06 | 1.43E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.16E-04 | 2.55E-07 | 1.34E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.09E-05 | 4.60E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 5.24E-05 | 1.16E-07 | 6.07E-10 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 3.99E-03 | 8.80E-06 | 4.62E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 1.47E-03 | 3.23E-06 | 1.70E-08 | |
| | **MHDT** | 15 | 0.710 | 14 | 50 | 0.03 | 3.04E-01 | 6.69E-04 | 3.51E-06 | |
| | **HHDT** | 15 | 0.703 | 85 | 50 | 0.03 | 1.86E+00 | 4.09E-03 | 2.15E-05 | 2.51E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 2.04E-03 | 4.50E-06 | 2.36E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 2.22E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 3.46E-05 | 7.62E-08 | 4.00E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 8.70E-05 | 1.92E-07 | 1.01E-09 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 6.10E-03 | 1.34E-05 | 7.06E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 2.24E-03 | 4.93E-06 | 2.59E-08 | |
| | **MHDT** | 15 | 0.710 | 23 | 50 | 0.03 | 4.97E-01 | 1.09E-03 | 5.75E-06 | |
| | **HHDT** | 15 | 0.703 | 133 | 50 | 0.03 | 2.90E+00 | 6.39E-03 | 3.36E-05 | 3.95E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.52E-03 | 3.35E-06 | 1.76E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.43E-04 | 3.15E-07 | 1.66E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.57E-05 | 5.67E-08 | 2.98E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 6.47E-05 | 1.43E-07 | 7.49E-10 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.26E+00 | 4.97E-03 | 2.61E-05 | |
| | **LDT1** | | | 3 | | | 2.12E-01 | 4.68E-04 | 2.46E-06 | |
| | **LDT2** | | | 3 | | | 3.82E-02 | 8.42E-05 | 4.42E-07 | |
| | **MDT** | | | 5 | | | 9.61E-02 | 2.12E-04 | 1.11E-06 | |
| | **LHDT1** | | | 283 | | | 9.10E+00 | 2.00E-02 | 1.05E-04 | |
| | **LHDT2** | | | 96 | | | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | **MHDT** | | | 1472 | | | 2.09E+02 | 4.60E-01 | 2.42E-03 | |
| | **HHDT** | | | 4883 | | | 6.74E+02 | 1.48E+00 | 7.80E-03 | |
| | **Total** | | | 6800 | | | 8.98E+02 | 1.98E+00 | 1.04E-02 | 1.04E-02 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 137 | 9.69E+00 | 2.13E-02 | 1.12E-04 | |
| | **LHDT2** | 0.853 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 1.184 | 5 | 713 | 7.03E+01 | 1.55E-01 | 8.14E-04 | |
| | **HHDT** | 1.023 | 5 | 2314 | 1.97E+02 | 4.34E-01 | 2.28E-03 | |
| | | | | 3210 | 2.81E+02 | 6.18E-01 | 3.25E-03 | 3.25E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 1 | 6.06E-02 | 1.33E-04 | 7.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.40E-07 | |
| | **MHDT** | 1.184 | 5 | 3 | 2.90E-01 | 6.38E-04 | 3.35E-06 | |
| | **HHDT** | 1.023 | 5 | 8 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | | | | 12 | 1.05E+00 | 2.30E-03 | 1.21E-05 | 1.21E-05 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 3 | 2.02E-01 | 4.46E-04 | 2.34E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 6.91E-02 | 1.52E-04 | 8.00E-07 | |
| | **MHDT** | 1.184 | 5 | 2 | 2.39E-01 | 5.27E-04 | 2.77E-06 | |
| | **HHDT** | 1.023 | 5 | 11 | 9.21E-01 | 2.03E-03 | 1.07E-05 | |
| | | | | 17 | 1.43E+00 | 3.15E-03 | 1.66E-05 | 1.66E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 2.84E-02 | 6.25E-05 | 3.28E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 9.69E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 1.184 | 5 | 7 | 6.79E-01 | 1.50E-03 | 7.86E-06 | |
| | **HHDT** | 1.023 | 5 | 43 | 3.62E+00 | 7.98E-03 | 4.19E-05 | |
| | | | | 50 | 4.34E+00 | 9.56E-03 | 5.02E-05 | 5.02E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 1 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 1.184 | 5 | 11 | 1.11E+00 | 2.45E-03 | 1.29E-05 | |
| | **HHDT** | 1.023 | 5 | 66 | 5.67E+00 | 1.25E-02 | 6.56E-05 | |
| | | | | 79 | 6.84E+00 | 1.51E-02 | 7.91E-05 | 7.91E-05 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 2.94E+02 | 6.48E-01 | 3.41E-03 | 3.41E-03 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 17546 | 330 | 0.21 | 1.86E+02 | 4.10E-01 | 2.15E-03 | |
| | **LDT1** | 15 | 0.061 | 2058 | 330 | 0.21 | 2.56E+01 | 5.64E-02 | 2.96E-04 | |
| | **LDT2** | 15 | 0.051 | 6111 | 330 | 0.21 | 6.35E+01 | 1.40E-01 | 7.35E-04 | |
| | **MDT** | 15 | 0.051 | 4846 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.83E-04 | |
| | **LHDT1** | 15 | 0.089 | 886 | 330 | 0.21 | 1.62E+01 | 3.56E-02 | 1.87E-04 | |
| | **LHDT2** | 15 | 0.101 | 93 | 330 | 0.21 | 1.93E+00 | 4.26E-03 | 2.24E-05 | |
| | **MHDT** | 15 | 0.148 | 344 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 1.21E-04 | |
| | **HHDT** | 15 | 0.090 | 104 | 330 | 0.21 | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | | | | | | | | | | 4.12E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 75 | 175 | 0.11 | 4.19E-01 | 9.23E-04 | 4.85E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 175 | 0.11 | 5.77E-02 | 1.27E-04 | 6.67E-07 | |
| | **LDT2** | 15 | 0.051 | 26 | 175 | 0.11 | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.051 | 21 | 175 | 0.11 | 1.13E-01 | 2.50E-04 | 1.31E-06 | |
| | **LHDT1** | 15 | 0.089 | 6 | 175 | 0.11 | 5.36E-02 | 1.18E-04 | 6.21E-07 | |
| | **LHDT2** | 15 | 0.101 | 1 | 175 | 0.11 | 6.41E-03 | 1.41E-05 | 7.42E-08 | |
| | **MHDT** | 15 | 0.148 | 1 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 175 | 0.11 | 3.50E-03 | 7.71E-06 | 4.05E-08 | 9.48E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 110 | 100 | 0.06 | 3.53E-01 | 7.77E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.061 | 13 | 100 | 0.06 | 4.86E-02 | 1.07E-04 | 5.62E-07 | |
| | **LDT2** | 15 | 0.051 | 38 | 100 | 0.06 | 1.21E-01 | 2.65E-04 | 1.39E-06 | |
| | **MDT** | 15 | 0.051 | 30 | 100 | 0.06 | 9.56E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 100 | 0.06 | 1.22E-02 | 2.70E-05 | 1.42E-07 | |
| | **MHDT** | 15 | 0.148 | 1 | 100 | 0.06 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 2.73E-03 | 6.01E-06 | 3.16E-08 | 8.63E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 64 | 50 | 0.03 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LDT1** | 15 | 0.061 | 7 | 50 | 0.03 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **LDT2** | 15 | 0.051 | 22 | 50 | 0.03 | 3.49E-02 | 7.69E-05 | 4.04E-07 | |
| | **MDT** | 15 | 0.051 | 18 | 50 | 0.03 | 2.77E-02 | 6.09E-05 | 3.20E-07 | |
| | **LHDT1** | 15 | 0.089 | 3 | 50 | 0.03 | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 8.58E-04 | 1.89E-06 | 9.93E-09 | |
| | **MHDT** | 15 | 0.148 | 3 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **HHDT** | 15 | 0.090 | 2 | 50 | 0.03 | 5.37E-03 | 1.18E-05 | 6.21E-08 | 2.40E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 105 | 50 | 0.03 | 1.69E-01 | 3.73E-04 | 1.96E-06 | |
| | **LDT1** | 15 | 0.061 | 12 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **LDT2** | 15 | 0.051 | 37 | 50 | 0.03 | 5.78E-02 | 1.27E-04 | 6.70E-07 | |
| | **MDT** | 15 | 0.051 | 29 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LHDT1** | 15 | 0.089 | 4 | 50 | 0.03 | 1.09E-02 | 2.41E-05 | 1.27E-07 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 1.31E-03 | 2.88E-06 | 1.52E-08 | |
| | **MHDT** | 15 | 0.148 | 5 | 50 | 0.03 | 2.50E-02 | 5.51E-05 | 2.90E-07 | |
| | **HHDT** | 15 | 0.090 | 3 | 50 | 0.03 | 8.39E-03 | 1.85E-05 | 9.71E-08 | 3.96E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 78 | 50 | 0.03 | 1.26E-01 | 2.78E-04 | 1.46E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 50 | 0.03 | 1.74E-02 | 3.82E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.051 | 27 | 50 | 0.03 | 4.31E-02 | 9.48E-05 | 4.98E-07 | |
| | **MDT** | 15 | 0.051 | 22 | 50 | 0.03 | 3.41E-02 | 7.52E-05 | 3.95E-07 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.87E+02 | 4.12E-01 | 2.17E-03 | |
| | **LDT1** | | | 2108 | | | 2.58E+01 | 5.67E-02 | 2.98E-04 | |
| | **LDT2** | | | 6262 | | | 6.39E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | | | 4966 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | | | 917 | | | 1.63E+01 | 3.60E-02 | 1.89E-04 | |
| | **LHDT2** | | | 97 | | | 1.95E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | | | 356 | | | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | **HHDT** | | | 110 | | | 1.95E+00 | 4.29E-03 | 2.25E-05 | |
| | **Total** | | | 32792 | | | 3.58E+02 | 7.89E-01 | 4.15E-03 | 4.15E-03 |

**Non=Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 443 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **LHDT2** | 0.050 | 5 | 47 | 1.95E-01 | 4.29E-04 | 2.25E-06 | |
| | **MHDT** | 0.063 | 5 | 172 | 9.04E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 0.082 | 5 | 52 | 3.57E-01 | 7.86E-04 | 4.13E-06 | |
| | | | | 714 | 3.67E+00 | 8.09E-03 | 4.25E-05 | 4.25E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 3 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 1.22E-03 | 2.68E-06 | 1.41E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.72E-03 | 8.20E-06 | 4.31E-08 | |
| | **HHDT** | 0.082 | 5 | 0 | 1.22E-03 | 2.69E-06 | 1.41E-08 | |
| | | | | 4 | 2.00E-02 | 4.41E-05 | 2.32E-07 | 2.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 9 | 4.63E-02 | 1.02E-04 | 5.35E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.06E-03 | 8.95E-06 | 4.70E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **HHDT** | 0.082 | 5 | 0 | 1.67E-03 | 3.67E-06 | 1.93E-08 | |
| | | | | 11 | 5.51E-02 | 1.21E-04 | 6.37E-07 | 6.37E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 1 | 6.49E-03 | 1.43E-05 | 7.51E-08 | |
| | **LHDT2** | 0.050 | 5 | 0 | 5.70E-04 | 1.25E-06 | 6.59E-09 | |
| | **MHDT** | 0.063 | 5 | 2 | 8.72E-03 | 1.92E-05 | 1.01E-07 | |
| | **HHDT** | 0.082 | 5 | 1 | 6.56E-03 | 1.44E-05 | 7.59E-08 | |
| | | | | 4 | 2.23E-02 | 4.92E-05 | 2.59E-07 | 2.59E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 2 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 8.70E-04 | 1.92E-06 | 1.01E-08 | |
| | **MHDT** | 0.063 | 5 | 3 | 1.43E-02 | 3.15E-05 | 1.65E-07 | |
| | **HHDT** | 0.082 | 5 | 2 | 1.03E-02 | 2.26E-05 | 1.19E-07 | |
| | | | | 6 | 3.53E-02 | 7.78E-05 | 4.09E-07 | 4.09E-07 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.082 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.80E+00 | 8.38E-03 | 4.40E-05 | 4.40E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 7.87E-03 | 3.15E-03 |
| Light Logistics | Phase 2 | 6.72E-05 | 3.22E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 7.93E-03 | 3.18E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.48E-03 | 3.26E-05 |
| Light Logistics | Phase 2 | 4.11E-05 | 7.89E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.52E-03 | 3.34E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.93E-03 | 3.18E-03 | |
| | Idling Emissions (g/sec) | 2.52E-03 | 3.34E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.05E-02 | 3.21E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.54E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.57E-03 | |
| | Total Other Onsite Emissions (g/sec) | | 3.02E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.05E-02 | 6.24E-03 | 1.67E-02 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 3.24E-09 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** PM10

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.206 | 41 | 330 | 0.21 | 1.71E+00 | 3.77E-03 | 1.98E-05 | |
| | LDT1 | 15 | 0.403 | 2 | 330 | 0.21 | 1.61E-01 | 3.55E-04 | 1.87E-06 | |
| | LDT2 | 15 | 0.074 | 2 | 330 | 0.21 | 2.90E-02 | 6.39E-05 | 3.36E-07 | |
| | MDT | 15 | 0.096 | 4 | 330 | 0.21 | 7.30E-02 | 1.61E-04 | 8.44E-07 | |
| | LHDT1 | 15 | 0.160 | 209 | 330 | 0.21 | 6.88E+00 | 1.52E-02 | 7.97E-05 | |
| | LHDT2 | 15 | 0.173 | 71 | 330 | 0.21 | 2.53E+00 | 5.57E-03 | 2.92E-05 | |
| | MHDT | 15 | 0.710 | 1089 | 330 | 0.21 | 1.59E+02 | 3.49E-01 | 1.84E-03 | |
| | HHDT | 15 | 0.703 | 3536 | 330 | 0.21 | 5.10E+02 | 1.12E+00 | 5.90E-03 | |
| | | | | | | | | | | 7.87E-03 |
| Travel at Light Logistics | LDA | 15 | 0.206 | 1 | 175 | 0.11 | 1.71E-02 | 3.78E-05 | 1.98E-07 | |
| | LDT1 | 15 | 0.403 | 0 | 175 | 0.11 | 1.61E-03 | 3.55E-06 | 1.87E-08 | |
| | LDT2 | 15 | 0.074 | 0 | 175 | 0.11 | 2.91E-04 | 6.40E-07 | 3.36E-09 | |
| | MDT | 15 | 0.096 | 0 | 175 | 0.11 | 7.30E-04 | 1.61E-06 | 8.45E-09 | |
| | LHDT1 | 15 | 0.160 | 6 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 1.17E-06 | |
| | LHDT2 | 15 | 0.173 | 2 | 175 | 0.11 | 3.72E-02 | 8.20E-05 | 4.31E-07 | |
| | MHDT | 15 | 0.710 | 20 | 175 | 0.11 | 1.54E+00 | 3.39E-03 | 1.78E-05 | |
| | HHDT | 15 | 0.703 | 54 | 175 | 0.11 | 4.11E+00 | 9.05E-03 | 4.76E-05 | 6.72E-05 |
| Travel at Utility | LDA | 15 | 0.206 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 41 | | | 1.73E+00 | 3.81E-03 | 2.00E-05 | |
| | LDT1 | | | 2 | | | 1.63E-01 | 3.59E-04 | 1.89E-06 | |
| | LDT2 | | | 2 | | | 2.93E-02 | 6.46E-05 | 3.39E-07 | |
| | MDT | | | 4 | | | 7.37E-02 | 1.62E-04 | 8.53E-07 | |
| | LHDT1 | | | 215 | | | 6.98E+00 | 1.54E-02 | 8.08E-05 | |
| | LHDT2 | | | 73 | | | 2.56E+00 | 5.65E-03 | 2.97E-05 | |
| | MHDT | | | 1109 | | | 1.60E+02 | 3.53E-01 | 1.85E-03 | |
| | HHDT | | | 3590 | | | 5.14E+02 | 1.13E+00 | 5.95E-03 | |
| | Total | | | 5037 | | | 6.85E+02 | 1.51E+00 | 7.93E-03 | 7.93E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 105 | 7.40E+00 | 1.63E-02 | 8.57E-05 | |
| | **LHDT2** | 0.853 | 5 | 36 | 2.53E+00 | 5.57E-03 | 2.93E-05 | |
| | **MHDT** | 1.184 | 5 | 545 | 5.37E+01 | 1.18E-01 | 6.22E-04 | |
| | **HHDT** | 1.023 | 5 | 1768 | 1.51E+02 | 3.32E-01 | 1.74E-03 | |
| | | | | 2453 | 2.14E+02 | 4.72E-01 | 2.48E-03 | 2.48E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 3 | 2.06E-01 | 4.53E-04 | 2.38E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 7.03E-02 | 1.55E-04 | 8.14E-07 | |
| | **MHDT** | 1.184 | 5 | 10 | 9.83E-01 | 2.17E-03 | 1.14E-05 | |
| | **HHDT** | 1.023 | 5 | 27 | 2.29E+00 | 5.05E-03 | 2.65E-05 | |
| | | | | 41 | 3.55E+00 | 7.82E-03 | 4.11E-05 | 4.11E-05 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 2.18E+02 | 4.80E-01 | 2.52E-03 | 2.52E-03 |

**World Logistics Center** **2012** **Phase 2** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 13408 | 330 | 0.21 | 1.42E+02 | 3.13E-01 | 1.64E-03 | |
| | **LDT1** | 15 | 0.061 | 1572 | 330 | 0.21 | 1.96E+01 | 4.31E-02 | 2.26E-04 | |
| | **LDT2** | 15 | 0.051 | 4670 | 330 | 0.21 | 4.85E+01 | 1.07E-01 | 5.62E-04 | |
| | **MDT** | 15 | 0.051 | 3703 | 330 | 0.21 | 3.85E+01 | 8.48E-02 | 4.46E-04 | |
| | **LHDT1** | 15 | 0.089 | 677 | 330 | 0.21 | 1.24E+01 | 2.72E-02 | 1.43E-04 | |
| | **LHDT2** | 15 | 0.101 | 71 | 330 | 0.21 | 1.48E+00 | 3.25E-03 | 1.71E-05 | |
| | **MHDT** | 15 | 0.148 | 263 | 330 | 0.21 | 7.98E+00 | 1.76E-02 | 9.24E-05 | |
| | **HHDT** | 15 | 0.090 | 80 | 330 | 0.21 | 1.47E+00 | 3.24E-03 | 1.70E-05 | |
| | | | | | | | | | | 3.15E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 253 | 175 | 0.11 | 1.42E+00 | 3.13E-03 | 1.65E-05 | |
| | **LDT1** | 15 | 0.061 | 30 | 175 | 0.11 | 1.96E-01 | 4.31E-04 | 2.27E-06 | |
| | **LDT2** | 15 | 0.051 | 88 | 175 | 0.11 | 4.86E-01 | 1.07E-03 | 5.62E-06 | |
| | **MDT** | 15 | 0.051 | 70 | 175 | 0.11 | 3.85E-01 | 8.49E-04 | 4.46E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 175 | 0.11 | 1.82E-01 | 4.01E-04 | 2.11E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 175 | 0.11 | 2.18E-02 | 4.80E-05 | 2.52E-07 | |
| | **MHDT** | 15 | 0.148 | 5 | 175 | 0.11 | 7.75E-02 | 1.71E-04 | 8.97E-07 | |
| | **HHDT** | 15 | 0.090 | 1 | 175 | 0.11 | 1.19E-02 | 2.62E-05 | 1.37E-07 | 3.22E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 1.44E+02 | 3.16E-01 | 1.66E-03 | |
| | **LDT1** | | | 1602 | | | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | | | 4758 | | | 4.90E+01 | 1.08E-01 | 5.67E-04 | |
| | **MDT** | | | 3773 | | | 3.89E+01 | 8.56E-02 | 4.50E-04 | |
| | **LHDT1** | | | 696 | | | 1.25E+01 | 2.76E-02 | 1.45E-04 | |
| | **LHDT2** | | | 73 | | | 1.50E+00 | 3.30E-03 | 1.74E-05 | |
| | **MHDT** | | | 268 | | | 8.06E+00 | 1.78E-02 | 9.33E-05 | |
| | **HHDT** | | | 81 | | | 1.48E+00 | 3.27E-03 | 1.72E-05 | |
| | **Total** | | | 24913 | | | 2.75E+02 | 6.05E-01 | 3.18E-03 | 3.18E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 339 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **LHDT2** | 0.050 | 5 | 36 | 1.49E-01 | 3.28E-04 | 1.72E-06 | |
| | **MHDT** | 0.063 | 5 | 132 | 6.91E-01 | 1.52E-03 | 7.99E-06 | |
| | **HHDT** | 0.085 | 5 | 40 | 2.83E-01 | 6.23E-04 | 3.27E-06 | |
| | | | | 546 | 2.82E+00 | 6.20E-03 | 3.26E-05 | 3.26E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 9 | 4.71E-02 | 1.04E-04 | 5.45E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.13E-03 | 9.10E-06 | 4.78E-08 | |
| | **MHDT** | 0.063 | 5 | 2 | 1.26E-02 | 2.78E-05 | 1.46E-07 | |
| | **HHDT** | 0.085 | 5 | 1 | 4.30E-03 | 9.47E-06 | 4.98E-08 | |
| | | | | 13 | 6.81E-02 | 1.50E-04 | 7.89E-07 | 7.89E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 2.88E+00 | 6.35E-03 | 3.34E-05 | 3.34E-05 |

**World Logistics Center** **2012** **PM10** Based on PB Traffic Results 10/3/2013
**Project Only** **Phase 1 + 2** Rev 5 Without Mitigation With EMFAC2014
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.26E-02 | 2.81E-03 | 3.56E-02 | 5.10E-02 |
| 2 | 2.98E-02 | 6.59E-03 | 8.44E-02 | 1.21E-01 |
| 3 | 3.38E-02 | 7.78E-03 | 9.61E-02 | 1.38E-01 |
| 5 | 1.59E-03 | 2.99E-03 | 9.01E-03 | 1.36E-02 |
| 6 | 1.83E-02 | 4.66E-03 | 5.28E-02 | 7.58E-02 |
| 8 | 2.38E-03 | 5.01E-03 | 1.44E-02 | 2.18E-02 |
| 11 | 4.20E-05 | 1.26E-04 | 3.37E-04 | 5.05E-04 |
| 12 | 9.51E-05 | 1.95E-04 | 5.72E-04 | 8.62E-04 |
| 14 | 3.09E-03 | 1.14E-03 | 9.82E-03 | 1.40E-02 |
| 18 | 2.38E-03 | 7.83E-04 | 7.14E-03 | 1.03E-02 |
| 19 | 1.22E-02 | 2.66E-03 | 3.44E-02 | 4.93E-02 |
| 21 | 1.26E-02 | 5.04E-03 | 3.92E-02 | 5.68E-02 |
| 24 | 1.11E-02 | 5.34E-03 | 3.61E-02 | 5.26E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 4.05E-03 | 8.96E-04 | 1.15E-02 | 1.65E-02 |
| 30 | 1.77E-02 | 4.21E-03 | 5.11E-02 | 7.30E-02 |
| 31 | 1.76E-03 | 1.39E-03 | 6.77E-03 | 9.92E-03 |
| | | | Total | 7.04E-01 |

| ID | Arterial | From | To | 2012 With Project - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | Street A | Street F | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | 4,604 | 147 | 307 | 402 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM10** **Phase 1 + 2** Without Mitigation

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1100 | 0.2070 | 0.0580 | 0.0680 | 0.1320 | 0.1450 | 0.4620 | 0.4540 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.67E-06 | 8.75E-07 | 2.41E-07 | 5.47E-07 | 7.11E-05 | 2.66E-05 | 2.71E-03 | 9.79E-03 | 1.26E-02 |
| 2 | 1 | 2.20E-05 | 1.99E-06 | 5.50E-07 | 1.25E-06 | 2.40E-04 | 8.95E-05 | 6.26E-03 | 2.32E-02 | 2.98E-02 |
| 3 | 1 | 2.60E-05 | 2.35E-06 | 6.48E-07 | 1.47E-06 | 2.89E-04 | 1.08E-04 | 7.26E-03 | 2.61E-02 | 3.38E-02 |
| 5 | 1 | 1.11E-05 | 1.00E-06 | 2.77E-07 | 6.28E-07 | 5.96E-05 | 2.23E-05 | 1.34E-03 | 1.55E-04 | 1.59E-03 |
| 6 | 1 | 1.59E-05 | 1.44E-06 | 3.97E-07 | 9.02E-07 | 1.46E-04 | 5.45E-05 | 4.14E-03 | 1.40E-02 | 1.83E-02 |
| 8 | 1 | 1.86E-05 | 1.68E-06 | 4.64E-07 | 1.05E-06 | 1.03E-04 | 3.85E-05 | 2.22E-03 | 0.00E+00 | 2.38E-03 |
| 11 | 1 | 4.78E-07 | 4.33E-08 | 1.19E-08 | 2.71E-08 | 2.09E-06 | 7.79E-07 | 3.86E-05 | 0.00E+00 | 4.20E-05 |
| 12 | 1 | 7.05E-07 | 6.38E-08 | 1.76E-08 | 3.99E-08 | 6.04E-06 | 2.26E-06 | 8.60E-05 | 0.00E+00 | 9.51E-05 |
| 14 | 1 | 4.21E-06 | 3.81E-07 | 1.05E-07 | 2.38E-07 | 1.91E-05 | 7.12E-06 | 5.24E-04 | 2.53E-03 | 3.09E-03 |
| 18 | 1 | 2.60E-06 | 2.35E-07 | 6.48E-08 | 1.47E-07 | 3.57E-05 | 1.33E-05 | 6.42E-04 | 1.69E-03 | 2.38E-03 |
| 19 | 1 | 9.04E-06 | 8.18E-07 | 2.25E-07 | 5.11E-07 | 8.29E-05 | 3.10E-05 | 2.50E-03 | 9.55E-03 | 1.22E-02 |
| 21 | 1 | 1.79E-05 | 1.62E-06 | 4.47E-07 | 1.01E-06 | 1.25E-04 | 4.66E-05 | 3.65E-03 | 8.75E-03 | 1.26E-02 |
| 24 | 1 | 1.93E-05 | 1.75E-06 | 4.82E-07 | 1.09E-06 | 1.14E-04 | 4.27E-05 | 3.50E-03 | 7.41E-03 | 1.11E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.11E-06 | 2.81E-07 | 7.76E-08 | 1.76E-07 | 2.28E-05 | 8.52E-06 | 7.73E-04 | 3.24E-03 | 4.05E-03 |
| 30 | 1 | 1.47E-05 | 1.33E-06 | 3.67E-07 | 8.33E-07 | 1.13E-04 | 4.22E-05 | 3.23E-03 | 1.42E-02 | 1.77E-02 |
| 31 | 1 | 5.18E-06 | 4.69E-07 | 1.29E-07 | 2.93E-07 | 2.33E-05 | 8.69E-06 | 6.74E-04 | 1.05E-03 | 1.76E-03 |

**World Logistics Center** **2012** **PM10** **Phase 1 + 2** Without Mitigation

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35,138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 |
| 2 | 36,806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 |
| 3 | 13,319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 |
| 5 | 9,380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 |
| 6 | 16,641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 |
| 8 | 13,674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 |
| 14 | 2,566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 |
| 18 | 2,017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 |
| 19 | 4,585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 |
| 21 | 14,156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 |
| 24 | 9,401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5,463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 |
| 30 | 6,005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 |
| 31 | 5,460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0470 | 0.0510 | 0.0470 | 0.0470 | 0.0870 | 0.0990 | 0.1450 | 0.0870 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.36E-03 | 1.74E-04 | 4.75E-04 | 3.77E-04 | 1.52E-04 | 1.82E-05 | 2.05E-04 | 4.23E-05 | 2.81E-03 |
| 2 | 1 | 3.11E-03 | 3.96E-04 | 1.08E-03 | 8.59E-04 | 5.11E-04 | 6.13E-05 | 4.75E-04 | 1.00E-04 | 6.59E-03 |
| 3 | 1 | 3.67E-03 | 4.67E-04 | 1.28E-03 | 1.01E-03 | 6.17E-04 | 7.40E-05 | 5.51E-04 | 1.13E-04 | 7.78E-03 |
| 5 | 1 | 1.56E-03 | 1.99E-04 | 5.45E-04 | 4.32E-04 | 1.27E-04 | 1.52E-05 | 1.01E-04 | 6.71E-07 | 2.99E-03 |
| 6 | 1 | 2.25E-03 | 2.86E-04 | 7.83E-04 | 6.21E-04 | 3.11E-04 | 3.73E-05 | 3.14E-04 | 6.04E-05 | 4.66E-03 |
| 8 | 1 | 2.62E-03 | 3.34E-04 | 9.14E-04 | 7.25E-04 | 2.20E-04 | 2.63E-05 | 1.68E-04 | 0.00E+00 | 5.01E-03 |
| 11 | 1 | 6.74E-05 | 8.58E-06 | 2.35E-05 | 1.86E-05 | 4.45E-06 | 5.34E-07 | 2.92E-06 | 0.00E+00 | 1.26E-04 |
| 12 | 1 | 9.94E-05 | 1.26E-05 | 3.46E-05 | 2.75E-05 | 1.29E-05 | 1.55E-06 | 6.52E-06 | 0.00E+00 | 1.95E-04 |
| 14 | 1 | 5.93E-04 | 7.55E-05 | 2.07E-04 | 1.64E-04 | 4.06E-05 | 4.87E-06 | 3.97E-05 | 1.09E-05 | 1.14E-03 |
| 18 | 1 | 3.67E-04 | 4.66E-05 | 1.28E-04 | 1.01E-04 | 7.61E-05 | 9.13E-06 | 4.87E-05 | 7.31E-06 | 7.83E-04 |
| 19 | 1 | 1.27E-03 | 1.62E-04 | 4.44E-04 | 3.52E-04 | 1.77E-04 | 2.12E-05 | 1.90E-04 | 4.13E-05 | 2.66E-03 |
| 21 | 1 | 2.53E-03 | 3.22E-04 | 8.80E-04 | 6.98E-04 | 2.66E-04 | 3.19E-05 | 2.77E-04 | 3.79E-05 | 5.04E-03 |
| 24 | 1 | 2.72E-03 | 3.47E-04 | 9.49E-04 | 7.53E-04 | 2.44E-04 | 2.92E-05 | 2.66E-04 | 3.21E-05 | 5.34E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.39E-04 | 5.58E-05 | 1.53E-04 | 1.21E-04 | 4.86E-05 | 5.83E-06 | 5.86E-05 | 1.40E-05 | 8.96E-04 |
| 30 | 1 | 2.08E-03 | 2.64E-04 | 7.23E-04 | 5.73E-04 | 2.41E-04 | 2.89E-05 | 2.45E-04 | 6.16E-05 | 4.21E-03 |
| 31 | 1 | 7.31E-04 | 9.30E-05 | 2.55E-04 | 2.02E-04 | 4.96E-05 | 5.95E-06 | 5.11E-05 | 4.55E-06 | 1.39E-03 |

**World Logistics Center** **2012 Project Phases 1 + 2**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 21,539 | 4375 | 1,127 | 229 | 3,097 | 629 | 9,375 | 1904 | 7138 | 8.73 | 0.035 | 0.0009 | 6.8 | 3.56E-02 |
| 2 | A | 731 | 0.45 | 21,965 | 9974 | 1,698 | 771 | 3,202 | 1454 | 9,941 | 4514 | 16714 | 8.83 | 0.035 | 0.0010 | 16.1 | 8.44E-02 |
| 3 | A | 2352 | 1.46 | 8,051 | 11763 | 637 | 931 | 1,154 | 1686 | 3,477 | 5080 | 19460 | 8.64 | 0.035 | 0.0009 | 18.3 | 9.61E-02 |
| 5 | A | 953 | 0.59 | 8,480 | 5020 | 324 | 192 | 525 | 311 | 51 | 30 | 5553 | 2.90 | 0.035 | 0.0003 | 1.7 | 9.01E-03 |
| 6 | A | 1099 | 0.68 | 10,562 | 7211 | 688 | 470 | 1,408 | 961 | 3,983 | 2719 | 11361 | 8.14 | 0.035 | 0.0009 | 10.0 | 5.28E-02 |
| 8 | A | 1091 | 0.68 | 12,425 | 8421 | 489 | 331 | 760 | 515 | 0 | 0 | 9267 | 2.79 | 0.035 | 0.0003 | 2.7 | 1.44E-02 |
| 11 | A | 1201 | 0.75 | 290 | 216 | 9 | 7 | 12 | 9 | 0 | 0 | 232 | 2.60 | 0.035 | 0.0003 | 0.1 | 3.37E-04 |
| 12 | A | 824 | 0.51 | 623 | 319 | 38 | 19 | 39 | 20 | 0 | 0 | 358 | 2.86 | 0.035 | 0.0003 | 0.1 | 5.72E-04 |
| 14 | A | 1618 | 1.01 | 1,894 | 1904 | 61 | 61 | 121 | 122 | 490 | 493 | 2579 | 6.70 | 0.035 | 0.0007 | 1.9 | 9.82E-03 |
| 18 | A | 1412 | 0.88 | 1,341 | 1176 | 131 | 115 | 170 | 149 | 375 | 329 | 1769 | 7.09 | 0.035 | 0.0008 | 1.4 | 7.14E-03 |
| 19 | A | 2386 | 1.48 | 2,759 | 4089 | 180 | 267 | 392 | 581 | 1,254 | 1859 | 6796 | 8.87 | 0.035 | 0.0010 | 6.6 | 3.44E-02 |
| 21 | A | 1258 | 0.78 | 10,378 | 8110 | 514 | 402 | 1,085 | 848 | 2,179 | 1703 | 11063 | 6.25 | 0.035 | 0.0007 | 7.5 | 3.92E-02 |
| 24 | A | 1946 | 1.21 | 7,231 | 8741 | 304 | 367 | 673 | 814 | 1,193 | 1442 | 11365 | 5.61 | 0.035 | 0.0006 | 6.9 | 3.61E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 3,357 | 1408 | 175 | 73 | 428 | 179 | 1,503 | 630 | 2291 | 8.81 | 0.035 | 0.0010 | 2.2 | 1.15E-02 |
| 30 | A | 2827 | 1.76 | 3,792 | 6659 | 207 | 364 | 427 | 750 | 1,579 | 2773 | 10546 | 8.49 | 0.035 | 0.0009 | 9.7 | 5.11E-02 |
| 31 | A | 820 | 0.51 | 4,604 | 2345 | 147 | 75 | 307 | 156 | 402 | 205 | 2781 | 4.32 | 0.035 | 0.0005 | 1.3 | 6.77E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.03E-02 | 4.12E-03 |
| Light Logistics | Phase 1 | 1.98E-05 | 9.48E-06 |
| Utilities Service Station | Phase 1 | 1.44E-05 | 8.63E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.51E-05 | 2.40E-06 |
| Convenience Store | Phase 1 | 3.95E-05 | 3.96E-06 |
| Fire Station | Phase 1 | 2.03E-08 | 2.55E-06 |
| Total | | 1.04E-02 | 4.15E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.25E-03 | 4.25E-05 |
| Light Logistics | Phase 1 | 1.21E-05 | 2.32E-07 |
| Utilities Service Station | Phase 1 | 1.66E-05 | 6.37E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.02E-05 | 2.59E-07 |
| Convenience Store | Phase 1 | 7.91E-05 | 4.09E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.41E-03 | 4.40E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.04E-02 | 4.15E-03 | |
| | Idling Emissions (g/sec) | 3.41E-03 | 4.40E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.38E-02 | 4.19E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.38E-02 | 5.53E-03 | 1.93E-02 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 4.13E-09 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.206 | 53 | 330 | 0.21 | 2.24E+00 | 4.94E-03 | 2.59E-05 | |
| | **LDT1** | 15 | 0.403 | 3 | 330 | 0.21 | 2.11E-01 | 4.65E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.074 | 3 | 330 | 0.21 | 3.80E-02 | 8.37E-05 | 4.40E-07 | |
| | **MDT** | 15 | 0.096 | 5 | 330 | 0.21 | 9.55E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.160 | 274 | 330 | 0.21 | 9.01E+00 | 1.98E-02 | 1.04E-04 | |
| | **LHDT2** | 15 | 0.173 | 93 | 330 | 0.21 | 3.31E+00 | 7.28E-03 | 3.83E-05 | |
| | **MHDT** | 15 | 0.710 | 1425 | 330 | 0.21 | 2.08E+02 | 4.57E-01 | 2.40E-03 | |
| | **HHDT** | 15 | 0.703 | 4628 | 330 | 0.21 | 6.67E+02 | 1.47E+00 | 7.72E-03 | |
| | | | | | | | | | | 1.03E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.206 | 0 | 175 | 0.11 | 5.05E-03 | 1.11E-05 | 5.84E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 175 | 0.11 | 4.75E-04 | 1.05E-06 | 5.50E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 175 | 0.11 | 8.56E-05 | 1.88E-07 | 9.90E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 175 | 0.11 | 2.15E-04 | 4.74E-07 | 2.49E-09 | |
| | **LHDT1** | 15 | 0.160 | 2 | 175 | 0.11 | 2.99E-02 | 6.58E-05 | 3.46E-07 | |
| | **LHDT2** | 15 | 0.173 | 1 | 175 | 0.11 | 1.10E-02 | 2.42E-05 | 1.27E-07 | |
| | **MHDT** | 15 | 0.710 | 6 | 175 | 0.11 | 4.53E-01 | 9.99E-04 | 5.25E-06 | |
| | **HHDT** | 15 | 0.703 | 16 | 175 | 0.11 | 1.21E+00 | 2.67E-03 | 1.40E-05 | 1.98E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.206 | 0 | 100 | 0.06 | 4.25E-03 | 9.37E-06 | 4.92E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 100 | 0.06 | 4.00E-04 | 8.82E-07 | 4.63E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 100 | 0.06 | 7.21E-05 | 1.59E-07 | 8.34E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 100 | 0.06 | 1.81E-04 | 3.99E-07 | 2.10E-09 | |
| | **LHDT1** | 15 | 0.160 | 6 | 100 | 0.06 | 5.70E-02 | 1.26E-04 | 6.60E-07 | |
| | **LHDT2** | 15 | 0.173 | 2 | 100 | 0.06 | 2.09E-02 | 4.61E-05 | 2.42E-07 | |
| | **MHDT** | 15 | 0.710 | 5 | 100 | 0.06 | 2.14E-01 | 4.72E-04 | 2.48E-06 | |
| | **HHDT** | 15 | 0.703 | 22 | 100 | 0.06 | 9.43E-01 | 2.08E-03 | 1.09E-05 | 1.44E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.23E-03 | 2.71E-06 | 1.43E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.16E-04 | 2.55E-07 | 1.34E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.09E-05 | 4.60E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 5.24E-05 | 1.16E-07 | 6.07E-10 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 3.99E-03 | 8.80E-06 | 4.62E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 1.47E-03 | 3.23E-06 | 1.70E-08 | |
| | **MHDT** | 15 | 0.710 | 14 | 50 | 0.03 | 3.04E-01 | 6.69E-04 | 3.51E-06 | |
| | **HHDT** | 15 | 0.703 | 85 | 50 | 0.03 | 1.86E+00 | 4.09E-03 | 2.15E-05 | 2.51E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 2.04E-03 | 4.50E-06 | 2.36E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 2.22E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 3.46E-05 | 7.62E-08 | 4.00E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 8.70E-05 | 1.92E-07 | 1.01E-09 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 6.10E-03 | 1.34E-05 | 7.06E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 2.24E-03 | 4.93E-06 | 2.59E-08 | |
| | **MHDT** | 15 | 0.710 | 23 | 50 | 0.03 | 4.97E-01 | 1.09E-03 | 5.75E-06 | |
| | **HHDT** | 15 | 0.703 | 133 | 50 | 0.03 | 2.90E+00 | 6.39E-03 | 3.36E-05 | 3.95E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.52E-03 | 3.35E-06 | 1.76E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.43E-04 | 3.15E-07 | 1.66E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.57E-05 | 5.67E-08 | 2.98E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 6.47E-05 | 1.43E-07 | 7.49E-10 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.26E+00 | 4.97E-03 | 2.61E-05 | |
| | **LDT1** | | | 3 | | | 2.12E-01 | 4.68E-04 | 2.46E-06 | |
| | **LDT2** | | | 3 | | | 3.82E-02 | 8.42E-05 | 4.42E-07 | |
| | **MDT** | | | 5 | | | 9.61E-02 | 2.12E-04 | 1.11E-06 | |
| | **LHDT1** | | | 283 | | | 9.10E+00 | 2.00E-02 | 1.05E-04 | |
| | **LHDT2** | | | 96 | | | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | **MHDT** | | | 1472 | | | 2.09E+02 | 4.60E-01 | 2.42E-03 | |
| | **HHDT** | | | 4883 | | | 6.74E+02 | 1.48E+00 | 7.80E-03 | |
| | **Total** | | | 6800 | | | 8.98E+02 | 1.98E+00 | 1.04E-02 | 1.04E-02 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 137 | 9.69E+00 | 2.13E-02 | 1.12E-04 | |
| | **LHDT2** | 0.853 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 1.184 | 5 | 713 | 7.03E+01 | 1.55E-01 | 8.14E-04 | |
| | **HHDT** | 1.023 | 5 | 2314 | 1.97E+02 | 4.34E-01 | 2.28E-03 | |
| | | | | 3210 | 2.81E+02 | 6.18E-01 | 3.25E-03 | 3.25E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 1 | 6.06E-02 | 1.33E-04 | 7.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.40E-07 | |
| | **MHDT** | 1.184 | 5 | 3 | 2.90E-01 | 6.38E-04 | 3.35E-06 | |
| | **HHDT** | 1.023 | 5 | 8 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | | | | 12 | 1.05E+00 | 2.30E-03 | 1.21E-05 | 1.21E-05 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 3 | 2.02E-01 | 4.46E-04 | 2.34E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 6.91E-02 | 1.52E-04 | 8.00E-07 | |
| | **MHDT** | 1.184 | 5 | 2 | 2.39E-01 | 5.27E-04 | 2.77E-06 | |
| | **HHDT** | 1.023 | 5 | 11 | 9.21E-01 | 2.03E-03 | 1.07E-05 | |
| | | | | 17 | 1.43E+00 | 3.15E-03 | 1.66E-05 | 1.66E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 2.84E-02 | 6.25E-05 | 3.28E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 9.69E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 1.184 | 5 | 7 | 6.79E-01 | 1.50E-03 | 7.86E-06 | |
| | **HHDT** | 1.023 | 5 | 43 | 3.62E+00 | 7.98E-03 | 4.19E-05 | |
| | | | | 50 | 4.34E+00 | 9.56E-03 | 5.02E-05 | 5.02E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 1 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 1.184 | 5 | 11 | 1.11E+00 | 2.45E-03 | 1.29E-05 | |
| | **HHDT** | 1.023 | 5 | 66 | 5.67E+00 | 1.25E-02 | 6.56E-05 | |
| | | | | 79 | 6.84E+00 | 1.51E-02 | 7.91E-05 | 7.91E-05 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 2.94E+02 | 6.48E-01 | 3.41E-03 | 3.41E-03 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 17546 | 330 | 0.21 | 1.86E+02 | 4.10E-01 | 2.15E-03 | |
| | **LDT1** | 15 | 0.061 | 2058 | 330 | 0.21 | 2.56E+01 | 5.64E-02 | 2.96E-04 | |
| | **LDT2** | 15 | 0.051 | 6111 | 330 | 0.21 | 6.35E+01 | 1.40E-01 | 7.35E-04 | |
| | **MDT** | 15 | 0.051 | 4846 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.83E-04 | |
| | **LHDT1** | 15 | 0.089 | 886 | 330 | 0.21 | 1.62E+01 | 3.56E-02 | 1.87E-04 | |
| | **LHDT2** | 15 | 0.101 | 93 | 330 | 0.21 | 1.93E+00 | 4.26E-03 | 2.24E-05 | |
| | **MHDT** | 15 | 0.148 | 344 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 1.21E-04 | |
| | **HHDT** | 15 | 0.090 | 104 | 330 | 0.21 | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | | | | | | | | | | 4.12E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 75 | 175 | 0.11 | 4.19E-01 | 9.23E-04 | 4.85E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 175 | 0.11 | 5.77E-02 | 1.27E-04 | 6.67E-07 | |
| | **LDT2** | 15 | 0.051 | 26 | 175 | 0.11 | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.051 | 21 | 175 | 0.11 | 1.13E-01 | 2.50E-04 | 1.31E-06 | |
| | **LHDT1** | 15 | 0.089 | 6 | 175 | 0.11 | 5.36E-02 | 1.18E-04 | 6.21E-07 | |
| | **LHDT2** | 15 | 0.101 | 1 | 175 | 0.11 | 6.41E-03 | 1.41E-05 | 7.42E-08 | |
| | **MHDT** | 15 | 0.148 | 1 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 175 | 0.11 | 3.50E-03 | 7.71E-06 | 4.05E-08 | 9.48E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 110 | 100 | 0.06 | 3.53E-01 | 7.77E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.061 | 13 | 100 | 0.06 | 4.86E-02 | 1.07E-04 | 5.62E-07 | |
| | **LDT2** | 15 | 0.051 | 38 | 100 | 0.06 | 1.21E-01 | 2.65E-04 | 1.39E-06 | |
| | **MDT** | 15 | 0.051 | 30 | 100 | 0.06 | 9.56E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 100 | 0.06 | 1.22E-02 | 2.70E-05 | 1.42E-07 | |
| | **MHDT** | 15 | 0.148 | 1 | 100 | 0.06 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 2.73E-03 | 6.01E-06 | 3.16E-08 | 8.63E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 64 | 50 | 0.03 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LDT1** | 15 | 0.061 | 7 | 50 | 0.03 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **LDT2** | 15 | 0.051 | 22 | 50 | 0.03 | 3.49E-02 | 7.69E-05 | 4.04E-07 | |
| | **MDT** | 15 | 0.051 | 18 | 50 | 0.03 | 2.77E-02 | 6.09E-05 | 3.20E-07 | |
| | **LHDT1** | 15 | 0.089 | 3 | 50 | 0.03 | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 8.58E-04 | 1.89E-06 | 9.93E-09 | |
| | **MHDT** | 15 | 0.148 | 3 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **HHDT** | 15 | 0.090 | 2 | 50 | 0.03 | 5.37E-03 | 1.18E-05 | 6.21E-08 | 2.40E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 105 | 50 | 0.03 | 1.69E-01 | 3.73E-04 | 1.96E-06 | |
| | **LDT1** | 15 | 0.061 | 12 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **LDT2** | 15 | 0.051 | 37 | 50 | 0.03 | 5.78E-02 | 1.27E-04 | 6.70E-07 | |
| | **MDT** | 15 | 0.051 | 29 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LHDT1** | 15 | 0.089 | 4 | 50 | 0.03 | 1.09E-02 | 2.41E-05 | 1.27E-07 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 1.31E-03 | 2.88E-06 | 1.52E-08 | |
| | **MHDT** | 15 | 0.148 | 5 | 50 | 0.03 | 2.50E-02 | 5.51E-05 | 2.90E-07 | |
| | **HHDT** | 15 | 0.090 | 3 | 50 | 0.03 | 8.39E-03 | 1.85E-05 | 9.71E-08 | 3.96E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 78 | 50 | 0.03 | 1.26E-01 | 2.78E-04 | 1.46E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 50 | 0.03 | 1.74E-02 | 3.82E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.051 | 27 | 50 | 0.03 | 4.31E-02 | 9.48E-05 | 4.98E-07 | |
| | **MDT** | 15 | 0.051 | 22 | 50 | 0.03 | 3.41E-02 | 7.52E-05 | 3.95E-07 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.87E+02 | 4.12E-01 | 2.17E-03 | |
| | **LDT1** | | | 2108 | | | 2.58E+01 | 5.67E-02 | 2.98E-04 | |
| | **LDT2** | | | 6262 | | | 6.39E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | | | 4966 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | | | 917 | | | 1.63E+01 | 3.60E-02 | 1.89E-04 | |
| | **LHDT2** | | | 97 | | | 1.95E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | | | 356 | | | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | **HHDT** | | | 110 | | | 1.95E+00 | 4.29E-03 | 2.25E-05 | |
| | **Total** | | | 32792 | | | 3.58E+02 | 7.89E-01 | 4.15E-03 | 4.15E-03 |

**Non=Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 443 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **LHDT2** | 0.050 | 5 | 47 | 1.95E-01 | 4.29E-04 | 2.25E-06 | |
| | **MHDT** | 0.063 | 5 | 172 | 9.04E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 0.082 | 5 | 52 | 3.57E-01 | 7.86E-04 | 4.13E-06 | |
| | | | | 714 | 3.67E+00 | 8.09E-03 | 4.25E-05 | 4.25E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 3 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 1.22E-03 | 2.68E-06 | 1.41E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.72E-03 | 8.20E-06 | 4.31E-08 | |
| | **HHDT** | 0.082 | 5 | 0 | 1.22E-03 | 2.69E-06 | 1.41E-08 | |
| | | | | 4 | 2.00E-02 | 4.41E-05 | 2.32E-07 | 2.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 9 | 4.63E-02 | 1.02E-04 | 5.35E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.06E-03 | 8.95E-06 | 4.70E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **HHDT** | 0.082 | 5 | 0 | 1.67E-03 | 3.67E-06 | 1.93E-08 | |
| | | | | 11 | 5.51E-02 | 1.21E-04 | 6.37E-07 | 6.37E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 1 | 6.49E-03 | 1.43E-05 | 7.51E-08 | |
| | **LHDT2** | 0.050 | 5 | 0 | 5.70E-04 | 1.25E-06 | 6.59E-09 | |
| | **MHDT** | 0.063 | 5 | 2 | 8.72E-03 | 1.92E-05 | 1.01E-07 | |
| | **HHDT** | 0.082 | 5 | 1 | 6.56E-03 | 1.44E-05 | 7.59E-08 | |
| | | | | 4 | 2.23E-02 | 4.92E-05 | 2.59E-07 | 2.59E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 2 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 8.70E-04 | 1.92E-06 | 1.01E-08 | |
| | **MHDT** | 0.063 | 5 | 3 | 1.43E-02 | 3.15E-05 | 1.65E-07 | |
| | **HHDT** | 0.082 | 5 | 2 | 1.03E-02 | 2.26E-05 | 1.19E-07 | |
| | | | | 6 | 3.53E-02 | 7.78E-05 | 4.09E-07 | 4.09E-07 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.082 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.80E+00 | 8.38E-03 | 4.40E-05 | 4.40E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 7.87E-03 | 3.15E-03 |
| Light Logistics | Phase 2 | 6.72E-05 | 3.22E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 7.93E-03 | 3.18E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.48E-03 | 3.26E-05 |
| Light Logistics | Phase 2 | 4.11E-05 | 7.89E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.52E-03 | 3.34E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.93E-03 | 3.18E-03 | |
| | Idling Emissions (g/sec) | 2.52E-03 | 3.34E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.05E-02 | 3.21E-03 | 1.37E-02 |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.54E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.57E-03 | |
| | Total Other Onsite Emissions (g/sec) | | 3.02E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.05E-02 | 6.24E-03 | 1.67E-02 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 3.24E-09 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** PM10

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.206 | 41 | 330 | 0.21 | 1.71E+00 | 3.77E-03 | 1.98E-05 | |
| | LDT1 | 15 | 0.403 | 2 | 330 | 0.21 | 1.61E-01 | 3.55E-04 | 1.87E-06 | |
| | LDT2 | 15 | 0.074 | 2 | 330 | 0.21 | 2.90E-02 | 6.39E-05 | 3.36E-07 | |
| | MDT | 15 | 0.096 | 4 | 330 | 0.21 | 7.30E-02 | 1.61E-04 | 8.44E-07 | |
| | LHDT1 | 15 | 0.160 | 209 | 330 | 0.21 | 6.88E+00 | 1.52E-02 | 7.97E-05 | |
| | LHDT2 | 15 | 0.173 | 71 | 330 | 0.21 | 2.53E+00 | 5.57E-03 | 2.92E-05 | |
| | MHDT | 15 | 0.710 | 1089 | 330 | 0.21 | 1.59E+02 | 3.49E-01 | 1.84E-03 | |
| | HHDT | 15 | 0.703 | 3536 | 330 | 0.21 | 5.10E+02 | 1.12E+00 | 5.90E-03 | |
| | | | | | | | | | | 7.87E-03 |
| Travel at Light Logistics | LDA | 15 | 0.206 | 1 | 175 | 0.11 | 1.71E-02 | 3.78E-05 | 1.98E-07 | |
| | LDT1 | 15 | 0.403 | 0 | 175 | 0.11 | 1.61E-03 | 3.55E-06 | 1.87E-08 | |
| | LDT2 | 15 | 0.074 | 0 | 175 | 0.11 | 2.91E-04 | 6.40E-07 | 3.36E-09 | |
| | MDT | 15 | 0.096 | 0 | 175 | 0.11 | 7.30E-04 | 1.61E-06 | 8.45E-09 | |
| | LHDT1 | 15 | 0.160 | 6 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 1.17E-06 | |
| | LHDT2 | 15 | 0.173 | 2 | 175 | 0.11 | 3.72E-02 | 8.20E-05 | 4.31E-07 | |
| | MHDT | 15 | 0.710 | 20 | 175 | 0.11 | 1.54E+00 | 3.39E-03 | 1.78E-05 | |
| | HHDT | 15 | 0.703 | 54 | 175 | 0.11 | 4.11E+00 | 9.05E-03 | 4.76E-05 | 6.72E-05 |
| Travel at Utility | LDA | 15 | 0.206 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.710 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.703 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 41 | | | 1.73E+00 | 3.81E-03 | 2.00E-05 | |
| | LDT1 | | | 2 | | | 1.63E-01 | 3.59E-04 | 1.89E-06 | |
| | LDT2 | | | 2 | | | 2.93E-02 | 6.46E-05 | 3.39E-07 | |
| | MDT | | | 4 | | | 7.37E-02 | 1.62E-04 | 8.53E-07 | |
| | LHDT1 | | | 215 | | | 6.98E+00 | 1.54E-02 | 8.08E-05 | |
| | LHDT2 | | | 73 | | | 2.56E+00 | 5.65E-03 | 2.97E-05 | |
| | MHDT | | | 1109 | | | 1.60E+02 | 3.53E-01 | 1.85E-03 | |
| | HHDT | | | 3590 | | | 5.14E+02 | 1.13E+00 | 5.95E-03 | |
| | Total | | | 5037 | | | 6.85E+02 | 1.51E+00 | 7.93E-03 | 7.93E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 105 | 7.40E+00 | 1.63E-02 | 8.57E-05 | |
| | **LHDT2** | 0.853 | 5 | 36 | 2.53E+00 | 5.57E-03 | 2.93E-05 | |
| | **MHDT** | 1.184 | 5 | 545 | 5.37E+01 | 1.18E-01 | 6.22E-04 | |
| | **HHDT** | 1.023 | 5 | 1768 | 1.51E+02 | 3.32E-01 | 1.74E-03 | |
| | | | | 2453 | 2.14E+02 | 4.72E-01 | 2.48E-03 | 2.48E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 3 | 2.06E-01 | 4.53E-04 | 2.38E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 7.03E-02 | 1.55E-04 | 8.14E-07 | |
| | **MHDT** | 1.184 | 5 | 10 | 9.83E-01 | 2.17E-03 | 1.14E-05 | |
| | **HHDT** | 1.023 | 5 | 27 | 2.29E+00 | 5.05E-03 | 2.65E-05 | |
| | | | | 41 | 3.55E+00 | 7.82E-03 | 4.11E-05 | 4.11E-05 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.184 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.023 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 2.18E+02 | 4.80E-01 | 2.52E-03 | 2.52E-03 |

**World Logistics Center** **2012** **Phase 2** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 13408 | 330 | 0.21 | 1.42E+02 | 3.13E-01 | 1.64E-03 | |
| | **LDT1** | 15 | 0.061 | 1572 | 330 | 0.21 | 1.96E+01 | 4.31E-02 | 2.26E-04 | |
| | **LDT2** | 15 | 0.051 | 4670 | 330 | 0.21 | 4.85E+01 | 1.07E-01 | 5.62E-04 | |
| | **MDT** | 15 | 0.051 | 3703 | 330 | 0.21 | 3.85E+01 | 8.48E-02 | 4.46E-04 | |
| | **LHDT1** | 15 | 0.089 | 677 | 330 | 0.21 | 1.24E+01 | 2.72E-02 | 1.43E-04 | |
| | **LHDT2** | 15 | 0.101 | 71 | 330 | 0.21 | 1.48E+00 | 3.25E-03 | 1.71E-05 | |
| | **MHDT** | 15 | 0.148 | 263 | 330 | 0.21 | 7.98E+00 | 1.76E-02 | 9.24E-05 | |
| | **HHDT** | 15 | 0.090 | 80 | 330 | 0.21 | 1.47E+00 | 3.24E-03 | 1.70E-05 | |
| | | | | | | | | | | 3.15E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 253 | 175 | 0.11 | 1.42E+00 | 3.13E-03 | 1.65E-05 | |
| | **LDT1** | 15 | 0.061 | 30 | 175 | 0.11 | 1.96E-01 | 4.31E-04 | 2.27E-06 | |
| | **LDT2** | 15 | 0.051 | 88 | 175 | 0.11 | 4.86E-01 | 1.07E-03 | 5.62E-06 | |
| | **MDT** | 15 | 0.051 | 70 | 175 | 0.11 | 3.85E-01 | 8.49E-04 | 4.46E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 175 | 0.11 | 1.82E-01 | 4.01E-04 | 2.11E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 175 | 0.11 | 2.18E-02 | 4.80E-05 | 2.52E-07 | |
| | **MHDT** | 15 | 0.148 | 5 | 175 | 0.11 | 7.75E-02 | 1.71E-04 | 8.97E-07 | |
| | **HHDT** | 15 | 0.090 | 1 | 175 | 0.11 | 1.19E-02 | 2.62E-05 | 1.37E-07 | 3.22E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 1.44E+02 | 3.16E-01 | 1.66E-03 | |
| | **LDT1** | | | 1602 | | | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | | | 4758 | | | 4.90E+01 | 1.08E-01 | 5.67E-04 | |
| | **MDT** | | | 3773 | | | 3.89E+01 | 8.56E-02 | 4.50E-04 | |
| | **LHDT1** | | | 696 | | | 1.25E+01 | 2.76E-02 | 1.45E-04 | |
| | **LHDT2** | | | 73 | | | 1.50E+00 | 3.30E-03 | 1.74E-05 | |
| | **MHDT** | | | 268 | | | 8.06E+00 | 1.78E-02 | 9.33E-05 | |
| | **HHDT** | | | 81 | | | 1.48E+00 | 3.27E-03 | 1.72E-05 | |
| | **Total** | | | 24913 | | | 2.75E+02 | 6.05E-01 | 3.18E-03 | 3.18E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 339 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **LHDT2** | 0.050 | 5 | 36 | 1.49E-01 | 3.28E-04 | 1.72E-06 | |
| | **MHDT** | 0.063 | 5 | 132 | 6.91E-01 | 1.52E-03 | 7.99E-06 | |
| | **HHDT** | 0.085 | 5 | 40 | 2.83E-01 | 6.23E-04 | 3.27E-06 | |
| | | | | 546 | 2.82E+00 | 6.20E-03 | 3.26E-05 | 3.26E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 9 | 4.71E-02 | 1.04E-04 | 5.45E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.13E-03 | 9.10E-06 | 4.78E-08 | |
| | **MHDT** | 0.063 | 5 | 2 | 1.26E-02 | 2.78E-05 | 1.46E-07 | |
| | **HHDT** | 0.085 | 5 | 1 | 4.30E-03 | 9.47E-06 | 4.98E-08 | |
| | | | | 13 | 6.81E-02 | 1.50E-04 | 7.89E-07 | 7.89E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.085 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 2.88E+00 | 6.35E-03 | 3.34E-05 | 3.34E-05 |

**World Logistics Center** **2012** **PM10** Based on PB Traffic Results 10/3/2013
**Project Only** **Phase 1 + 2** Rev 5 Without Mitigation With EMFAC2014
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.26E-02 | 2.81E-03 | 3.56E-02 | 5.10E-02 |
| 2 | 2.98E-02 | 6.59E-03 | 8.44E-02 | 1.21E-01 |
| 3 | 3.38E-02 | 7.78E-03 | 9.61E-02 | 1.38E-01 |
| 5 | 1.59E-03 | 2.99E-03 | 9.01E-03 | 1.36E-02 |
| 6 | 1.83E-02 | 4.66E-03 | 5.28E-02 | 7.58E-02 |
| 8 | 2.38E-03 | 5.01E-03 | 1.44E-02 | 2.18E-02 |
| 11 | 4.20E-05 | 1.26E-04 | 3.37E-04 | 5.05E-04 |
| 12 | 9.51E-05 | 1.95E-04 | 5.72E-04 | 8.62E-04 |
| 14 | 3.09E-03 | 1.14E-03 | 9.82E-03 | 1.40E-02 |
| 18 | 2.38E-03 | 7.83E-04 | 7.14E-03 | 1.03E-02 |
| 19 | 1.22E-02 | 2.66E-03 | 3.44E-02 | 4.93E-02 |
| 21 | 1.26E-02 | 5.04E-03 | 3.92E-02 | 5.68E-02 |
| 24 | 1.11E-02 | 5.34E-03 | 3.61E-02 | 5.26E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 4.05E-03 | 8.96E-04 | 1.15E-02 | 1.65E-02 |
| 30 | 1.77E-02 | 4.21E-03 | 5.11E-02 | 7.30E-02 |
| 31 | 1.76E-03 | 1.39E-03 | 6.77E-03 | 9.92E-03 |
| | | | Total | 7.04E-01 |

| ID | Arterial | From | To | 2012 With Project - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | Street A | Street F | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | 4,604 | 147 | 307 | 402 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM10** **Phase 1 + 2** Without Mitigation

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1100 | 0.2070 | 0.0580 | 0.0680 | 0.1320 | 0.1450 | 0.4620 | 0.4540 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.67E-06 | 8.75E-07 | 2.41E-07 | 5.47E-07 | 7.11E-05 | 2.66E-05 | 2.71E-03 | 9.79E-03 | 1.26E-02 |
| 2 | 1 | 2.20E-05 | 1.99E-06 | 5.50E-07 | 1.25E-06 | 2.40E-04 | 8.95E-05 | 6.26E-03 | 2.32E-02 | 2.98E-02 |
| 3 | 1 | 2.60E-05 | 2.35E-06 | 6.48E-07 | 1.47E-06 | 2.89E-04 | 1.08E-04 | 7.26E-03 | 2.61E-02 | 3.38E-02 |
| 5 | 1 | 1.11E-05 | 1.00E-06 | 2.77E-07 | 6.28E-07 | 5.96E-05 | 2.23E-05 | 1.34E-03 | 1.55E-04 | 1.59E-03 |
| 6 | 1 | 1.59E-05 | 1.44E-06 | 3.97E-07 | 9.02E-07 | 1.46E-04 | 5.45E-05 | 4.14E-03 | 1.40E-02 | 1.83E-02 |
| 8 | 1 | 1.86E-05 | 1.68E-06 | 4.64E-07 | 1.05E-06 | 1.03E-04 | 3.85E-05 | 2.22E-03 | 0.00E+00 | 2.38E-03 |
| 11 | 1 | 4.78E-07 | 4.33E-08 | 1.19E-08 | 2.71E-08 | 2.09E-06 | 7.79E-07 | 3.86E-05 | 0.00E+00 | 4.20E-05 |
| 12 | 1 | 7.05E-07 | 6.38E-08 | 1.76E-08 | 3.99E-08 | 6.04E-06 | 2.26E-06 | 8.60E-05 | 0.00E+00 | 9.51E-05 |
| 14 | 1 | 4.21E-06 | 3.81E-07 | 1.05E-07 | 2.38E-07 | 1.91E-05 | 7.12E-06 | 5.24E-04 | 2.53E-03 | 3.09E-03 |
| 18 | 1 | 2.60E-06 | 2.35E-07 | 6.48E-08 | 1.47E-07 | 3.57E-05 | 1.33E-05 | 6.42E-04 | 1.69E-03 | 2.38E-03 |
| 19 | 1 | 9.04E-06 | 8.18E-07 | 2.25E-07 | 5.11E-07 | 8.29E-05 | 3.10E-05 | 2.50E-03 | 9.55E-03 | 1.22E-02 |
| 21 | 1 | 1.79E-05 | 1.62E-06 | 4.47E-07 | 1.01E-06 | 1.25E-04 | 4.66E-05 | 3.65E-03 | 8.75E-03 | 1.26E-02 |
| 24 | 1 | 1.93E-05 | 1.75E-06 | 4.82E-07 | 1.09E-06 | 1.14E-04 | 4.27E-05 | 3.50E-03 | 7.41E-03 | 1.11E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.11E-06 | 2.81E-07 | 7.76E-08 | 1.76E-07 | 2.28E-05 | 8.52E-06 | 7.73E-04 | 3.24E-03 | 4.05E-03 |
| 30 | 1 | 1.47E-05 | 1.33E-06 | 3.67E-07 | 8.33E-07 | 1.13E-04 | 4.22E-05 | 3.23E-03 | 1.42E-02 | 1.77E-02 |
| 31 | 1 | 5.18E-06 | 4.69E-07 | 1.29E-07 | 2.93E-07 | 2.33E-05 | 8.69E-06 | 6.74E-04 | 1.05E-03 | 1.76E-03 |

**World Logistics Center** **2012** **PM10** **Phase 1 + 2** Without Mitigation

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35,138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 |
| 2 | 36,806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 |
| 3 | 13,319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 |
| 5 | 9,380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 |
| 6 | 16,641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 |
| 8 | 13,674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 |
| 14 | 2,566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 |
| 18 | 2,017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 |
| 19 | 4,585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 |
| 21 | 14,156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 |
| 24 | 9,401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5,463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 |
| 30 | 6,005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 |
| 31 | 5,460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0470 | 0.0510 | 0.0470 | 0.0470 | 0.0870 | 0.0990 | 0.1450 | 0.0870 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.36E-03 | 1.74E-04 | 4.75E-04 | 3.77E-04 | 1.52E-04 | 1.82E-05 | 2.05E-04 | 4.23E-05 | 2.81E-03 |
| 2 | 1 | 3.11E-03 | 3.96E-04 | 1.08E-03 | 8.59E-04 | 5.11E-04 | 6.13E-05 | 4.75E-04 | 1.00E-04 | 6.59E-03 |
| 3 | 1 | 3.67E-03 | 4.67E-04 | 1.28E-03 | 1.01E-03 | 6.17E-04 | 7.40E-05 | 5.51E-04 | 1.13E-04 | 7.78E-03 |
| 5 | 1 | 1.56E-03 | 1.99E-04 | 5.45E-04 | 4.32E-04 | 1.27E-04 | 1.52E-05 | 1.01E-04 | 6.71E-07 | 2.99E-03 |
| 6 | 1 | 2.25E-03 | 2.86E-04 | 7.83E-04 | 6.21E-04 | 3.11E-04 | 3.73E-05 | 3.14E-04 | 6.04E-05 | 4.66E-03 |
| 8 | 1 | 2.62E-03 | 3.34E-04 | 9.14E-04 | 7.25E-04 | 2.20E-04 | 2.63E-05 | 1.68E-04 | 0.00E+00 | 5.01E-03 |
| 11 | 1 | 6.74E-05 | 8.58E-06 | 2.35E-05 | 1.86E-05 | 4.45E-06 | 5.34E-07 | 2.92E-06 | 0.00E+00 | 1.26E-04 |
| 12 | 1 | 9.94E-05 | 1.26E-05 | 3.46E-05 | 2.75E-05 | 1.29E-05 | 1.55E-06 | 6.52E-06 | 0.00E+00 | 1.95E-04 |
| 14 | 1 | 5.93E-04 | 7.55E-05 | 2.07E-04 | 1.64E-04 | 4.06E-05 | 4.87E-06 | 3.97E-05 | 1.09E-05 | 1.14E-03 |
| 18 | 1 | 3.67E-04 | 4.66E-05 | 1.28E-04 | 1.01E-04 | 7.61E-05 | 9.13E-06 | 4.87E-05 | 7.31E-06 | 7.83E-04 |
| 19 | 1 | 1.27E-03 | 1.62E-04 | 4.44E-04 | 3.52E-04 | 1.77E-04 | 2.12E-05 | 1.90E-04 | 4.13E-05 | 2.66E-03 |
| 21 | 1 | 2.53E-03 | 3.22E-04 | 8.80E-04 | 6.98E-04 | 2.66E-04 | 3.19E-05 | 2.77E-04 | 3.79E-05 | 5.04E-03 |
| 24 | 1 | 2.72E-03 | 3.47E-04 | 9.49E-04 | 7.53E-04 | 2.44E-04 | 2.92E-05 | 2.66E-04 | 3.21E-05 | 5.34E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.39E-04 | 5.58E-05 | 1.53E-04 | 1.21E-04 | 4.86E-05 | 5.83E-06 | 5.86E-05 | 1.40E-05 | 8.96E-04 |
| 30 | 1 | 2.08E-03 | 2.64E-04 | 7.23E-04 | 5.73E-04 | 2.41E-04 | 2.89E-05 | 2.45E-04 | 6.16E-05 | 4.21E-03 |
| 31 | 1 | 7.31E-04 | 9.30E-05 | 2.55E-04 | 2.02E-04 | 4.96E-05 | 5.95E-06 | 5.11E-05 | 4.55E-06 | 1.39E-03 |

**World Logistics Center** **2012 Project Phases 1 + 2**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 21,539 | 4375 | 1,127 | 229 | 3,097 | 629 | 9,375 | 1904 | 7138 | 8.73 | 0.035 | 0.0009 | 6.8 | 3.56E-02 |
| 2 | A | 731 | 0.45 | 21,965 | 9974 | 1,698 | 771 | 3,202 | 1454 | 9,941 | 4514 | 16714 | 8.83 | 0.035 | 0.0010 | 16.1 | 8.44E-02 |
| 3 | A | 2352 | 1.46 | 8,051 | 11763 | 637 | 931 | 1,154 | 1686 | 3,477 | 5080 | 19460 | 8.64 | 0.035 | 0.0009 | 18.3 | 9.61E-02 |
| 5 | A | 953 | 0.59 | 8,480 | 5020 | 324 | 192 | 525 | 311 | 51 | 30 | 5553 | 2.90 | 0.035 | 0.0003 | 1.7 | 9.01E-03 |
| 6 | A | 1099 | 0.68 | 10,562 | 7211 | 688 | 470 | 1,408 | 961 | 3,983 | 2719 | 11361 | 8.14 | 0.035 | 0.0009 | 10.0 | 5.28E-02 |
| 8 | A | 1091 | 0.68 | 12,425 | 8421 | 489 | 331 | 760 | 515 | 0 | 0 | 9267 | 2.79 | 0.035 | 0.0003 | 2.7 | 1.44E-02 |
| 11 | A | 1201 | 0.75 | 290 | 216 | 9 | 7 | 12 | 9 | 0 | 0 | 232 | 2.60 | 0.035 | 0.0003 | 0.1 | 3.37E-04 |
| 12 | A | 824 | 0.51 | 623 | 319 | 38 | 19 | 39 | 20 | 0 | 0 | 358 | 2.86 | 0.035 | 0.0003 | 0.1 | 5.72E-04 |
| 14 | A | 1618 | 1.01 | 1,894 | 1904 | 61 | 61 | 121 | 122 | 490 | 493 | 2579 | 6.70 | 0.035 | 0.0007 | 1.9 | 9.82E-03 |
| 18 | A | 1412 | 0.88 | 1,341 | 1176 | 131 | 115 | 170 | 149 | 375 | 329 | 1769 | 7.09 | 0.035 | 0.0008 | 1.4 | 7.14E-03 |
| 19 | A | 2386 | 1.48 | 2,759 | 4089 | 180 | 267 | 392 | 581 | 1,254 | 1859 | 6796 | 8.87 | 0.035 | 0.0010 | 6.6 | 3.44E-02 |
| 21 | A | 1258 | 0.78 | 10,378 | 8110 | 514 | 402 | 1,085 | 848 | 2,179 | 1703 | 11063 | 6.25 | 0.035 | 0.0007 | 7.5 | 3.92E-02 |
| 24 | A | 1946 | 1.21 | 7,231 | 8741 | 304 | 367 | 673 | 814 | 1,193 | 1442 | 11365 | 5.61 | 0.035 | 0.0006 | 6.9 | 3.61E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 3,357 | 1408 | 175 | 73 | 428 | 179 | 1,503 | 630 | 2291 | 8.81 | 0.035 | 0.0010 | 2.2 | 1.15E-02 |
| 30 | A | 2827 | 1.76 | 3,792 | 6659 | 207 | 364 | 427 | 750 | 1,579 | 2773 | 10546 | 8.49 | 0.035 | 0.0009 | 9.7 | 5.11E-02 |
| 31 | A | 820 | 0.51 | 4,604 | 2345 | 147 | 75 | 307 | 156 | 402 | 205 | 2781 | 4.32 | 0.035 | 0.0005 | 1.3 | 6.77E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1**
**No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.84E-01 | 4.16E-02 |
| Light Logistics | Phase 1 | 4.74E-04 | 1.27E-04 |
| Utilities Service Station | Phase 1 | 3.35E-04 | 1.21E-04 |
| Gas Station w/Convenience Store | Phase 1 | 6.25E-04 | 3.70E-05 |
| Convenience Store | Phase 1 | 7.05E-04 | 4.57E-05 |
| Fire Station | Phase 1 | 2.68E-07 | 7.84E-05 |
| Total | | 2.86E-01 | 4.20E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.49E-01 | 1.31E-02 |
| Light Logistics | Phase 1 | 8.60E-04 | 5.33E-05 |
| Utilities Service Station | Phase 1 | 1.42E-03 | 1.24E-04 |
| Gas Station w/Convenience Store | Phase 1 | 3.04E-03 | 9.13E-05 |
| Convenience Store | Phase 1 | 3.47E-03 | 1.08E-04 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 2.58E-01 | 1.35E-02 |

| **Total Onsite Mobile Emissions** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 2.86E-01 | 4.20E-02 | |
| | Idling Emissions (g/sec) | 2.58E-01 | 1.35E-02 | |
| | Total Vehicle Emissions (g/sec) | 5.44E-01 | 5.55E-02 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.74E-01 | |
| | Fork Lifts (LPG) (g/sec) | | 1.40E-01 | |
| | Total Other Onsite Emissions (g/sec) | | 3.14E-01 | |
| | | | | Total |
| | Total Emissions (g/sec) | 5.44E-01 | 3.70E-01 | 9.14E-01 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 1.95E-07 |

**World Logistics Center** 2012 Phase 1 With Mitigation: MY201 T6 and T7 DSL
**Diesel Vehicle Emissions** Nox

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Nox Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.510 | 3 | 330 | 0.21 | 3.34E-01 | 7.37E-04 | 9.29E-05 | |
| | LDT1 | 15 | 1.080 | 0 | 330 | 0.21 | 3.77E-02 | 8.30E-05 | 1.05E-05 | |
| | LDT2 | 15 | 0.170 | 0 | 330 | 0.21 | 5.75E-03 | 1.27E-05 | 1.60E-06 | |
| | MDT | 15 | 0.190 | 0 | 330 | 0.21 | 1.11E-02 | 2.45E-05 | 3.09E-06 | |
| | LHDT1 | 15 | 4.180 | 34 | 330 | 0.21 | 2.89E+01 | 6.36E-02 | 8.02E-03 | |
| | LHDT2 | 15 | 3.880 | 11 | 330 | 0.21 | 8.76E+00 | 1.93E-02 | 2.43E-03 | |
| | MHDT | 15 | 3.410 | 181 | 330 | 0.21 | 1.27E+02 | 2.79E-01 | 3.52E-02 | |
| | HHDT | 15 | 7.190 | 581 | 330 | 0.21 | 8.56E+02 | 1.89E+00 | 2.38E-01 | |
| | | | | | | | | | | 2.84E-01 |
| Travel at Light Logistics | LDA | 15 | 0.510 | 0 | 175 | 0.11 | 1.12E-03 | 2.46E-06 | 3.11E-07 | |
| | LDT1 | 15 | 1.080 | 0 | 175 | 0.11 | 1.26E-04 | 2.78E-07 | 3.50E-08 | |
| | LDT2 | 15 | 0.170 | 0 | 175 | 0.11 | 1.92E-05 | 4.23E-08 | 5.34E-09 | |
| | MDT | 15 | 0.190 | 0 | 175 | 0.11 | 3.72E-05 | 8.20E-08 | 1.03E-08 | |
| | LHDT1 | 15 | 4.180 | 0 | 175 | 0.11 | 8.51E-02 | 1.88E-04 | 2.37E-05 | |
| | LHDT2 | 15 | 3.880 | 0 | 175 | 0.11 | 2.59E-02 | 5.69E-05 | 7.18E-06 | |
| | MHDT | 15 | 3.410 | 1 | 175 | 0.11 | 2.07E-01 | 4.55E-04 | 5.74E-05 | |
| | HHDT | 15 | 7.190 | 2 | 175 | 0.11 | 1.39E+00 | 3.06E-03 | 3.85E-04 | 4.74E-04 |
| Travel at Utility | LDA | 15 | 0.510 | 0 | 100 | 0.06 | 9.88E-04 | 2.18E-06 | 2.74E-07 | |
| | LDT1 | 15 | 1.080 | 0 | 100 | 0.06 | 1.11E-04 | 2.45E-07 | 3.09E-08 | |
| | LDT2 | 15 | 0.170 | 0 | 100 | 0.06 | 1.70E-05 | 3.74E-08 | 4.72E-09 | |
| | MDT | 15 | 0.190 | 0 | 100 | 0.06 | 3.29E-05 | 7.24E-08 | 9.14E-09 | |
| | LHDT1 | 15 | 4.180 | 1 | 100 | 0.06 | 1.52E-01 | 3.36E-04 | 4.24E-05 | |
| | LHDT2 | 15 | 3.880 | 0 | 100 | 0.06 | 4.63E-02 | 1.02E-04 | 1.29E-05 | |
| | MHDT | 15 | 3.410 | 1 | 100 | 0.06 | 1.67E-01 | 3.67E-04 | 4.63E-05 | |
| | HHDT | 15 | 7.190 | 2 | 100 | 0.06 | 8.38E-01 | 1.85E-03 | 2.33E-04 | 3.35E-04 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.510 | 0 | 50 | 0.03 | 2.67E-04 | 5.88E-07 | 7.42E-08 | |
| | LDT1 | 15 | 1.080 | 0 | 50 | 0.03 | 3.01E-05 | 6.63E-08 | 8.36E-09 | |
| | LDT2 | 15 | 0.170 | 0 | 50 | 0.03 | 4.59E-06 | 1.01E-08 | 1.27E-09 | |
| | MDT | 15 | 0.190 | 0 | 50 | 0.03 | 8.89E-06 | 1.96E-08 | 2.47E-09 | |
| | LHDT1 | 15 | 4.180 | 0 | 50 | 0.03 | 5.57E-04 | 1.23E-06 | 1.55E-07 | |
| | LHDT2 | 15 | 3.880 | 0 | 50 | 0.03 | 1.69E-04 | 3.73E-07 | 4.70E-08 | |
| | MHDT | 15 | 3.410 | 2 | 50 | 0.03 | 2.01E-01 | 4.43E-04 | 5.58E-05 | |
| | HHDT | 15 | 7.190 | 9 | 50 | 0.03 | 2.05E+00 | 4.51E-03 | 5.69E-04 | 6.25E-04 |
| Travel at Convenience Store | LDA | 15 | 0.510 | 0 | 50 | 0.03 | 3.32E-04 | 7.32E-07 | 9.23E-08 | |
| | LDT1 | 15 | 1.080 | 0 | 50 | 0.03 | 3.74E-05 | 8.25E-08 | 1.04E-08 | |
| | LDT2 | 15 | 0.170 | 0 | 50 | 0.03 | 5.71E-06 | 1.26E-08 | 1.59E-09 | |
| | MDT | 15 | 0.190 | 0 | 50 | 0.03 | 1.11E-05 | 2.44E-08 | 3.07E-09 | |
| | LHDT1 | 15 | 4.180 | 0 | 50 | 0.03 | 2.39E-02 | 5.26E-05 | 6.63E-06 | |
| | LHDT2 | 15 | 3.880 | 0 | 50 | 0.03 | 7.25E-03 | 1.60E-05 | 2.01E-06 | |
| | MHDT | 15 | 3.410 | 1 | 50 | 0.03 | 1.53E-01 | 3.37E-04 | 4.25E-05 | |
| | HHDT | 15 | 7.190 | 11 | 50 | 0.03 | 2.35E+00 | 5.19E-03 | 6.54E-04 | 7.05E-04 |
| Travel at Fire Station | LDA | 15 | 0.510 | 0 | 50 | 0.03 | 8.30E-04 | 1.83E-06 | 2.31E-07 | |
| | LDT1 | 15 | 1.080 | 0 | 50 | 0.03 | 9.36E-05 | 2.06E-07 | 2.60E-08 | |
| | LDT2 | 15 | 0.170 | 0 | 50 | 0.03 | 1.43E-05 | 3.14E-08 | 3.97E-09 | |
| | MDT | 15 | 0.190 | 0 | 50 | 0.03 | 2.76E-05 | 6.09E-08 | 7.68E-09 | |
| | LHDT1 | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 7.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-07 |
| Total - All Buildings | LDA | | | 3 | | | 3.38E-01 | 7.45E-04 | 9.39E-05 | |
| | LDT1 | | | 0 | | | 3.81E-02 | 8.39E-05 | 1.06E-05 | |
| | LDT2 | | | 0 | | | 5.81E-03 | 1.28E-05 | 1.61E-06 | |
| | MDT | | | 0 | | | 1.13E-02 | 2.48E-05 | 3.13E-06 | |
| | LHDT1 | | | 35 | | | 2.91E+01 | 6.41E-02 | 8.09E-03 | |
| | LHDT2 | | | 11 | | | 8.84E+00 | 1.95E-02 | 2.46E-03 | |
| | MHDT | | | 186 | | | 1.27E+02 | 2.81E-01 | 3.54E-02 | |
| | HHDT | | | 604 | | | 8.63E+02 | 1.90E+00 | 2.40E-01 | |
| | Total | | | 840 | | | 1.03E+03 | 2.27E+00 | 2.86E-01 | 2.86E-01 |

**Diesel truck Idling Emissions** **Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 17 | 1.05E+02 | 2.32E-01 | 2.93E-02 | |
| | **LHDT2** | 75.050 | 5 | 6 | 3.45E+01 | 7.59E-02 | 9.57E-03 | |
| | **MHDT** | 26.280 | 5 | 91 | 1.98E+02 | 4.37E-01 | 5.51E-02 | |
| | **HHDT** | 23.120 | 5 | 290 | 5.60E+02 | 1.23E+00 | 1.55E-01 | |
| | | | | 403 | 8.98E+02 | 1.98E+00 | 2.49E-01 | 2.49E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 0 | 5.86E-01 | 1.29E-03 | 1.63E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.92E-01 | 4.22E-04 | 5.32E-05 | |
| | **MHDT** | 26.280 | 5 | 0 | 6.10E-01 | 1.34E-03 | 1.69E-04 | |
| | **HHDT** | 23.120 | 5 | 1 | 1.71E+00 | 3.77E-03 | 4.75E-04 | |
| | | | | 1 | 3.10E+00 | 6.82E-03 | 8.60E-04 | 8.60E-04 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 1.84E+00 | 4.05E-03 | 5.10E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 6.01E-01 | 1.32E-03 | 1.67E-04 | |
| | **MHDT** | 26.280 | 5 | 0 | 8.61E-01 | 1.90E-03 | 2.39E-04 | |
| | **HHDT** | 23.120 | 5 | 1 | 1.81E+00 | 3.98E-03 | 5.02E-04 | |
| | | | | 2 | 5.11E+00 | 1.12E-02 | 1.42E-03 | 1.42E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 1.34E-02 | 2.95E-05 | 3.73E-06 | |
| | **LHDT2** | 75.050 | 5 | 0 | 4.39E-03 | 9.67E-06 | 1.22E-06 | |
| | **MHDT** | 26.280 | 5 | 1 | 2.08E+00 | 4.58E-03 | 5.77E-04 | |
| | **HHDT** | 23.120 | 5 | 5 | 8.83E+00 | 1.95E-02 | 2.45E-03 | |
| | | | | 6 | 1.09E+01 | 2.41E-02 | 3.04E-03 | 3.04E-03 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 5.75E-01 | 1.27E-03 | 1.60E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 1.88E-01 | 4.14E-04 | 5.22E-05 | |
| | **MHDT** | 26.280 | 5 | 1 | 1.58E+00 | 3.49E-03 | 4.40E-04 | |
| | **HHDT** | 23.120 | 5 | 5 | 1.02E+01 | 2.24E-02 | 2.82E-03 | |
| | | | | 6 | 1.25E+01 | 2.75E-02 | 3.47E-03 | 3.47E-03 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 26.280 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 23.120 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 9.29E+02 | 2.05E+00 | 2.58E-01 | 2.58E-01 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY201 T6 and T7 DSL
**Diesel Vehicle Emissions** **Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day**

**Onsite Running Exhaust Emissions** **Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 1004 | 330 | 0.21 | 4.08E+01 | 8.98E-02 | 1.13E-02 | |
| | **LDT1** | 15 | 0.549 | 119 | 330 | 0.21 | 1.34E+01 | 2.95E-02 | 3.72E-03 | |
| | **LDT2** | 15 | 0.393 | 363 | 330 | 0.21 | 2.92E+01 | 6.44E-02 | 8.12E-03 | |
| | **MDT** | 15 | 0.528 | 280 | 330 | 0.21 | 3.03E+01 | 6.67E-02 | 8.41E-03 | |
| | **LHDT1** | 15 | 0.559 | 109 | 330 | 0.21 | 1.25E+01 | 2.75E-02 | 3.46E-03 | |
| | **LHDT2** | 15 | 0.558 | 11 | 330 | 0.21 | 1.30E+00 | 2.87E-03 | 3.62E-04 | |
| | **MHDT** | 15 | 1.612 | 41 | 330 | 0.21 | 1.37E+01 | 3.01E-02 | 3.80E-03 | |
| | **HHDT** | 15 | 4.218 | 10 | 330 | 0.21 | 8.62E+00 | 1.90E-02 | 2.39E-03 | |
| | | | | | | | | | | 4.16E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 6 | 175 | 0.11 | 1.36E-01 | 3.00E-04 | 3.78E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 175 | 0.11 | 4.47E-02 | 9.85E-05 | 1.24E-05 | |
| | **LDT2** | 15 | 0.393 | 2 | 175 | 0.11 | 9.77E-02 | 2.15E-04 | 2.71E-05 | |
| | **MDT** | 15 | 0.528 | 2 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LHDT1** | 15 | 0.559 | 1 | 175 | 0.11 | 3.68E-02 | 8.10E-05 | 1.02E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 175 | 0.11 | 3.84E-03 | 8.47E-06 | 1.07E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 175 | 0.11 | 2.23E-02 | 4.91E-05 | 6.19E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 1.40E-02 | 3.08E-05 | 3.88E-06 | 1.27E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 10 | 100 | 0.06 | 1.20E-01 | 2.65E-04 | 3.34E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 100 | 0.06 | 3.95E-02 | 8.71E-05 | 1.10E-05 | |
| | **LDT2** | 15 | 0.393 | 4 | 100 | 0.06 | 8.63E-02 | 1.90E-04 | 2.40E-05 | |
| | **MDT** | 15 | 0.528 | 3 | 100 | 0.06 | 8.94E-02 | 1.97E-04 | 2.48E-05 | |
| | **LHDT1** | 15 | 0.559 | 2 | 100 | 0.06 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 6.89E-03 | 1.52E-05 | 1.91E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 1.80E-02 | 3.96E-05 | 4.99E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 8.44E-03 | 1.86E-05 | 2.34E-06 | 1.21E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 5 | 50 | 0.03 | 3.25E-02 | 7.17E-05 | 9.04E-06 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.07E-02 | 2.35E-05 | 2.97E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 6.48E-06 | |
| | **MDT** | 15 | 0.528 | 1 | 50 | 0.03 | 2.42E-02 | 5.32E-05 | 6.71E-06 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 2.41E-04 | 5.30E-07 | 6.69E-08 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 2.52E-05 | 5.54E-08 | 6.99E-09 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 6.03E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.06E-02 | 4.54E-05 | 5.72E-06 | 3.70E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 7 | 50 | 0.03 | 4.05E-02 | 8.92E-05 | 1.12E-05 | |
| | **LDT1** | 15 | 0.549 | 1 | 50 | 0.03 | 1.33E-02 | 2.93E-05 | 3.69E-06 | |
| | **LDT2** | 15 | 0.393 | 2 | 50 | 0.03 | 2.90E-02 | 6.39E-05 | 8.06E-06 | |
| | **MDT** | 15 | 0.528 | 2 | 50 | 0.03 | 3.01E-02 | 6.62E-05 | 8.35E-06 | |
| | **LHDT1** | 15 | 0.559 | 1 | 50 | 0.03 | 1.03E-02 | 2.27E-05 | 2.87E-06 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 1.08E-03 | 2.37E-06 | 2.99E-07 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 1.65E-02 | 3.64E-05 | 4.59E-06 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 2.37E-02 | 5.22E-05 | 6.58E-06 | 4.57E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 16 | 50 | 0.03 | 1.01E-01 | 2.23E-04 | 2.81E-05 | |
| | **LDT1** | 15 | 0.549 | 2 | 50 | 0.03 | 3.32E-02 | 7.32E-05 | 9.23E-06 | |
| | **LDT2** | 15 | 0.393 | 6 | 50 | 0.03 | 7.25E-02 | 1.60E-04 | 2.02E-05 | |
| | **MDT** | 15 | 0.528 | 5 | 50 | 0.03 | 7.52E-02 | 1.66E-04 | 2.09E-05 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.84E-05 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 4.12E+01 | 9.07E-02 | 1.14E-02 | |
| | **LDT1** | | | 124 | | | 1.35E+01 | 2.98E-02 | 3.76E-03 | |
| | **LDT2** | | | 379 | | | 2.95E+01 | 6.50E-02 | 8.20E-03 | |
| | **MDT** | | | 292 | | | 3.06E+01 | 6.74E-02 | 8.50E-03 | |
| | **LHDT1** | | | 112 | | | 1.26E+01 | 2.77E-02 | 3.50E-03 | |
| | **LHDT2** | | | 12 | | | 1.32E+00 | 2.90E-03 | 3.65E-04 | |
| | **MHDT** | | | 42 | | | 1.37E+01 | 3.03E-02 | 3.82E-03 | |
| | **HHDT** | | | 10 | | | 8.68E+00 | 1.91E-02 | 2.41E-03 | |
| | **Total** | | | 2020 | | | 1.51E+02 | 3.33E-01 | 4.20E-02 | 4.20E-02 |

**Non-Diesel truck Idling Emissions** **Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 3.800 | 5 | 54 | 1.72E+01 | 3.79E-02 | 4.78E-03 | |
| | **LHDT2** | 3.550 | 5 | 6 | 1.69E+00 | 3.71E-03 | 4.68E-04 | |
| | **MHDT** | 13.000 | 5 | 21 | 2.24E+01 | 4.93E-02 | 6.22E-03 | |
| | **HHDT** | 14.000 | 5 | 5 | 5.81E+00 | 1.28E-02 | 1.61E-03 | |
| | | | | 86 | 4.71E+01 | 1.04E-01 | 1.31E-02 | 1.31E-02 |
| **Idle at Light Logistics** | **LHDT1** | 3.800 | 5 | 0 | 9.58E-02 | 2.11E-04 | 2.66E-05 | |
| | **LHDT2** | 3.550 | 5 | 0 | 9.38E-03 | 2.07E-05 | 2.61E-06 | |
| | **MHDT** | 13.000 | 5 | 0 | 6.89E-02 | 1.52E-04 | 1.91E-05 | |
| | **HHDT** | 14.000 | 5 | 0 | 1.78E-02 | 3.91E-05 | 4.93E-06 | |
| | | | | 0 | 1.92E-01 | 4.23E-04 | 5.33E-05 | 5.33E-05 |
| **Idle at Utility** | **LHDT1** | 3.800 | 5 | 1 | 3.00E-01 | 6.62E-04 | 8.34E-05 | |
| | **LHDT2** | 3.550 | 5 | 0 | 2.94E-02 | 6.48E-05 | 8.17E-06 | |
| | **MHDT** | 13.000 | 5 | 0 | 9.72E-02 | 2.14E-04 | 2.70E-05 | |
| | **HHDT** | 14.000 | 5 | 0 | 1.88E-02 | 4.14E-05 | 5.22E-06 | |
| | | | | 1 | 4.46E-01 | 9.82E-04 | 1.24E-04 | 1.24E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 3.800 | 5 | 0 | 2.19E-03 | 4.83E-06 | 6.09E-07 | |
| | **LHDT2** | 3.550 | 5 | 0 | 2.15E-04 | 4.73E-07 | 5.97E-08 | |
| | **MHDT** | 13.000 | 5 | 0 | 2.35E-01 | 5.17E-04 | 6.52E-05 | |
| | **HHDT** | 14.000 | 5 | 0 | 9.17E-02 | 2.02E-04 | 2.55E-05 | |
| | | | | 0 | 3.29E-01 | 7.24E-04 | 9.13E-05 | 9.13E-05 |
| **Idle at Convenience Store** | **LHDT1** | 3.800 | 5 | 0 | 9.40E-02 | 2.07E-04 | 2.61E-05 | |
| | **LHDT2** | 3.550 | 5 | 0 | 9.20E-03 | 2.03E-05 | 2.56E-06 | |
| | **MHDT** | 13.000 | 5 | 0 | 1.79E-01 | 3.94E-04 | 4.96E-05 | |
| | **HHDT** | 14.000 | 5 | 0 | 1.06E-01 | 2.32E-04 | 2.93E-05 | |
| | | | | 1 | 3.87E-01 | 8.53E-04 | 1.08E-04 | 1.08E-04 |
| **Idle at Firestation** | **LHDT1** | 3.800 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 3.550 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 13.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 14.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 4.85E+01 | 1.07E-01 | 1.35E-02 | 1.35E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hourly Nox emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 2**

With Mitigation: MY2010 T6 and T7 DSL

**Vehicle Running Exhaust Emissions** **Pollutant** **Peak Hourly Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.17E-01 | 3.18E-02 |
| Light Logistics | Phase 2 | 1.61E-03 | 4.31E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.18E-01 | 3.22E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.91E-01 | 1.00E-02 |
| Light Logistics | Phase 2 | 2.92E-03 | 1.81E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.93E-01 | 1.02E-02 |

**Total Onsite Mobile Emissions**

| | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 2.18E-01 | 3.22E-02 | |
| | Idling Emissions (g/sec) | 1.93E-01 | 1.02E-02 | |
| | Total Vehicle Emissions (g/sec) | 4.12E-01 | 4.24E-02 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 6.58E-01 | |
| | Forklifts (LPG) (g/sec) | | 1.10E-01 | |
| | Total Other Onsite Emissions (g/sec) | | 7.68E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 4.12E-01 | 8.11E-01 | 1.22E+00 |
| | Area (m2) | | | 5152719 |
| | Emission Rate (g/m2-sec) | | | 2.37E-07 |

**World Logistics Center** **2012** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **Peak Hourly Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hourly Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.510 | 2 | 330 | 0.21 | 2.56E-01 | 5.63E-04 | 7.10E-05 | |
| | **LDT1** | 15 | 1.080 | 0 | 330 | 0.21 | 2.88E-02 | 6.35E-05 | 8.00E-06 | |
| | **LDT2** | 15 | 0.170 | 0 | 330 | 0.21 | 4.39E-03 | 9.68E-06 | 1.22E-06 | |
| | **MDT** | 15 | 0.190 | 0 | 330 | 0.21 | 8.51E-03 | 1.87E-05 | 2.36E-06 | |
| | **LHDT1** | 15 | 4.180 | 26 | 330 | 0.21 | 2.21E+01 | 4.86E-02 | 6.13E-03 | |
| | **LHDT2** | 15 | 3.880 | 8 | 330 | 0.21 | 6.70E+00 | 1.48E-02 | 1.86E-03 | |
| | **MHDT** | 15 | 3.410 | 138 | 330 | 0.21 | 9.68E+01 | 2.13E-01 | 2.69E-02 | |
| | **HHDT** | 15 | 7.190 | 444 | 330 | 0.21 | 6.54E+02 | 1.44E+00 | 1.82E-01 | 2.17E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.510 | 0 | 175 | 0.11 | 3.80E-03 | 8.36E-06 | 1.05E-06 | |
| | **LDT1** | 15 | 1.080 | 0 | 175 | 0.11 | 4.28E-04 | 9.42E-07 | 1.19E-07 | |
| | **LDT2** | 15 | 0.170 | 0 | 175 | 0.11 | 6.52E-05 | 1.44E-07 | 1.81E-08 | |
| | **MDT** | 15 | 0.190 | 0 | 175 | 0.11 | 1.26E-04 | 2.78E-07 | 3.51E-08 | |
| | **LHDT1** | 15 | 4.180 | 1 | 175 | 0.11 | 2.89E-01 | 6.37E-04 | 8.03E-05 | |
| | **LHDT2** | 15 | 3.880 | 0 | 175 | 0.11 | 8.78E-02 | 1.93E-04 | 2.44E-05 | |
| | **MHDT** | 15 | 3.410 | 2 | 175 | 0.11 | 7.01E-01 | 1.54E-03 | 1.95E-04 | |
| | **HHDT** | 15 | 7.190 | 6 | 175 | 0.11 | 4.71E+00 | 1.04E-02 | 1.31E-03 | 1.61E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.510 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 3.410 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 7.190 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 7.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 7.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.510 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.080 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.170 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 4.180 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 3.880 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 3.410 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 7.190 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 2.59E-01 | 5.71E-04 | 7.21E-05 | |
| | **LDT1** | | | 0 | | | 2.92E-02 | 6.44E-05 | 8.12E-06 | |
| | **LDT2** | | | 0 | | | 4.46E-03 | 9.82E-06 | 1.24E-06 | |
| | **MDT** | | | 0 | | | 8.63E-03 | 1.90E-05 | 2.40E-06 | |
| | **LHDT1** | | | 26 | | | 2.23E+01 | 4.92E-02 | 6.21E-03 | |
| | **LHDT2** | | | 9 | | | 6.78E+00 | 1.49E-02 | 1.88E-03 | |
| | **MHDT** | | | 140 | | | 9.75E+01 | 2.15E-01 | 2.71E-02 | |
| | **HHDT** | | | 450 | | | 6.59E+02 | 1.45E+00 | 1.83E-01 | |
| | **Total** | | | 628 | | | 7.86E+02 | 1.73E+00 | 2.18E-01 | 2.18E-01 |

**Diesel truck Idling Emissions** **eak Hourly Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 75.050 | 5 | 13 | 8.05E+01 | 1.77E-01 | 2.24E-02 | |
| | **LHDT2** | 75.050 | 5 | 4 | 2.63E+01 | 5.80E-02 | 7.31E-03 | |
| | **MHDT** | 26.280 | 5 | 69 | 1.52E+02 | 3.34E-01 | 4.21E-02 | |
| | **HHDT** | 23.120 | 5 | 222 | 4.28E+02 | 9.42E-01 | 1.19E-01 | |
| | | | | 308 | 6.86E+02 | 1.51E+00 | 1.91E-01 | 1.91E-01 |
| **Idle at Light Logistics** | **LHDT1** | 75.050 | 5 | 0 | 1.99E+00 | 4.38E-03 | 5.53E-04 | |
| | **LHDT2** | 75.050 | 5 | 0 | 6.51E-01 | 1.43E-03 | 1.81E-04 | |
| | **MHDT** | 26.280 | 5 | 1 | 2.07E+00 | 4.56E-03 | 5.75E-04 | |
| | **HHDT** | 23.120 | 5 | 3 | 5.81E+00 | 1.28E-02 | 1.61E-03 | |
| | | | | 4 | 1.05E+01 | 2.32E-02 | 2.92E-03 | 2.92E-03 |
| **Idle at Utility** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 26.280 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 23.120 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 26.280 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 23.120 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 26.280 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 23.120 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 75.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 26.280 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 23.120 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 313 | 6.97E+02 | 1.53E+00 | 1.93E-01 | 1.93E-01 |

**World Logistics Center** **2012** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **Peak Hourly Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hourly Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.198 | 767 | 330 | 0.21 | 3.11E+01 | 6.86E-02 | 8.65E-03 | |
| | **LDT1** | 15 | 0.549 | 91 | 330 | 0.21 | 1.02E+01 | 2.25E-02 | 2.84E-03 | |
| | **LDT2** | 15 | 0.393 | 277 | 330 | 0.21 | 2.23E+01 | 4.92E-02 | 6.20E-03 | |
| | **MDT** | 15 | 0.528 | 214 | 330 | 0.21 | 2.31E+01 | 5.10E-02 | 6.43E-03 | |
| | **LHDT1** | 15 | 0.559 | 83 | 330 | 0.21 | 9.53E+00 | 2.10E-02 | 2.65E-03 | |
| | **LHDT2** | 15 | 0.558 | 9 | 330 | 0.21 | 9.96E-01 | 2.19E-03 | 2.77E-04 | |
| | **MHDT** | 15 | 1.612 | 32 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 2.90E-03 | |
| | **HHDT** | 15 | 4.218 | 8 | 330 | 0.21 | 6.58E+00 | 1.45E-02 | 1.83E-03 | 3.18E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.198 | 21 | 175 | 0.11 | 4.63E-01 | 1.02E-03 | 1.28E-04 | |
| | **LDT1** | 15 | 0.549 | 3 | 175 | 0.11 | 1.52E-01 | 3.34E-04 | 4.22E-05 | |
| | **LDT2** | 15 | 0.393 | 8 | 175 | 0.11 | 3.32E-01 | 7.30E-04 | 9.21E-05 | |
| | **MDT** | 15 | 0.528 | 6 | 175 | 0.11 | 3.44E-01 | 7.57E-04 | 9.55E-05 | |
| | **LHDT1** | 15 | 0.559 | 2 | 175 | 0.11 | 1.25E-01 | 2.75E-04 | 3.47E-05 | |
| | **LHDT2** | 15 | 0.558 | 0 | 175 | 0.11 | 1.31E-02 | 2.88E-05 | 3.63E-06 | |
| | **MHDT** | 15 | 1.612 | 0 | 175 | 0.11 | 7.57E-02 | 1.67E-04 | 2.10E-05 | |
| | **HHDT** | 15 | 4.218 | 0 | 175 | 0.11 | 4.74E-02 | 1.04E-04 | 1.32E-05 | 4.31E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.198 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.198 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.549 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.393 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.528 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.559 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.558 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.612 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 4.218 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 789 | | | 3.16E+01 | 6.96E-02 | 8.78E-03 | |
| | **LDT1** | | | 93 | | | 1.04E+01 | 2.29E-02 | 2.88E-03 | |
| | **LDT2** | | | 285 | | | 2.27E+01 | 4.99E-02 | 6.29E-03 | |
| | **MDT** | | | 220 | | | 2.35E+01 | 5.17E-02 | 6.52E-03 | |
| | **LHDT1** | | | 85 | | | 9.66E+00 | 2.13E-02 | 2.68E-03 | |
| | **LHDT2** | | | 9 | | | 1.01E+00 | 2.22E-03 | 2.80E-04 | |
| | **MHDT** | | | 32 | | | 1.05E+01 | 2.32E-02 | 2.92E-03 | |
| | **HHDT** | | | 8 | | | 6.63E+00 | 1.46E-02 | 1.84E-03 | |
| | **Total** | | | 1521 | | | 1.16E+02 | 2.55E-01 | 3.22E-02 | 3.22E-02 |

**Non-Diesel truck Idling Emissions** **'eak Hourly Nox Emissions** Idle Time (minute 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 3.800 | 5 | 42 | 1.32E+01 | 2.90E-02 | 3.66E-03 | |
| | **LHDT2** | 3.550 | 5 | 4 | 1.29E+00 | 2.84E-03 | 3.58E-04 | |
| | **MHDT** | 13.000 | 5 | 16 | 1.71E+01 | 3.77E-02 | 4.76E-03 | |
| | **HHDT** | 14.000 | 5 | 4 | 4.44E+00 | 9.78E-03 | 1.23E-03 | |
| | | | | 66 | 3.60E+01 | 7.93E-02 | 1.00E-02 | 1.00E-02 |
| **Idle at Light Logistics** | **LHDT1** | 3.800 | 5 | 1 | 3.25E-01 | 7.17E-04 | 9.04E-05 | |
| | **LHDT2** | 3.550 | 5 | 0 | 3.19E-02 | 7.02E-05 | 8.85E-06 | |
| | **MHDT** | 13.000 | 5 | 0 | 2.34E-01 | 5.15E-04 | 6.50E-05 | |
| | **HHDT** | 14.000 | 5 | 0 | 6.03E-02 | 1.33E-04 | 1.68E-05 | |
| | | | | 1 | 6.51E-01 | 1.43E-03 | 1.81E-04 | 1.81E-04 |
| **Idle at Utility** | **LHDT1** | 3.800 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 3.550 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 13.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 14.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 3.800 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 3.550 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 13.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 14.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 3.800 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 3.550 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 13.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 14.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 3.800 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 3.550 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 13.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 14.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 67 | 3.67E+01 | 8.08E-02 | 1.02E-02 | 1.02E-02 |

**World Logistics Center** **2012** **Nox** Based on PB Traffic Results 10/3/2013
**Project-Related Emissions** **Phases 1+2** With EMFAC2014 With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 1.76E-01 | 2.74E-02 | 2.03E-01 |
| 2 | 4.76E-01 | 7.03E-02 | 5.46E-01 |
| 3 | 5.19E-01 | 8.21E-02 | 6.01E-01 |
| 5 | 3.29E-02 | 2.93E-02 | 6.22E-02 |
| 6 | 3.03E-01 | 4.89E-02 | 3.52E-01 |
| 8 | 3.60E-02 | 4.88E-02 | 8.48E-02 |
| 11 | 8.43E-04 | 1.41E-03 | 2.25E-03 |
| 12 | 1.79E-03 | 2.11E-03 | 3.90E-03 |
| 14 | 1.68E-01 | 2.42E-02 | 1.92E-01 |
| 18 | 3.47E-02 | 7.43E-03 | 4.22E-02 |
| 19 | 1.93E-01 | 2.95E-02 | 2.23E-01 |
| 21 | 1.97E-01 | 5.21E-02 | 2.49E-01 |
| 24 | 1.82E-01 | 5.30E-02 | 2.35E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 6.89E-02 | 1.03E-02 | 7.92E-02 |
| 30 | 2.63E-01 | 4.41E-02 | 3.07E-01 |
| 31 | 1.82E-02 | 1.20E-02 | 3.03E-02 |
| | | Total | 3.21E+00 |

| ID | Arterial | From | To | | 2012 With Project (Pk PM) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,315 | 110 | 219 | 692 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,399 | 181 | 242 | 833 |
| 3 | Street E | west of Street A | | | 526 | 66 | 85 | 280 |
| 5 | Street E | Street D | Street A | | 685 | 40 | 49 | 19 |
| 6 | Street A | Street F | Street C | | 686 | 76 | 111 | 350 |
| 8 | Street D | Street E | Cactus Ave | | 1,006 | 60 | 73 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 27 | 2 | 1 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 55 | 5 | 4 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | | 250 | 16 | 27 | 142 |
| 18 | Street B | east of Street A | Theodore St | | 82 | 14 | 12 | 28 |
| 19 | Street F | east of Street A | | | 191 | 19 | 30 | 105 |
| 21 | Street C | east of Street A | | | 776 | 58 | 89 | 183 |
| 24 | Street C | Street F | Street H | | 528 | 35 | 56 | 108 |
| 26 | Street H | Street C | Street G | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 245 | 20 | 34 | 135 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 262 | 23 | 30 | 122 |
| 31 | Gilman Springs Rd | south of Street C | | | 327 | 16 | 23 | 19 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **Nox** **Phases 1+2** With Mitigation: MY2010 T6 and T7 DSL
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 2 | 0 | 0 | 0 | 22 | 8 | 176 | 677 | 886 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 2 | 0 | 0 | 0 | 37 | 13 | 195 | 815 | 1062 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 5 | 68 | 274 | 361 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 1 | 0 | 0 | 0 | 8 | 3 | 39 | 19 | 70 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 15 | 5 | 89 | 342 | 454 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 2 | 0 | 0 | 0 | 12 | 4 | 59 | 0 | 77 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 5 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 3 | 1 | 22 | 139 | 165 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 27 | 41 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 103 | 132 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 12 | 4 | 72 | 179 | 268 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 7 | 2 | 45 | 106 | 161 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 0 | 0 | 0 | 0 | 4 | 1 | 27 | 132 | 165 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 5 | 2 | 24 | 119 | 150 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 1 | 0 | 0 | 0 | 3 | 1 | 19 | 19 | 42 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.5400 | 1.2800 | 0.1400 | 0.1700 | 4.5500 | 4.2100 | 1.9900 | 3.8800 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6.95E-05 | 7.93E-06 | 8.53E-07 | 2.00E-06 | 5.74E-03 | 1.81E-03 | 1.98E-02 | 1.48E-01 | 1.76E-01 |
| 2 | 1 | 1.65E-04 | 1.89E-05 | 2.03E-06 | 4.77E-06 | 2.11E-02 | 6.65E-03 | 4.89E-02 | 3.99E-01 | 4.76E-01 |
| 3 | 1 | 2.00E-04 | 2.28E-05 | 2.45E-06 | 5.77E-06 | 2.48E-02 | 7.80E-03 | 5.53E-02 | 4.31E-01 | 5.19E-01 |
| 5 | 1 | 1.06E-04 | 1.20E-05 | 1.29E-06 | 3.04E-06 | 6.09E-03 | 1.92E-03 | 1.29E-02 | 1.19E-02 | 3.29E-02 |
| 6 | 1 | 1.22E-04 | 1.39E-05 | 1.50E-06 | 3.51E-06 | 1.33E-02 | 4.20E-03 | 3.37E-02 | 2.52E-01 | 3.03E-01 |
| 8 | 1 | 1.78E-04 | 2.02E-05 | 2.18E-06 | 5.12E-06 | 1.05E-02 | 3.29E-03 | 2.20E-02 | 0.00E+00 | 3.60E-02 |
| 11 | 1 | 5.24E-06 | 5.98E-07 | 6.43E-08 | 1.51E-07 | 3.84E-04 | 1.21E-04 | 3.32E-04 | 0.00E+00 | 8.43E-04 |
| 12 | 1 | 7.33E-06 | 8.36E-07 | 8.99E-08 | 2.11E-07 | 6.58E-04 | 2.07E-04 | 9.12E-04 | 0.00E+00 | 1.79E-03 |
| 14 | 1 | 6.54E-05 | 7.46E-06 | 8.02E-07 | 1.89E-06 | 4.13E-03 | 1.30E-03 | 1.21E-02 | 1.50E-01 | 1.68E-01 |
| 18 | 1 | 1.87E-05 | 2.13E-06 | 2.30E-07 | 5.40E-07 | 3.16E-03 | 9.93E-04 | 4.69E-03 | 2.59E-02 | 3.47E-02 |
| 19 | 1 | 7.37E-05 | 8.40E-06 | 9.04E-07 | 2.12E-06 | 7.24E-03 | 2.28E-03 | 1.98E-02 | 1.64E-01 | 1.93E-01 |
| 21 | 1 | 1.58E-04 | 1.80E-05 | 1.94E-06 | 4.55E-06 | 1.17E-02 | 3.67E-03 | 3.10E-02 | 1.51E-01 | 1.97E-01 |
| 24 | 1 | 1.66E-04 | 1.89E-05 | 2.04E-06 | 4.79E-06 | 1.09E-02 | 3.42E-03 | 3.01E-02 | 1.38E-01 | 1.82E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.67E-05 | 3.05E-06 | 3.28E-07 | 7.71E-07 | 2.16E-03 | 6.78E-04 | 6.35E-03 | 5.97E-02 | 6.89E-02 |
| 30 | 1 | 1.20E-04 | 1.37E-05 | 1.47E-06 | 3.45E-06 | 1.04E-02 | 3.27E-03 | 2.35E-02 | 2.26E-01 | 2.63E-01 |
| 31 | 1 | 4.34E-05 | 4.94E-06 | 5.32E-07 | 1.25E-06 | 2.10E-03 | 6.59E-04 | 5.22E-03 | 1.02E-02 | 1.82E-02 |

**World Logistics Center** **2012** **Nox** **Phases 1+2** With Mitigation: MY2010 T6 and T7 DSL
Existing + Project
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Pk Hr Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 753 | 88 | 262 | 208 | 72 | 8 | 43 | 15 | 1450 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 802 | 94 | 279 | 221 | 119 | 13 | 47 | 18 | 1593 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 301 | 35 | 105 | 83 | 43 | 5 | 17 | 6 | 596 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 392 | 46 | 137 | 108 | 26 | 3 | 10 | 0 | 723 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 393 | 46 | 137 | 109 | 50 | 5 | 22 | 8 | 769 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 576 | 68 | 201 | 159 | 39 | 4 | 14 | 0 | 1062 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 29 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 32 | 4 | 11 | 9 | 3 | 0 | 1 | 0 | 59 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 143 | 17 | 50 | 40 | 11 | 1 | 5 | 3 | 270 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 47 | 6 | 16 | 13 | 9 | 1 | 2 | 1 | 95 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 109 | 13 | 38 | 30 | 13 | 1 | 6 | 2 | 213 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 445 | 52 | 155 | 123 | 38 | 4 | 17 | 4 | 838 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 303 | 35 | 105 | 84 | 23 | 2 | 11 | 2 | 566 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 140 | 16 | 49 | 39 | 13 | 1 | 7 | 3 | 269 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 150 | 18 | 52 | 41 | 15 | 2 | 6 | 3 | 287 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 187 | 22 | 65 | 52 | 11 | 1 | 4 | 0 | 343 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1400 | 0.3800 | 0.2500 | 0.3400 | 0.5500 | 0.5000 | 1.7400 | 6.0100 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.95E-03 | 1.89E-03 | 3.70E-03 | 3.99E-03 | 2.25E-03 | 2.15E-04 | 4.18E-03 | 5.18E-03 | 2.74E-02 |
| 2 | 1 | 1.42E-02 | 4.51E-03 | 8.80E-03 | 9.50E-03 | 8.26E-03 | 7.92E-04 | 1.03E-02 | 1.39E-02 | 7.03E-02 |
| 3 | 1 | 1.71E-02 | 5.45E-03 | 1.07E-02 | 1.15E-02 | 9.70E-03 | 9.29E-04 | 1.17E-02 | 1.51E-02 | 8.21E-02 |
| 5 | 1 | 9.04E-03 | 2.88E-03 | 5.62E-03 | 6.06E-03 | 2.38E-03 | 2.28E-04 | 2.73E-03 | 4.15E-04 | 2.93E-02 |
| 6 | 1 | 1.04E-02 | 3.32E-03 | 6.49E-03 | 7.00E-03 | 5.22E-03 | 5.00E-04 | 7.13E-03 | 8.81E-03 | 4.89E-02 |
| 8 | 1 | 1.52E-02 | 4.84E-03 | 9.45E-03 | 1.02E-02 | 4.09E-03 | 3.92E-04 | 4.65E-03 | 0.00E+00 | 4.88E-02 |
| 11 | 1 | 4.49E-04 | 1.43E-04 | 2.79E-04 | 3.01E-04 | 1.50E-04 | 1.44E-05 | 7.02E-05 | 0.00E+00 | 1.41E-03 |
| 12 | 1 | 6.27E-04 | 2.00E-04 | 3.90E-04 | 4.21E-04 | 2.57E-04 | 2.47E-05 | 1.93E-04 | 0.00E+00 | 2.11E-03 |
| 14 | 1 | 5.60E-03 | 1.78E-03 | 3.48E-03 | 3.76E-03 | 1.62E-03 | 1.55E-04 | 2.55E-03 | 5.26E-03 | 2.42E-02 |
| 18 | 1 | 1.60E-03 | 5.10E-04 | 9.97E-04 | 1.08E-03 | 1.23E-03 | 1.18E-04 | 9.90E-04 | 9.05E-04 | 7.43E-03 |
| 19 | 1 | 6.31E-03 | 2.01E-03 | 3.92E-03 | 4.23E-03 | 2.83E-03 | 2.71E-04 | 4.18E-03 | 5.74E-03 | 2.95E-02 |
| 21 | 1 | 1.35E-02 | 4.30E-03 | 8.40E-03 | 9.06E-03 | 4.56E-03 | 4.37E-04 | 6.54E-03 | 5.27E-03 | 5.21E-02 |
| 24 | 1 | 1.42E-02 | 4.53E-03 | 8.85E-03 | 9.54E-03 | 4.25E-03 | 4.08E-04 | 6.37E-03 | 4.81E-03 | 5.30E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.29E-03 | 7.29E-04 | 1.42E-03 | 1.54E-03 | 8.43E-04 | 8.08E-05 | 1.34E-03 | 2.09E-03 | 1.03E-02 |
| 30 | 1 | 1.03E-02 | 3.26E-03 | 6.38E-03 | 6.88E-03 | 4.06E-03 | 3.89E-04 | 4.95E-03 | 7.90E-03 | 4.41E-02 |
| 31 | 1 | 3.71E-03 | 1.18E-03 | 2.31E-03 | 2.49E-03 | 8.19E-04 | 7.85E-05 | 1.10E-03 | 3.57E-04 | 1.20E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012 Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 9.13E-04 | 2.05E-03 |
| Light Logistics | Phase 1 | 1.89E-06 | 4.72E-06 |
| Utilities Service Station | Phase 1 | 1.66E-06 | 4.24E-06 |
| Gas Station w/Convenience Store | Phase 1 | 1.97E-06 | 1.18E-06 |
| Convenience Store | Phase 1 | 3.11E-06 | 1.95E-06 |
| Fire Station | Phase 1 | 1.71E-08 | 1.29E-06 |
| Total | | 9.22E-04 | 2.07E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.48E-04 | 3.93E-05 |
| Light Logistics | Phase 1 | 9.14E-07 | 2.14E-07 |
| Utilities Service Station | Phase 1 | 3.00E-06 | 5.81E-07 |
| Gas Station w/Convenience Store | Phase 1 | 4.87E-07 | 2.40E-07 |
| Convenience Store | Phase 1 | 7.47E-07 | 0.00E+00 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.53E-04 | 4.03E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 9.22E-04 | 2.07E-03 | |
| | Idling Emissions (g/sec) | 1.53E-04 | 4.03E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.07E-03 | 2.11E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.30E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 1.61E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.07E-03 | 3.71E-03 | 4.79E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.02E-09 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.174 | 53 | 330 | 0.21 | 1.90E+00 | 4.18E-03 | 2.19E-05 | |
| | **LDT1** | 15 | 0.362 | 3 | 330 | 0.21 | 1.90E-01 | 4.18E-04 | 2.20E-06 | |
| | **LDT2** | 15 | 0.048 | 3 | 330 | 0.21 | 2.47E-02 | 5.45E-05 | 2.86E-07 | |
| | **MDT** | 15 | 0.069 | 5 | 330 | 0.21 | 6.88E-02 | 1.52E-04 | 7.97E-07 | |
| | **LHDT1** | 15 | 0.105 | 274 | 330 | 0.21 | 5.88E+00 | 1.30E-02 | 6.81E-05 | |
| | **LHDT2** | 15 | 0.110 | 93 | 330 | 0.21 | 2.10E+00 | 4.63E-03 | 2.43E-05 | |
| | **MHDT** | 15 | 0.066 | 1425 | 330 | 0.21 | 1.93E+01 | 4.25E-02 | 2.24E-04 | |
| | **HHDT** | 15 | 0.052 | 4628 | 330 | 0.21 | 4.94E+01 | 1.09E-01 | 5.72E-04 | |
| | | | | | | | | | | 9.13E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.174 | 0 | 175 | 0.11 | 4.27E-03 | 9.41E-06 | 4.94E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 175 | 0.11 | 4.27E-04 | 9.41E-07 | 4.95E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 175 | 0.11 | 5.57E-05 | 1.23E-07 | 6.45E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 175 | 0.11 | 1.55E-04 | 3.42E-07 | 1.79E-09 | |
| | **LHDT1** | 15 | 0.105 | 2 | 175 | 0.11 | 1.95E-02 | 4.30E-05 | 2.26E-07 | |
| | **LHDT2** | 15 | 0.110 | 1 | 175 | 0.11 | 6.98E-03 | 1.54E-05 | 8.08E-08 | |
| | **MHDT** | 15 | 0.066 | 6 | 175 | 0.11 | 4.22E-02 | 9.29E-05 | 4.88E-07 | |
| | **HHDT** | 15 | 0.052 | 16 | 175 | 0.11 | 8.97E-02 | 1.98E-04 | 1.04E-06 | 1.89E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.174 | 0 | 100 | 0.06 | 3.57E-03 | 7.87E-06 | 4.14E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 100 | 0.06 | 3.58E-04 | 7.88E-07 | 4.14E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 4.66E-05 | 1.03E-07 | 5.40E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 100 | 0.06 | 1.30E-04 | 2.86E-07 | 1.50E-09 | |
| | **LHDT1** | 15 | 0.105 | 6 | 100 | 0.06 | 3.70E-02 | 8.15E-05 | 4.28E-07 | |
| | **LHDT2** | 15 | 0.110 | 2 | 100 | 0.06 | 1.32E-02 | 2.91E-05 | 1.53E-07 | |
| | **MHDT** | 15 | 0.066 | 5 | 100 | 0.06 | 1.98E-02 | 4.36E-05 | 2.29E-07 | |
| | **HHDT** | 15 | 0.052 | 21 | 100 | 0.06 | 6.95E-02 | 1.53E-04 | 8.04E-07 | 1.66E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 1.04E-03 | 2.29E-06 | 1.21E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 1.04E-04 | 2.30E-07 | 1.21E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 1.36E-05 | 2.99E-08 | 1.57E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 3.78E-05 | 8.33E-08 | 4.38E-10 | |
| | **LHDT1** | 15 | 0.105 | 1 | 50 | 0.03 | 2.61E-03 | 5.75E-06 | 3.02E-08 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 9.33E-04 | 2.06E-06 | 1.08E-08 | |
| | **MHDT** | 15 | 0.066 | 14 | 50 | 0.03 | 2.82E-02 | 6.22E-05 | 3.27E-07 | |
| | **HHDT** | 15 | 0.052 | 85 | 50 | 0.03 | 1.38E-01 | 3.03E-04 | 1.59E-06 | 1.97E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 1.73E-03 | 3.80E-06 | 2.00E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 1.73E-04 | 3.81E-07 | 2.00E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 2.25E-05 | 4.96E-08 | 2.61E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 6.27E-05 | 1.38E-07 | 7.26E-10 | |
| | **LHDT1** | 15 | 0.105 | 1 | 50 | 0.03 | 3.98E-03 | 8.78E-06 | 4.61E-08 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 1.42E-03 | 3.14E-06 | 1.65E-08 | |
| | **MHDT** | 15 | 0.066 | 23 | 50 | 0.03 | 4.62E-02 | 1.02E-04 | 5.35E-07 | |
| | **HHDT** | 15 | 0.052 | 133 | 50 | 0.03 | 2.15E-01 | 4.74E-04 | 2.49E-06 | 3.11E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 1.29E-03 | 2.83E-06 | 1.49E-08 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 1.29E-04 | 2.83E-07 | 1.49E-09 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 1.68E-05 | 3.69E-08 | 1.94E-10 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | **LHDT1** | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.066 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 1.91E+00 | 4.20E-03 | 2.21E-05 | |
| | **LDT1** | | | 3 | | | 1.91E-01 | 4.20E-04 | 2.21E-06 | |
| | **LDT2** | | | 3 | | | 2.49E-02 | 5.48E-05 | 2.88E-07 | |
| | **MDT** | | | 5 | | | 6.93E-02 | 1.53E-04 | 8.02E-07 | |
| | **LHDT1** | | | 283 | | | 5.95E+00 | 1.31E-02 | 6.88E-05 | |
| | **LHDT2** | | | 96 | | | 2.13E+00 | 4.68E-03 | 2.46E-05 | |
| | **MHDT** | | | 1472 | | | 1.95E+01 | 4.28E-02 | 2.25E-04 | |
| | **HHDT** | | | 4883 | | | 4.99E+01 | 1.10E-01 | 5.78E-04 | |
| | **Total** | | | 6799 | | | 7.97E+01 | 1.75E-01 | 9.22E-04 | 9.22E-04 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.812 | 5 | 137 | 9.27E+00 | 2.04E-02 | 1.07E-04 | |
| | **LHDT2** | 0.816 | 5 | 47 | 3.17E+00 | 6.97E-03 | 3.66E-05 | |
| | **MHDT** | 0.001 | 5 | 713 | 7.72E-02 | 1.70E-04 | 8.94E-07 | |
| | **HHDT** | 0.001 | 5 | 2314 | 2.70E-01 | 5.95E-04 | 3.12E-06 | |
| | | | | 3210 | 1.28E+01 | 2.81E-02 | 1.48E-04 | 1.48E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.812 | 5 | 1 | 5.80E-02 | 1.28E-04 | 6.71E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 1.98E-02 | 4.36E-05 | 2.29E-07 | |
| | **MHDT** | 0.001 | 5 | 3 | 3.18E-04 | 7.00E-07 | 3.68E-09 | |
| | **HHDT** | 0.001 | 5 | 8 | 9.24E-04 | 2.04E-06 | 1.07E-08 | |
| | | | | 12 | 7.90E-02 | 1.74E-04 | 9.14E-07 | 9.14E-07 |
| **Idle at Utility** | **LHDT1** | 0.812 | 5 | 3 | 1.92E-01 | 4.24E-04 | 2.23E-06 | |
| | **LHDT2** | 0.816 | 5 | 1 | 6.57E-02 | 1.45E-04 | 7.60E-07 | |
| | **MHDT** | 0.001 | 5 | 2 | 2.61E-04 | 5.75E-07 | 3.02E-09 | |
| | **HHDT** | 0.001 | 5 | 11 | 1.25E-03 | 2.76E-06 | 1.45E-08 | |
| | | | | 17 | 2.60E-01 | 5.72E-04 | 3.00E-06 | 3.00E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 2.71E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 9.27E-03 | 2.04E-05 | 1.07E-07 | |
| | **MHDT** | 0.001 | 5 | 7 | 7.45E-04 | 1.64E-06 | 8.63E-09 | |
| | **HHDT** | 0.001 | 5 | 43 | 4.96E-03 | 1.09E-05 | 5.74E-08 | |
| | | | | 50 | 4.21E-02 | 9.27E-05 | 4.87E-07 | 4.87E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.812 | 5 | 1 | 4.14E-02 | 9.12E-05 | 4.79E-07 | |
| | **LHDT2** | 0.816 | 5 | 0 | 1.42E-02 | 3.12E-05 | 1.64E-07 | |
| | **MHDT** | 0.001 | 5 | 11 | 1.22E-03 | 2.69E-06 | 1.41E-08 | |
| | **HHDT** | 0.001 | 5 | 66 | 7.75E-03 | 1.71E-05 | 8.98E-08 | |
| | | | | 79 | 6.45E-02 | 1.42E-04 | 7.47E-07 | 7.47E-07 |
| **Idle at Firestation** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 1.32E+01 | 2.91E-02 | 1.53E-04 | 1.53E-04 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.026 | 17546 | 330 | 0.21 | 9.35E+01 | 2.06E-01 | 1.08E-03 | |
| | **LDT1** | 15 | 0.034 | 2058 | 330 | 0.21 | 1.43E+01 | 3.16E-02 | 1.66E-04 | |
| | **LDT2** | 15 | 0.026 | 6111 | 330 | 0.21 | 3.26E+01 | 7.17E-02 | 3.77E-04 | |
| | **MDT** | 15 | 0.024 | 4846 | 330 | 0.21 | 2.38E+01 | 5.25E-02 | 2.76E-04 | |
| | **LHDT1** | 15 | 0.040 | 886 | 330 | 0.21 | 7.27E+00 | 1.60E-02 | 8.41E-05 | |
| | **LHDT2** | 15 | 0.044 | 93 | 330 | 0.21 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **MHDT** | 15 | 0.064 | 344 | 330 | 0.21 | 4.52E+00 | 9.95E-03 | 5.23E-05 | |
| | **HHDT** | 15 | 0.026 | 104 | 330 | 0.21 | 5.57E-01 | 1.23E-03 | 6.44E-06 | |
| | | | | | | | | | | 2.05E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.026 | 75 | 175 | 0.11 | 2.11E-01 | 4.64E-04 | 2.44E-06 | |
| | **LDT1** | 15 | 0.034 | 9 | 175 | 0.11 | 3.23E-02 | 7.11E-05 | 3.74E-07 | |
| | **LDT2** | 15 | 0.026 | 26 | 175 | 0.11 | 7.34E-02 | 1.62E-04 | 8.49E-07 | |
| | **MDT** | 15 | 0.024 | 21 | 175 | 0.11 | 5.37E-02 | 1.18E-04 | 6.22E-07 | |
| | **LHDT1** | 15 | 0.040 | 6 | 175 | 0.11 | 2.41E-02 | 5.31E-05 | 2.79E-07 | |
| | **LHDT2** | 15 | 0.044 | 1 | 175 | 0.11 | 2.79E-03 | 6.16E-06 | 3.23E-08 | |
| | **MHDT** | 15 | 0.064 | 1 | 175 | 0.11 | 9.87E-03 | 2.17E-05 | 1.14E-07 | |
| | **HHDT** | 15 | 0.026 | 0 | 175 | 0.11 | 1.01E-03 | 2.23E-06 | 1.17E-08 | 4.72E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.026 | 109 | 100 | 0.06 | 1.76E-01 | 3.88E-04 | 2.04E-06 | |
| | **LDT1** | 15 | 0.034 | 13 | 100 | 0.06 | 2.70E-02 | 5.96E-05 | 3.13E-07 | |
| | **LDT2** | 15 | 0.026 | 38 | 100 | 0.06 | 6.14E-02 | 1.35E-04 | 7.11E-07 | |
| | **MDT** | 15 | 0.024 | 30 | 100 | 0.06 | 4.50E-02 | 9.90E-05 | 5.20E-07 | |
| | **LHDT1** | 15 | 0.040 | 18 | 100 | 0.06 | 4.57E-02 | 1.01E-04 | 5.29E-07 | |
| | **LHDT2** | 15 | 0.044 | 2 | 100 | 0.06 | 5.30E-03 | 1.17E-05 | 6.13E-08 | |
| | **MHDT** | 15 | 0.064 | 1 | 100 | 0.06 | 4.63E-03 | 1.02E-05 | 5.36E-08 | |
| | **HHDT** | 15 | 0.026 | 0 | 100 | 0.06 | 7.83E-04 | 1.72E-06 | 9.06E-09 | 4.24E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.026 | 64 | 50 | 0.03 | 5.14E-02 | 1.13E-04 | 5.95E-07 | |
| | **LDT1** | 15 | 0.034 | 7 | 50 | 0.03 | 7.88E-03 | 1.74E-05 | 9.12E-08 | |
| | **LDT2** | 15 | 0.026 | 22 | 50 | 0.03 | 1.79E-02 | 3.94E-05 | 2.07E-07 | |
| | **MDT** | 15 | 0.024 | 18 | 50 | 0.03 | 1.31E-02 | 2.89E-05 | 1.52E-07 | |
| | **LHDT1** | 15 | 0.040 | 3 | 50 | 0.03 | 3.22E-03 | 7.10E-06 | 3.73E-08 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 3.74E-04 | 8.23E-07 | 4.32E-09 | |
| | **MHDT** | 15 | 0.064 | 3 | 50 | 0.03 | 6.61E-03 | 1.46E-05 | 7.65E-08 | |
| | **HHDT** | 15 | 0.026 | 2 | 50 | 0.03 | 1.55E-03 | 3.41E-06 | 1.79E-08 | 1.18E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.026 | 105 | 50 | 0.03 | 8.52E-02 | 1.88E-04 | 9.86E-07 | |
| | **LDT1** | 15 | 0.034 | 12 | 50 | 0.03 | 1.31E-02 | 2.88E-05 | 1.51E-07 | |
| | **LDT2** | 15 | 0.026 | 37 | 50 | 0.03 | 2.97E-02 | 6.53E-05 | 3.43E-07 | |
| | **MDT** | 15 | 0.024 | 29 | 50 | 0.03 | 2.17E-02 | 4.78E-05 | 2.51E-07 | |
| | **LHDT1** | 15 | 0.040 | 4 | 50 | 0.03 | 4.92E-03 | 1.08E-05 | 5.69E-08 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 5.70E-04 | 1.26E-06 | 6.60E-09 | |
| | **MHDT** | 15 | 0.064 | 5 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.026 | 3 | 50 | 0.03 | 2.42E-03 | 5.34E-06 | 2.80E-08 | 1.95E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.026 | 78 | 50 | 0.03 | 6.34E-02 | 1.40E-04 | 7.34E-07 | |
| | **LDT1** | 15 | 0.034 | 9 | 50 | 0.03 | 9.72E-03 | 2.14E-05 | 1.13E-07 | |
| | **LDT2** | 15 | 0.026 | 27 | 50 | 0.03 | 2.21E-02 | 4.86E-05 | 2.56E-07 | |
| | **MDT** | 15 | 0.024 | 22 | 50 | 0.03 | 1.62E-02 | 3.56E-05 | 1.87E-07 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.29E-06 |
| **Total - All Buildings** | **LDA** | | | 17977 | | | 9.41E+01 | 2.07E-01 | 1.09E-03 | |
| | **LDT1** | | | 2108 | | | 1.44E+01 | 3.18E-02 | 1.67E-04 | |
| | **LDT2** | | | 6261 | | | 3.28E+01 | 7.22E-02 | 3.79E-04 | |
| | **MDT** | | | 4965 | | | 2.40E+01 | 5.28E-02 | 2.78E-04 | |
| | **LHDT1** | | | 917 | | | 7.34E+00 | 1.62E-02 | 8.50E-05 | |
| | **LHDT2** | | | 97 | | | 8.51E-01 | 1.88E-03 | 9.85E-06 | |
| | **MHDT** | | | 356 | | | 4.55E+00 | 1.00E-02 | 5.27E-05 | |
| | **HHDT** | | | 110 | | | 5.63E-01 | 1.24E-03 | 6.51E-06 | |
| | **Total** | | | 32791 | | | 1.79E+02 | 3.93E-01 | 2.07E-03 | 2.07E-03 |

**Non-Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.055 | 5 | 443 | 2.03E+00 | 4.47E-03 | 2.35E-05 | |
| | **LHDT2** | 0.045 | 5 | 47 | 1.75E-01 | 3.86E-04 | 2.03E-06 | |
| | **MHDT** | 0.060 | 5 | 172 | 8.61E-01 | 1.90E-03 | 9.96E-06 | |
| | **HHDT** | 0.075 | 5 | 52 | 3.26E-01 | 7.19E-04 | 3.78E-06 | |
| | | | | 714 | 3.39E+00 | 7.47E-03 | 3.93E-05 | 3.93E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.055 | 5 | 3 | 1.27E-02 | 2.80E-05 | 1.47E-07 | |
| | **LHDT2** | 0.045 | 5 | 0 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | **MHDT** | 0.060 | 5 | 1 | 3.55E-03 | 7.81E-06 | 4.10E-08 | |
| | **HHDT** | 0.075 | 5 | 0 | 1.12E-03 | 2.46E-06 | 1.29E-08 | |
| | | | | 4 | 1.85E-02 | 4.07E-05 | 2.14E-07 | 2.14E-07 |
| **Idle at Utility** | **LHDT1** | 0.055 | 5 | 9 | 4.21E-02 | 9.28E-05 | 4.88E-07 | |
| | **LHDT2** | 0.045 | 5 | 1 | 3.63E-03 | 8.00E-06 | 4.21E-08 | |
| | **MHDT** | 0.060 | 5 | 1 | 2.91E-03 | 6.42E-06 | 3.37E-08 | |
| | **HHDT** | 0.075 | 5 | 0 | 1.51E-03 | 3.34E-06 | 1.75E-08 | |
| | | | | 11 | 5.02E-02 | 1.11E-04 | 5.81E-07 | 5.81E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.055 | 5 | 1 | 5.94E-03 | 1.31E-05 | 6.88E-08 | |
| | **LHDT2** | 0.045 | 5 | 0 | 5.13E-04 | 1.13E-06 | 5.93E-09 | |
| | **MHDT** | 0.060 | 5 | 2 | 8.31E-03 | 1.83E-05 | 9.62E-08 | |
| | **HHDT** | 0.075 | 5 | 1 | 6.00E-03 | 1.32E-05 | 6.94E-08 | |
| | | | | 4 | 2.08E-02 | 4.57E-05 | 2.40E-07 | 2.40E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.055 | 5 | 2 | 9.08E-03 | 2.00E-05 | 1.05E-07 | |
| | **LHDT2** | 0.045 | 5 | 0 | 7.83E-04 | 1.72E-06 | 9.06E-09 | |
| | **MHDT** | 0.060 | 5 | 3 | 1.36E-02 | 3.00E-05 | 1.57E-07 | |
| | **HHDT** | 0.075 | 5 | 2 | 9.38E-03 | 2.07E-05 | 1.09E-07 | |
| | | | | 6 | 3.28E-02 | 7.23E-05 | 3.80E-07 | 3.80E-07 |
| **Idle at Firestation** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.075 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.52E+00 | 7.74E-03 | 4.07E-05 | 4.07E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035 Phase 2**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 6.98E-04 | 1.57E-03 |
| Light Logistics | Phase 2 | 6.42E-06 | 1.60E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 7.04E-04 | 1.59E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.13E-04 | 3.00E-05 |
| Light Logistics | Phase 2 | 3.11E-06 | 7.26E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.16E-04 | 3.07E-05 |

**Total Onsite Mobile Emissiona**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.04E-04 | 1.59E-03 | |
| | Idling Emissions (g/sec) | 1.16E-04 | 3.07E-05 | |
| | Total Vehicle Emissions (g/sec) | 8.20E-04 | 1.62E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.09E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.40E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 6.49E-04 | |
| | | | | Total |
| | Total All Sources (g/sec) | 8.20E-04 | 2.27E-03 | 3.09E-03 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 5.99E-10 |

**World Logistics Center** **2012** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.174 | 41 | 330 | 0.21 | 1.45E+00 | 3.19E-03 | 1.68E-05 | |
| | **LDT1** | 15 | 0.362 | 2 | 330 | 0.21 | 1.45E-01 | 3.19E-04 | 1.68E-06 | |
| | **LDT2** | 15 | 0.048 | 2 | 330 | 0.21 | 1.89E-02 | 4.16E-05 | 2.19E-07 | |
| | **MDT** | 15 | 0.069 | 4 | 330 | 0.21 | 5.26E-02 | 1.16E-04 | 6.09E-07 | |
| | **LHDT1** | 15 | 0.105 | 209 | 330 | 0.21 | 4.50E+00 | 9.90E-03 | 5.20E-05 | |
| | **LHDT2** | 15 | 0.110 | 71 | 330 | 0.21 | 1.61E+00 | 3.54E-03 | 1.86E-05 | |
| | **MHDT** | 15 | 0.066 | 1089 | 330 | 0.21 | 1.48E+01 | 3.25E-02 | 1.71E-04 | |
| | **HHDT** | 15 | 0.052 | 3536 | 330 | 0.21 | 3.78E+01 | 8.32E-02 | 4.37E-04 | |
| | | | | | | | | | | 6.98E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.174 | 1 | 175 | 0.11 | 1.45E-02 | 3.19E-05 | 1.68E-07 | |
| | **LDT1** | 15 | 0.362 | 0 | 175 | 0.11 | 1.45E-03 | 3.20E-06 | 1.68E-08 | |
| | **LDT2** | 15 | 0.048 | 0 | 175 | 0.11 | 1.89E-04 | 4.17E-07 | 2.19E-09 | |
| | **MDT** | 15 | 0.069 | 0 | 175 | 0.11 | 5.26E-04 | 1.16E-06 | 6.09E-09 | |
| | **LHDT1** | 15 | 0.105 | 6 | 175 | 0.11 | 6.63E-02 | 1.46E-04 | 7.67E-07 | |
| | **LHDT2** | 15 | 0.110 | 2 | 175 | 0.11 | 2.37E-02 | 5.22E-05 | 2.74E-07 | |
| | **MHDT** | 15 | 0.066 | 20 | 175 | 0.11 | 1.43E-01 | 3.16E-04 | 1.66E-06 | |
| | **HHDT** | 15 | 0.052 | 54 | 175 | 0.11 | 3.05E-01 | 6.71E-04 | 3.53E-06 | 6.42E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.174 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.362 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.069 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.105 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.110 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.066 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.066 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.066 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.174 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.362 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.069 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.105 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.110 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.066 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 1.46E+00 | 3.22E-03 | 1.69E-05 | |
| | **LDT1** | | | 2 | | | 1.46E-01 | 3.22E-04 | 1.69E-06 | |
| | **LDT2** | | | 2 | | | 1.91E-02 | 4.21E-05 | 2.21E-07 | |
| | **MDT** | | | 4 | | | 5.31E-02 | 1.17E-04 | 6.15E-07 | |
| | **LHDT1** | | | 215 | | | 4.56E+00 | 1.01E-02 | 5.28E-05 | |
| | **LHDT2** | | | 73 | | | 1.63E+00 | 3.59E-03 | 1.89E-05 | |
| | **MHDT** | | | 1109 | | | 1.49E+01 | 3.28E-02 | 1.72E-04 | |
| | **HHDT** | | | 3590 | | | 3.81E+01 | 8.39E-02 | 4.41E-04 | |
| | **Total** | | | 5037 | | | 6.09E+01 | 1.34E-01 | 7.04E-04 | 7.04E-04 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.812 | 5 | 105 | 7.08E+00 | 1.56E-02 | 8.20E-05 | |
| | **LHDT2** | 0.816 | 5 | 36 | 2.42E+00 | 5.33E-03 | 2.80E-05 | |
| | **MHDT** | 0.001 | 5 | 545 | 5.90E-02 | 1.30E-04 | 6.83E-07 | |
| | **HHDT** | 0.001 | 5 | 1768 | 2.06E-01 | 4.54E-04 | 2.39E-06 | |
| | | | | 2453 | 9.77E+00 | 2.15E-02 | 1.13E-04 | 1.13E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.812 | 5 | 3 | 1.97E-01 | 4.34E-04 | 2.28E-06 | |
| | **LHDT2** | 0.816 | 5 | 1 | 6.73E-02 | 1.48E-04 | 7.78E-07 | |
| | **MHDT** | 0.001 | 5 | 10 | 1.08E-03 | 2.38E-06 | 1.25E-08 | |
| | **HHDT** | 0.001 | 5 | 27 | 3.14E-03 | 6.91E-06 | 3.63E-08 | |
| | | | | 41 | 2.68E-01 | 5.91E-04 | 3.11E-06 | 3.11E-06 |
| **Idle at Utility** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.812 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.816 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 1.00E+01 | 2.21E-02 | 1.16E-04 | 1.16E-04 |

**World Logistics Center** 2012 Phase 2 With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.026 | 13408 | 330 | 0.21 | 7.15E+01 | 1.57E-01 | 8.27E-04 | |
| | **LDT1** | 15 | 0.034 | 1572 | 330 | 0.21 | 1.10E+01 | 2.41E-02 | 1.27E-04 | |
| | **LDT2** | 15 | 0.026 | 4670 | 330 | 0.21 | 2.49E+01 | 5.48E-02 | 2.88E-04 | |
| | **MDT** | 15 | 0.024 | 3703 | 330 | 0.21 | 1.82E+01 | 4.01E-02 | 2.11E-04 | |
| | **LHDT1** | 15 | 0.040 | 677 | 330 | 0.21 | 5.55E+00 | 1.22E-02 | 6.43E-05 | |
| | **LHDT2** | 15 | 0.044 | 71 | 330 | 0.21 | 6.44E-01 | 1.42E-03 | 7.45E-06 | |
| | **MHDT** | 15 | 0.064 | 263 | 330 | 0.21 | 3.45E+00 | 7.60E-03 | 4.00E-05 | |
| | **HHDT** | 15 | 0.026 | 80 | 330 | 0.21 | 4.25E-01 | 9.37E-04 | 4.92E-06 | |
| | | | | | | | | | | 1.57E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.026 | 253 | 175 | 0.11 | 7.15E-01 | 1.58E-03 | 8.28E-06 | |
| | **LDT1** | 15 | 0.034 | 30 | 175 | 0.11 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LDT2** | 15 | 0.026 | 88 | 175 | 0.11 | 2.49E-01 | 5.49E-04 | 2.88E-06 | |
| | **MDT** | 15 | 0.024 | 70 | 175 | 0.11 | 1.82E-01 | 4.02E-04 | 2.11E-06 | |
| | **LHDT1** | 15 | 0.040 | 19 | 175 | 0.11 | 8.18E-02 | 1.80E-04 | 9.47E-07 | |
| | **LHDT2** | 15 | 0.044 | 2 | 175 | 0.11 | 9.49E-03 | 2.09E-05 | 1.10E-07 | |
| | **MHDT** | 15 | 0.064 | 5 | 175 | 0.11 | 3.35E-02 | 7.38E-05 | 3.88E-07 | |
| | **HHDT** | 15 | 0.026 | 1 | 175 | 0.11 | 3.43E-03 | 7.56E-06 | 3.97E-08 | 1.60E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 7.22E+01 | 1.59E-01 | 8.35E-04 | |
| | **LDT1** | | | 1602 | | | 1.11E+01 | 2.44E-02 | 1.28E-04 | |
| | **LDT2** | | | 4758 | | | 2.51E+01 | 5.54E-02 | 2.91E-04 | |
| | **MDT** | | | 3773 | | | 1.84E+01 | 4.05E-02 | 2.13E-04 | |
| | **LHDT1** | | | 696 | | | 5.63E+00 | 1.24E-02 | 6.52E-05 | |
| | **LHDT2** | | | 73 | | | 6.53E-01 | 1.44E-03 | 7.56E-06 | |
| | **MHDT** | | | 268 | | | 3.49E+00 | 7.68E-03 | 4.03E-05 | |
| | **HHDT** | | | 81 | | | 4.29E-01 | 9.45E-04 | 4.96E-06 | |
| | **Total** | | | 24913 | | | 1.37E+02 | 3.02E-01 | 1.59E-03 | 1.59E-03 |

**Non-Diesel Truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.055 | 5 | 339 | 1.55E+00 | 3.42E-03 | 1.80E-05 | |
| | **LHDT2** | 0.045 | 5 | 36 | 1.34E-01 | 2.95E-04 | 1.55E-06 | |
| | **MHDT** | 0.060 | 5 | 132 | 6.58E-01 | 1.45E-03 | 7.61E-06 | |
| | **HHDT** | 0.075 | 5 | 40 | 2.49E-01 | 5.49E-04 | 2.89E-06 | |
| | | | | 546 | 2.59E+00 | 5.71E-03 | 3.00E-05 | 3.00E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.055 | 5 | 9 | 4.31E-02 | 9.50E-05 | 4.99E-07 | |
| | **LHDT2** | 0.045 | 5 | 1 | 3.72E-03 | 8.19E-06 | 4.31E-08 | |
| | **MHDT** | 0.060 | 5 | 2 | 1.20E-02 | 2.65E-05 | 1.39E-07 | |
| | **HHDT** | 0.075 | 5 | 1 | 3.79E-03 | 8.36E-06 | 4.39E-08 | |
| | | | | 13 | 6.27E-02 | 1.38E-04 | 7.26E-07 | 7.26E-07 |
| **Idle at Utility** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.075 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.075 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.075 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.055 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.045 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.075 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 2.66E+00 | 5.85E-03 | 3.07E-05 | 3.07E-05 |

**World Logistics Center** **2012** **PM2.5** Based on PB Traffic Results 10/3/2013
**With Project** **Phase 1 + 2** Rev5 With Mitigation:MY2010 T6 and T7 DSL
**Internal Roadway Circulation** With EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.45E-03 | 1.28E-03 | 8.73E-03 | 1.15E-02 |
| 2 | 3.47E-03 | 3.01E-03 | 2.07E-02 | 2.72E-02 |
| 3 | 3.95E-03 | 3.56E-03 | 2.36E-02 | 3.11E-02 |
| 5 | 2.61E-04 | 1.37E-03 | 2.21E-03 | 3.85E-03 |
| 6 | 2.14E-03 | 2.13E-03 | 1.30E-02 | 1.72E-02 |
| 8 | 4.10E-04 | 2.31E-03 | 3.54E-03 | 6.26E-03 |
| 11 | 7.50E-06 | 5.81E-05 | 8.27E-05 | 1.48E-04 |
| 12 | 1.75E-05 | 8.97E-05 | 1.40E-04 | 2.48E-04 |
| 14 | 3.52E-04 | 5.22E-04 | 2.41E-03 | 3.28E-03 |
| 18 | 2.94E-04 | 3.58E-04 | 1.75E-03 | 2.41E-03 |
| 19 | 1.40E-03 | 1.22E-03 | 8.45E-03 | 1.11E-02 |
| 21 | 1.52E-03 | 2.31E-03 | 9.62E-03 | 1.35E-02 |
| 24 | 1.36E-03 | 2.45E-03 | 8.87E-03 | 1.27E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 4.61E-04 | 4.10E-04 | 2.83E-03 | 3.70E-03 |
| 30 | 2.02E-03 | 1.93E-03 | 1.25E-02 | 1.65E-02 |
| 31 | 2.25E-04 | 6.41E-04 | 1.66E-03 | 2.53E-03 |
| | | | Total | 1.63E-01 |

| ID | Arterial | From | To | | 2012 With Project - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | | | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | Street A | Street F | | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | | 4,604 | 147 | 307 | 402 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM2.5** **Phase 1 + 2** With Mitigation:MY2010 T6 and T7 DSL

Rev5

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0820 | 0.1750 | 0.0320 | 0.0400 | 0.0780 | 0.0830 | 0.0648 | 0.0465 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.21E-06 | 7.40E-07 | 1.33E-07 | 3.22E-07 | 4.20E-05 | 1.52E-05 | 3.80E-04 | 1.00E-03 | 1.45E-03 |
| 2 | 1 | 1.64E-05 | 1.69E-06 | 3.03E-07 | 7.34E-07 | 1.42E-04 | 5.12E-05 | 8.78E-04 | 2.38E-03 | 3.47E-03 |
| 3 | 1 | 1.94E-05 | 1.99E-06 | 3.58E-07 | 8.65E-07 | 1.71E-04 | 6.18E-05 | 1.02E-03 | 2.67E-03 | 3.95E-03 |
| 5 | 1 | 8.27E-06 | 8.49E-07 | 1.53E-07 | 3.69E-07 | 3.52E-05 | 1.27E-05 | 1.88E-04 | 1.59E-05 | 2.61E-04 |
| 6 | 1 | 1.19E-05 | 1.22E-06 | 2.19E-07 | 5.31E-07 | 8.62E-05 | 3.12E-05 | 5.80E-04 | 1.43E-03 | 2.14E-03 |
| 8 | 1 | 1.39E-05 | 1.42E-06 | 2.56E-07 | 6.20E-07 | 6.09E-05 | 2.20E-05 | 3.11E-04 | 0.00E+00 | 4.10E-04 |
| 11 | 1 | 3.56E-07 | 3.66E-08 | 6.58E-09 | 1.59E-08 | 1.23E-06 | 4.46E-07 | 5.40E-06 | 0.00E+00 | 7.50E-06 |
| 12 | 1 | 5.25E-07 | 5.39E-08 | 9.70E-09 | 2.35E-08 | 3.57E-06 | 1.29E-06 | 1.20E-05 | 0.00E+00 | 1.75E-05 |
| 14 | 1 | 3.14E-06 | 3.22E-07 | 5.79E-08 | 1.40E-07 | 1.13E-05 | 4.07E-06 | 7.34E-05 | 2.59E-04 | 3.52E-04 |
| 18 | 1 | 1.94E-06 | 1.99E-07 | 3.58E-08 | 8.65E-08 | 2.11E-05 | 7.63E-06 | 9.00E-05 | 1.73E-04 | 2.94E-04 |
| 19 | 1 | 6.74E-06 | 6.91E-07 | 1.24E-07 | 3.01E-07 | 4.90E-05 | 1.77E-05 | 3.51E-04 | 9.78E-04 | 1.40E-03 |
| 21 | 1 | 1.34E-05 | 1.37E-06 | 2.47E-07 | 5.97E-07 | 7.38E-05 | 2.67E-05 | 5.12E-04 | 8.96E-04 | 1.52E-03 |
| 24 | 1 | 1.44E-05 | 1.48E-06 | 2.66E-07 | 6.43E-07 | 6.75E-05 | 2.44E-05 | 4.91E-04 | 7.59E-04 | 1.36E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.32E-06 | 2.38E-07 | 4.28E-08 | 1.04E-07 | 1.35E-05 | 4.88E-06 | 1.08E-04 | 3.32E-04 | 4.61E-04 |
| 30 | 1 | 1.10E-05 | 1.13E-06 | 2.03E-07 | 4.90E-07 | 6.68E-05 | 2.42E-05 | 4.53E-04 | 1.46E-03 | 2.02E-03 |
| 31 | 1 | 3.86E-06 | 3.96E-07 | 7.13E-08 | 1.73E-07 | 1.37E-05 | 4.98E-06 | 9.44E-05 | 1.08E-04 | 2.25E-04 |

**World Logistics Center** **2012** **PM2.5** **Phase 1 + 2** With Mitigation:MY2010 T6 and T7 DSL

Rev5

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35,138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 |
| 2 | 36,806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 |
| 3 | 13,319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 |
| 5 | 9,380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 |
| 6 | 16,641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 |
| 8 | 13,674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 |
| 14 | 2,566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 |
| 18 | 2,017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 |
| 19 | 4,585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 |
| 21 | 14,156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 |
| 24 | 9,401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5,463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 |
| 30 | 6,005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 |
| 31 | 5,460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0220 | 0.0250 | 0.0220 | 0.0200 | 0.0380 | 0.0420 | 0.0620 | 0.0350 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 6.38E-04 | 8.51E-05 | 2.22E-04 | 1.60E-04 | 6.63E-05 | 7.72E-06 | 8.78E-05 | 1.70E-05 | 1.28E-03 |
| 2 | 1 | 1.46E-03 | 1.94E-04 | 5.07E-04 | 3.65E-04 | 2.23E-04 | 2.60E-05 | 2.03E-04 | 4.04E-05 | 3.01E-03 |
| 3 | 1 | 1.72E-03 | 2.29E-04 | 5.98E-04 | 4.31E-04 | 2.69E-04 | 3.14E-05 | 2.35E-04 | 4.54E-05 | 3.56E-03 |
| 5 | 1 | 7.32E-04 | 9.76E-05 | 2.55E-04 | 1.84E-04 | 5.55E-05 | 6.47E-06 | 4.34E-05 | 2.70E-07 | 1.37E-03 |
| 6 | 1 | 1.05E-03 | 1.40E-04 | 3.66E-04 | 2.64E-04 | 1.36E-04 | 1.58E-05 | 1.34E-04 | 2.43E-05 | 2.13E-03 |
| 8 | 1 | 1.23E-03 | 1.64E-04 | 4.28E-04 | 3.08E-04 | 9.59E-05 | 1.12E-05 | 7.19E-05 | 0.00E+00 | 2.31E-03 |
| 11 | 1 | 3.16E-05 | 4.21E-06 | 1.10E-05 | 7.93E-06 | 1.94E-06 | 2.26E-07 | 1.25E-06 | 0.00E+00 | 5.81E-05 |
| 12 | 1 | 4.65E-05 | 6.20E-06 | 1.62E-05 | 1.17E-05 | 5.63E-06 | 6.56E-07 | 2.79E-06 | 0.00E+00 | 8.97E-05 |
| 14 | 1 | 2.78E-04 | 3.70E-05 | 9.67E-05 | 6.97E-05 | 1.77E-05 | 2.07E-06 | 1.70E-05 | 4.40E-06 | 5.22E-04 |
| 18 | 1 | 1.72E-04 | 2.29E-05 | 5.98E-05 | 4.31E-05 | 3.33E-05 | 3.87E-06 | 2.08E-05 | 2.94E-06 | 3.58E-04 |
| 19 | 1 | 5.97E-04 | 7.95E-05 | 2.08E-04 | 1.50E-04 | 7.72E-05 | 9.00E-06 | 8.11E-05 | 1.66E-05 | 1.22E-03 |
| 21 | 1 | 1.18E-03 | 1.58E-04 | 4.12E-04 | 2.97E-04 | 1.16E-04 | 1.35E-05 | 1.18E-04 | 1.52E-05 | 2.31E-03 |
| 24 | 1 | 1.28E-03 | 1.70E-04 | 4.44E-04 | 3.20E-04 | 1.06E-04 | 1.24E-05 | 1.14E-04 | 1.29E-05 | 2.45E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.05E-04 | 2.74E-05 | 7.15E-05 | 5.16E-05 | 2.12E-05 | 2.47E-06 | 2.51E-05 | 5.64E-06 | 4.10E-04 |
| 30 | 1 | 9.72E-04 | 1.29E-04 | 3.38E-04 | 2.44E-04 | 1.05E-04 | 1.23E-05 | 1.05E-04 | 2.48E-05 | 1.93E-03 |
| 31 | 1 | 3.42E-04 | 4.56E-05 | 1.19E-04 | 8.59E-05 | 2.17E-05 | 2.52E-06 | 2.18E-05 | 1.83E-06 | 6.41E-04 |

**World Logistics Center** **2012 Project Phases 1 + 2**

Rev5

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 21,539 | 4375 | 1,127 | 229 | 3,097 | 629 | 9,375 | 1904 | 7138 | 8.73 | 0.035 | 0.0002 | 1.7 | 8.73E-03 |
| 2 | A | 731 | 0.45 | 21,965 | 9974 | 1,698 | 771 | 3,202 | 1454 | 9,941 | 4514 | 16714 | 8.83 | 0.035 | 0.0002 | 3.9 | 2.07E-02 |
| 3 | A | 2352 | 1.46 | 8,051 | 11763 | 637 | 931 | 1,154 | 1686 | 3,477 | 5080 | 19460 | 8.64 | 0.035 | 0.0002 | 4.5 | 2.36E-02 |
| 5 | A | 953 | 0.59 | 8,480 | 5020 | 324 | 192 | 525 | 311 | 51 | 30 | 5553 | 2.90 | 0.035 | 0.0001 | 0.4 | 2.21E-03 |
| 6 | A | 1099 | 0.68 | 10,562 | 7211 | 688 | 470 | 1,408 | 961 | 3,983 | 2719 | 11361 | 8.14 | 0.035 | 0.0002 | 2.5 | 1.30E-02 |
| 8 | A | 1091 | 0.68 | 12,425 | 8421 | 489 | 331 | 760 | 515 | 0 | 0 | 9267 | 2.79 | 0.035 | 0.0001 | 0.7 | 3.54E-03 |
| 11 | A | 1201 | 0.75 | 290 | 216 | 9 | 7 | 12 | 9 | 0 | 0 | 232 | 2.60 | 0.035 | 0.0001 | 0.0 | 8.27E-05 |
| 12 | A | 824 | 0.51 | 623 | 319 | 38 | 19 | 39 | 20 | 0 | 0 | 358 | 2.86 | 0.035 | 0.0001 | 0.0 | 1.40E-04 |
| 14 | A | 1618 | 1.01 | 1,894 | 1904 | 61 | 61 | 121 | 122 | 490 | 493 | 2579 | 6.70 | 0.035 | 0.0002 | 0.5 | 2.41E-03 |
| 18 | A | 1412 | 0.88 | 1,341 | 1176 | 131 | 115 | 170 | 149 | 375 | 329 | 1769 | 7.09 | 0.035 | 0.0002 | 0.3 | 1.75E-03 |
| 19 | A | 2386 | 1.48 | 2,759 | 4089 | 180 | 267 | 392 | 581 | 1,254 | 1859 | 6796 | 8.87 | 0.035 | 0.0002 | 1.6 | 8.45E-03 |
| 21 | A | 1258 | 0.78 | 10,378 | 8110 | 514 | 402 | 1,085 | 848 | 2,179 | 1703 | 11063 | 6.25 | 0.035 | 0.0002 | 1.8 | 9.62E-03 |
| 24 | A | 1946 | 1.21 | 7,231 | 8741 | 304 | 367 | 673 | 814 | 1,193 | 1442 | 11365 | 5.61 | 0.035 | 0.0001 | 1.7 | 8.87E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 3,357 | 1408 | 175 | 73 | 428 | 179 | 1,503 | 630 | 2291 | 8.81 | 0.035 | 0.0002 | 0.5 | 2.83E-03 |
| 30 | A | 2827 | 1.76 | 3,792 | 6659 | 207 | 364 | 427 | 750 | 1,579 | 2773 | 10546 | 8.49 | 0.035 | 0.0002 | 2.4 | 1.25E-02 |
| 31 | A | 820 | 0.51 | 4,604 | 2345 | 147 | 75 | 307 | 156 | 402 | 205 | 2781 | 4.32 | 0.035 | 0.0001 | 0.3 | 1.66E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2012** **Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.96E-03 | 4.12E-03 |
| Light Logistics | Phase 1 | 3.96E-06 | 9.48E-06 |
| Utilities Service Station | Phase 1 | 3.29E-06 | 8.63E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.37E-06 | 2.40E-06 |
| Convenience Store | Phase 1 | 6.89E-06 | 3.96E-06 |
| Fire Station | Phase 1 | 2.03E-08 | 2.55E-06 |
| Total | | 1.97E-03 | 4.15E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.55E-04 | 4.25E-05 |
| Light Logistics | Phase 1 | 9.56E-07 | 2.32E-07 |
| Utilities Service Station | Phase 1 | 3.16E-06 | 6.37E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.11E-07 | 2.58E-07 |
| Convenience Store | Phase 1 | 7.84E-07 | 4.09E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.60E-04 | 4.40E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.97E-03 | 4.15E-03 | |
| | Idling Emissions (g/sec) | 1.60E-04 | 4.40E-05 | |
| | Total Vehicle Emissions (g/sec) | 2.13E-03 | 4.19E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 2.13E-03 | 5.53E-03 | 7.66E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.64E-09 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.206 | 53 | 330 | 0.21 | 2.24E+00 | 4.94E-03 | 2.59E-05 | |
| | **LDT1** | 15 | 0.403 | 3 | 330 | 0.21 | 2.11E-01 | 4.65E-04 | 2.44E-06 | |
| | **LDT2** | 15 | 0.074 | 3 | 330 | 0.21 | 3.80E-02 | 8.37E-05 | 4.40E-07 | |
| | **MDT** | 15 | 0.096 | 5 | 330 | 0.21 | 9.55E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.160 | 274 | 330 | 0.21 | 9.01E+00 | 1.98E-02 | 1.04E-04 | |
| | **LHDT2** | 15 | 0.173 | 93 | 330 | 0.21 | 3.31E+00 | 7.28E-03 | 3.83E-05 | |
| | **MHDT** | 15 | 0.150 | 1425 | 330 | 0.21 | 4.38E+01 | 9.65E-02 | 5.07E-04 | |
| | **HHDT** | 15 | 0.116 | 4628 | 330 | 0.21 | 1.10E+02 | 2.43E-01 | 1.28E-03 | |
| | | | | | | | | | | 1.96E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.206 | 0 | 175 | 0.11 | 5.05E-03 | 1.11E-05 | 5.84E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 175 | 0.11 | 4.75E-04 | 1.05E-06 | 5.50E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 175 | 0.11 | 8.56E-05 | 1.88E-07 | 9.90E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 175 | 0.11 | 2.15E-04 | 4.74E-07 | 2.49E-09 | |
| | **LHDT1** | 15 | 0.160 | 2 | 175 | 0.11 | 2.99E-02 | 6.58E-05 | 3.46E-07 | |
| | **LHDT2** | 15 | 0.173 | 1 | 175 | 0.11 | 1.10E-02 | 2.42E-05 | 1.27E-07 | |
| | **MHDT** | 15 | 0.150 | 6 | 175 | 0.11 | 9.57E-02 | 2.11E-04 | 1.11E-06 | |
| | **HHDT** | 15 | 0.116 | 16 | 175 | 0.11 | 2.00E-01 | 4.41E-04 | 2.32E-06 | 3.96E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.206 | 0 | 100 | 0.06 | 4.25E-03 | 9.37E-06 | 4.92E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 100 | 0.06 | 4.00E-04 | 8.82E-07 | 4.63E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 100 | 0.06 | 7.21E-05 | 1.59E-07 | 8.34E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 100 | 0.06 | 1.81E-04 | 3.99E-07 | 2.10E-09 | |
| | **LHDT1** | 15 | 0.160 | 6 | 100 | 0.06 | 5.70E-02 | 1.26E-04 | 6.60E-07 | |
| | **LHDT2** | 15 | 0.173 | 2 | 100 | 0.06 | 2.09E-02 | 4.61E-05 | 2.42E-07 | |
| | **MHDT** | 15 | 0.150 | 5 | 100 | 0.06 | 4.52E-02 | 9.95E-05 | 5.23E-07 | |
| | **HHDT** | 15 | 0.116 | 22 | 100 | 0.06 | 1.56E-01 | 3.43E-04 | 1.80E-06 | 3.29E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.23E-03 | 2.71E-06 | 1.43E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.16E-04 | 2.55E-07 | 1.34E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.09E-05 | 4.60E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 5.24E-05 | 1.16E-07 | 6.07E-10 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 3.99E-03 | 8.80E-06 | 4.62E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 1.47E-03 | 3.23E-06 | 1.70E-08 | |
| | **MHDT** | 15 | 0.150 | 14 | 50 | 0.03 | 6.41E-02 | 1.41E-04 | 7.41E-07 | |
| | **HHDT** | 15 | 0.116 | 85 | 50 | 0.03 | 3.07E-01 | 6.76E-04 | 3.55E-06 | 4.37E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 2.04E-03 | 4.50E-06 | 2.36E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.92E-04 | 4.23E-07 | 2.22E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 3.46E-05 | 7.62E-08 | 4.00E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 8.70E-05 | 1.92E-07 | 1.01E-09 | |
| | **LHDT1** | 15 | 0.160 | 1 | 50 | 0.03 | 6.10E-03 | 1.34E-05 | 7.06E-08 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 2.24E-03 | 4.93E-06 | 2.59E-08 | |
| | **MHDT** | 15 | 0.150 | 23 | 50 | 0.03 | 1.05E-01 | 2.31E-04 | 1.21E-06 | |
| | **HHDT** | 15 | 0.116 | 133 | 50 | 0.03 | 4.80E-01 | 1.06E-03 | 5.55E-06 | 6.89E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 1.52E-03 | 3.35E-06 | 1.76E-08 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 1.43E-04 | 3.15E-07 | 1.66E-09 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 2.57E-05 | 5.67E-08 | 2.98E-10 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 6.47E-05 | 1.43E-07 | 7.49E-10 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.150 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.116 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-08 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.26E+00 | 4.97E-03 | 2.61E-05 | |
| | **LDT1** | | | 3 | | | 2.12E-01 | 4.68E-04 | 2.46E-06 | |
| | **LDT2** | | | 3 | | | 3.82E-02 | 8.42E-05 | 4.42E-07 | |
| | **MDT** | | | 5 | | | 9.61E-02 | 2.12E-04 | 1.11E-06 | |
| | **LHDT1** | | | 283 | | | 9.10E+00 | 2.00E-02 | 1.05E-04 | |
| | **LHDT2** | | | 96 | | | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | **MHDT** | | | 1472 | | | 4.41E+01 | 9.72E-02 | 5.11E-04 | |
| | **HHDT** | | | 4883 | | | 1.11E+02 | 2.45E-01 | 1.29E-03 | |
| | **Total** | | | 6800 | | | 1.71E+02 | 3.76E-01 | 1.97E-03 | 1.97E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 137 | 9.69E+00 | 2.13E-02 | 1.12E-04 | |
| | **LHDT2** | 0.853 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 0.001 | 5 | 713 | 8.31E-02 | 1.83E-04 | 9.62E-07 | |
| | **HHDT** | 0.002 | 5 | 2314 | 2.89E-01 | 6.37E-04 | 3.35E-06 | |
| | | | | 3210 | 1.34E+01 | 2.95E-02 | 1.55E-04 | 1.55E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 1 | 6.06E-02 | 1.33E-04 | 7.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.40E-07 | |
| | **MHDT** | 0.001 | 5 | 3 | 3.42E-04 | 7.54E-07 | 3.96E-09 | |
| | **HHDT** | 0.002 | 5 | 8 | 9.90E-04 | 2.18E-06 | 1.15E-08 | |
| | | | | 12 | 8.26E-02 | 1.82E-04 | 9.56E-07 | 9.56E-07 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 3 | 2.02E-01 | 4.46E-04 | 2.34E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 6.91E-02 | 1.52E-04 | 8.00E-07 | |
| | **MHDT** | 0.001 | 5 | 2 | 2.83E-04 | 6.24E-07 | 3.28E-09 | |
| | **HHDT** | 0.002 | 5 | 11 | 1.35E-03 | 2.97E-06 | 1.56E-08 | |
| | | | | 17 | 2.73E-01 | 6.01E-04 | 3.16E-06 | 3.16E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 2.84E-02 | 6.25E-05 | 3.28E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 9.69E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 0.001 | 5 | 7 | 8.03E-04 | 1.77E-06 | 9.29E-09 | |
| | **HHDT** | 0.002 | 5 | 43 | 5.31E-03 | 1.17E-05 | 6.15E-08 | |
| | | | | 50 | 4.42E-02 | 9.73E-05 | 5.11E-07 | 5.11E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 1 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 0.853 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 0.001 | 5 | 11 | 1.31E-03 | 2.89E-06 | 1.52E-08 | |
| | **HHDT** | 0.002 | 5 | 66 | 8.31E-03 | 1.83E-05 | 9.62E-08 | |
| | | | | 79 | 6.77E-02 | 1.49E-04 | 7.84E-07 | 7.84E-07 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 1.38E+01 | 3.05E-02 | 1.60E-04 | 1.60E-04 |

**World Logistics Center** **2012** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 17546 | 330 | 0.21 | 1.86E+02 | 4.10E-01 | 2.15E-03 | |
| | **LDT1** | 15 | 0.061 | 2058 | 330 | 0.21 | 2.56E+01 | 5.64E-02 | 2.96E-04 | |
| | **LDT2** | 15 | 0.051 | 6111 | 330 | 0.21 | 6.35E+01 | 1.40E-01 | 7.35E-04 | |
| | **MDT** | 15 | 0.051 | 4846 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.83E-04 | |
| | **LHDT1** | 15 | 0.089 | 886 | 330 | 0.21 | 1.62E+01 | 3.56E-02 | 1.87E-04 | |
| | **LHDT2** | 15 | 0.101 | 93 | 330 | 0.21 | 1.93E+00 | 4.26E-03 | 2.24E-05 | |
| | **MHDT** | 15 | 0.148 | 344 | 330 | 0.21 | 1.04E+01 | 2.30E-02 | 1.21E-04 | |
| | **HHDT** | 15 | 0.090 | 104 | 330 | 0.21 | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | | | | | | | | | | 4.12E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 75 | 175 | 0.11 | 4.19E-01 | 9.23E-04 | 4.85E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 175 | 0.11 | 5.77E-02 | 1.27E-04 | 6.67E-07 | |
| | **LDT2** | 15 | 0.051 | 26 | 175 | 0.11 | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.051 | 21 | 175 | 0.11 | 1.13E-01 | 2.50E-04 | 1.31E-06 | |
| | **LHDT1** | 15 | 0.089 | 6 | 175 | 0.11 | 5.36E-02 | 1.18E-04 | 6.21E-07 | |
| | **LHDT2** | 15 | 0.101 | 1 | 175 | 0.11 | 6.41E-03 | 1.41E-05 | 7.42E-08 | |
| | **MHDT** | 15 | 0.148 | 1 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 175 | 0.11 | 3.50E-03 | 7.71E-06 | 4.05E-08 | 9.48E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 110 | 100 | 0.06 | 3.53E-01 | 7.77E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.061 | 13 | 100 | 0.06 | 4.86E-02 | 1.07E-04 | 5.62E-07 | |
| | **LDT2** | 15 | 0.051 | 38 | 100 | 0.06 | 1.21E-01 | 2.65E-04 | 1.39E-06 | |
| | **MDT** | 15 | 0.051 | 30 | 100 | 0.06 | 9.56E-02 | 2.10E-04 | 1.11E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 100 | 0.06 | 1.22E-02 | 2.70E-05 | 1.42E-07 | |
| | **MHDT** | 15 | 0.148 | 1 | 100 | 0.06 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 2.73E-03 | 6.01E-06 | 3.16E-08 | 8.63E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 64 | 50 | 0.03 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **LDT1** | 15 | 0.061 | 7 | 50 | 0.03 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **LDT2** | 15 | 0.051 | 22 | 50 | 0.03 | 3.49E-02 | 7.69E-05 | 4.04E-07 | |
| | **MDT** | 15 | 0.051 | 18 | 50 | 0.03 | 2.77E-02 | 6.09E-05 | 3.20E-07 | |
| | **LHDT1** | 15 | 0.089 | 3 | 50 | 0.03 | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 8.58E-04 | 1.89E-06 | 9.93E-09 | |
| | **MHDT** | 15 | 0.148 | 3 | 50 | 0.03 | 1.53E-02 | 3.37E-05 | 1.77E-07 | |
| | **HHDT** | 15 | 0.090 | 2 | 50 | 0.03 | 5.37E-03 | 1.18E-05 | 6.21E-08 | 2.40E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 105 | 50 | 0.03 | 1.69E-01 | 3.73E-04 | 1.96E-06 | |
| | **LDT1** | 15 | 0.061 | 12 | 50 | 0.03 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **LDT2** | 15 | 0.051 | 37 | 50 | 0.03 | 5.78E-02 | 1.27E-04 | 6.70E-07 | |
| | **MDT** | 15 | 0.051 | 29 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LHDT1** | 15 | 0.089 | 4 | 50 | 0.03 | 1.09E-02 | 2.41E-05 | 1.27E-07 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 1.31E-03 | 2.88E-06 | 1.52E-08 | |
| | **MHDT** | 15 | 0.148 | 5 | 50 | 0.03 | 2.50E-02 | 5.51E-05 | 2.90E-07 | |
| | **HHDT** | 15 | 0.090 | 3 | 50 | 0.03 | 8.39E-03 | 1.85E-05 | 9.71E-08 | 3.96E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 78 | 50 | 0.03 | 1.26E-01 | 2.78E-04 | 1.46E-06 | |
| | **LDT1** | 15 | 0.061 | 9 | 50 | 0.03 | 1.74E-02 | 3.82E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.051 | 27 | 50 | 0.03 | 4.31E-02 | 9.48E-05 | 4.98E-07 | |
| | **MDT** | 15 | 0.051 | 22 | 50 | 0.03 | 3.41E-02 | 7.52E-05 | 3.95E-07 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.87E+02 | 4.12E-01 | 2.17E-03 | |
| | **LDT1** | | | 2108 | | | 2.58E+01 | 5.67E-02 | 2.98E-04 | |
| | **LDT2** | | | 6262 | | | 6.39E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | | | 4966 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | | | 917 | | | 1.63E+01 | 3.60E-02 | 1.89E-04 | |
| | **LHDT2** | | | 97 | | | 1.95E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | | | 356 | | | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | **HHDT** | | | 110 | | | 1.95E+00 | 4.29E-03 | 2.25E-05 | |
| | **Total** | | | 32792 | | | 3.58E+02 | 7.89E-01 | 4.15E-03 | 4.15E-03 |

**Non=Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 443 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **LHDT2** | 0.050 | 5 | 47 | 1.95E-01 | 4.29E-04 | 2.25E-06 | |
| | **MHDT** | 0.063 | 5 | 172 | 9.04E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 0.082 | 5 | 52 | 3.57E-01 | 7.86E-04 | 4.13E-06 | |
| | | | | 714 | 3.67E+00 | 8.08E-03 | 4.25E-05 | 4.25E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 3 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 1.22E-03 | 2.68E-06 | 1.41E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.72E-03 | 8.20E-06 | 4.31E-08 | |
| | **HHDT** | 0.082 | 5 | 0 | 1.22E-03 | 2.69E-06 | 1.41E-08 | |
| | | | | 4 | 2.00E-02 | 4.41E-05 | 2.32E-07 | 2.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 9 | 4.63E-02 | 1.02E-04 | 5.35E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.06E-03 | 8.95E-06 | 4.70E-08 | |
| | **MHDT** | 0.063 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **HHDT** | 0.082 | 5 | 0 | 1.67E-03 | 3.67E-06 | 1.93E-08 | |
| | | | | 11 | 5.51E-02 | 1.21E-04 | 6.37E-07 | 6.37E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 1 | 6.49E-03 | 1.43E-05 | 7.51E-08 | |
| | **LHDT2** | 0.050 | 5 | 0 | 5.70E-04 | 1.25E-06 | 6.59E-09 | |
| | **MHDT** | 0.063 | 5 | 2 | 8.72E-03 | 1.92E-05 | 1.01E-07 | |
| | **HHDT** | 0.082 | 5 | 1 | 6.56E-03 | 1.44E-05 | 7.59E-08 | |
| | | | | 4 | 2.23E-02 | 4.92E-05 | 2.58E-07 | 2.58E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 2 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **LHDT2** | 0.050 | 5 | 0 | 8.70E-04 | 1.92E-06 | 1.01E-08 | |
| | **MHDT** | 0.063 | 5 | 3 | 1.43E-02 | 3.14E-05 | 1.65E-07 | |
| | **HHDT** | 0.082 | 5 | 2 | 1.03E-02 | 2.26E-05 | 1.19E-07 | |
| | | | | 6 | 3.53E-02 | 7.78E-05 | 4.09E-07 | 4.09E-07 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.063 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.082 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 3.80E+00 | 8.38E-03 | 4.40E-05 | 4.40E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Phase 2** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.49E-03 | 3.15E-03 |
| Light Logistics | Phase 2 | 1.35E-05 | 3.22E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.51E-03 | 3.18E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.18E-04 | 3.26E-05 |
| Light Logistics | Phase 2 | 3.25E-06 | 7.90E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.22E-04 | 3.34E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.51E-03 | 3.18E-03 | |
| | Idling Emissions (g/sec) | 1.22E-04 | 3.34E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.63E-03 | 3.21E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.54E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.40E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 6.94E-04 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.63E-03 | 3.91E-03 | 5.54E-03 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.07E-09 |

**World Logistics Center** **2012** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.206 | 41 | 330 | 0.21 | 1.71E+00 | 3.77E-03 | 1.98E-05 | |
| | **LDT1** | 15 | 0.403 | 2 | 330 | 0.21 | 1.61E-01 | 3.55E-04 | 1.87E-06 | |
| | **LDT2** | 15 | 0.074 | 2 | 330 | 0.21 | 2.90E-02 | 6.39E-05 | 3.36E-07 | |
| | **MDT** | 15 | 0.096 | 4 | 330 | 0.21 | 7.30E-02 | 1.61E-04 | 8.44E-07 | |
| | **LHDT1** | 15 | 0.160 | 209 | 330 | 0.21 | 6.88E+00 | 1.52E-02 | 7.97E-05 | |
| | **LHDT2** | 15 | 0.173 | 71 | 330 | 0.21 | 2.53E+00 | 5.57E-03 | 2.92E-05 | |
| | **MHDT** | 15 | 0.150 | 1089 | 330 | 0.21 | 3.35E+01 | 7.37E-02 | 3.87E-04 | |
| | **HHDT** | 15 | 0.116 | 3536 | 330 | 0.21 | 8.42E+01 | 1.86E-01 | 9.75E-04 | |
| | | | | | | | | | | 1.49E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.206 | 1 | 175 | 0.11 | 1.71E-02 | 3.78E-05 | 1.98E-07 | |
| | **LDT1** | 15 | 0.403 | 0 | 175 | 0.11 | 1.61E-03 | 3.55E-06 | 1.87E-08 | |
| | **LDT2** | 15 | 0.074 | 0 | 175 | 0.11 | 2.91E-04 | 6.40E-07 | 3.36E-09 | |
| | **MDT** | 15 | 0.096 | 0 | 175 | 0.11 | 7.30E-04 | 1.61E-06 | 8.45E-09 | |
| | **LHDT1** | 15 | 0.160 | 6 | 175 | 0.11 | 1.01E-01 | 2.23E-04 | 1.17E-06 | |
| | **LHDT2** | 15 | 0.173 | 2 | 175 | 0.11 | 3.72E-02 | 8.20E-05 | 4.31E-07 | |
| | **MHDT** | 15 | 0.150 | 20 | 175 | 0.11 | 3.25E-01 | 7.15E-04 | 3.76E-06 | |
| | **HHDT** | 15 | 0.116 | 54 | 175 | 0.11 | 6.79E-01 | 1.50E-03 | 7.86E-06 | 1.35E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.206 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.403 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.074 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.096 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.160 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.150 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.116 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.150 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.116 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.150 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.116 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.206 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.403 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.074 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.096 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.160 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.173 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.150 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.116 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 1.73E+00 | 3.81E-03 | 2.00E-05 | |
| | **LDT1** | | | 2 | | | 1.63E-01 | 3.59E-04 | 1.89E-06 | |
| | **LDT2** | | | 2 | | | 2.93E-02 | 6.46E-05 | 3.39E-07 | |
| | **MDT** | | | 4 | | | 7.37E-02 | 1.62E-04 | 8.53E-07 | |
| | **LHDT1** | | | 215 | | | 6.98E+00 | 1.54E-02 | 8.08E-05 | |
| | **LHDT2** | | | 73 | | | 2.56E+00 | 5.65E-03 | 2.97E-05 | |
| | **MHDT** | | | 1109 | | | 3.38E+01 | 7.44E-02 | 3.91E-04 | |
| | **HHDT** | | | 3590 | | | 8.49E+01 | 1.87E-01 | 9.83E-04 | |
| | **Total** | | | 5037 | | | 1.30E+02 | 2.87E-01 | 1.51E-03 | 1.51E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.849 | 5 | 105 | 7.40E+00 | 1.63E-02 | 8.57E-05 | |
| | **LHDT2** | 0.853 | 5 | 36 | 2.53E+00 | 5.57E-03 | 2.93E-05 | |
| | **MHDT** | 0.001 | 5 | 545 | 6.35E-02 | 1.40E-04 | 7.35E-07 | |
| | **HHDT** | 0.002 | 5 | 1768 | 2.21E-01 | 4.87E-04 | 2.56E-06 | |
| | | | | 2453 | 1.02E+01 | 2.25E-02 | 1.18E-04 | 1.18E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.849 | 5 | 3 | 2.06E-01 | 4.53E-04 | 2.38E-06 | |
| | **LHDT2** | 0.853 | 5 | 1 | 7.03E-02 | 1.55E-04 | 8.14E-07 | |
| | **MHDT** | 0.001 | 5 | 10 | 1.16E-03 | 2.56E-06 | 1.35E-08 | |
| | **HHDT** | 0.002 | 5 | 27 | 3.36E-03 | 7.40E-06 | 3.89E-08 | |
| | | | | 41 | 2.81E-01 | 6.18E-04 | 3.25E-06 | 3.25E-06 |
| **Idle at Utility** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.849 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.853 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 1.05E+01 | 2.31E-02 | 1.22E-04 | 1.22E-04 |

**World Logistics Center** **2012** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.052 | 13408 | 330 | 0.21 | 1.42E+02 | 3.13E-01 | 1.64E-03 | |
| | **LDT1** | 15 | 0.061 | 1572 | 330 | 0.21 | 1.96E+01 | 4.31E-02 | 2.26E-04 | |
| | **LDT2** | 15 | 0.051 | 4670 | 330 | 0.21 | 4.85E+01 | 1.07E-01 | 5.62E-04 | |
| | **MDT** | 15 | 0.051 | 3703 | 330 | 0.21 | 3.85E+01 | 8.48E-02 | 4.46E-04 | |
| | **LHDT1** | 15 | 0.089 | 677 | 330 | 0.21 | 1.24E+01 | 2.72E-02 | 1.43E-04 | |
| | **LHDT2** | 15 | 0.101 | 71 | 330 | 0.21 | 1.48E+00 | 3.25E-03 | 1.71E-05 | |
| | **MHDT** | 15 | 0.148 | 263 | 330 | 0.21 | 7.98E+00 | 1.76E-02 | 9.24E-05 | |
| | **HHDT** | 15 | 0.090 | 80 | 330 | 0.21 | 1.47E+00 | 3.24E-03 | 1.70E-05 | |
| | | | | | | | | | | 3.15E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.052 | 253 | 175 | 0.11 | 1.42E+00 | 3.13E-03 | 1.65E-05 | |
| | **LDT1** | 15 | 0.061 | 30 | 175 | 0.11 | 1.96E-01 | 4.31E-04 | 2.27E-06 | |
| | **LDT2** | 15 | 0.051 | 88 | 175 | 0.11 | 4.86E-01 | 1.07E-03 | 5.62E-06 | |
| | **MDT** | 15 | 0.051 | 70 | 175 | 0.11 | 3.85E-01 | 8.49E-04 | 4.46E-06 | |
| | **LHDT1** | 15 | 0.089 | 19 | 175 | 0.11 | 1.82E-01 | 4.01E-04 | 2.11E-06 | |
| | **LHDT2** | 15 | 0.101 | 2 | 175 | 0.11 | 2.18E-02 | 4.80E-05 | 2.52E-07 | |
| | **MHDT** | 15 | 0.148 | 5 | 175 | 0.11 | 7.75E-02 | 1.71E-04 | 8.97E-07 | |
| | **HHDT** | 15 | 0.090 | 1 | 175 | 0.11 | 1.19E-02 | 2.62E-05 | 1.37E-07 | 3.22E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.089 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.101 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.148 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.090 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 1.44E+02 | 3.16E-01 | 1.66E-03 | |
| | **LDT1** | | | 1602 | | | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | | | 4758 | | | 4.90E+01 | 1.08E-01 | 5.67E-04 | |
| | **MDT** | | | 3773 | | | 3.89E+01 | 8.56E-02 | 4.50E-04 | |
| | **LHDT1** | | | 696 | | | 1.25E+01 | 2.76E-02 | 1.45E-04 | |
| | **LHDT2** | | | 73 | | | 1.50E+00 | 3.30E-03 | 1.74E-05 | |
| | **MHDT** | | | 268 | | | 8.06E+00 | 1.78E-02 | 9.33E-05 | |
| | **HHDT** | | | 81 | | | 1.48E+00 | 3.27E-03 | 1.72E-05 | |
| | **Total** | | | 24913 | | | 2.75E+02 | 6.05E-01 | 3.18E-03 | 3.18E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.060 | 5 | 339 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **LHDT2** | 0.050 | 5 | 36 | 1.49E-01 | 3.28E-04 | 1.72E-06 | |
| | **MHDT** | 0.065 | 5 | 132 | 7.13E-01 | 1.57E-03 | 8.25E-06 | |
| | **HHDT** | 0.080 | 5 | 40 | 2.66E-01 | 5.86E-04 | 3.08E-06 | |
| | | | | 546 | 2.82E+00 | 6.21E-03 | 3.26E-05 | 3.26E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.060 | 5 | 9 | 4.71E-02 | 1.04E-04 | 5.45E-07 | |
| | **LHDT2** | 0.050 | 5 | 1 | 4.13E-03 | 9.10E-06 | 4.78E-08 | |
| | **MHDT** | 0.065 | 5 | 2 | 1.30E-02 | 2.87E-05 | 1.51E-07 | |
| | **HHDT** | 0.080 | 5 | 1 | 4.05E-03 | 8.91E-06 | 4.68E-08 | |
| | | | | 13 | 6.83E-02 | 1.50E-04 | 7.90E-07 | 7.90E-07 |
| **Idle at Utility** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.065 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.065 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.065 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.065 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.080 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 2.89E+00 | 6.36E-03 | 3.34E-05 | 3.34E-05 |

**World Logistics Center** **2012** **PM10** Based on PB Traffic Results 10/3/2013
**Existing + Project** **Phase 1 + 2** With EMFAC2014 With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation** Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.08E-02 | 2.81E-03 | 3.56E-02 | 4.92E-02 |
| 2 | 2.56E-02 | 6.59E-03 | 8.44E-02 | 1.17E-01 |
| 3 | 2.90E-02 | 7.78E-03 | 9.61E-02 | 1.33E-01 |
| 5 | 6.97E-04 | 2.99E-03 | 9.01E-03 | 1.27E-02 |
| 6 | 1.56E-02 | 4.66E-03 | 5.28E-02 | 7.30E-02 |
| 8 | 9.03E-04 | 5.01E-03 | 1.44E-02 | 2.04E-02 |
| 11 | 1.63E-05 | 1.26E-04 | 3.37E-04 | 4.79E-04 |
| 12 | 3.78E-05 | 1.95E-04 | 5.72E-04 | 8.05E-04 |
| 14 | 2.74E-03 | 1.14E-03 | 9.82E-03 | 1.37E-02 |
| 18 | 1.96E-03 | 7.83E-04 | 7.14E-03 | 9.88E-03 |
| 19 | 1.05E-02 | 2.66E-03 | 3.44E-02 | 4.76E-02 |
| 21 | 1.02E-02 | 5.04E-03 | 3.92E-02 | 5.44E-02 |
| 24 | 8.76E-03 | 5.34E-03 | 3.61E-02 | 5.02E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.53E-03 | 8.96E-04 | 1.15E-02 | 1.60E-02 |
| 30 | 1.55E-02 | 4.21E-03 | 5.11E-02 | 7.08E-02 |
| 31 | 1.31E-03 | 1.39E-03 | 6.77E-03 | 9.48E-03 |
| | | | Total | 6.78E-01 |

| ID | Arterial | From | To | 2012 With Project - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | 21,539 | 1,127 | 3,097 | 9,375 |
| 2 | Street A | Eucalyptus Ave | Street F | 21,965 | 1,698 | 3,202 | 9,941 |
| 3 | Street E | west of Street A | | 8,051 | 637 | 1,154 | 3,477 |
| 5 | Street E | Street D | Street A | 8,480 | 324 | 525 | 51 |
| 6 | Street A | Street F | Street C | 10,562 | 688 | 1,408 | 3,983 |
| 8 | Street D | Street E | Cactus Ave | 12,425 | 489 | 760 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | 290 | 9 | 12 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | 623 | 38 | 39 | 0 |
| 14 | Eucalyptus Ave | east of Redlands Blvd | | 1,894 | 61 | 121 | 490 |
| 18 | Street B | east of Street A | | 1,341 | 131 | 170 | 375 |
| 19 | Street F | east of Street A | Street C | 2,759 | 180 | 392 | 1,254 |
| 21 | Street C | Street A | Street F | 10,378 | 514 | 1,085 | 2,179 |
| 24 | Street C | Street F | Street H | 7,231 | 304 | 673 | 1,193 |
| 26 | Street H | Street C | Street G | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | 3,357 | 175 | 428 | 1,503 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | 3,792 | 207 | 427 | 1,579 |
| 31 | Gilman Springs Rd | south of Street C | | 4,604 | 147 | 307 | 402 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **PM10** **Phase 1 + 2** With Mitigation: MY2010 T6 and T7 DSL

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 37 | 2 | 2 | 3 | 229 | 78 | 2494 | 9168 | 12014 |
| 2 | 36806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 38 | 2 | 2 | 3 | 345 | 117 | 2579 | 9722 | 12809 |
| 3 | 13319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 130 | 44 | 929 | 3400 | 4520 |
| 5 | 9380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 15 | 1 | 1 | 1 | 66 | 22 | 423 | 50 | 579 |
| 6 | 16641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 18 | 1 | 1 | 2 | 140 | 48 | 1134 | 3895 | 5238 |
| 8 | 13674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 22 | 1 | 1 | 2 | 99 | 34 | 612 | 0 | 771 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 1 | 0 | 0 | 0 | 2 | 1 | 10 | 0 | 13 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 8 | 3 | 31 | 0 | 43 |
| 14 | 2566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 3 | 0 | 0 | 0 | 12 | 4 | 97 | 479 | 597 |
| 18 | 2017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 2 | 0 | 0 | 0 | 27 | 9 | 137 | 367 | 542 |
| 19 | 4585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 37 | 12 | 316 | 1226 | 1597 |
| 21 | 14156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 18 | 1 | 1 | 2 | 105 | 36 | 874 | 2131 | 3166 |
| 24 | 9401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 13 | 1 | 1 | 1 | 62 | 21 | 542 | 1167 | 1806 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 6 | 0 | 0 | 1 | 36 | 12 | 345 | 1470 | 1869 |
| 30 | 6005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 42 | 14 | 344 | 1544 | 1952 |
| 31 | 5460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 8 | 0 | 0 | 1 | 30 | 10 | 247 | 393 | 690 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1100 | 0.2070 | 0.0580 | 0.0680 | 0.1320 | 0.1450 | 0.1541 | 0.4540 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.67E-06 | 8.75E-07 | 2.41E-07 | 5.47E-07 | 7.11E-05 | 2.66E-05 | 9.04E-04 | 9.79E-03 | 1.08E-02 |
| 2 | 1 | 2.20E-05 | 1.99E-06 | 5.50E-07 | 1.25E-06 | 2.40E-04 | 8.95E-05 | 2.09E-03 | 2.32E-02 | 2.56E-02 |
| 3 | 1 | 2.60E-05 | 2.35E-06 | 6.48E-07 | 1.47E-06 | 2.89E-04 | 1.08E-04 | 2.42E-03 | 2.61E-02 | 2.90E-02 |
| 5 | 1 | 1.11E-05 | 1.00E-06 | 2.77E-07 | 6.28E-07 | 5.96E-05 | 2.23E-05 | 4.46E-04 | 1.55E-04 | 6.97E-04 |
| 6 | 1 | 1.59E-05 | 1.44E-06 | 3.97E-07 | 9.02E-07 | 1.46E-04 | 5.45E-05 | 1.38E-03 | 1.40E-02 | 1.56E-02 |
| 8 | 1 | 1.86E-05 | 1.68E-06 | 4.64E-07 | 1.05E-06 | 1.03E-04 | 3.85E-05 | 7.40E-04 | 0.00E+00 | 9.03E-04 |
| 11 | 1 | 4.78E-07 | 4.33E-08 | 1.19E-08 | 2.71E-08 | 2.09E-06 | 7.79E-07 | 1.29E-05 | 0.00E+00 | 1.63E-05 |
| 12 | 1 | 7.05E-07 | 6.38E-08 | 1.76E-08 | 3.99E-08 | 6.04E-06 | 2.26E-06 | 2.87E-05 | 0.00E+00 | 3.78E-05 |
| 14 | 1 | 4.21E-06 | 3.81E-07 | 1.05E-07 | 2.38E-07 | 1.91E-05 | 7.12E-06 | 1.75E-04 | 2.53E-03 | 2.74E-03 |
| 18 | 1 | 2.60E-06 | 2.35E-07 | 6.48E-08 | 1.47E-07 | 3.57E-05 | 1.33E-05 | 2.14E-04 | 1.69E-03 | 1.96E-03 |
| 19 | 1 | 9.04E-06 | 8.18E-07 | 2.25E-07 | 5.11E-07 | 8.29E-05 | 3.10E-05 | 8.35E-04 | 9.55E-03 | 1.05E-02 |
| 21 | 1 | 1.79E-05 | 1.62E-06 | 4.47E-07 | 1.01E-06 | 1.25E-04 | 4.66E-05 | 1.22E-03 | 8.75E-03 | 1.02E-02 |
| 24 | 1 | 1.93E-05 | 1.75E-06 | 4.82E-07 | 1.09E-06 | 1.14E-04 | 4.27E-05 | 1.17E-03 | 7.41E-03 | 8.76E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.11E-06 | 2.81E-07 | 7.76E-08 | 1.76E-07 | 2.28E-05 | 8.52E-06 | 2.58E-04 | 3.24E-03 | 3.53E-03 |
| 30 | 1 | 1.47E-05 | 1.33E-06 | 3.67E-07 | 8.33E-07 | 1.13E-04 | 4.22E-05 | 1.08E-03 | 1.42E-02 | 1.55E-02 |
| 31 | 1 | 5.18E-06 | 4.69E-07 | 1.29E-07 | 2.93E-07 | 2.33E-05 | 8.69E-06 | 2.25E-04 | 1.05E-03 | 1.31E-03 |

**World Logistics Center** **2012** **PM10** **Phase 1 + 2** With Mitigation: MY2010 T6 and T7 DSL

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 35,138 | 21,539 | 1,127 | 3,097 | 9,375 | 327 | 0.203 | 12341 | 1447 | 4298 | 3409 | 742 | 78 | 603 | 207 | 23124 |
| 2 | 36,806 | 21,965 | 1,698 | 3,202 | 9,941 | 731 | 0.454 | 12585 | 1476 | 4383 | 3476 | 1117 | 118 | 623 | 219 | 23997 |
| 3 | 13,319 | 8,051 | 637 | 1,154 | 3,477 | 2352 | 1.461 | 4613 | 541 | 1607 | 1274 | 419 | 44 | 225 | 77 | 8799 |
| 5 | 9,380 | 8,480 | 324 | 525 | 51 | 953 | 0.592 | 4859 | 570 | 1692 | 1342 | 213 | 22 | 102 | 1 | 8801 |
| 6 | 16,641 | 10,562 | 688 | 1,408 | 3,983 | 1099 | 0.683 | 6051 | 710 | 2108 | 1671 | 453 | 48 | 274 | 88 | 11403 |
| 8 | 13,674 | 12,425 | 489 | 760 | 0 | 1091 | 0.678 | 7119 | 835 | 2479 | 1966 | 322 | 34 | 148 | 0 | 12903 |
| 11 | 311 | 290 | 9 | 12 | 0 | 1201 | 0.746 | 166 | 19 | 58 | 46 | 6 | 1 | 2 | 0 | 298 |
| 12 | 700 | 623 | 38 | 39 | 0 | 824 | 0.512 | 357 | 42 | 124 | 99 | 25 | 3 | 8 | 0 | 657 |
| 14 | 2,566 | 1,894 | 61 | 121 | 490 | 1618 | 1.005 | 1085 | 127 | 378 | 300 | 40 | 4 | 24 | 11 | 1969 |
| 18 | 2,017 | 1,341 | 131 | 170 | 375 | 1412 | 0.877 | 768 | 90 | 268 | 212 | 86 | 9 | 33 | 8 | 1475 |
| 19 | 4,585 | 2,759 | 180 | 392 | 1,254 | 2386 | 1.482 | 1581 | 185 | 551 | 437 | 118 | 12 | 76 | 28 | 2988 |
| 21 | 14,156 | 10,378 | 514 | 1,085 | 2,179 | 1258 | 0.781 | 5946 | 697 | 2071 | 1642 | 338 | 36 | 211 | 48 | 10990 |
| 24 | 9,401 | 7,231 | 304 | 673 | 1,193 | 1946 | 1.209 | 4143 | 486 | 1443 | 1144 | 200 | 21 | 131 | 26 | 7595 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 5,463 | 3,357 | 175 | 428 | 1,503 | 675 | 0.419 | 1923 | 226 | 670 | 531 | 115 | 12 | 83 | 33 | 3594 |
| 30 | 6,005 | 3,792 | 207 | 427 | 1,579 | 2827 | 1.756 | 2173 | 255 | 757 | 600 | 136 | 14 | 83 | 35 | 4053 |
| 31 | 5,460 | 4,604 | 147 | 307 | 402 | 820 | 0.509 | 2638 | 309 | 919 | 729 | 97 | 10 | 60 | 9 | 4770 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0470 | 0.0510 | 0.0470 | 0.0470 | 0.0870 | 0.0990 | 0.1450 | 0.0870 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.36E-03 | 1.74E-04 | 4.75E-04 | 3.77E-04 | 1.52E-04 | 1.82E-05 | 2.05E-04 | 4.23E-05 | 2.81E-03 |
| 2 | 1 | 3.11E-03 | 3.96E-04 | 1.08E-03 | 8.59E-04 | 5.11E-04 | 6.13E-05 | 4.75E-04 | 1.00E-04 | 6.59E-03 |
| 3 | 1 | 3.67E-03 | 4.67E-04 | 1.28E-03 | 1.01E-03 | 6.17E-04 | 7.40E-05 | 5.51E-04 | 1.13E-04 | 7.78E-03 |
| 5 | 1 | 1.56E-03 | 1.99E-04 | 5.45E-04 | 4.32E-04 | 1.27E-04 | 1.52E-05 | 1.01E-04 | 6.71E-07 | 2.99E-03 |
| 6 | 1 | 2.25E-03 | 2.86E-04 | 7.83E-04 | 6.21E-04 | 3.11E-04 | 3.73E-05 | 3.14E-04 | 6.04E-05 | 4.66E-03 |
| 8 | 1 | 2.62E-03 | 3.34E-04 | 9.14E-04 | 7.25E-04 | 2.20E-04 | 2.63E-05 | 1.68E-04 | 0.00E+00 | 5.01E-03 |
| 11 | 1 | 6.74E-05 | 8.58E-06 | 2.35E-05 | 1.86E-05 | 4.45E-06 | 5.34E-07 | 2.92E-06 | 0.00E+00 | 1.26E-04 |
| 12 | 1 | 9.94E-05 | 1.26E-05 | 3.46E-05 | 2.75E-05 | 1.29E-05 | 1.55E-06 | 6.52E-06 | 0.00E+00 | 1.95E-04 |
| 14 | 1 | 5.93E-04 | 7.55E-05 | 2.07E-04 | 1.64E-04 | 4.06E-05 | 4.87E-06 | 3.97E-05 | 1.09E-05 | 1.14E-03 |
| 18 | 1 | 3.67E-04 | 4.66E-05 | 1.28E-04 | 1.01E-04 | 7.61E-05 | 9.13E-06 | 4.87E-05 | 7.31E-06 | 7.83E-04 |
| 19 | 1 | 1.27E-03 | 1.62E-04 | 4.44E-04 | 3.52E-04 | 1.77E-04 | 2.12E-05 | 1.90E-04 | 4.13E-05 | 2.66E-03 |
| 21 | 1 | 2.53E-03 | 3.22E-04 | 8.80E-04 | 6.98E-04 | 2.66E-04 | 3.19E-05 | 2.77E-04 | 3.79E-05 | 5.04E-03 |
| 24 | 1 | 2.72E-03 | 3.47E-04 | 9.49E-04 | 7.53E-04 | 2.44E-04 | 2.92E-05 | 2.66E-04 | 3.21E-05 | 5.34E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.39E-04 | 5.58E-05 | 1.53E-04 | 1.21E-04 | 4.86E-05 | 5.83E-06 | 5.86E-05 | 1.40E-05 | 8.96E-04 |
| 30 | 1 | 2.08E-03 | 2.64E-04 | 7.23E-04 | 5.73E-04 | 2.41E-04 | 2.89E-05 | 2.45E-04 | 6.16E-05 | 4.21E-03 |
| 31 | 1 | 7.31E-04 | 9.30E-05 | 2.55E-04 | 2.02E-04 | 4.96E-05 | 5.95E-06 | 5.11E-05 | 4.55E-06 | 1.39E-03 |

**World Logistics Center** **2012 Project Phases 1 + 2**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 21,539 | 4375 | 1,127 | 229 | 3,097 | 629 | 9,375 | 1904 | 7138 | 8.73 | 0.035 | 0.0009 | 6.8 | 3.56E-02 |
| 2 | A | 731 | 0.45 | 21,965 | 9974 | 1,698 | 771 | 3,202 | 1454 | 9,941 | 4514 | 16714 | 8.83 | 0.035 | 0.0010 | 16.1 | 8.44E-02 |
| 3 | A | 2352 | 1.46 | 8,051 | 11763 | 637 | 931 | 1,154 | 1686 | 3,477 | 5080 | 19460 | 8.64 | 0.035 | 0.0009 | 18.3 | 9.61E-02 |
| 5 | A | 953 | 0.59 | 8,480 | 5020 | 324 | 192 | 525 | 311 | 51 | 30 | 5553 | 2.90 | 0.035 | 0.0003 | 1.7 | 9.01E-03 |
| 6 | A | 1099 | 0.68 | 10,562 | 7211 | 688 | 470 | 1,408 | 961 | 3,983 | 2719 | 11361 | 8.14 | 0.035 | 0.0009 | 10.0 | 5.28E-02 |
| 8 | A | 1091 | 0.68 | 12,425 | 8421 | 489 | 331 | 760 | 515 | 0 | 0 | 9267 | 2.79 | 0.035 | 0.0003 | 2.7 | 1.44E-02 |
| 11 | A | 1201 | 0.75 | 290 | 216 | 9 | 7 | 12 | 9 | 0 | 0 | 232 | 2.60 | 0.035 | 0.0003 | 0.1 | 3.37E-04 |
| 12 | A | 824 | 0.51 | 623 | 319 | 38 | 19 | 39 | 20 | 0 | 0 | 358 | 2.86 | 0.035 | 0.0003 | 0.1 | 5.72E-04 |
| 14 | A | 1618 | 1.01 | 1,894 | 1904 | 61 | 61 | 121 | 122 | 490 | 493 | 2579 | 6.70 | 0.035 | 0.0007 | 1.9 | 9.82E-03 |
| 18 | A | 1412 | 0.88 | 1,341 | 1176 | 131 | 115 | 170 | 149 | 375 | 329 | 1769 | 7.09 | 0.035 | 0.0008 | 1.4 | 7.14E-03 |
| 19 | A | 2386 | 1.48 | 2,759 | 4089 | 180 | 267 | 392 | 581 | 1,254 | 1859 | 6796 | 8.87 | 0.035 | 0.0010 | 6.6 | 3.44E-02 |
| 21 | A | 1258 | 0.78 | 10,378 | 8110 | 514 | 402 | 1,085 | 848 | 2,179 | 1703 | 11063 | 6.25 | 0.035 | 0.0007 | 7.5 | 3.92E-02 |
| 24 | A | 1946 | 1.21 | 7,231 | 8741 | 304 | 367 | 673 | 814 | 1,193 | 1442 | 11365 | 5.61 | 0.035 | 0.0006 | 6.9 | 3.61E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 3,357 | 1408 | 175 | 73 | 428 | 179 | 1,503 | 630 | 2291 | 8.81 | 0.035 | 0.0010 | 2.2 | 1.15E-02 |
| 30 | A | 2827 | 1.76 | 3,792 | 6659 | 207 | 364 | 427 | 750 | 1,579 | 2773 | 10546 | 8.49 | 0.035 | 0.0009 | 9.7 | 5.11E-02 |
| 31 | A | 820 | 0.51 | 4,604 | 2345 | 147 | 75 | 307 | 156 | 402 | 205 | 2781 | 4.32 | 0.035 | 0.0005 | 1.3 | 6.77E-03 |

# F.4 - Project Development Schedule Emissions for 2021

**Appendix F.4 contains the calculated localized unmitigated and mitigated emissions for project construction and operation during the 2021 project construction and operation. Emissions are provided for CO, NO2, PM10, and PM2.5.**

**The individual air pollutant AERMOD project files are not provided to reduce paper consumption but are available on a separate CD.**

**World Logistics Center** **Without Mitigation**

**Onsite Construction Exhaust Emissions in 2021**

| | Onsite Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | **VOC (lbs/day)** | **NOx (lbs/day)** | **CO (lbs/day)** | **SO2 (lbs/day)** | **PM10 exhaust (lbs/day)** | **PM2.5 exhaust (lbs/day)** |
| Maximum Daily Total | 298.9 | 1202.4 | 724.1 | 1.3 | 60.4 | 55.8 |
| Concrete Pouring | 7.1 | 62.9 | 44.8 | 0.1 | 4.8 | 4.5 |
| Non-Concrete Pouring | 291.8 | 1139.5 | 679.3 | 1.2 | 55.6 | 51.3 |

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |

| **Emission Rates** | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Concrete Pouring | 0.149 | 1.322 | 0.942 | 0.002 | 0.101 | 0.095 |
| Non-Concrete Pouring | 3.680 | 14.370 | 8.567 | 0.015 | 0.701 | 0.647 |
| Total | 3.829 | 15.692 | 9.508 | 0.017 | 0.802 | 0.742 |

**Number of Volume Sources:** 81

**Emissions per Volume Source**

| | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Total | 0.0472735 | 0.19373365 | 0.117387 | 0.000213 | 0.009902058 | 0.009154733 |

**Variable Emission Factors**

| | **VOC** | **NOx** | **CO** | **SO2** | **PM10 exhaust** | **PM2.5 exhaust** |
|---|---|---|---|---|---|---|
| 6am to 4pm | 0.96102756 | 0.91575141 | 0.900968 | 0.878049 | 0.874213836 | 0.87244898 |
| 4pm to Midnight | 0 | 0 | 0 | 0 | 0 | 0 |
| Midnight to 6am | 0.03897244 | 0.08424859 | 0.099032 | 0.121951 | 0.125786164 | 0.12755102 |

**Fugitive Dust**

| | PM10 (lbs/day) | PM2.5 (lbs/day) |
|---|---|---|
| All Sources | 118.1 | 18.4 |

**Duration of Construction** 10 hours

| **Emissions** | **PM10 (g/sec)** | **PM2.5 (g/sec)** |
|---|---|---|
| All Sources | 1.48937222 | 0.23204444 |

**Size of the Construction Area Source** 763712 m2

| **Area Emissions** | **PM10 (g/m2-sec)** | **PM2.5 (g/m2-sec)** |
|---|---|---|
| AllSources | 1.9502E-06 | 3.0384E-07 |

**World Logistics Center** **Without Mitigation** **2/25/2015**

**Onsite Construction Exhaust Emissions in 2021**

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |
| **Construction** | 260 | days/year |

**Onsite Emissions**

| | VOC (tons/year) | NOx (tons/year) | CO (tons/year) | SO2 (tons/year) | PM10 exhaust (tons/year) | PM2.5 exhaust (tons/year) |
|---|---|---|---|---|---|---|
| Annual Total | 14.7 | 113.5 | 66.7 | 0.1 | 6.0 | 5.5 |
| Concrete Pouring | 0.9 | 8.2 | 5.8 | 0.0 | 0.6 | 0.6 |
| Non-Concrete Pouring | 13.8 | 105.3 | 60.9 | 0.1 | 5.3 | 4.9 |

| **Average Emissions** | VOC (g/sec) | NOx (g/sec) | CO (g/sec) | SO2 (g/sec) | PM10 exhaust (g/sec) | PM2.5 exhaust (g/sec) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 1.46E-01 | 1.33E+00 | 9.38E-01 | 0.00E+00 | 1.00E-01 | 9.54E-02 |
| Non-Concrete Pouring | 1.34E+00 | 1.02E+01 | 5.91E+00 | 9.70E-03 | 5.17E-01 | 4.75E-01 |

**Number of Volume Sources:** 81

**Emissions per Volume Source**

| | VOC (g/sec/src) | NOx (g/sec/src) | CO (g/sec/src) | SO2 (g/sec/src) | PM10 exhaust (g/sec/src) | PM2.5 exhaust (g/sec/src) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 1.80E-03 | 1.64E-02 | 1.16E-02 | 0.00E+00 | 1.24E-03 | 1.18E-03 |
| Non Concrete Pouring | 1.65E-02 | 1.26E-01 | 7.29E-02 | 1.20E-04 | 6.38E-03 | 5.87E-03 |
| **Total** | 1.83E-02 | 1.42E-01 | 8.45E-02 | 1.20E-04 | 7.62E-03 | 7.05E-03 |

**Variable Emission Factors**

| | 6am to 4pm | 4pm to MN | MN to 6am |
|---|---|---|---|
| PM10 | 8.38E-01 | 0.00E+00 | 1.62E-01 |
| Nox | 8.85E-01 | 0.00E+00 | 1.15E-01 |

**Fugitive Dust**

| | PM10 (tons/year) | PM2.5 (tons/year) |
|---|---|---|
| All Sources | 2 | 0.42 |

**Duration of Construction** 10 hours

| **Emissions** | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|
| All Sources | 0.05758498 | 0.01209285 |

**Size of the Construction Area Source** 763712 m2

| **Area Emissions** | PM10 (g/m2-sec) | PM2.5 (g/m2-sec) |
|---|---|---|
| AllSources | 7.5401E-08 | 1.5834E-08 |

**World Logistics Center Project in 2021**
**Internal Roadway Circulation**

**2021**
**With EMFAC2014**

**Peak Hour CO**
Rev 5

Based on PB Traffic Results 10/3/2013
No Mitigation

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 3.34E-02 | 6.76E-02 | 1.01E-01 |
| 2 | 9.08E-02 | 1.75E-01 | 2.66E-01 |
| 3 | 1.43E-01 | 2.69E-01 | 4.12E-01 |
| 5 | 6.96E-03 | 5.12E-02 | 5.82E-02 |
| 6 | 3.91E-02 | 1.07E-01 | 1.46E-01 |
| 8 | 4.00E-03 | 9.79E-02 | 1.02E-01 |
| 11 | 1.39E-04 | 1.68E-03 | 1.82E-03 |
| 12 | 6.49E-04 | 7.01E-03 | 7.66E-03 |
| 14 | 2.92E-02 | 4.72E-02 | 7.65E-02 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 5.08E-07 | 8.96E-04 | 8.97E-04 |
| 21 | 7.84E-03 | 4.24E-02 | 5.03E-02 |
| 24 | 1.18E-02 | 6.51E-02 | 7.69E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 2.40E-07 | 4.23E-04 | 4.23E-04 |
| 30 | 1.00E-06 | 1.77E-03 | 1.77E-03 |
| 31 | 4.99E-03 | 2.77E-02 | 3.27E-02 |
| Total (g/sec) | 3.72E-01 | 9.62E-01 | 1.33E+00 |
| Total (lbs/day) | 7.08E+01 | 1.83E+02 | 2.54E+02 |

| ID | Arterial | From | To | | Estimated Project 2021 - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 953 | 56 | 134 | 442 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,024 | 118 | 154 | 534 |
| 3 | Street E | west of Street A | | | 489 | 52 | 75 | 262 |
| 5 | Street E | Street D | Street A | | 308 | 18 | 28 | 25 |
| 6 | Street A | Street F | Street C | | 475 | 42 | 58 | 148 |
| 8 | Street D | Street E | Cactus Ave | | 536 | 33 | 50 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 8 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 37 | 13 | 8 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 114 | 17 | 16 | 79 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 3 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 194 | 7 | 13 | 25 |
| 24 | Street C | Street F | Gilman Springs Rd | | 193 | 6 | 14 | 24 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 4 | 0 | 0 | 0 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 4 | 0 | 0 | 0 |
| 31 | Gilman Springs Rd | south of Street C | | | 196 | 6 | 14 | 24 |

**World Logistics Center** **2021 Peak Hour CO**
Project in 2021
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1585 | 953 | 56 | 134 | 442 | 327 | 0.203 | 2 | 0 | 0 | 0 | 11 | 4 | 109 | 435 | 561 | 114 |
| 2 | 1830 | 1,024 | 118 | 154 | 534 | 731 | 0.454 | 2 | 0 | 0 | 0 | 24 | 8 | 125 | 525 | 685 | 311 |
| 3 | 878 | 489 | 52 | 75 | 262 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 11 | 4 | 61 | 258 | 334 | 488 |
| 5 | 378 | 308 | 18 | 28 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 4 | 1 | 22 | 25 | 53 | 31 |
| 6 | 723 | 475 | 42 | 58 | 148 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 9 | 3 | 47 | 146 | 205 | 140 |
| 8 | 619 | 536 | 33 | 50 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 7 | 2 | 41 | 0 | 51 | 34 |
| 11 | 10 | 8 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| 12 | 59 | 37 | 13 | 8 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 3 | 1 | 7 | 0 | 11 | 5 |
| 14 | 226 | 114 | 17 | 16 | 79 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 3 | 1 | 13 | 78 | 96 | 96 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 3 | 3 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 239 | 194 | 7 | 13 | 25 | 1258 | 0.781 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 25 | 38 | 30 |
| 24 | 238 | 193 | 6 | 14 | 24 | 1946 | 1.209 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 24 | 37 | 45 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 240 | 196 | 6 | 14 | 24 | 820 | 0.509 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 24 | 37 | 19 |
| | | | | | | | | | | | | | | | | Total | 1316 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.2126 | 0.7088 | 0.1266 | 0.1922 | 0.5129 | 0.3909 | 0.4091 | 1.2425 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2.00E-05 | 4.04E-06 | 6.45E-07 | 1.74E-06 | 3.31E-04 | 8.38E-05 | 2.52E-03 | 3.05E-02 | 3.34E-02 |
| 2 | 1 | 4.81E-05 | 9.70E-06 | 1.55E-06 | 4.17E-06 | 1.56E-03 | 3.94E-04 | 6.47E-03 | 8.24E-02 | 9.08E-02 |
| 3 | 1 | 7.40E-05 | 1.49E-05 | 2.38E-06 | 6.41E-06 | 2.21E-03 | 5.58E-04 | 1.02E-02 | 1.30E-01 | 1.43E-01 |
| 5 | 1 | 1.89E-05 | 3.80E-06 | 6.07E-07 | 1.64E-06 | 3.03E-04 | 7.66E-05 | 1.51E-03 | 5.05E-03 | 6.96E-03 |
| 6 | 1 | 3.36E-05 | 6.77E-06 | 1.08E-06 | 2.91E-06 | 8.31E-04 | 2.10E-04 | 3.65E-03 | 3.43E-02 | 3.91E-02 |
| 8 | 1 | 3.76E-05 | 7.58E-06 | 1.21E-06 | 3.26E-06 | 6.44E-04 | 1.63E-04 | 3.15E-03 | 0.00E+00 | 4.00E-03 |
| 11 | 1 | 5.81E-07 | 1.17E-07 | 1.87E-08 | 5.04E-08 | 1.82E-05 | 4.60E-06 | 1.16E-04 | 0.00E+00 | 1.39E-04 |
| 12 | 1 | 1.95E-06 | 3.93E-07 | 6.27E-08 | 1.69E-07 | 1.99E-04 | 5.04E-05 | 3.96E-04 | 0.00E+00 | 6.49E-04 |
| 14 | 1 | 1.18E-05 | 2.39E-06 | 3.81E-07 | 1.03E-06 | 4.89E-04 | 1.24E-04 | 1.48E-03 | 2.71E-02 | 2.92E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 3.85E-07 | 7.76E-08 | 1.24E-08 | 3.34E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.08E-07 |
| 21 | 1 | 1.57E-05 | 3.16E-06 | 5.05E-07 | 1.36E-06 | 1.52E-04 | 3.85E-05 | 9.68E-04 | 6.66E-03 | 7.84E-03 |
| 24 | 1 | 2.42E-05 | 4.87E-06 | 7.78E-07 | 2.10E-06 | 2.06E-04 | 5.21E-05 | 1.59E-03 | 9.97E-03 | 1.18E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.82E-07 | 3.66E-08 | 5.84E-09 | 1.57E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-07 |
| 30 | 1 | 7.60E-07 | 1.53E-07 | 2.45E-08 | 6.59E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-06 |
| 31 | 1 | 1.03E-05 | 2.08E-06 | 3.32E-07 | 8.95E-07 | 8.68E-05 | 2.20E-05 | 6.70E-04 | 4.20E-03 | 4.99E-03 |

**World Logistics Center** **2021 Peak Hour CO**
Project in 2021
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1585 | 953 | 56 | 134 | 442 | 327 | 0.203 | 534 | 65 | 198 | 154 | 37 | 4 | 25 | 7 | 1023 | 208 |
| 2 | 1830 | 1,024 | 118 | 154 | 534 | 731 | 0.454 | 574 | 70 | 213 | 165 | 78 | 8 | 29 | 8 | 1145 | 520 |
| 3 | 878 | 489 | 52 | 75 | 262 | 2352 | 1.461 | 274 | 33 | 102 | 79 | 34 | 4 | 14 | 4 | 544 | 795 |
| 5 | 378 | 308 | 18 | 28 | 25 | 953 | 0.592 | 173 | 21 | 64 | 50 | 12 | 1 | 5 | 0 | 326 | 193 |
| 6 | 723 | 475 | 42 | 58 | 148 | 1099 | 0.683 | 266 | 32 | 99 | 77 | 28 | 3 | 11 | 2 | 518 | 353 |
| 8 | 619 | 536 | 33 | 50 | 0 | 1091 | 0.678 | 301 | 37 | 112 | 86 | 21 | 2 | 9 | 0 | 568 | 385 |
| 11 | 10 | 8 | 1 | 2 | 0 | 1201 | 0.746 | 4 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 8 | 6 |
| 12 | 59 | 37 | 13 | 8 | 0 | 824 | 0.512 | 21 | 3 | 8 | 6 | 9 | 1 | 2 | 0 | 48 | 25 |
| 14 | 226 | 114 | 17 | 16 | 79 | 1618 | 1.005 | 64 | 8 | 24 | 18 | 11 | 1 | 3 | 1 | 130 | 131 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 3 | 3 | 0 | 0 | 0 | 2386 | 1.482 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 21 | 239 | 194 | 7 | 13 | 25 | 1258 | 0.781 | 109 | 13 | 40 | 31 | 4 | 0 | 2 | 0 | 201 | 157 |
| 24 | 238 | 193 | 6 | 14 | 24 | 1946 | 1.209 | 108 | 13 | 40 | 31 | 4 | 0 | 3 | 0 | 200 | 242 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 7 |
| 31 | 240 | 196 | 6 | 14 | 24 | 820 | 0.509 | 110 | 13 | 41 | 32 | 4 | 0 | 3 | 0 | 203 | 103 |
| | | | | | | | | | | | | | | | | Total | 3131 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.6549 | 1.5345 | 0.8091 | 1.4090 | 1.5061 | 0.5979 | 2.2760 | 37.5281 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.97E-02 | 5.63E-03 | 9.05E-03 | 1.22E-02 | 3.14E-03 | 1.31E-04 | 3.19E-03 | 1.46E-02 | 6.76E-02 |
| 2 | 1 | 4.74E-02 | 1.35E-02 | 2.17E-02 | 2.93E-02 | 1.48E-02 | 6.19E-04 | 8.21E-03 | 3.93E-02 | 1.75E-01 |
| 3 | 1 | 7.29E-02 | 2.08E-02 | 3.34E-02 | 4.51E-02 | 2.09E-02 | 8.75E-04 | 1.29E-02 | 6.21E-02 | 2.69E-01 |
| 5 | 1 | 1.86E-02 | 5.30E-03 | 8.52E-03 | 1.15E-02 | 2.86E-03 | 1.20E-04 | 1.92E-03 | 2.41E-03 | 5.12E-02 |
| 6 | 1 | 3.31E-02 | 9.44E-03 | 1.52E-02 | 2.05E-02 | 7.87E-03 | 3.30E-04 | 4.63E-03 | 1.64E-02 | 1.07E-01 |
| 8 | 1 | 3.71E-02 | 1.06E-02 | 1.70E-02 | 2.29E-02 | 6.09E-03 | 2.55E-04 | 3.99E-03 | 0.00E+00 | 9.79E-02 |
| 11 | 1 | 5.73E-04 | 1.63E-04 | 2.63E-04 | 3.54E-04 | 1.72E-04 | 7.21E-06 | 1.47E-04 | 0.00E+00 | 1.68E-03 |
| 12 | 1 | 1.92E-03 | 5.48E-04 | 8.81E-04 | 1.19E-03 | 1.89E-03 | 7.91E-05 | 5.03E-04 | 0.00E+00 | 7.01E-03 |
| 14 | 1 | 1.17E-02 | 3.33E-03 | 5.35E-03 | 7.22E-03 | 4.63E-03 | 1.94E-04 | 1.88E-03 | 1.30E-02 | 4.72E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 3.79E-04 | 1.08E-04 | 1.74E-04 | 2.35E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.96E-04 |
| 21 | 1 | 1.55E-02 | 4.41E-03 | 7.09E-03 | 9.57E-03 | 1.44E-03 | 6.04E-05 | 1.23E-03 | 3.18E-03 | 4.24E-02 |
| 24 | 1 | 2.38E-02 | 6.80E-03 | 1.09E-02 | 1.47E-02 | 1.95E-03 | 8.18E-05 | 2.02E-03 | 4.76E-03 | 6.51E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.79E-04 | 5.10E-05 | 8.20E-05 | 1.11E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.23E-04 |
| 30 | 1 | 7.49E-04 | 2.14E-04 | 3.44E-04 | 4.63E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.77E-03 |
| 31 | 1 | 1.02E-02 | 2.90E-03 | 4.66E-03 | 6.29E-03 | 8.22E-04 | 3.44E-05 | 8.51E-04 | 2.00E-03 | 2.77E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour CO emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | |
|---|---|---|---|
| | 2021 | Phase 1 | No Mitigation |

**Vehicle Running Exhaust Emissions**

| | | | Pollutant | Peak Hour CO |
|---|---|---|---|---|
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 1 | 7.88E-02 | 1.55E-01 | |
| Light Logistics | Phase 1 | 1.49E-04 | 5.25E-04 | |
| Utilities Service Station | Phase 1 | 1.04E-04 | 4.96E-04 | |
| Gas Station w/Convenience Store | Phase 1 | 1.99E-04 | 2.51E-04 | |
| Convenience Store | Phase 1 | 2.26E-04 | 3.02E-04 | |
| Fire Station | Phase 1 | 5.14E-07 | 2.47E-04 | |
| Total | | 7.95E-02 | 1.57E-01 | |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 3.66E-02 | 3.23E-01 |
| Light Logistics | Phase 1 | 1.60E-04 | 1.56E-03 |
| Utilities Service Station | Phase 1 | 3.31E-04 | 3.87E-03 |
| Gas Station w/Convenience Store | Phase 1 | 4.15E-04 | 2.14E-03 |
| Convenience Store | Phase 1 | 5.32E-04 | 2.78E-03 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.80E-02 | 3.33E-01 |

**Total Onsite Emission**

| | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 7.95E-02 | 1.57E-01 | |
| Idling Emissions (g/sec) | 3.80E-02 | 3.33E-01 | |
| Total Vehicle Emissions (g/sec) | 1.17E-01 | 4.90E-01 | |
| Yard Trucks (LPG) (g/sec) | | 7.24E-02 | |
| Fork Lifts (LPG) (g/sec) | | 5.36E-01 | |
| | | | Total |
| Total All Sources (g/sec) | 1.17E-01 | 1.10E+00 | 1.22E+00 |
| Area (m2) | 4.07E+06 | 4.07E+06 | |
| Emission Rate (g/m2-sec) | 2.88E-08 | 2.70E-07 | 2.99E-07 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** Peak Hour CO

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Peak Hour CO Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 1.234 | 3 | 330 | 0.21 | 7.17E-01 | 1.58E-03 | 1.99E-04 | |
| | LDT1 | 15 | 1.699 | 0 | 330 | 0.21 | 5.26E-02 | 1.16E-04 | 1.46E-05 | |
| | LDT2 | 15 | 0.858 | 0 | 330 | 0.21 | 2.57E-02 | 5.67E-05 | 7.15E-06 | |
| | MDT | 15 | 1.294 | 0 | 330 | 0.21 | 6.72E-02 | 1.48E-04 | 1.87E-05 | |
| | LHDT1 | 15 | 1.255 | 30 | 330 | 0.21 | 7.68E+00 | 1.69E-02 | 2.13E-03 | |
| | LHDT2 | 15 | 1.126 | 10 | 330 | 0.21 | 2.26E+00 | 4.97E-03 | 6.26E-04 | |
| | MHDT | 15 | 0.770 | 161 | 330 | 0.21 | 2.54E+01 | 5.59E-02 | 7.05E-03 | |
| | HHDT | 15 | 2.345 | 515 | 330 | 0.21 | 2.48E+02 | 5.45E-01 | 6.88E-02 | |
| | | | | | | | | | | 7.88E-02 |
| Travel at Light Logistics | LDA | 15 | 1.234 | 0 | 175 | 0.11 | 2.70E-03 | 5.96E-06 | 7.51E-07 | |
| | LDT1 | 15 | 1.699 | 0 | 175 | 0.11 | 1.98E-04 | 4.37E-07 | 5.51E-08 | |
| | LDT2 | 15 | 0.858 | 0 | 175 | 0.11 | 9.70E-05 | 2.14E-07 | 2.69E-08 | |
| | MDT | 15 | 1.294 | 0 | 175 | 0.11 | 2.53E-04 | 5.58E-07 | 7.04E-08 | |
| | LHDT1 | 15 | 1.255 | 0 | 175 | 0.11 | 2.56E-02 | 5.63E-05 | 7.10E-06 | |
| | LHDT2 | 15 | 1.126 | 0 | 175 | 0.11 | 7.51E-03 | 1.65E-05 | 2.08E-06 | |
| | MHDT | 15 | 0.770 | 1 | 175 | 0.11 | 4.67E-02 | 1.03E-04 | 1.30E-05 | |
| | HHDT | 15 | 2.345 | 2 | 175 | 0.11 | 4.52E-01 | 9.97E-04 | 1.26E-04 | 1.49E-04 |
| Travel at Utility | LDA | 15 | 1.234 | 0 | 100 | 0.06 | 2.44E-03 | 5.38E-06 | 6.78E-07 | |
| | LDT1 | 15 | 1.699 | 0 | 100 | 0.06 | 1.79E-04 | 3.94E-07 | 4.97E-08 | |
| | LDT2 | 15 | 0.858 | 0 | 100 | 0.06 | 8.76E-05 | 1.93E-07 | 2.43E-08 | |
| | MDT | 15 | 1.294 | 0 | 100 | 0.06 | 2.29E-04 | 5.04E-07 | 6.36E-08 | |
| | LHDT1 | 15 | 1.255 | 1 | 100 | 0.06 | 4.58E-02 | 1.01E-04 | 1.27E-05 | |
| | LHDT2 | 15 | 1.126 | 0 | 100 | 0.06 | 1.34E-02 | 2.96E-05 | 3.73E-06 | |
| | MHDT | 15 | 0.770 | 1 | 100 | 0.06 | 3.76E-02 | 8.29E-05 | 1.05E-05 | |
| | HHDT | 15 | 2.345 | 2 | 100 | 0.06 | 2.73E-01 | 6.02E-04 | 7.59E-05 | 1.04E-04 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 1.234 | 0 | 50 | 0.03 | 1.11E-03 | 2.45E-06 | 3.09E-07 | |
| | LDT1 | 15 | 1.699 | 0 | 50 | 0.03 | 8.17E-05 | 1.80E-07 | 2.27E-08 | |
| | LDT2 | 15 | 0.858 | 0 | 50 | 0.03 | 4.00E-05 | 8.80E-08 | 1.11E-08 | |
| | MDT | 15 | 1.294 | 0 | 50 | 0.03 | 1.04E-04 | 2.30E-07 | 2.90E-08 | |
| | LHDT1 | 15 | 1.255 | 0 | 50 | 0.03 | 1.67E-04 | 3.68E-07 | 4.64E-08 | |
| | LHDT2 | 15 | 1.126 | 0 | 50 | 0.03 | 4.91E-05 | 1.08E-07 | 1.36E-08 | |
| | MHDT | 15 | 0.770 | 2 | 50 | 0.03 | 4.54E-02 | 1.00E-04 | 1.26E-05 | |
| | HHDT | 15 | 2.345 | 9 | 50 | 0.03 | 6.68E-01 | 1.47E-03 | 1.85E-04 | 1.99E-04 |
| Travel at Convenience Store | LDA | 15 | 1.234 | 0 | 50 | 0.03 | 1.33E-03 | 2.92E-06 | 3.68E-07 | |
| | LDT1 | 15 | 1.699 | 0 | 50 | 0.03 | 9.72E-05 | 2.14E-07 | 2.70E-08 | |
| | LDT2 | 15 | 0.858 | 0 | 50 | 0.03 | 4.76E-05 | 1.05E-07 | 1.32E-08 | |
| | MDT | 15 | 1.294 | 0 | 50 | 0.03 | 1.24E-04 | 2.74E-07 | 3.45E-08 | |
| | LHDT1 | 15 | 1.255 | 0 | 50 | 0.03 | 7.16E-03 | 1.58E-05 | 1.99E-06 | |
| | LHDT2 | 15 | 1.126 | 0 | 50 | 0.03 | 2.10E-03 | 4.63E-06 | 5.84E-07 | |
| | MHDT | 15 | 0.770 | 1 | 50 | 0.03 | 3.46E-02 | 7.62E-05 | 9.60E-06 | |
| | HHDT | 15 | 2.345 | 11 | 50 | 0.03 | 7.68E-01 | 1.69E-03 | 2.13E-04 | 2.26E-04 |
| Travel at Fire Station | LDA | 15 | 1.234 | 0 | 50 | 0.03 | 1.54E-03 | 3.39E-06 | 4.27E-07 | |
| | LDT1 | 15 | 1.699 | 0 | 50 | 0.03 | 1.13E-04 | 2.48E-07 | 3.13E-08 | |
| | LDT2 | 15 | 0.858 | 0 | 50 | 0.03 | 5.52E-05 | 1.22E-07 | 1.53E-08 | |
| | MDT | 15 | 1.294 | 0 | 50 | 0.03 | 1.44E-04 | 3.18E-07 | 4.01E-08 | |
| | LHDT1 | 15 | 1.255 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.126 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.770 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 2.345 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.14E-07 |
| Total - All Buildings | LDA | | | 3 | | | 7.26E-01 | 1.60E-03 | 2.02E-04 | |
| | LDT1 | | | 0 | | | 5.32E-02 | 1.17E-04 | 1.48E-05 | |
| | LDT2 | | | 0 | | | 2.61E-02 | 5.74E-05 | 7.24E-06 | |
| | MDT | | | 0 | | | 6.81E-02 | 1.50E-04 | 1.89E-05 | |
| | LHDT1 | | | 31 | | | 7.76E+00 | 1.71E-02 | 2.15E-03 | |
| | LHDT2 | | | 10 | | | 2.28E+00 | 5.02E-03 | 6.33E-04 | |
| | MHDT | | | 165 | | | 2.55E+01 | 5.62E-02 | 7.09E-03 | |
| | HHDT | | | 538 | | | 2.50E+02 | 5.50E-01 | 6.94E-02 | |
| | Total | | | 748 | | | 2.86E+02 | 6.30E-01 | 7.95E-02 | 7.95E-02 |

**Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 15 | 3.27E+01 | 7.21E-02 | 9.09E-03 | |
| | **LHDT2** | 26.300 | 5 | 5 | 1.07E+01 | 2.36E-02 | 2.97E-03 | |
| | **MHDT** | 2.060 | 5 | 80 | 1.38E+01 | 3.04E-02 | 3.83E-03 | |
| | **HHDT** | 3.470 | 5 | 257 | 7.44E+01 | 1.64E-01 | 2.07E-02 | |
| | | | | 358 | 1.32E+02 | 2.90E-01 | 3.66E-02 | 3.66E-02 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 2.05E-01 | 4.52E-04 | 5.70E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.72E-02 | 1.48E-04 | 1.87E-05 | |
| | **MHDT** | 2.060 | 5 | 0 | 4.78E-02 | 1.05E-04 | 1.33E-05 | |
| | **HHDT** | 3.470 | 5 | 1 | 2.57E-01 | 5.65E-04 | 7.13E-05 | |
| | | | | 1 | 5.77E-01 | 1.27E-03 | 1.60E-04 | 1.60E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 6.44E-01 | 1.42E-03 | 1.79E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.11E-01 | 4.64E-04 | 5.85E-05 | |
| | **MHDT** | 2.060 | 5 | 0 | 6.75E-02 | 1.49E-04 | 1.88E-05 | |
| | **HHDT** | 3.470 | 5 | 1 | 2.71E-01 | 5.98E-04 | 7.54E-05 | |
| | | | | 2 | 1.19E+00 | 2.63E-03 | 3.31E-04 | 3.31E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 4.70E-03 | 1.04E-05 | 1.31E-06 | |
| | **LHDT2** | 26.300 | 5 | 0 | 1.54E-03 | 3.39E-06 | 4.27E-07 | |
| | **MHDT** | 2.060 | 5 | 1 | 1.63E-01 | 3.59E-04 | 4.52E-05 | |
| | **HHDT** | 3.470 | 5 | 5 | 1.33E+00 | 2.92E-03 | 3.68E-04 | |
| | | | | 6 | 1.49E+00 | 3.29E-03 | 4.15E-04 | 4.15E-04 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 2.01E-01 | 4.44E-04 | 5.60E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **MHDT** | 2.060 | 5 | 1 | 1.24E-01 | 2.73E-04 | 3.45E-05 | |
| | **HHDT** | 3.470 | 5 | 5 | 1.52E+00 | 3.36E-03 | 4.23E-04 | |
| | | | | 6 | 1.92E+00 | 4.22E-03 | 5.32E-04 | 5.32E-04 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 2.060 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 3.470 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 372 | 1.37E+02 | 3.01E-01 | 3.80E-02 | 3.80E-02 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** Peak Hour CO

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 hrs/day
1 hrs/day SoCAB

**Onsite Running Exhaust Emissions** Peak Hour CO Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.960 | 890 | 330 | 0.21 | 1.75E+02 | 3.86E-01 | 4.87E-02 | |
| | LDT1 | 15 | 2.448 | 105 | 330 | 0.21 | 5.29E+01 | 1.17E-01 | 1.47E-02 | |
| | LDT2 | 15 | 1.183 | 321 | 330 | 0.21 | 7.80E+01 | 1.72E-01 | 2.17E-02 | |
| | MDT | 15 | 2.120 | 248 | 330 | 0.21 | 1.08E+02 | 2.38E-01 | 3.00E-02 | |
| | LHDT1 | 15 | 2.073 | 96 | 330 | 0.21 | 4.10E+01 | 9.03E-02 | 1.14E-02 | |
| | LHDT2 | 15 | 0.781 | 10 | 330 | 0.21 | 1.62E+00 | 3.57E-03 | 4.50E-04 | |
| | MHDT | 15 | 2.791 | 37 | 330 | 0.21 | 2.10E+01 | 4.62E-02 | 5.83E-03 | |
| | HHDT | 15 | 45.064 | 9 | 330 | 0.21 | 8.16E+01 | 1.80E-01 | 2.27E-02 | |
| | | | | | | | | | | 1.55E-01 |
| Travel at Light Logistics | LDA | 15 | 0.960 | 6 | 175 | 0.11 | 6.61E-01 | 1.46E-03 | 1.84E-04 | |
| | LDT1 | 15 | 2.448 | 1 | 175 | 0.11 | 2.00E-01 | 4.39E-04 | 5.54E-05 | |
| | LDT2 | 15 | 1.183 | 2 | 175 | 0.11 | 2.94E-01 | 6.48E-04 | 8.17E-05 | |
| | MDT | 15 | 2.120 | 2 | 175 | 0.11 | 4.07E-01 | 8.96E-04 | 1.13E-04 | |
| | LHDT1 | 15 | 2.073 | 1 | 175 | 0.11 | 1.36E-01 | 3.00E-04 | 3.79E-05 | |
| | LHDT2 | 15 | 0.781 | 0 | 175 | 0.11 | 5.39E-03 | 1.19E-05 | 1.50E-06 | |
| | MHDT | 15 | 2.791 | 0 | 175 | 0.11 | 3.86E-02 | 8.50E-05 | 1.07E-05 | |
| | HHDT | 15 | 45.064 | 0 | 175 | 0.11 | 1.49E-01 | 3.29E-04 | 4.14E-05 | 5.25E-04 |
| Travel at Utility | LDA | 15 | 0.960 | 10 | 100 | 0.06 | 5.96E-01 | 1.31E-03 | 1.66E-04 | |
| | LDT1 | 15 | 2.448 | 1 | 100 | 0.06 | 1.80E-01 | 3.97E-04 | 5.00E-05 | |
| | LDT2 | 15 | 1.183 | 4 | 100 | 0.06 | 2.65E-01 | 5.85E-04 | 7.37E-05 | |
| | MDT | 15 | 2.120 | 3 | 100 | 0.06 | 3.67E-01 | 8.09E-04 | 1.02E-04 | |
| | LHDT1 | 15 | 2.073 | 2 | 100 | 0.06 | 2.44E-01 | 5.38E-04 | 6.79E-05 | |
| | LHDT2 | 15 | 0.781 | 0 | 100 | 0.06 | 9.65E-03 | 2.13E-05 | 2.68E-06 | |
| | MHDT | 15 | 2.791 | 0 | 100 | 0.06 | 3.11E-02 | 6.85E-05 | 8.64E-06 | |
| | HHDT | 15 | 45.064 | 0 | 100 | 0.06 | 9.01E-02 | 1.99E-04 | 2.50E-05 | 4.96E-04 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.960 | 9 | 50 | 0.03 | 2.72E-01 | 6.00E-04 | 7.56E-05 | |
| | LDT1 | 15 | 2.448 | 1 | 50 | 0.03 | 8.22E-02 | 1.81E-04 | 2.28E-05 | |
| | LDT2 | 15 | 1.183 | 3 | 50 | 0.03 | 1.21E-01 | 2.67E-04 | 3.37E-05 | |
| | MDT | 15 | 2.120 | 3 | 50 | 0.03 | 1.68E-01 | 3.69E-04 | 4.65E-05 | |
| | LHDT1 | 15 | 2.073 | 0 | 50 | 0.03 | 8.92E-04 | 1.97E-06 | 2.48E-07 | |
| | LHDT2 | 15 | 0.781 | 0 | 50 | 0.03 | 3.52E-05 | 7.76E-08 | 9.79E-09 | |
| | MHDT | 15 | 2.791 | 0 | 50 | 0.03 | 3.75E-02 | 8.27E-05 | 1.04E-05 | |
| | HHDT | 15 | 45.064 | 0 | 50 | 0.03 | 2.20E-01 | 4.85E-04 | 6.11E-05 | 2.51E-04 |
| Travel at Convenience Store | LDA | 15 | 0.960 | 11 | 50 | 0.03 | 3.24E-01 | 7.14E-04 | 9.00E-05 | |
| | LDT1 | 15 | 2.448 | 1 | 50 | 0.03 | 9.79E-02 | 2.16E-04 | 2.72E-05 | |
| | LDT2 | 15 | 1.183 | 4 | 50 | 0.03 | 1.44E-01 | 3.18E-04 | 4.01E-05 | |
| | MDT | 15 | 2.120 | 3 | 50 | 0.03 | 1.99E-01 | 4.39E-04 | 5.54E-05 | |
| | LHDT1 | 15 | 2.073 | 1 | 50 | 0.03 | 3.82E-02 | 8.42E-05 | 1.06E-05 | |
| | LHDT2 | 15 | 0.781 | 0 | 50 | 0.03 | 1.51E-03 | 3.33E-06 | 4.20E-07 | |
| | MHDT | 15 | 2.791 | 0 | 50 | 0.03 | 2.86E-02 | 6.30E-05 | 7.94E-06 | |
| | HHDT | 15 | 45.064 | 0 | 50 | 0.03 | 2.53E-01 | 5.58E-04 | 7.03E-05 | 3.02E-04 |
| Travel at Fire Station | LDA | 15 | 0.960 | 13 | 50 | 0.03 | 3.76E-01 | 8.28E-04 | 1.04E-04 | |
| | LDT1 | 15 | 2.448 | 1 | 50 | 0.03 | 1.14E-01 | 2.50E-04 | 3.15E-05 | |
| | LDT2 | 15 | 1.183 | 5 | 50 | 0.03 | 1.67E-01 | 3.69E-04 | 4.65E-05 | |
| | MDT | 15 | 2.120 | 4 | 50 | 0.03 | 2.31E-01 | 5.10E-04 | 6.43E-05 | |
| | LHDT1 | 15 | 2.073 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.781 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 2.791 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 45.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-04 |
| Total - All Buildings | LDA | | | 939 | | | 1.78E+02 | 3.91E-01 | 4.93E-02 | |
| | LDT1 | | | 111 | | | 5.36E+01 | 1.18E-01 | 1.49E-02 | |
| | LDT2 | | | 339 | | | 7.90E+01 | 1.74E-01 | 2.19E-02 | |
| | MDT | | | 262 | | | 1.09E+02 | 2.41E-01 | 3.03E-02 | |
| | LHDT1 | | | 100 | | | 4.14E+01 | 9.12E-02 | 1.15E-02 | |
| | LHDT2 | | | 10 | | | 1.64E+00 | 3.60E-03 | 4.54E-04 | |
| | MHDT | | | 38 | | | 2.11E+01 | 4.65E-02 | 5.86E-03 | |
| | HHDT | | | 9 | | | 8.23E+01 | 1.81E-01 | 2.29E-02 | |
| | Total | | | 1808 | | | 5.66E+02 | 1.25E+00 | 1.57E-01 | 1.57E-01 |

**Non-Diesel Truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 127.300 | 5 | 48 | 5.11E+02 | 1.13E+00 | 1.42E-01 | |
| | **LHDT2** | 130.300 | 5 | 5 | 5.49E+01 | 1.21E-01 | 1.52E-02 | |
| | **MHDT** | 325.000 | 5 | 18 | 4.97E+02 | 1.09E+00 | 1.38E-01 | |
| | **HHDT** | 270.605 | 5 | 4 | 9.96E+01 | 2.19E-01 | 2.77E-02 | |
| | | | | 76 | 1.16E+03 | 2.56E+00 | 3.23E-01 | 3.23E-01 |
| **Idle at Light Logistics** | **LHDT1** | 127.300 | 5 | 0 | 3.21E+00 | 7.07E-03 | 8.92E-04 | |
| | **LHDT2** | 130.300 | 5 | 0 | 3.44E-01 | 7.58E-04 | 9.56E-05 | |
| | **MHDT** | 325.000 | 5 | 0 | 1.72E+00 | 3.79E-03 | 4.78E-04 | |
| | **HHDT** | 270.605 | 5 | 0 | 3.43E-01 | 7.56E-04 | 9.54E-05 | |
| | | | | 0 | 5.62E+00 | 1.24E-02 | 1.56E-03 | 1.56E-03 |
| **Idle at Utility** | **LHDT1** | 127.300 | 5 | 1 | 1.01E+01 | 2.22E-02 | 2.79E-03 | |
| | **LHDT2** | 130.300 | 5 | 0 | 1.08E+00 | 2.38E-03 | 3.00E-04 | |
| | **MHDT** | 325.000 | 5 | 0 | 2.43E+00 | 5.35E-03 | 6.75E-04 | |
| | **HHDT** | 270.605 | 5 | 0 | 3.63E-01 | 8.00E-04 | 1.01E-04 | |
| | | | | 1 | 1.39E+01 | 3.07E-02 | 3.87E-03 | 3.87E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 127.300 | 5 | 0 | 7.35E-02 | 1.62E-04 | 2.04E-05 | |
| | **LHDT2** | 130.300 | 5 | 0 | 7.88E-03 | 1.74E-05 | 2.19E-06 | |
| | **MHDT** | 325.000 | 5 | 0 | 5.87E+00 | 1.29E-02 | 1.63E-03 | |
| | **HHDT** | 270.605 | 5 | 0 | 1.77E+00 | 3.91E-03 | 4.93E-04 | |
| | | | | 0 | 7.72E+00 | 1.70E-02 | 2.14E-03 | 2.14E-03 |
| **Idle at Convenience Store** | **LHDT1** | 127.300 | 5 | 0 | 3.15E+00 | 6.94E-03 | 8.75E-04 | |
| | **LHDT2** | 130.300 | 5 | 0 | 3.38E-01 | 7.44E-04 | 9.38E-05 | |
| | **MHDT** | 325.000 | 5 | 0 | 4.47E+00 | 9.84E-03 | 1.24E-03 | |
| | **HHDT** | 270.605 | 5 | 0 | 2.04E+00 | 4.49E-03 | 5.67E-04 | |
| | | | | 1 | 9.99E+00 | 2.20E-02 | 2.78E-03 | 2.78E-03 |
| **Idle at Firestation** | **LHDT1** | 127.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 130.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 325.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 270.605 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 78 | 1.20E+03 | 2.64E+00 | 3.33E-01 | 3.33E-01 |

**World Logistics Center Project in 2021**
**Internal Roadway Circulation**

**2021**
**With EMFAC2014**

**NOx Pk Hr**
Rev 5

Based on PB Traffic Results 10/3/2013
No Mitigation

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 1.50E-01 | 6.69E-03 | 1.57E-01 |
| 2 | 4.06E-01 | 1.83E-02 | 4.24E-01 |
| 3 | 6.39E-01 | 2.79E-02 | 6.67E-01 |
| 5 | 3.11E-02 | 5.09E-03 | 3.62E-02 |
| 6 | 1.75E-01 | 1.10E-02 | 1.86E-01 |
| 8 | 1.79E-02 | 9.86E-03 | 2.77E-02 |
| 11 | 6.35E-04 | 1.89E-04 | 8.24E-04 |
| 12 | 2.70E-03 | 9.47E-04 | 3.65E-03 |
| 14 | 1.30E-01 | 4.97E-03 | 1.35E-01 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 2.51E-07 | 7.72E-05 | 7.75E-05 |
| 21 | 3.51E-02 | 4.03E-03 | 3.91E-02 |
| 24 | 5.31E-02 | 6.16E-03 | 5.93E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.18E-07 | 3.64E-05 | 3.65E-05 |
| 30 | 4.96E-07 | 1.52E-04 | 1.53E-04 |
| 31 | 2.24E-02 | 2.62E-03 | 2.50E-02 |
| | | | |
| Total (g/sec) | 1.66E+00 | 9.79E-02 | 1.76E+00 |
| Total (lbs/day) | 3.16E+02 | 1.86E+01 | 3.35E+02 |
| | | | |
| Total VMT (mi/day) | 1.32E+03 | 3.13E+03 | 4.45E+03 |

| ID | Arterial | From | To | | Estimated Project 2021 - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 953 | 56 | 134 | 442 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,024 | 118 | 154 | 534 |
| 3 | Street E | west of Street A | | | 489 | 52 | 75 | 262 |
| 5 | Street E | Street D | Street A | | 308 | 18 | 28 | 25 |
| 6 | Street A | Street F | Street C | | 475 | 42 | 58 | 148 |
| 8 | Street D | Street E | Cactus Ave | | 536 | 33 | 50 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 8 | 1 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 37 | 13 | 8 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 114 | 17 | 16 | 79 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 3 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 194 | 7 | 13 | 25 |
| 24 | Street C | Street F | Gilman Springs Rd | | 193 | 6 | 14 | 24 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 4 | 0 | 0 | 0 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 4 | 0 | 0 | 0 |
| 31 | Gilman Springs Rd | south of Street C | | | 196 | 6 | 14 | 24 |

**World Logistics Center** **2021** **NOx Pk Hr**
Project in 2021
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1585 | 953 | 56 | 134 | 442 | 327 | 0.203 | 2 | 0 | 0 | 0 | 11 | 4 | 109 | 435 | 561 | 114 |
| 2 | 1830 | 1,024 | 118 | 154 | 534 | 731 | 0.454 | 2 | 0 | 0 | 0 | 24 | 8 | 125 | 525 | 685 | 311 |
| 3 | 878 | 489 | 52 | 75 | 262 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 11 | 4 | 61 | 258 | 334 | 488 |
| 5 | 378 | 308 | 18 | 28 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 4 | 1 | 22 | 25 | 53 | 31 |
| 6 | 723 | 475 | 42 | 58 | 148 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 9 | 3 | 47 | 146 | 205 | 140 |
| 8 | 619 | 536 | 33 | 50 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 7 | 2 | 41 | 0 | 51 | 34 |
| 11 | 10 | 8 | 1 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| 12 | 59 | 37 | 13 | 8 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 3 | 1 | 7 | 0 | 11 | 5 |
| 14 | 226 | 114 | 17 | 16 | 79 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 3 | 1 | 13 | 78 | 96 | 96 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 3 | 3 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 239 | 194 | 7 | 13 | 25 | 1258 | 0.781 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 25 | 38 | 30 |
| 24 | 238 | 193 | 6 | 14 | 24 | 1946 | 1.209 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 24 | 37 | 45 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 240 | 196 | 6 | 14 | 24 | 820 | 0.509 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 24 | 37 | 19 |
| | | | | | | | | | | | | | | | | Total | 1316 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0852 | 0.7829 | 0.0409 | 0.0418 | 1.6238 | 0.9894 | 2.0024 | 5.5523 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 8.03E-06 | 4.46E-06 | 2.08E-07 | 3.78E-07 | 1.05E-03 | 2.12E-04 | 1.23E-02 | 1.36E-01 | 1.50E-01 |
| 2 | 1 | 1.93E-05 | 1.07E-05 | 5.00E-07 | 9.07E-07 | 4.94E-03 | 9.98E-04 | 3.17E-02 | 3.68E-01 | 4.06E-01 |
| 3 | 1 | 2.97E-05 | 1.65E-05 | 7.69E-07 | 1.39E-06 | 6.98E-03 | 1.41E-03 | 4.98E-02 | 5.81E-01 | 6.39E-01 |
| 5 | 1 | 7.56E-06 | 4.20E-06 | 1.96E-07 | 3.56E-07 | 9.58E-04 | 1.94E-04 | 7.40E-03 | 2.26E-02 | 3.11E-02 |
| 6 | 1 | 1.35E-05 | 7.47E-06 | 3.49E-07 | 6.33E-07 | 2.63E-03 | 5.32E-04 | 1.78E-02 | 1.53E-01 | 1.75E-01 |
| 8 | 1 | 1.51E-05 | 8.37E-06 | 3.91E-07 | 7.09E-07 | 2.04E-03 | 4.12E-04 | 1.54E-02 | 0.00E+00 | 1.79E-02 |
| 11 | 1 | 2.33E-07 | 1.29E-07 | 6.04E-09 | 1.10E-08 | 5.75E-05 | 1.16E-05 | 5.65E-04 | 0.00E+00 | 6.35E-04 |
| 12 | 1 | 7.82E-07 | 4.34E-07 | 2.03E-08 | 3.68E-08 | 6.31E-04 | 1.28E-04 | 1.94E-03 | 0.00E+00 | 2.70E-03 |
| 14 | 1 | 4.74E-06 | 2.63E-06 | 1.23E-07 | 2.23E-07 | 1.55E-03 | 3.13E-04 | 7.24E-03 | 1.21E-01 | 1.30E-01 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.54E-07 | 8.57E-08 | 4.00E-09 | 7.26E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.51E-07 |
| 21 | 1 | 6.29E-06 | 3.49E-06 | 1.63E-07 | 2.96E-07 | 4.82E-04 | 9.74E-05 | 4.74E-03 | 2.98E-02 | 3.51E-02 |
| 24 | 1 | 9.69E-06 | 5.38E-06 | 2.51E-07 | 4.56E-07 | 6.52E-04 | 1.32E-04 | 7.79E-03 | 4.45E-02 | 5.31E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 7.28E-08 | 4.04E-08 | 1.89E-09 | 3.42E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.18E-07 |
| 30 | 1 | 3.05E-07 | 1.69E-07 | 7.90E-09 | 1.43E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.96E-07 |
| 31 | 1 | 4.14E-06 | 2.30E-06 | 1.07E-07 | 1.95E-07 | 2.75E-04 | 5.56E-05 | 3.28E-03 | 1.88E-02 | 2.24E-02 |

**World Logistics Center** **2021** **NOx Pk Hr**
Project in 2021
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1585 | 953 | 56 | 134 | 442 | 327 | 0.203 | 534 | 65 | 198 | 154 | 37 | 4 | 25 | 7 | 1023 | 208 |
| 2 | 1830 | 1,024 | 118 | 154 | 534 | 731 | 0.454 | 574 | 70 | 213 | 165 | 78 | 8 | 29 | 8 | 1145 | 520 |
| 3 | 878 | 489 | 52 | 75 | 262 | 2352 | 1.461 | 274 | 33 | 102 | 79 | 34 | 4 | 14 | 4 | 544 | 795 |
| 5 | 378 | 308 | 18 | 28 | 25 | 953 | 0.592 | 173 | 21 | 64 | 50 | 12 | 1 | 5 | 0 | 326 | 193 |
| 6 | 723 | 475 | 42 | 58 | 148 | 1099 | 0.683 | 266 | 32 | 99 | 77 | 28 | 3 | 11 | 2 | 518 | 353 |
| 8 | 619 | 536 | 33 | 50 | 0 | 1091 | 0.678 | 301 | 37 | 112 | 86 | 21 | 2 | 9 | 0 | 568 | 385 |
| 11 | 10 | 8 | 1 | 2 | 0 | 1201 | 0.746 | 4 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 8 | 6 |
| 12 | 59 | 37 | 13 | 8 | 0 | 824 | 0.512 | 21 | 3 | 8 | 6 | 9 | 1 | 2 | 0 | 48 | 25 |
| 14 | 226 | 114 | 17 | 16 | 79 | 1618 | 1.005 | 64 | 8 | 24 | 18 | 11 | 1 | 3 | 1 | 130 | 131 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 3 | 3 | 0 | 0 | 0 | 2386 | 1.482 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 21 | 239 | 194 | 7 | 13 | 25 | 1258 | 0.781 | 109 | 13 | 40 | 31 | 4 | 0 | 2 | 0 | 201 | 157 |
| 24 | 238 | 193 | 6 | 14 | 24 | 1946 | 1.209 | 108 | 13 | 40 | 31 | 4 | 0 | 3 | 0 | 200 | 242 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4 | 4 | 0 | 0 | 0 | 675 | 0.419 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 2 |
| 30 | 4 | 4 | 0 | 0 | 0 | 2827 | 1.756 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 7 |
| 31 | 240 | 196 | 6 | 14 | 24 | 820 | 0.509 | 110 | 13 | 41 | 32 | 4 | 0 | 3 | 0 | 203 | 103 |
| | | | | | | | | | | | | | | | | Total | 3131 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0488 | 0.1316 | 0.0732 | 0.1438 | 0.3354 | 0.1888 | 0.5022 | 3.1675 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.47E-03 | 4.83E-04 | 8.19E-04 | 1.25E-03 | 6.98E-04 | 4.15E-05 | 7.04E-04 | 1.23E-03 | 6.69E-03 |
| 2 | 1 | 3.53E-03 | 1.16E-03 | 1.97E-03 | 2.99E-03 | 3.29E-03 | 1.95E-04 | 1.81E-03 | 3.32E-03 | 1.83E-02 |
| 3 | 1 | 5.43E-03 | 1.78E-03 | 3.02E-03 | 4.60E-03 | 4.65E-03 | 2.76E-04 | 2.85E-03 | 5.24E-03 | 2.79E-02 |
| 5 | 1 | 1.38E-03 | 4.55E-04 | 7.71E-04 | 1.17E-03 | 6.38E-04 | 3.79E-05 | 4.23E-04 | 2.03E-04 | 5.09E-03 |
| 6 | 1 | 2.46E-03 | 8.09E-04 | 1.37E-03 | 2.09E-03 | 1.75E-03 | 1.04E-04 | 1.02E-03 | 1.38E-03 | 1.10E-02 |
| 8 | 1 | 2.76E-03 | 9.07E-04 | 1.54E-03 | 2.34E-03 | 1.36E-03 | 8.06E-05 | 8.81E-04 | 0.00E+00 | 9.86E-03 |
| 11 | 1 | 4.27E-05 | 1.40E-05 | 2.38E-05 | 3.62E-05 | 3.83E-05 | 2.28E-06 | 3.23E-05 | 0.00E+00 | 1.89E-04 |
| 12 | 1 | 1.43E-04 | 4.70E-05 | 7.97E-05 | 1.21E-04 | 4.20E-04 | 2.50E-05 | 1.11E-04 | 0.00E+00 | 9.47E-04 |
| 14 | 1 | 8.68E-04 | 2.85E-04 | 4.84E-04 | 7.36E-04 | 1.03E-03 | 6.13E-05 | 4.14E-04 | 1.09E-03 | 4.97E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 2.82E-05 | 9.28E-06 | 1.57E-05 | 2.39E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.72E-05 |
| 21 | 1 | 1.15E-03 | 3.78E-04 | 6.42E-04 | 9.76E-04 | 3.21E-04 | 1.91E-05 | 2.71E-04 | 2.69E-04 | 4.03E-03 |
| 24 | 1 | 1.77E-03 | 5.83E-04 | 9.88E-04 | 1.50E-03 | 4.34E-04 | 2.58E-05 | 4.45E-04 | 4.02E-04 | 6.16E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.33E-05 | 4.38E-06 | 7.42E-06 | 1.13E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.64E-05 |
| 30 | 1 | 5.58E-05 | 1.83E-05 | 3.11E-05 | 4.73E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.52E-04 |
| 31 | 1 | 7.57E-04 | 2.49E-04 | 4.22E-04 | 6.42E-04 | 1.83E-04 | 1.09E-05 | 1.88E-04 | 1.69E-04 | 2.62E-03 |

**World Logistics Center** **2021** **Phase 1** No Mitigation

With EMFAC2014 **NOx Pk Hr** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for NOx Pk Hr emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | |
|---|---|---|---|
| | 2022 | Phase 1 | No Mitigation |

**Vehicle Running Exhaust Emissions**

| | | | Pollutant | NOx Pk Hr |
|---|---|---|---|---|
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 1 | 3.57E-01 | 1.51E-02 | |
| Light Logistics | Phase 1 | 6.59E-04 | 4.98E-05 | |
| Utilities Service Station | Phase 1 | 4.27E-04 | 5.04E-05 | |
| Gas Station w/Convenience Store | Phase 1 | 9.18E-04 | 2.25E-05 | |
| Convenience Store | Phase 1 | 1.03E-03 | 2.77E-05 | |
| Fire Station | Phase 1 | 5.96E-08 | 2.06E-05 | |
| Total | | 3.60E-01 | 1.53E-02 | |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.59E-01 | 4.83E-03 |
| Light Logistics | Phase 1 | 9.78E-04 | 2.09E-05 |
| Utilities Service Station | Phase 1 | 1.48E-03 | 4.27E-05 |
| Gas Station w/Convenience Store | Phase 1 | 3.77E-03 | 5.49E-05 |
| Convenience Store | Phase 1 | 4.25E-03 | 6.86E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 2.70E-01 | 5.02E-03 |

| **Total Onsite Emission** | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 3.60E-01 | 1.53E-02 | |
| Idling Emissions (g/sec) | 2.70E-01 | 5.02E-03 | |
| Total Vehicle Emissions (g/sec) | 6.30E-01 | 2.03E-02 | |
| Yard Trucks (LPG) (g/sec) | | 1.77E+00 | |
| Fork Lifts (LPG) (g/sec) | | 5.69E-02 | |
| | | | Total |
| Total All Sources (g/sec) | 6.30E-01 | 1.84E+00 | 2.47E+00 |
| Area (m2) | 4.07E+06 | 4.07E+06 | |
| Emission Rate (g/m2-sec) | 1.55E-07 | 4.53E-07 | 6.08E-07 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** NOx Pk Hr

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** NOx Pk Hr Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.122 | 3 | 330 | 0.21 | 7.07E-02 | 1.56E-04 | 1.96E-05 | |
| | LDT1 | 15 | 0.720 | 0 | 330 | 0.21 | 2.23E-02 | 4.91E-05 | 6.19E-06 | |
| | LDT2 | 15 | 0.090 | 0 | 330 | 0.21 | 2.70E-03 | 5.95E-06 | 7.50E-07 | |
| | MDT | 15 | 0.084 | 0 | 330 | 0.21 | 4.35E-03 | 9.58E-06 | 1.21E-06 | |
| | LHDT1 | 15 | 1.594 | 30 | 330 | 0.21 | 9.75E+00 | 2.15E-02 | 2.71E-03 | |
| | LHDT2 | 15 | 1.029 | 10 | 330 | 0.21 | 2.06E+00 | 4.54E-03 | 5.72E-04 | |
| | MHDT | 15 | 4.538 | 161 | 330 | 0.21 | 1.49E+02 | 3.29E-01 | 4.15E-02 | |
| | HHDT | 15 | 10.661 | 515 | 330 | 0.21 | 1.13E+03 | 2.48E+00 | 3.13E-01 | |
| | | | | | | | | | | 3.57E-01 |
| Travel at Light Logistics | LDA | 15 | 0.122 | 0 | 175 | 0.11 | 2.67E-04 | 5.87E-07 | 7.41E-08 | |
| | LDT1 | 15 | 0.720 | 0 | 175 | 0.11 | 8.40E-05 | 1.85E-07 | 2.33E-08 | |
| | LDT2 | 15 | 0.090 | 0 | 175 | 0.11 | 1.02E-05 | 2.24E-08 | 2.83E-09 | |
| | MDT | 15 | 0.084 | 0 | 175 | 0.11 | 1.64E-05 | 3.61E-08 | 4.56E-09 | |
| | LHDT1 | 15 | 1.594 | 0 | 175 | 0.11 | 3.25E-02 | 7.15E-05 | 9.02E-06 | |
| | LHDT2 | 15 | 1.029 | 0 | 175 | 0.11 | 6.86E-03 | 1.51E-05 | 1.90E-06 | |
| | MHDT | 15 | 4.538 | 1 | 175 | 0.11 | 2.75E-01 | 6.05E-04 | 7.63E-05 | |
| | HHDT | 15 | 10.661 | 2 | 175 | 0.11 | 2.06E+00 | 4.53E-03 | 5.71E-04 | 6.59E-04 |
| Travel at Utility | LDA | 15 | 0.122 | 0 | 100 | 0.06 | 2.41E-04 | 5.30E-07 | 6.69E-08 | |
| | LDT1 | 15 | 0.720 | 0 | 100 | 0.06 | 7.58E-05 | 1.67E-07 | 2.11E-08 | |
| | LDT2 | 15 | 0.090 | 0 | 100 | 0.06 | 9.19E-06 | 2.03E-08 | 2.55E-09 | |
| | MDT | 15 | 0.084 | 0 | 100 | 0.06 | 1.48E-05 | 3.26E-08 | 4.11E-09 | |
| | LHDT1 | 15 | 1.594 | 1 | 100 | 0.06 | 5.81E-02 | 1.28E-04 | 1.62E-05 | |
| | LHDT2 | 15 | 1.029 | 0 | 100 | 0.06 | 1.23E-02 | 2.71E-05 | 3.41E-06 | |
| | MHDT | 15 | 4.538 | 1 | 100 | 0.06 | 2.22E-01 | 4.88E-04 | 6.16E-05 | |
| | HHDT | 15 | 10.661 | 2 | 100 | 0.06 | 1.24E+00 | 2.74E-03 | 3.45E-04 | 4.27E-04 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.122 | 0 | 50 | 0.03 | 1.10E-04 | 2.42E-07 | 3.05E-08 | |
| | LDT1 | 15 | 0.720 | 0 | 50 | 0.03 | 3.46E-05 | 7.62E-08 | 9.61E-09 | |
| | LDT2 | 15 | 0.090 | 0 | 50 | 0.03 | 4.20E-06 | 9.24E-09 | 1.17E-09 | |
| | MDT | 15 | 0.084 | 0 | 50 | 0.03 | 6.76E-06 | 1.49E-08 | 1.88E-09 | |
| | LHDT1 | 15 | 1.594 | 0 | 50 | 0.03 | 2.12E-04 | 4.68E-07 | 5.90E-08 | |
| | LHDT2 | 15 | 1.029 | 0 | 50 | 0.03 | 4.49E-05 | 9.88E-08 | 1.25E-08 | |
| | MHDT | 15 | 4.538 | 2 | 50 | 0.03 | 2.67E-01 | 5.89E-04 | 7.43E-05 | |
| | HHDT | 15 | 10.661 | 9 | 50 | 0.03 | 3.04E+00 | 6.69E-03 | 8.43E-04 | 9.18E-04 |
| Travel at Convenience Store | LDA | 15 | 0.122 | 0 | 50 | 0.03 | 1.31E-04 | 2.88E-07 | 3.63E-08 | |
| | LDT1 | 15 | 0.720 | 0 | 50 | 0.03 | 4.12E-05 | 9.07E-08 | 1.14E-08 | |
| | LDT2 | 15 | 0.090 | 0 | 50 | 0.03 | 5.00E-06 | 1.10E-08 | 1.39E-09 | |
| | MDT | 15 | 0.084 | 0 | 50 | 0.03 | 8.05E-06 | 1.77E-08 | 2.24E-09 | |
| | LHDT1 | 15 | 1.594 | 0 | 50 | 0.03 | 9.10E-03 | 2.00E-05 | 2.53E-06 | |
| | LHDT2 | 15 | 1.029 | 0 | 50 | 0.03 | 1.92E-03 | 4.23E-06 | 5.34E-07 | |
| | MHDT | 15 | 4.538 | 1 | 50 | 0.03 | 2.04E-01 | 4.49E-04 | 5.66E-05 | |
| | HHDT | 15 | 10.661 | 11 | 50 | 0.03 | 3.49E+00 | 7.69E-03 | 9.70E-04 | 1.03E-03 |
| Travel at Fire Station | LDA | 15 | 0.122 | 0 | 50 | 0.03 | 1.52E-04 | 3.34E-07 | 4.22E-08 | |
| | LDT1 | 15 | 0.720 | 0 | 50 | 0.03 | 4.78E-05 | 1.05E-07 | 1.33E-08 | |
| | LDT2 | 15 | 0.090 | 0 | 50 | 0.03 | 5.80E-06 | 1.28E-08 | 1.61E-09 | |
| | MDT | 15 | 0.084 | 0 | 50 | 0.03 | 9.33E-06 | 2.06E-08 | 2.59E-09 | |
| | LHDT1 | 15 | 1.594 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.029 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 4.538 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 10.661 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.96E-08 |
| Total - All Buildings | LDA | | | 3 | | | 7.16E-02 | 1.58E-04 | 1.99E-05 | |
| | LDT1 | | | 0 | | | 2.26E-02 | 4.97E-05 | 6.27E-06 | |
| | LDT2 | | | 0 | | | 2.74E-03 | 6.03E-06 | 7.60E-07 | |
| | MDT | | | 0 | | | 4.41E-03 | 9.70E-06 | 1.22E-06 | |
| | LHDT1 | | | 31 | | | 9.85E+00 | 2.17E-02 | 2.74E-03 | |
| | LHDT2 | | | 10 | | | 2.08E+00 | 4.58E-03 | 5.78E-04 | |
| | MHDT | | | 165 | | | 1.50E+02 | 3.31E-01 | 4.18E-02 | |
| | HHDT | | | 538 | | | 1.14E+03 | 2.50E+00 | 3.15E-01 | |
| | Total | | | 748 | | | 1.30E+03 | 2.86E+00 | 3.60E-01 | 3.60E-01 |

**Diesel truck Idling Emissions** **NOx Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 64.000 | 5 | 15 | 7.96E+01 | 1.75E-01 | 2.21E-02 | |
| | **LHDT2** | 61.500 | 5 | 5 | 2.50E+01 | 5.51E-02 | 6.95E-03 | |
| | **MHDT** | 30.300 | 5 | 80 | 2.03E+02 | 4.47E-01 | 5.63E-02 | |
| | **HHDT** | 29.200 | 5 | 257 | 6.26E+02 | 1.38E+00 | 1.74E-01 | |
| | | | | 358 | 9.34E+02 | 2.06E+00 | 2.59E-01 | 2.59E-01 |
| **Idle at Light Logistics** | **LHDT1** | 64.000 | 5 | 0 | 5.00E-01 | 1.10E-03 | 1.39E-04 | |
| | **LHDT2** | 61.500 | 5 | 0 | 1.57E-01 | 3.46E-04 | 4.36E-05 | |
| | **MHDT** | 30.300 | 5 | 0 | 7.03E-01 | 1.55E-03 | 1.95E-04 | |
| | **HHDT** | 29.200 | 5 | 1 | 2.16E+00 | 4.76E-03 | 6.00E-04 | |
| | | | | 1 | 3.52E+00 | 7.75E-03 | 9.78E-04 | 9.78E-04 |
| **Idle at Utility** | **LHDT1** | 64.000 | 5 | 0 | 1.57E+00 | 3.45E-03 | 4.35E-04 | |
| | **LHDT2** | 61.500 | 5 | 0 | 4.92E-01 | 1.08E-03 | 1.37E-04 | |
| | **MHDT** | 30.300 | 5 | 0 | 9.93E-01 | 2.19E-03 | 2.76E-04 | |
| | **HHDT** | 29.200 | 5 | 1 | 2.28E+00 | 5.03E-03 | 6.34E-04 | |
| | | | | 2 | 5.33E+00 | 1.18E-02 | 1.48E-03 | 1.48E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 64.000 | 5 | 0 | 1.14E-02 | 2.52E-05 | 3.18E-06 | |
| | **LHDT2** | 61.500 | 5 | 0 | 3.60E-03 | 7.92E-06 | 9.99E-07 | |
| | **MHDT** | 30.300 | 5 | 1 | 2.40E+00 | 5.28E-03 | 6.66E-04 | |
| | **HHDT** | 29.200 | 5 | 5 | 1.12E+01 | 2.46E-02 | 3.10E-03 | |
| | | | | 6 | 1.36E+01 | 2.99E-02 | 3.77E-03 | 3.77E-03 |
| **Idle at Convenience Store** | **LHDT1** | 64.000 | 5 | 0 | 4.90E-01 | 1.08E-03 | 1.36E-04 | |
| | **LHDT2** | 61.500 | 5 | 0 | 1.54E-01 | 3.39E-04 | 4.28E-05 | |
| | **MHDT** | 30.300 | 5 | 1 | 1.82E+00 | 4.02E-03 | 5.07E-04 | |
| | **HHDT** | 29.200 | 5 | 5 | 1.28E+01 | 2.83E-02 | 3.56E-03 | |
| | | | | 6 | 1.53E+01 | 3.37E-02 | 4.25E-03 | 4.25E-03 |
| **Idle at Firestation** | **LHDT1** | 64.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 61.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 30.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 29.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 372 | 9.72E+02 | 2.14E+00 | 2.70E-01 | 2.70E-01 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** NOx Pk Hr

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 hrs/day
1 hrs/day SoCAB

**Onsite Running Exhaust Emissions** NOx Pk Hr Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.071 | 890 | 330 | 0.21 | 1.29E+01 | 2.84E-02 | 3.58E-03 | |
| | LDT1 | 15 | 0.201 | 105 | 330 | 0.21 | 4.35E+00 | 9.58E-03 | 1.21E-03 | |
| | LDT2 | 15 | 0.107 | 321 | 330 | 0.21 | 7.07E+00 | 1.56E-02 | 1.96E-03 | |
| | MDT | 15 | 0.202 | 248 | 330 | 0.21 | 1.03E+01 | 2.26E-02 | 2.85E-03 | |
| | LHDT1 | 15 | 0.394 | 96 | 330 | 0.21 | 7.79E+00 | 1.72E-02 | 2.17E-03 | |
| | LHDT2 | 15 | 0.228 | 10 | 330 | 0.21 | 4.72E-01 | 1.04E-03 | 1.31E-04 | |
| | MHDT | 15 | 0.611 | 37 | 330 | 0.21 | 4.59E+00 | 1.01E-02 | 1.28E-03 | |
| | HHDT | 15 | 3.885 | 9 | 330 | 0.21 | 7.03E+00 | 1.55E-02 | 1.95E-03 | |
| | | | | | | | | | | 1.51E-02 |
| Travel at Light Logistics | LDA | 15 | 0.071 | 6 | 175 | 0.11 | 4.86E-02 | 1.07E-04 | 1.35E-05 | |
| | LDT1 | 15 | 0.201 | 1 | 175 | 0.11 | 1.64E-02 | 3.61E-05 | 4.55E-06 | |
| | LDT2 | 15 | 0.107 | 2 | 175 | 0.11 | 2.66E-02 | 5.87E-05 | 7.40E-06 | |
| | MDT | 15 | 0.202 | 2 | 175 | 0.11 | 3.87E-02 | 8.52E-05 | 1.07E-05 | |
| | LHDT1 | 15 | 0.394 | 1 | 175 | 0.11 | 2.59E-02 | 5.71E-05 | 7.21E-06 | |
| | LHDT2 | 15 | 0.228 | 0 | 175 | 0.11 | 1.57E-03 | 3.46E-06 | 4.36E-07 | |
| | MHDT | 15 | 0.611 | 0 | 175 | 0.11 | 8.44E-03 | 1.86E-05 | 2.35E-06 | |
| | HHDT | 15 | 3.885 | 0 | 175 | 0.11 | 1.29E-02 | 2.83E-05 | 3.57E-06 | 4.98E-05 |
| Travel at Utility | LDA | 15 | 0.071 | 10 | 100 | 0.06 | 4.39E-02 | 9.66E-05 | 1.22E-05 | |
| | LDT1 | 15 | 0.201 | 1 | 100 | 0.06 | 1.48E-02 | 3.26E-05 | 4.11E-06 | |
| | LDT2 | 15 | 0.107 | 4 | 100 | 0.06 | 2.41E-02 | 5.30E-05 | 6.68E-06 | |
| | MDT | 15 | 0.202 | 3 | 100 | 0.06 | 3.49E-02 | 7.69E-05 | 9.69E-06 | |
| | LHDT1 | 15 | 0.394 | 2 | 100 | 0.06 | 4.65E-02 | 1.02E-04 | 1.29E-05 | |
| | LHDT2 | 15 | 0.228 | 0 | 100 | 0.06 | 2.81E-03 | 6.20E-06 | 7.82E-07 | |
| | MHDT | 15 | 0.611 | 0 | 100 | 0.06 | 6.81E-03 | 1.50E-05 | 1.89E-06 | |
| | HHDT | 15 | 3.885 | 0 | 100 | 0.06 | 7.77E-03 | 1.71E-05 | 2.16E-06 | 5.04E-05 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.071 | 9 | 50 | 0.03 | 2.00E-02 | 4.41E-05 | 5.56E-06 | |
| | LDT1 | 15 | 0.201 | 1 | 50 | 0.03 | 6.76E-03 | 1.49E-05 | 1.88E-06 | |
| | LDT2 | 15 | 0.107 | 3 | 50 | 0.03 | 1.10E-02 | 2.42E-05 | 3.05E-06 | |
| | MDT | 15 | 0.202 | 3 | 50 | 0.03 | 1.59E-02 | 3.51E-05 | 4.43E-06 | |
| | LHDT1 | 15 | 0.394 | 0 | 50 | 0.03 | 1.70E-04 | 3.74E-07 | 4.71E-08 | |
| | LHDT2 | 15 | 0.228 | 0 | 50 | 0.03 | 1.03E-05 | 2.26E-08 | 2.85E-09 | |
| | MHDT | 15 | 0.611 | 0 | 50 | 0.03 | 8.22E-03 | 1.81E-05 | 2.28E-06 | |
| | HHDT | 15 | 3.885 | 0 | 50 | 0.03 | 1.90E-02 | 4.18E-05 | 5.27E-06 | 2.25E-05 |
| Travel at Convenience Store | LDA | 15 | 0.071 | 11 | 50 | 0.03 | 2.38E-02 | 5.25E-05 | 6.62E-06 | |
| | LDT1 | 15 | 0.201 | 1 | 50 | 0.03 | 8.04E-03 | 1.77E-05 | 2.23E-06 | |
| | LDT2 | 15 | 0.107 | 4 | 50 | 0.03 | 1.31E-02 | 2.88E-05 | 3.63E-06 | |
| | MDT | 15 | 0.202 | 3 | 50 | 0.03 | 1.90E-02 | 4.18E-05 | 5.27E-06 | |
| | LHDT1 | 15 | 0.394 | 1 | 50 | 0.03 | 7.27E-03 | 1.60E-05 | 2.02E-06 | |
| | LHDT2 | 15 | 0.228 | 0 | 50 | 0.03 | 4.40E-04 | 9.70E-07 | 1.22E-07 | |
| | MHDT | 15 | 0.611 | 0 | 50 | 0.03 | 6.26E-03 | 1.38E-05 | 1.74E-06 | |
| | HHDT | 15 | 3.885 | 0 | 50 | 0.03 | 2.18E-02 | 4.81E-05 | 6.06E-06 | 2.77E-05 |
| Travel at Fire Station | LDA | 15 | 0.071 | 13 | 50 | 0.03 | 2.77E-02 | 6.09E-05 | 7.68E-06 | |
| | LDT1 | 15 | 0.201 | 1 | 50 | 0.03 | 9.33E-03 | 2.06E-05 | 2.59E-06 | |
| | LDT2 | 15 | 0.107 | 5 | 50 | 0.03 | 1.52E-02 | 3.34E-05 | 4.21E-06 | |
| | MDT | 15 | 0.202 | 4 | 50 | 0.03 | 2.20E-02 | 4.85E-05 | 6.11E-06 | |
| | LHDT1 | 15 | 0.394 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.228 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.611 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 3.885 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-05 |
| Total - All Buildings | LDA | | | 939 | | | 1.31E+01 | 2.88E-02 | 3.63E-03 | |
| | LDT1 | | | 111 | | | 4.40E+00 | 9.70E-03 | 1.22E-03 | |
| | LDT2 | | | 339 | | | 7.16E+00 | 1.58E-02 | 1.99E-03 | |
| | MDT | | | 262 | | | 1.04E+01 | 2.29E-02 | 2.88E-03 | |
| | LHDT1 | | | 100 | | | 7.87E+00 | 1.73E-02 | 2.19E-03 | |
| | LHDT2 | | | 10 | | | 4.77E-01 | 1.05E-03 | 1.32E-04 | |
| | MHDT | | | 38 | | | 4.62E+00 | 1.02E-02 | 1.28E-03 | |
| | HHDT | | | 9 | | | 7.10E+00 | 1.56E-02 | 1.97E-03 | |
| | Total | | | 1808 | | | 5.51E+01 | 1.21E-01 | 1.53E-02 | 1.53E-02 |

**Non-Diesel Truck Idling Emissions** **NOx Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.220 | 5 | 48 | 4.90E+00 | 1.08E-02 | 1.36E-03 | |
| | **LHDT2** | 1.210 | 5 | 5 | 5.10E-01 | 1.12E-03 | 1.42E-04 | |
| | **MHDT** | 1.820 | 5 | 18 | 2.78E+00 | 6.12E-03 | 7.72E-04 | |
| | **HHDT** | 25.014 | 5 | 4 | 9.21E+00 | 2.03E-02 | 2.56E-03 | |
| | | | | 76 | 1.74E+01 | 3.83E-02 | 4.83E-03 | 4.83E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.220 | 5 | 0 | 3.08E-02 | 6.78E-05 | 8.55E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 3.20E-03 | 7.04E-06 | 8.88E-07 | |
| | **MHDT** | 1.820 | 5 | 0 | 9.64E-03 | 2.12E-05 | 2.68E-06 | |
| | **HHDT** | 25.014 | 5 | 0 | 3.17E-02 | 6.99E-05 | 8.82E-06 | |
| | | | | 0 | 7.53E-02 | 1.66E-04 | 2.09E-05 | 2.09E-05 |
| **Idle at Utility** | **LHDT1** | 1.220 | 5 | 1 | 9.64E-02 | 2.12E-04 | 2.68E-05 | |
| | **LHDT2** | 1.210 | 5 | 0 | 1.00E-02 | 2.21E-05 | 2.78E-06 | |
| | **MHDT** | 1.820 | 5 | 0 | 1.36E-02 | 3.00E-05 | 3.78E-06 | |
| | **HHDT** | 25.014 | 5 | 0 | 3.36E-02 | 7.39E-05 | 9.32E-06 | |
| | | | | 1 | 1.54E-01 | 3.38E-04 | 4.27E-05 | 4.27E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.220 | 5 | 0 | 7.04E-04 | 1.55E-06 | 1.96E-07 | |
| | **LHDT2** | 1.210 | 5 | 0 | 7.32E-05 | 1.61E-07 | 2.03E-08 | |
| | **MHDT** | 1.820 | 5 | 0 | 3.28E-02 | 7.24E-05 | 9.12E-06 | |
| | **HHDT** | 25.014 | 5 | 0 | 1.64E-01 | 3.61E-04 | 4.55E-05 | |
| | | | | 0 | 1.98E-01 | 4.35E-04 | 5.49E-05 | 5.49E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.220 | 5 | 0 | 3.02E-02 | 6.65E-05 | 8.38E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 3.14E-03 | 6.91E-06 | 8.71E-07 | |
| | **MHDT** | 1.820 | 5 | 0 | 2.50E-02 | 5.51E-05 | 6.95E-06 | |
| | **HHDT** | 25.014 | 5 | 0 | 1.89E-01 | 4.15E-04 | 5.24E-05 | |
| | | | | 1 | 2.47E-01 | 5.44E-04 | 6.86E-05 | 6.86E-05 |
| **Idle at Firestation** | **LHDT1** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.210 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.820 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.014 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 78 | 1.81E+01 | 3.98E-02 | 5.02E-03 | 5.02E-03 |

**World Logistics Center** **2021** **Annual Nox** Based on PB Traffic Results 10/3/2013
**Project Emissions** **With EMFAC2014** **Rev 5** Without Mitigation
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 8.41E-02 | 3.99E-03 | 8.81E-02 |
| 2 | 2.03E-01 | 1.00E-02 | 2.13E-01 |
| 3 | 3.38E-01 | 1.61E-02 | 3.54E-01 |
| 5 | 6.64E-03 | 2.19E-03 | 8.83E-03 |
| 6 | 7.69E-02 | 5.69E-03 | 8.26E-02 |
| 8 | 7.49E-03 | 4.54E-03 | 1.20E-02 |
| 11 | 1.37E-04 | 6.06E-05 | 1.97E-04 |
| 12 | 1.23E-03 | 4.22E-04 | 1.65E-03 |
| 14 | 1.86E-02 | 1.36E-03 | 2.00E-02 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.67E-07 | 5.13E-05 | 5.14E-05 |
| 21 | 1.12E-02 | 1.89E-03 | 1.31E-02 |
| 24 | 1.76E-02 | 2.91E-03 | 2.05E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.12E-03 | 9.44E-05 | 1.21E-03 |
| 30 | 4.68E-03 | 3.96E-04 | 5.07E-03 |
| 31 | 8.78E-03 | 1.33E-03 | 1.01E-02 |
| | | | 8.30E-01 |

| ID | Arterial | From | To | | Estimated 2021 Vehicles - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

Traffic Volumes Interpolated from data provide by parsons Brinkerhoff for 2022 and 2035

**World Logistics Center** **2021** **Annual Nox** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 26 | 2 | 1 | 2 | 116 | 39 | 1535 | 5848 | 7568 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 27 | 2 | 1 | 3 | 226 | 75 | 1670 | 6288 | 8291 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 13 | 1 | 1 | 1 | 105 | 35 | 859 | 3249 | 4263 |
| 5 | 3964 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 9 | 216 | 88 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 25 | 559 | 1525 | 2197 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 4 | 117 | 176 | 313 |
| 24 | 2709 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 34 | 55 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 34 | 55 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 4 | 0 | 0 | 0 | 11 | 4 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0852 | 0.7829 | 0.0409 | 0.0418 | 1.6238 | 0.9894 | 2.0024 | 5.5523 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.15E-06 | 2.86E-06 | 1.34E-07 | 2.42E-07 | 4.44E-04 | 8.97E-05 | 7.23E-03 | 7.63E-02 | 8.41E-02 |
| 2 | 1 | 1.20E-05 | 6.65E-06 | 3.10E-07 | 5.63E-07 | 1.93E-03 | 3.90E-04 | 1.76E-02 | 1.83E-01 | 2.03E-01 |
| 3 | 1 | 1.92E-05 | 1.07E-05 | 4.98E-07 | 9.03E-07 | 2.88E-03 | 5.82E-04 | 2.91E-02 | 3.05E-01 | 3.38E-01 |
| 5 | 1 | 3.57E-06 | 1.98E-06 | 9.24E-08 | 1.68E-07 | 2.86E-04 | 5.79E-05 | 2.96E-03 | 3.33E-03 | 6.64E-03 |
| 6 | 1 | 7.81E-06 | 4.34E-06 | 2.02E-07 | 3.67E-07 | 9.52E-04 | 1.92E-04 | 8.85E-03 | 6.69E-02 | 7.69E-02 |
| 8 | 1 | 7.34E-06 | 4.08E-06 | 1.90E-07 | 3.45E-07 | 6.92E-04 | 1.40E-04 | 6.65E-03 | 0.00E+00 | 7.49E-03 |
| 11 | 1 | 8.00E-08 | 4.44E-08 | 2.07E-09 | 3.76E-09 | 2.01E-05 | 4.05E-06 | 1.13E-04 | 0.00E+00 | 1.37E-04 |
| 12 | 1 | 4.05E-07 | 2.25E-07 | 1.05E-08 | 1.91E-08 | 2.34E-04 | 4.73E-05 | 9.47E-04 | 0.00E+00 | 1.23E-03 |
| 14 | 1 | 1.53E-06 | 8.47E-07 | 3.95E-08 | 7.17E-08 | 4.71E-04 | 9.52E-05 | 2.22E-03 | 1.58E-02 | 1.86E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.02E-07 | 5.69E-08 | 2.66E-09 | 4.82E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.67E-07 |
| 21 | 1 | 3.16E-06 | 1.76E-06 | 8.19E-08 | 1.49E-07 | 1.56E-04 | 3.15E-05 | 2.12E-03 | 8.85E-03 | 1.12E-02 |
| 24 | 1 | 4.88E-06 | 2.71E-06 | 1.26E-07 | 2.29E-07 | 2.09E-04 | 4.22E-05 | 3.35E-03 | 1.40E-02 | 1.76E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.36E-07 | 7.57E-08 | 3.53E-09 | 6.41E-09 | 1.13E-05 | 2.28E-06 | 1.74E-04 | 9.28E-04 | 1.12E-03 |
| 30 | 1 | 5.71E-07 | 3.17E-07 | 1.48E-08 | 2.68E-08 | 4.72E-05 | 9.54E-06 | 7.29E-04 | 3.89E-03 | 4.68E-03 |
| 31 | 1 | 2.20E-06 | 1.22E-06 | 5.71E-08 | 1.04E-07 | 1.02E-04 | 2.06E-05 | 1.62E-03 | 7.03E-03 | 8.78E-03 |

**World Logistics Center** **2021** **Annual Nox** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8226 | 1002 | 3054 | 2366 | 375 | 40 | 350 | 92 | 15505 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8543 | 1041 | 3172 | 2458 | 728 | 77 | 381 | 99 | 16498 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4261 | 519 | 1582 | 1226 | 338 | 36 | 196 | 51 | 8209 |
| 5 | 3,964 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1952 | 238 | 725 | 562 | 83 | 9 | 49 | 1 | 3619 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3707 | 451 | 1376 | 1066 | 239 | 25 | 128 | 24 | 7017 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3514 | 428 | 1305 | 1011 | 175 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 5 | 0 | 1 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 257 | 31 | 95 | 74 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 492 | 60 | 183 | 142 | 80 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 22 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1311 | 160 | 487 | 377 | 34 | 4 | 27 | 3 | 2402 |
| 24 | 2,709 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1308 | 159 | 486 | 376 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 105 | 13 | 39 | 30 | 5 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 105 | 13 | 39 | 30 | 5 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1403 | 171 | 521 | 404 | 34 | 4 | 31 | 3 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0488 | 0.1316 | 0.0732 | 0.1438 | 0.3354 | 0.1888 | 0.5022 | 3.1675 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.43E-04 | 3.10E-04 | 5.25E-04 | 8.00E-04 | 2.95E-04 | 1.76E-05 | 4.13E-04 | 6.88E-04 | 3.99E-03 |
| 2 | 1 | 2.19E-03 | 7.20E-04 | 1.22E-03 | 1.86E-03 | 1.28E-03 | 7.62E-05 | 1.01E-03 | 1.65E-03 | 1.00E-02 |
| 3 | 1 | 3.52E-03 | 1.15E-03 | 1.96E-03 | 2.98E-03 | 1.92E-03 | 1.14E-04 | 1.66E-03 | 2.75E-03 | 1.61E-02 |
| 5 | 1 | 6.53E-04 | 2.14E-04 | 3.63E-04 | 5.53E-04 | 1.91E-04 | 1.13E-05 | 1.69E-04 | 3.01E-05 | 2.19E-03 |
| 6 | 1 | 1.43E-03 | 4.69E-04 | 7.96E-04 | 1.21E-03 | 6.33E-04 | 3.77E-05 | 5.06E-04 | 6.03E-04 | 5.69E-03 |
| 8 | 1 | 1.34E-03 | 4.42E-04 | 7.49E-04 | 1.14E-03 | 4.61E-04 | 2.74E-05 | 3.80E-04 | 0.00E+00 | 4.54E-03 |
| 11 | 1 | 1.46E-05 | 4.81E-06 | 8.15E-06 | 1.24E-05 | 1.33E-05 | 7.94E-07 | 6.44E-06 | 0.00E+00 | 6.06E-05 |
| 12 | 1 | 7.42E-05 | 2.44E-05 | 4.13E-05 | 6.29E-05 | 1.56E-04 | 9.26E-06 | 5.42E-05 | 0.00E+00 | 4.22E-04 |
| 14 | 1 | 2.79E-04 | 9.17E-05 | 1.56E-04 | 2.37E-04 | 3.13E-04 | 1.86E-05 | 1.27E-04 | 1.43E-04 | 1.36E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.88E-05 | 6.16E-06 | 1.04E-05 | 1.59E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.13E-05 |
| 21 | 1 | 5.79E-04 | 1.90E-04 | 3.22E-04 | 4.90E-04 | 1.04E-04 | 6.17E-06 | 1.21E-04 | 7.98E-05 | 1.89E-03 |
| 24 | 1 | 8.93E-04 | 2.93E-04 | 4.97E-04 | 7.57E-04 | 1.39E-04 | 8.27E-06 | 1.92E-04 | 1.26E-04 | 2.91E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.49E-05 | 8.19E-06 | 1.39E-05 | 2.11E-05 | 7.50E-06 | 4.46E-07 | 9.96E-06 | 8.37E-06 | 9.44E-05 |
| 30 | 1 | 1.04E-04 | 3.43E-05 | 5.82E-05 | 8.86E-05 | 3.14E-05 | 1.87E-06 | 4.17E-05 | 3.51E-05 | 3.96E-04 |
| 31 | 1 | 4.04E-04 | 1.33E-04 | 2.25E-04 | 3.42E-04 | 6.77E-05 | 4.03E-06 | 9.29E-05 | 6.34E-05 | 1.33E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | 2021 No Mitigation | Phase 1 | |
|---|---|---|---|---|
| **Vehicle Running Exhaust Emissions** | | | **Pollutant** | **Annual Nox** |
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 1 | 1.34E-01 | 9.90E-03 | |
| Light Logistics | Phase 1 | 2.52E-04 | 2.29E-05 | |
| Utilities Service Station | Phase 1 | 1.91E-04 | 2.19E-05 | |
| Gas Station w/Convenience Store | Phase 1 | 3.51E-04 | 7.43E-06 | |
| Convenience Store | Phase 1 | 5.50E-04 | 1.21E-05 | |
| Fire Station | Phase 1 | 1.53E-08 | 5.29E-06 | |
| Total | | 1.36E-01 | 9.97E-03 | |
| **Vehicle Idling Emission Sources** | | | | |
| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** | |
| High Cube | Phase 1 | 9.77E-02 | 1.83E-03 | |
| Light Logistics | Phase 1 | 3.81E-04 | 8.09E-06 | |
| Utilities Service Station | Phase 1 | 6.11E-04 | 1.75E-05 | |
| Gas Station w/Convenience Store | Phase 1 | 1.44E-03 | 2.22E-05 | |
| Convenience Store | Phase 1 | 2.26E-03 | 3.48E-05 | |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 | |
| Total | | 1.02E-01 | 1.91E-03 | |
| **Total Onsite Emission** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
| | Runing Exhaust (g/sec) | 1.36E-01 | 9.97E-03 | |
| | Idling Emissions (g/sec) | 1.02E-01 | 1.91E-03 | |
| | Total Vehicle Emissions (g/sec) | 2.38E-01 | 1.19E-02 | |
| **Other Onsite Emissions** | | | | |
| | Yard Trucks (LPG) (g/sec) | | 5.15E-01 | |
| | Fork Lifts (LPG) (g/sec) | | 1.66E-02 | |
| | Total Other Onsite Sources (g/sec) | | 5.32E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 2.38E-01 | 5.44E-01 | 7.82E-01 |
| | Area (m2) | | | 4.07E+06 |
| | Total Emission Rate (g/m2-sec) | | | 1.92E-07 |

**World Logistics Center** **2021** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.122 | 55 | 330 | 0.21 | 1.38E+00 | 3.04E-03 | 1.60E-05 | |
| | **LDT1** | 15 | 0.720 | 3 | 330 | 0.21 | 4.35E-01 | 9.58E-04 | 5.03E-06 | |
| | **LDT2** | 15 | 0.090 | 3 | 330 | 0.21 | 5.27E-02 | 1.16E-04 | 6.10E-07 | |
| | **MDT** | 15 | 0.084 | 5 | 330 | 0.21 | 8.49E-02 | 1.87E-04 | 9.83E-07 | |
| | **LHDT1** | 15 | 1.594 | 275 | 330 | 0.21 | 8.99E+01 | 1.98E-01 | 1.04E-03 | |
| | **LHDT2** | 15 | 1.029 | 90 | 330 | 0.21 | 1.90E+01 | 4.18E-02 | 2.20E-04 | |
| | **MHDT** | 15 | 4.538 | 1441 | 330 | 0.21 | 1.34E+03 | 2.95E+00 | 1.55E-02 | |
| | **HHDT** | 15 | 10.661 | 4652 | 330 | 0.21 | 1.02E+04 | 2.24E+01 | 1.18E-01 | |
| | | | | | | | | | | 1.34E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.122 | 0 | 175 | 0.11 | 3.11E-03 | 6.85E-06 | 3.60E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 175 | 0.11 | 9.79E-04 | 2.16E-06 | 1.13E-08 | |
| | **LDT2** | 15 | 0.090 | 0 | 175 | 0.11 | 1.19E-04 | 2.62E-07 | 1.37E-09 | |
| | **MDT** | 15 | 0.084 | 0 | 175 | 0.11 | 1.91E-04 | 4.21E-07 | 2.21E-09 | |
| | **LHDT1** | 15 | 1.594 | 2 | 175 | 0.11 | 2.98E-01 | 6.57E-04 | 3.45E-06 | |
| | **LHDT2** | 15 | 1.029 | 1 | 175 | 0.11 | 6.30E-02 | 1.39E-04 | 7.29E-07 | |
| | **MHDT** | 15 | 4.538 | 6 | 175 | 0.11 | 2.93E+00 | 6.45E-03 | 3.39E-05 | |
| | **HHDT** | 15 | 10.661 | 16 | 175 | 0.11 | 1.85E+01 | 4.07E-02 | 2.14E-04 | 2.52E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.122 | 0 | 100 | 0.06 | 2.62E-03 | 5.77E-06 | 3.03E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 100 | 0.06 | 8.25E-04 | 1.82E-06 | 9.55E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 100 | 0.06 | 1.00E-04 | 2.20E-07 | 1.16E-09 | |
| | **MDT** | 15 | 0.084 | 0 | 100 | 0.06 | 1.61E-04 | 3.55E-07 | 1.86E-09 | |
| | **LHDT1** | 15 | 1.594 | 6 | 100 | 0.06 | 5.69E-01 | 1.25E-03 | 6.58E-06 | |
| | **LHDT2** | 15 | 1.029 | 2 | 100 | 0.06 | 1.20E-01 | 2.65E-04 | 1.39E-06 | |
| | **MHDT** | 15 | 4.538 | 5 | 100 | 0.06 | 1.38E+00 | 3.05E-03 | 1.60E-05 | |
| | **HHDT** | 15 | 10.661 | 22 | 100 | 0.06 | 1.44E+01 | 3.17E-02 | 1.66E-04 | 1.91E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.122 | 0 | 50 | 0.03 | 7.59E-04 | 1.67E-06 | 8.78E-09 | |
| | **LDT1** | 15 | 0.720 | 0 | 50 | 0.03 | 2.39E-04 | 5.26E-07 | 2.76E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 50 | 0.03 | 2.90E-05 | 6.38E-08 | 3.35E-10 | |
| | **MDT** | 15 | 0.084 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | **LHDT1** | 15 | 1.594 | 1 | 50 | 0.03 | 3.99E-02 | 8.78E-05 | 4.61E-07 | |
| | **LHDT2** | 15 | 1.029 | 0 | 50 | 0.03 | 8.42E-03 | 1.85E-05 | 9.74E-08 | |
| | **MHDT** | 15 | 4.538 | 14 | 50 | 0.03 | 1.96E+00 | 4.32E-03 | 2.27E-05 | |
| | **HHDT** | 15 | 10.661 | 85 | 50 | 0.03 | 2.83E+01 | 6.23E-02 | 3.28E-04 | 3.51E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.122 | 0 | 50 | 0.03 | 1.26E-03 | 2.77E-06 | 1.46E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 50 | 0.03 | 3.96E-04 | 8.72E-07 | 4.58E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 50 | 0.03 | 4.80E-05 | 1.06E-07 | 5.56E-10 | |
| | **MDT** | 15 | 0.084 | 0 | 50 | 0.03 | 7.73E-05 | 1.70E-07 | 8.95E-10 | |
| | **LHDT1** | 15 | 1.594 | 1 | 50 | 0.03 | 6.09E-02 | 1.34E-04 | 7.04E-07 | |
| | **LHDT2** | 15 | 1.029 | 0 | 50 | 0.03 | 1.29E-02 | 2.83E-05 | 1.49E-07 | |
| | **MHDT** | 15 | 4.538 | 23 | 50 | 0.03 | 3.21E+00 | 7.07E-03 | 3.71E-05 | |
| | **HHDT** | 15 | 10.661 | 134 | 50 | 0.03 | 4.43E+01 | 9.75E-02 | 5.12E-04 | 5.50E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.122 | 0 | 50 | 0.03 | 9.36E-04 | 2.06E-06 | 1.08E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 50 | 0.03 | 2.95E-04 | 6.49E-07 | 3.41E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 50 | 0.03 | 3.57E-05 | 7.87E-08 | 4.14E-10 | |
| | **MDT** | 15 | 0.084 | 0 | 50 | 0.03 | 5.76E-05 | 1.27E-07 | 6.66E-10 | |
| | **LHDT1** | 15 | 1.594 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.029 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.538 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 10.661 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-08 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | **LDT1** | | | 3 | | | 4.37E-01 | 9.64E-04 | 5.06E-06 | |
| | **LDT2** | | | 3 | | | 5.31E-02 | 1.17E-04 | 6.14E-07 | |
| | **MDT** | | | 5 | | | 8.55E-02 | 1.88E-04 | 9.89E-07 | |
| | **LHDT1** | | | 285 | | | 9.08E+01 | 2.00E-01 | 1.05E-03 | |
| | **LHDT2** | | | 93 | | | 1.92E+01 | 4.23E-02 | 2.22E-04 | |
| | **MHDT** | | | 1488 | | | 1.35E+03 | 2.97E+00 | 1.56E-02 | |
| | **HHDT** | | | 4909 | | | 1.03E+04 | 2.26E+01 | 1.19E-01 | |
| | **Total** | | | 6843 | | | 1.17E+04 | 2.58E+01 | 1.36E-01 | 1.36E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 64.000 | 5 | 138 | 7.33E+02 | 1.62E+00 | 8.49E-03 | |
| | **LHDT2** | 61.500 | 5 | 45 | 2.31E+02 | 5.08E-01 | 2.67E-03 | |
| | **MHDT** | 30.300 | 5 | 720 | 1.82E+03 | 4.01E+00 | 2.11E-02 | |
| | **HHDT** | 29.200 | 5 | 2326 | 5.66E+03 | 1.25E+01 | 6.55E-02 | |
| | | | | 3229 | 8.44E+03 | 1.86E+01 | 9.77E-02 | 9.77E-02 |
| **Idle at Light Logistics** | **LHDT1** | 64.000 | 5 | 1 | 4.59E+00 | 1.01E-02 | 5.31E-05 | |
| | **LHDT2** | 61.500 | 5 | 0 | 1.44E+00 | 3.18E-03 | 1.67E-05 | |
| | **MHDT** | 30.300 | 5 | 3 | 7.49E+00 | 1.65E-02 | 8.67E-05 | |
| | **HHDT** | 29.200 | 5 | 8 | 1.94E+01 | 4.27E-02 | 2.24E-04 | |
| | | | | 12 | 3.29E+01 | 7.25E-02 | 3.81E-04 | 3.81E-04 |
| **Idle at Utility** | **LHDT1** | 64.000 | 5 | 3 | 1.53E+01 | 3.37E-02 | 1.77E-04 | |
| | **LHDT2** | 61.500 | 5 | 1 | 4.81E+00 | 1.06E-02 | 5.57E-05 | |
| | **MHDT** | 30.300 | 5 | 2 | 6.19E+00 | 1.36E-02 | 7.17E-05 | |
| | **HHDT** | 29.200 | 5 | 11 | 2.64E+01 | 5.82E-02 | 3.06E-04 | |
| | | | | 17 | 5.27E+01 | 1.16E-01 | 6.11E-04 | 6.11E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 64.000 | 5 | 0 | 2.15E+00 | 4.73E-03 | 2.49E-05 | |
| | **LHDT2** | 61.500 | 5 | 0 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | **MHDT** | 30.300 | 5 | 7 | 1.76E+01 | 3.87E-02 | 2.03E-04 | |
| | **HHDT** | 29.200 | 5 | 43 | 1.04E+02 | 2.29E-01 | 1.20E-03 | |
| | | | | 50 | 1.24E+02 | 2.74E-01 | 1.44E-03 | 1.44E-03 |
| **Idle at Convenience Store** | **LHDT1** | 64.000 | 5 | 1 | 3.28E+00 | 7.22E-03 | 3.79E-05 | |
| | **LHDT2** | 61.500 | 5 | 0 | 1.03E+00 | 2.27E-03 | 1.19E-05 | |
| | **MHDT** | 30.300 | 5 | 11 | 2.87E+01 | 6.33E-02 | 3.33E-04 | |
| | **HHDT** | 29.200 | 5 | 67 | 1.63E+02 | 3.58E-01 | 1.88E-03 | |
| | | | | 79 | 1.96E+02 | 4.31E-01 | 2.26E-03 | 2.26E-03 |
| **Idle at Firestation** | **LHDT1** | 64.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 61.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 30.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 29.200 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 8.85E+03 | 1.95E+01 | 1.02E-01 | 1.02E-01 |

**World Logistics Center** **2021** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.071 | 17378 | 330 | 0.21 | 2.52E+02 | 5.54E-01 | 2.91E-03 | |
| | **LDT1** | 15 | 0.201 | 2059 | 330 | 0.21 | 8.49E+01 | 1.87E-01 | 9.83E-04 | |
| | **LDT2** | 15 | 0.107 | 6276 | 330 | 0.21 | 1.38E+02 | 3.04E-01 | 1.60E-03 | |
| | **MDT** | 15 | 0.202 | 4845 | 330 | 0.21 | 2.00E+02 | 4.41E-01 | 2.32E-03 | |
| | **LHDT1** | 15 | 0.394 | 888 | 330 | 0.21 | 7.18E+01 | 1.58E-01 | 8.31E-04 | |
| | **LHDT2** | 15 | 0.228 | 93 | 330 | 0.21 | 4.35E+00 | 9.58E-03 | 5.03E-05 | |
| | **MHDT** | 15 | 0.611 | 329 | 330 | 0.21 | 4.12E+01 | 9.07E-02 | 4.77E-04 | |
| | **HHDT** | 15 | 3.885 | 80 | 330 | 0.21 | 6.36E+01 | 1.40E-01 | 7.36E-04 | |
| | | | | | | | | | | 9.90E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.071 | 74 | 175 | 0.11 | 5.67E-01 | 1.25E-03 | 6.56E-06 | |
| | **LDT1** | 15 | 0.201 | 9 | 175 | 0.11 | 1.91E-01 | 4.21E-04 | 2.21E-06 | |
| | **LDT2** | 15 | 0.107 | 27 | 175 | 0.11 | 3.11E-01 | 6.84E-04 | 3.60E-06 | |
| | **MDT** | 15 | 0.202 | 21 | 175 | 0.11 | 4.51E-01 | 9.93E-04 | 5.22E-06 | |
| | **LHDT1** | 15 | 0.394 | 6 | 175 | 0.11 | 2.38E-01 | 5.25E-04 | 2.76E-06 | |
| | **LHDT2** | 15 | 0.228 | 1 | 175 | 0.11 | 1.44E-02 | 3.18E-05 | 1.67E-07 | |
| | **MHDT** | 15 | 0.611 | 1 | 175 | 0.11 | 8.99E-02 | 1.98E-04 | 1.04E-06 | |
| | **HHDT** | 15 | 3.885 | 0 | 175 | 0.11 | 1.15E-01 | 2.54E-04 | 1.34E-06 | 2.29E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.071 | 109 | 100 | 0.06 | 4.77E-01 | 1.05E-03 | 5.53E-06 | |
| | **LDT1** | 15 | 0.201 | 13 | 100 | 0.06 | 1.61E-01 | 3.55E-04 | 1.86E-06 | |
| | **LDT2** | 15 | 0.107 | 39 | 100 | 0.06 | 2.62E-01 | 5.77E-04 | 3.03E-06 | |
| | **MDT** | 15 | 0.202 | 30 | 100 | 0.06 | 3.80E-01 | 8.37E-04 | 4.40E-06 | |
| | **LHDT1** | 15 | 0.394 | 19 | 100 | 0.06 | 4.54E-01 | 1.00E-03 | 5.26E-06 | |
| | **LHDT2** | 15 | 0.228 | 2 | 100 | 0.06 | 2.75E-02 | 6.06E-05 | 3.19E-07 | |
| | **MHDT** | 15 | 0.611 | 1 | 100 | 0.06 | 4.25E-02 | 9.36E-05 | 4.92E-07 | |
| | **HHDT** | 15 | 3.885 | 0 | 100 | 0.06 | 8.99E-02 | 1.98E-04 | 1.04E-06 | 2.19E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.071 | 63 | 50 | 0.03 | 1.38E-01 | 3.05E-04 | 1.60E-06 | |
| | **LDT1** | 15 | 0.201 | 7 | 50 | 0.03 | 4.66E-02 | 1.03E-04 | 5.40E-07 | |
| | **LDT2** | 15 | 0.107 | 23 | 50 | 0.03 | 7.58E-02 | 1.67E-04 | 8.77E-07 | |
| | **MDT** | 15 | 0.202 | 18 | 50 | 0.03 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LHDT1** | 15 | 0.394 | 3 | 50 | 0.03 | 3.19E-02 | 7.02E-05 | 3.69E-07 | |
| | **LHDT2** | 15 | 0.228 | 0 | 50 | 0.03 | 1.93E-03 | 4.25E-06 | 2.23E-08 | |
| | **MHDT** | 15 | 0.611 | 3 | 50 | 0.03 | 6.02E-02 | 1.33E-04 | 6.97E-07 | |
| | **HHDT** | 15 | 3.885 | 1 | 50 | 0.03 | 1.77E-01 | 3.90E-04 | 2.05E-06 | 7.43E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.071 | 104 | 50 | 0.03 | 2.29E-01 | 5.05E-04 | 2.65E-06 | |
| | **LDT1** | 15 | 0.201 | 12 | 50 | 0.03 | 7.73E-02 | 1.70E-04 | 8.95E-07 | |
| | **LDT2** | 15 | 0.107 | 38 | 50 | 0.03 | 1.26E-01 | 2.77E-04 | 1.45E-06 | |
| | **MDT** | 15 | 0.202 | 29 | 50 | 0.03 | 1.82E-01 | 4.02E-04 | 2.11E-06 | |
| | **LHDT1** | 15 | 0.394 | 4 | 50 | 0.03 | 4.86E-02 | 1.07E-04 | 5.63E-07 | |
| | **LHDT2** | 15 | 0.228 | 0 | 50 | 0.03 | 2.95E-03 | 6.49E-06 | 3.41E-08 | |
| | **MHDT** | 15 | 0.611 | 5 | 50 | 0.03 | 9.86E-02 | 2.17E-04 | 1.14E-06 | |
| | **HHDT** | 15 | 3.885 | 2 | 50 | 0.03 | 2.77E-01 | 6.09E-04 | 3.20E-06 | 1.21E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.071 | 78 | 50 | 0.03 | 1.71E-01 | 3.76E-04 | 1.97E-06 | |
| | **LDT1** | 15 | 0.201 | 9 | 50 | 0.03 | 5.75E-02 | 1.27E-04 | 6.66E-07 | |
| | **LDT2** | 15 | 0.107 | 28 | 50 | 0.03 | 9.35E-02 | 2.06E-04 | 1.08E-06 | |
| | **MDT** | 15 | 0.202 | 22 | 50 | 0.03 | 1.36E-01 | 2.99E-04 | 1.57E-06 | |
| | **LHDT1** | 15 | 0.394 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.228 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.611 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.885 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.29E-06 |
| **Total - All Buildings** | **LDA** | | | 17806 | | | 2.53E+02 | 5.58E-01 | 2.93E-03 | |
| | **LDT1** | | | 2109 | | | 8.54E+01 | 1.88E-01 | 9.89E-04 | |
| | **LDT2** | | | 6430 | | | 1.39E+02 | 3.06E-01 | 1.61E-03 | |
| | **MDT** | | | 4964 | | | 2.01E+02 | 4.44E-01 | 2.33E-03 | |
| | **LHDT1** | | | 919 | | | 7.26E+01 | 1.60E-01 | 8.40E-04 | |
| | **LHDT2** | | | 96 | | | 4.40E+00 | 9.68E-03 | 5.09E-05 | |
| | **MHDT** | | | 340 | | | 4.15E+01 | 9.13E-02 | 4.80E-04 | |
| | **HHDT** | | | 84 | | | 6.42E+01 | 1.41E-01 | 7.43E-04 | |
| | **Total** | | | 32749 | | | 8.62E+02 | 1.90E+00 | 9.97E-03 | 9.97E-03 |

**Non-Diesel Truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.220 | 5 | 444 | 4.52E+01 | 9.95E-02 | 5.23E-04 | |
| | **LHDT2** | 1.210 | 5 | 47 | 4.69E+00 | 1.03E-02 | 5.43E-05 | |
| | **MHDT** | 1.820 | 5 | 164 | 2.49E+01 | 5.49E-02 | 2.89E-04 | |
| | **HHDT** | 25.014 | 5 | 40 | 8.32E+01 | 1.83E-01 | 9.63E-04 | |
| | | | | 695 | 1.58E+02 | 3.48E-01 | 1.83E-03 | 1.83E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.220 | 5 | 3 | 2.82E-01 | 6.22E-04 | 3.27E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 2.94E-02 | 6.47E-05 | 3.40E-07 | |
| | **MHDT** | 1.820 | 5 | 1 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 25.014 | 5 | 0 | 2.85E-01 | 6.27E-04 | 3.30E-06 | |
| | | | | 4 | 6.99E-01 | 1.54E-03 | 8.09E-06 | 8.09E-06 |
| **Idle at Utility** | **LHDT1** | 1.220 | 5 | 9 | 9.43E-01 | 2.08E-03 | 1.09E-05 | |
| | **LHDT2** | 1.210 | 5 | 1 | 9.80E-02 | 2.16E-04 | 1.13E-06 | |
| | **MHDT** | 1.820 | 5 | 1 | 8.49E-02 | 1.87E-04 | 9.83E-07 | |
| | **HHDT** | 25.014 | 5 | 0 | 3.88E-01 | 8.55E-04 | 4.49E-06 | |
| | | | | 11 | 1.51E+00 | 3.34E-03 | 1.75E-05 | 1.75E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.220 | 5 | 1 | 1.32E-01 | 2.91E-04 | 1.53E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 1.37E-02 | 3.03E-05 | 1.59E-07 | |
| | **MHDT** | 1.820 | 5 | 2 | 2.41E-01 | 5.30E-04 | 2.79E-06 | |
| | **HHDT** | 25.014 | 5 | 1 | 1.53E+00 | 3.37E-03 | 1.77E-05 | |
| | | | | 4 | 1.91E+00 | 4.22E-03 | 2.22E-05 | 2.22E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.220 | 5 | 2 | 2.02E-01 | 4.45E-04 | 2.34E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 2.10E-02 | 4.62E-05 | 2.43E-07 | |
| | **MHDT** | 1.820 | 5 | 3 | 3.94E-01 | 8.68E-04 | 4.56E-06 | |
| | **HHDT** | 25.014 | 5 | 1 | 2.39E+00 | 5.26E-03 | 2.77E-05 | |
| | | | | 6 | 3.01E+00 | 6.62E-03 | 3.48E-05 | 3.48E-05 |
| **Idle at Firestation** | **LHDT1** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.210 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.820 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.014 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 1.65E+02 | 3.64E-01 | 1.91E-03 | 1.91E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2021** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Gas Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.98E-03 | 3.77E-03 |
| Light Logistics | Phase 1 | 3.95E-06 | 8.61E-06 |
| Utilities Service Station | Phase 1 | 3.12E-06 | 7.83E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.55E-06 | 3.28E-06 |
| Convenience Store | Phase 1 | 7.17E-06 | 5.30E-06 |
| Fire Station | Phase 1 | 6.34E-09 | 1.97E-06 |
| Total | | 2.00E-03 | 3.80E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicle Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.86E-04 | 2.43E-05 |
| Light Logistics | Phase 1 | 1.01E-06 | 1.38E-07 |
| Utilities Service Station | Phase 1 | 2.93E-06 | 3.99E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.34E-06 | 1.24E-07 |
| Convenience Store | Phase 1 | 2.09E-06 | 1.96E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.94E-04 | 2.52E-05 |

**Total Onsite Emission**

| | | | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 2.00E-03 | 3.80E-03 | |
| Idling Emissions (g/sec) | 1.94E-04 | 2.52E-05 | |
| Total Vehicle Emissions (g/sec) | 2.19E-03 | 3.83E-03 | 6.02E-03 |
| Yard Trucks (LPG) (g/sec) | | 2.11E-03 | |
| Forklifts (LPG) (g/sec) | | 1.74E-04 | |
| Total All Sources (g/sec) | 2.19E-03 | 6.11E-03 | 8.30E-03 |
| Size of Area Source (m2) | 4.07E+06 | 4.07E+06 | |
| **Area Emission Rate (g/m2-sec)** | **5.38E-10** | **1.50E-09** | 2.04E-09 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.072 | 53 | 330 | 0.21 | 7.86E-01 | 1.73E-03 | 9.09E-06 | |
| | LDT1 | 15 | 0.259 | 3 | 330 | 0.21 | 1.36E-01 | 2.98E-04 | 1.57E-06 | |
| | LDT2 | 15 | 0.054 | 3 | 330 | 0.21 | 2.80E-02 | 6.16E-05 | 3.24E-07 | |
| | MDT | 15 | 0.057 | 5 | 330 | 0.21 | 5.65E-02 | 1.24E-04 | 6.54E-07 | |
| | LHDT1 | 15 | 0.123 | 274 | 330 | 0.21 | 6.93E+00 | 1.53E-02 | 8.02E-05 | |
| | LHDT2 | 15 | 0.128 | 93 | 330 | 0.21 | 2.45E+00 | 5.39E-03 | 2.83E-05 | |
| | MHDT | 15 | 0.151 | 1425 | 330 | 0.21 | 4.42E+01 | 9.74E-02 | 5.12E-04 | |
| | HHDT | 15 | 0.123 | 4628 | 330 | 0.21 | 1.16E+02 | 2.56E-01 | 1.35E-03 | |
| | | | | | | | | | | 1.98E-03 |
| Travel at Light Logistics | LDA | 15 | 0.072 | 0 | 175 | 0.11 | 1.77E-03 | 3.90E-06 | 2.05E-08 | |
| | LDT1 | 15 | 0.259 | 0 | 175 | 0.11 | 3.05E-04 | 6.72E-07 | 3.53E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 175 | 0.11 | 6.30E-05 | 1.39E-07 | 7.29E-10 | |
| | MDT | 15 | 0.057 | 0 | 175 | 0.11 | 1.27E-04 | 2.80E-07 | 1.47E-09 | |
| | LHDT1 | 15 | 0.123 | 2 | 175 | 0.11 | 2.30E-02 | 5.07E-05 | 2.66E-07 | |
| | LHDT2 | 15 | 0.128 | 1 | 175 | 0.11 | 8.12E-03 | 1.79E-05 | 9.39E-08 | |
| | MHDT | 15 | 0.151 | 6 | 175 | 0.11 | 9.66E-02 | 2.13E-04 | 1.12E-06 | |
| | HHDT | 15 | 0.123 | 16 | 175 | 0.11 | 2.11E-01 | 4.65E-04 | 2.44E-06 | 3.95E-06 |
| Travel at Utility | LDA | 15 | 0.072 | 0 | 100 | 0.06 | 1.54E-03 | 3.39E-06 | 1.78E-08 | |
| | LDT1 | 15 | 0.259 | 0 | 100 | 0.06 | 2.65E-04 | 5.84E-07 | 3.07E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 100 | 0.06 | 5.47E-05 | 1.21E-07 | 6.33E-10 | |
| | MDT | 15 | 0.057 | 0 | 100 | 0.06 | 1.11E-04 | 2.44E-07 | 1.28E-09 | |
| | LHDT1 | 15 | 0.123 | 6 | 100 | 0.06 | 4.36E-02 | 9.60E-05 | 5.05E-07 | |
| | LHDT2 | 15 | 0.128 | 2 | 100 | 0.06 | 1.54E-02 | 3.39E-05 | 1.78E-07 | |
| | MHDT | 15 | 0.151 | 5 | 100 | 0.06 | 4.53E-02 | 9.99E-05 | 5.25E-07 | |
| | HHDT | 15 | 0.123 | 21 | 100 | 0.06 | 1.64E-01 | 3.60E-04 | 1.89E-06 | 3.12E-06 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.072 | 0 | 50 | 0.03 | 6.84E-04 | 1.51E-06 | 7.91E-09 | |
| | LDT1 | 15 | 0.259 | 0 | 50 | 0.03 | 1.18E-04 | 2.60E-07 | 1.36E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 50 | 0.03 | 2.43E-05 | 5.36E-08 | 2.81E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 4.91E-05 | 1.08E-07 | 5.69E-10 | |
| | LHDT1 | 15 | 0.123 | 1 | 50 | 0.03 | 3.07E-03 | 6.77E-06 | 3.56E-08 | |
| | LHDT2 | 15 | 0.128 | 0 | 50 | 0.03 | 1.09E-03 | 2.39E-06 | 1.26E-08 | |
| | MHDT | 15 | 0.151 | 14 | 50 | 0.03 | 6.47E-02 | 1.42E-04 | 7.48E-07 | |
| | HHDT | 15 | 0.123 | 85 | 50 | 0.03 | 3.24E-01 | 7.13E-04 | 3.75E-06 | 4.55E-06 |
| Travel at Convenience Store | LDA | 15 | 0.072 | 0 | 50 | 0.03 | 1.11E-03 | 2.43E-06 | 1.28E-08 | |
| | LDT1 | 15 | 0.259 | 0 | 50 | 0.03 | 1.91E-04 | 4.20E-07 | 2.21E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 50 | 0.03 | 3.93E-05 | 8.66E-08 | 4.55E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 7.94E-05 | 1.75E-07 | 9.19E-10 | |
| | LHDT1 | 15 | 0.123 | 1 | 50 | 0.03 | 4.69E-03 | 1.03E-05 | 5.43E-08 | |
| | LHDT2 | 15 | 0.128 | 0 | 50 | 0.03 | 1.66E-03 | 3.65E-06 | 1.92E-08 | |
| | MHDT | 15 | 0.151 | 23 | 50 | 0.03 | 1.06E-01 | 2.33E-04 | 1.23E-06 | |
| | HHDT | 15 | 0.123 | 133 | 50 | 0.03 | 5.06E-01 | 1.11E-03 | 5.86E-06 | 7.17E-06 |
| Travel at Fire Station | LDA | 15 | 0.072 | 0 | 50 | 0.03 | 4.28E-04 | 9.42E-07 | 4.95E-09 | |
| | LDT1 | 15 | 0.259 | 0 | 50 | 0.03 | 7.38E-05 | 1.62E-07 | 8.54E-10 | |
| | LDT2 | 15 | 0.054 | 0 | 50 | 0.03 | 1.52E-05 | 3.35E-08 | 1.76E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 3.07E-05 | 6.77E-08 | 3.56E-10 | |
| | LHDT1 | 15 | 0.123 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.128 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.151 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.123 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.34E-09 |
| Total - All Buildings | LDA | | | 55 | | | 7.91E-01 | 1.74E-03 | 9.16E-06 | |
| | LDT1 | | | 3 | | | 1.36E-01 | 3.01E-04 | 1.58E-06 | |
| | LDT2 | | | 3 | | | 2.81E-02 | 6.20E-05 | 3.26E-07 | |
| | MDT | | | 5 | | | 5.69E-02 | 1.25E-04 | 6.58E-07 | |
| | LHDT1 | | | 283 | | | 7.01E+00 | 1.54E-02 | 8.11E-05 | |
| | LHDT2 | | | 96 | | | 2.47E+00 | 5.45E-03 | 2.86E-05 | |
| | MHDT | | | 1472 | | | 4.45E+01 | 9.81E-02 | 5.15E-04 | |
| | HHDT | | | 4883 | | | 1.18E+02 | 2.59E-01 | 1.36E-03 | |
| | Total | | | 6800 | | | 1.73E+02 | 3.80E-01 | 2.00E-03 | 2.00E-03 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.730 | 5 | 137 | 8.33E+00 | 1.83E-02 | 9.64E-05 | |
| | **LHDT2** | 0.730 | 5 | 47 | 2.83E+00 | 6.24E-03 | 3.28E-05 | |
| | **MHDT** | 0.015 | 5 | 713 | 8.91E-01 | 1.96E-03 | 1.03E-05 | |
| | **HHDT** | 0.021 | 5 | 2314 | 4.05E+00 | 8.92E-03 | 4.69E-05 | |
| | | | | 3210 | 1.61E+01 | 3.55E-02 | 1.86E-04 | 1.86E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.730 | 5 | 1 | 5.21E-02 | 1.15E-04 | 6.03E-07 | |
| | **LHDT2** | 0.730 | 5 | 0 | 1.77E-02 | 3.90E-05 | 2.05E-07 | |
| | **MHDT** | 0.015 | 5 | 3 | 3.67E-03 | 8.08E-06 | 4.25E-08 | |
| | **HHDT** | 0.021 | 5 | 8 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | | | | 12 | 8.74E-02 | 1.92E-04 | 1.01E-06 | 1.01E-06 |
| **Idle at Utility** | **LHDT1** | 0.730 | 5 | 3 | 1.73E-01 | 3.81E-04 | 2.00E-06 | |
| | **LHDT2** | 0.730 | 5 | 1 | 5.88E-02 | 1.29E-04 | 6.80E-07 | |
| | **MHDT** | 0.015 | 5 | 2 | 3.01E-03 | 6.64E-06 | 3.49E-08 | |
| | **HHDT** | 0.021 | 5 | 11 | 1.88E-02 | 4.14E-05 | 2.17E-07 | |
| | | | | 17 | 2.53E-01 | 5.58E-04 | 2.93E-06 | 2.93E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.730 | 5 | 0 | 2.44E-02 | 5.37E-05 | 2.82E-07 | |
| | **LHDT2** | 0.730 | 5 | 0 | 8.29E-03 | 1.83E-05 | 9.60E-08 | |
| | **MHDT** | 0.015 | 5 | 7 | 8.60E-03 | 1.89E-05 | 9.95E-08 | |
| | **HHDT** | 0.021 | 5 | 43 | 7.44E-02 | 1.64E-04 | 8.61E-07 | |
| | | | | 50 | 1.16E-01 | 2.55E-04 | 1.34E-06 | 1.34E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.730 | 5 | 1 | 3.72E-02 | 8.20E-05 | 4.31E-07 | |
| | **LHDT2** | 0.730 | 5 | 0 | 1.27E-02 | 2.79E-05 | 1.47E-07 | |
| | **MHDT** | 0.015 | 5 | 11 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **HHDT** | 0.021 | 5 | 66 | 1.16E-01 | 2.56E-04 | 1.35E-06 | |
| | | | | 79 | 1.80E-01 | 3.97E-04 | 2.09E-06 | 2.09E-06 |
| **Idle at Firestation** | **LHDT1** | 0.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.015 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.021 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 1.67E+01 | 3.69E-02 | 1.94E-04 | 1.94E-04 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Non-Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 17546 | 330 | 0.21 | 1.78E+02 | 3.93E-01 | 2.07E-03 | |
| | **LDT1** | 15 | 0.052 | 2058 | 330 | 0.21 | 2.20E+01 | 4.85E-02 | 2.55E-04 | |
| | **LDT2** | 15 | 0.050 | 6111 | 330 | 0.21 | 6.21E+01 | 1.37E-01 | 7.19E-04 | |
| | **MDT** | 15 | 0.050 | 4846 | 330 | 0.21 | 4.95E+01 | 1.09E-01 | 5.73E-04 | |
| | **LHDT1** | 15 | 0.048 | 886 | 330 | 0.21 | 8.80E+00 | 1.94E-02 | 1.02E-04 | |
| | **LHDT2** | 15 | 0.048 | 93 | 330 | 0.21 | 9.11E-01 | 2.01E-03 | 1.05E-05 | |
| | **MHDT** | 15 | 0.048 | 344 | 330 | 0.21 | 3.35E+00 | 7.39E-03 | 3.88E-05 | |
| | **HHDT** | 15 | 0.047 | 104 | 330 | 0.21 | 1.01E+00 | 2.22E-03 | 1.17E-05 | |
| | | | | | | | | | | 3.77E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 75 | 175 | 0.11 | 4.02E-01 | 8.85E-04 | 4.65E-06 | |
| | **LDT1** | 15 | 0.052 | 9 | 175 | 0.11 | 4.96E-02 | 1.09E-04 | 5.74E-07 | |
| | **LDT2** | 15 | 0.050 | 26 | 175 | 0.11 | 1.40E-01 | 3.08E-04 | 1.62E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.11E-01 | 2.46E-04 | 1.29E-06 | |
| | **LHDT1** | 15 | 0.048 | 6 | 175 | 0.11 | 2.92E-02 | 6.43E-05 | 3.38E-07 | |
| | **LHDT2** | 15 | 0.048 | 1 | 175 | 0.11 | 3.02E-03 | 6.66E-06 | 3.50E-08 | |
| | **MHDT** | 15 | 0.048 | 1 | 175 | 0.11 | 7.33E-03 | 1.61E-05 | 8.48E-08 | |
| | **HHDT** | 15 | 0.047 | 0 | 175 | 0.11 | 1.83E-03 | 4.03E-06 | 2.12E-08 | 8.61E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 113 | 100 | 0.06 | 3.49E-01 | 7.70E-04 | 4.04E-06 | |
| | **LDT1** | 15 | 0.052 | 13 | 100 | 0.06 | 4.31E-02 | 9.50E-05 | 4.99E-07 | |
| | **LDT2** | 15 | 0.050 | 39 | 100 | 0.06 | 1.22E-01 | 2.68E-04 | 1.41E-06 | |
| | **MDT** | 15 | 0.050 | 31 | 100 | 0.06 | 9.69E-02 | 2.13E-04 | 1.12E-06 | |
| | **LHDT1** | 15 | 0.048 | 18 | 100 | 0.06 | 5.53E-02 | 1.22E-04 | 6.40E-07 | |
| | **LHDT2** | 15 | 0.048 | 2 | 100 | 0.06 | 5.73E-03 | 1.26E-05 | 6.63E-08 | |
| | **MHDT** | 15 | 0.048 | 1 | 100 | 0.06 | 3.44E-03 | 7.57E-06 | 3.98E-08 | |
| | **HHDT** | 15 | 0.047 | 0 | 100 | 0.06 | 1.42E-03 | 3.12E-06 | 1.64E-08 | 7.83E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 101 | 50 | 0.03 | 1.55E-01 | 3.42E-04 | 1.80E-06 | |
| | **LDT1** | 15 | 0.052 | 12 | 50 | 0.03 | 1.92E-02 | 4.22E-05 | 2.22E-07 | |
| | **LDT2** | 15 | 0.050 | 35 | 50 | 0.03 | 5.40E-02 | 1.19E-04 | 6.25E-07 | |
| | **MDT** | 15 | 0.050 | 28 | 50 | 0.03 | 4.31E-02 | 9.49E-05 | 4.98E-07 | |
| | **LHDT1** | 15 | 0.048 | 3 | 50 | 0.03 | 3.90E-03 | 8.59E-06 | 4.52E-08 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 4.04E-04 | 8.90E-07 | 4.68E-09 | |
| | **MHDT** | 15 | 0.048 | 3 | 50 | 0.03 | 4.90E-03 | 1.08E-05 | 5.68E-08 | |
| | **HHDT** | 15 | 0.047 | 2 | 50 | 0.03 | 2.81E-03 | 6.19E-06 | 3.25E-08 | 3.28E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 163 | 50 | 0.03 | 2.51E-01 | 5.53E-04 | 2.90E-06 | |
| | **LDT1** | 15 | 0.052 | 19 | 50 | 0.03 | 3.10E-02 | 6.83E-05 | 3.59E-07 | |
| | **LDT2** | 15 | 0.050 | 57 | 50 | 0.03 | 8.73E-02 | 1.92E-04 | 1.01E-06 | |
| | **MDT** | 15 | 0.050 | 45 | 50 | 0.03 | 6.96E-02 | 1.53E-04 | 8.06E-07 | |
| | **LHDT1** | 15 | 0.048 | 4 | 50 | 0.03 | 5.96E-03 | 1.31E-05 | 6.89E-08 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 6.17E-04 | 1.36E-06 | 7.14E-09 | |
| | **MHDT** | 15 | 0.048 | 5 | 50 | 0.03 | 8.03E-03 | 1.77E-05 | 9.29E-08 | |
| | **HHDT** | 15 | 0.047 | 3 | 50 | 0.03 | 4.39E-03 | 9.67E-06 | 5.08E-08 | 5.30E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 63 | 50 | 0.03 | 9.71E-02 | 2.14E-04 | 1.12E-06 | |
| | **LDT1** | 15 | 0.052 | 7 | 50 | 0.03 | 1.20E-02 | 2.64E-05 | 1.39E-07 | |
| | **LDT2** | 15 | 0.050 | 22 | 50 | 0.03 | 3.38E-02 | 7.44E-05 | 3.91E-07 | |
| | **MDT** | 15 | 0.050 | 17 | 50 | 0.03 | 2.69E-02 | 5.93E-05 | 3.12E-07 | |
| | **LHDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-06 |
| **Total - All Buildings** | **LDA** | | | 18060 | | | 1.80E+02 | 3.96E-01 | 2.08E-03 | |
| | **LDT1** | | | 2118 | | | 2.22E+01 | 4.89E-02 | 2.57E-04 | |
| | **LDT2** | | | 6290 | | | 6.25E+01 | 1.38E-01 | 7.24E-04 | |
| | **MDT** | | | 4988 | | | 4.98E+01 | 1.10E-01 | 5.77E-04 | |
| | **LHDT1** | | | 917 | | | 8.89E+00 | 1.96E-02 | 1.03E-04 | |
| | **LHDT2** | | | 97 | | | 9.21E-01 | 2.03E-03 | 1.07E-05 | |
| | **MHDT** | | | 356 | | | 3.38E+00 | 7.44E-03 | 3.91E-05 | |
| | **HHDT** | | | 110 | | | 1.02E+00 | 2.25E-03 | 1.18E-05 | |
| | **Total** | | | 32936 | | | 3.28E+02 | 7.23E-01 | 3.80E-03 | 3.80E-03 |

**Non-Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.039 | 5 | 443 | 1.45E+00 | 3.19E-03 | 1.68E-05 | |
| | **LHDT2** | 0.031 | 5 | 47 | 1.19E-01 | 2.61E-04 | 1.37E-06 | |
| | **MHDT** | 0.030 | 5 | 172 | 4.24E-01 | 9.34E-04 | 4.91E-06 | |
| | **HHDT** | 0.026 | 5 | 52 | 1.12E-01 | 2.46E-04 | 1.29E-06 | |
| | | | | 714 | 2.10E+00 | 4.63E-03 | 2.43E-05 | 2.43E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.039 | 5 | 3 | 9.07E-03 | 2.00E-05 | 1.05E-07 | |
| | **LHDT2** | 0.031 | 5 | 0 | 7.42E-04 | 1.64E-06 | 8.59E-09 | |
| | **MHDT** | 0.030 | 5 | 1 | 1.75E-03 | 3.85E-06 | 2.02E-08 | |
| | **HHDT** | 0.026 | 5 | 0 | 3.83E-04 | 8.43E-07 | 4.43E-09 | |
| | | | | 4 | 1.19E-02 | 2.63E-05 | 1.38E-07 | 1.38E-07 |
| **Idle at Utility** | **LHDT1** | 0.039 | 5 | 9 | 3.01E-02 | 6.62E-05 | 3.48E-07 | |
| | **LHDT2** | 0.031 | 5 | 1 | 2.46E-03 | 5.42E-06 | 2.85E-08 | |
| | **MHDT** | 0.030 | 5 | 1 | 1.43E-03 | 3.16E-06 | 1.66E-08 | |
| | **HHDT** | 0.026 | 5 | 0 | 5.19E-04 | 1.14E-06 | 6.01E-09 | |
| | | | | 11 | 3.45E-02 | 7.60E-05 | 3.99E-07 | 3.99E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.039 | 5 | 1 | 4.24E-03 | 9.34E-06 | 4.91E-08 | |
| | **LHDT2** | 0.031 | 5 | 0 | 3.47E-04 | 7.65E-07 | 4.02E-09 | |
| | **MHDT** | 0.030 | 5 | 2 | 4.09E-03 | 9.01E-06 | 4.74E-08 | |
| | **HHDT** | 0.026 | 5 | 1 | 2.06E-03 | 4.53E-06 | 2.38E-08 | |
| | | | | 4 | 1.07E-02 | 2.37E-05 | 1.24E-07 | 1.24E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.039 | 5 | 2 | 6.48E-03 | 1.43E-05 | 7.50E-08 | |
| | **LHDT2** | 0.031 | 5 | 0 | 5.30E-04 | 1.17E-06 | 6.14E-09 | |
| | **MHDT** | 0.030 | 5 | 3 | 6.70E-03 | 1.48E-05 | 7.75E-08 | |
| | **HHDT** | 0.026 | 5 | 2 | 3.21E-03 | 7.08E-06 | 3.72E-08 | |
| | | | | 6 | 1.69E-02 | 3.73E-05 | 1.96E-07 | 1.96E-07 |
| **Idle at Firestation** | **LHDT1** | 0.039 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.031 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.030 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.026 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.18E+00 | 4.80E-03 | 2.52E-05 | 2.52E-05 |

**World Logistics Center** **2021** **PM2.5** Based on PB Traffic Results 10/3/2013
**Project Phase 1 Emissions** **With EMFAC2014** **Phase 1** No Mitigation Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.03E-03 | 7.69E-04 | 5.54E-03 | 7.34E-03 |
| 2 | 2.52E-03 | 1.86E-03 | 1.34E-02 | 1.78E-02 |
| 3 | 4.17E-03 | 2.98E-03 | 2.22E-02 | 2.93E-02 |
| 5 | 1.47E-04 | 5.11E-04 | 1.08E-03 | 1.74E-03 |
| 6 | 1.01E-03 | 1.17E-03 | 5.73E-03 | 7.91E-03 |
| 8 | 2.57E-04 | 1.06E-03 | 1.95E-03 | 3.27E-03 |
| 11 | 4.86E-06 | 1.28E-05 | 2.75E-05 | 4.52E-05 |
| 12 | 4.27E-05 | 7.87E-05 | 1.98E-04 | 3.19E-04 |
| 14 | 2.56E-04 | 2.55E-04 | 1.37E-03 | 1.88E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 4.80E-08 | 1.35E-05 | 1.73E-05 | 3.08E-05 |
| 21 | 1.68E-04 | 4.42E-04 | 1.20E-03 | 1.81E-03 |
| 24 | 2.64E-04 | 6.81E-04 | 1.87E-03 | 2.82E-03 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.56E-05 | 2.00E-05 | 8.82E-05 | 1.24E-04 |
| 30 | 6.55E-05 | 8.39E-05 | 3.69E-04 | 5.19E-04 |
| 31 | 1.30E-04 | 3.09E-04 | 8.94E-04 | 1.33E-03 |
| | | | Total | 7.63E-02 |

| ID | Arterial | From | To | | 2021 Project Related Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

**World Logistics Center** **2021** **PM2.5** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 27 | 1 | 1 | 2 | 116 | 38 | 1535 | 5840 | 7560 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 28 | 1 | 1 | 2 | 226 | 74 | 1669 | 6279 | 8281 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 105 | 34 | 859 | 3245 | 4259 |
| 5 | 3965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 8 | 216 | 87 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 24 | 559 | 1522 | 2194 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 3 | 117 | 176 | 312 |
| 24 | 2710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 5 | 0 | 0 | 0 | 11 | 3 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0294 | 0.1094 | 0.0229 | 0.0238 | 0.0589 | 0.0591 | 0.0663 | 0.0558 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.83E-06 | 3.63E-07 | 7.35E-08 | 1.33E-07 | 1.61E-05 | 5.28E-06 | 2.39E-04 | 7.66E-04 | 1.03E-03 |
| 2 | 1 | 4.26E-06 | 8.43E-07 | 1.71E-07 | 3.08E-07 | 6.99E-05 | 2.29E-05 | 5.82E-04 | 1.84E-03 | 2.52E-03 |
| 3 | 1 | 6.83E-06 | 1.35E-06 | 2.74E-07 | 4.95E-07 | 1.04E-04 | 3.42E-05 | 9.63E-04 | 3.06E-03 | 4.17E-03 |
| 5 | 1 | 1.27E-06 | 2.51E-07 | 5.09E-08 | 9.19E-08 | 1.04E-05 | 3.42E-06 | 9.81E-05 | 3.33E-05 | 1.47E-04 |
| 6 | 1 | 2.78E-06 | 5.50E-07 | 1.11E-07 | 2.01E-07 | 3.45E-05 | 1.13E-05 | 2.93E-04 | 6.71E-04 | 1.01E-03 |
| 8 | 1 | 2.61E-06 | 5.18E-07 | 1.05E-07 | 1.89E-07 | 2.51E-05 | 8.24E-06 | 2.20E-04 | 0.00E+00 | 2.57E-04 |
| 11 | 1 | 2.84E-08 | 5.63E-09 | 1.14E-09 | 2.06E-09 | 6.96E-07 | 2.28E-07 | 3.90E-06 | 0.00E+00 | 4.86E-06 |
| 12 | 1 | 1.44E-07 | 2.86E-08 | 5.79E-09 | 1.05E-08 | 8.47E-06 | 2.78E-06 | 3.13E-05 | 0.00E+00 | 4.27E-05 |
| 14 | 1 | 5.42E-07 | 1.07E-07 | 2.17E-08 | 3.93E-08 | 1.71E-05 | 5.61E-06 | 7.36E-05 | 1.59E-04 | 2.56E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 3.66E-08 | 7.25E-09 | 1.47E-09 | 2.65E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.80E-08 |
| 21 | 1 | 1.12E-06 | 2.23E-07 | 4.51E-08 | 8.15E-08 | 5.65E-06 | 1.85E-06 | 7.03E-05 | 8.89E-05 | 1.68E-04 |
| 24 | 1 | 1.73E-06 | 3.44E-07 | 6.96E-08 | 1.26E-07 | 7.61E-06 | 2.50E-06 | 1.11E-04 | 1.41E-04 | 2.64E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.85E-08 | 9.62E-09 | 1.95E-09 | 3.52E-09 | 3.91E-07 | 1.28E-07 | 5.70E-06 | 9.36E-06 | 1.56E-05 |
| 30 | 1 | 2.03E-07 | 4.03E-08 | 8.15E-09 | 1.47E-08 | 1.64E-06 | 5.37E-07 | 2.39E-05 | 3.92E-05 | 6.55E-05 |
| 31 | 1 | 7.84E-07 | 1.55E-07 | 3.14E-08 | 5.68E-08 | 3.68E-06 | 1.21E-06 | 5.38E-05 | 7.06E-05 | 1.30E-04 |

**World Logistics Center** **2021** **PM2.5** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8330 | 987 | 3008 | 2322 | 375 | 39 | 350 | 100 | 15513 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8652 | 1025 | 3124 | 2412 | 729 | 76 | 381 | 108 | 16508 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4315 | 511 | 1558 | 1203 | 338 | 35 | 196 | 56 | 8213 |
| 5 | 3,965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1977 | 234 | 714 | 551 | 83 | 9 | 49 | 1 | 3620 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3754 | 445 | 1356 | 1047 | 240 | 25 | 128 | 26 | 7019 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3558 | 422 | 1285 | 992 | 176 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 4 | 0 | 2 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 260 | 31 | 94 | 73 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 498 | 59 | 180 | 139 | 81 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1328 | 157 | 480 | 370 | 34 | 4 | 27 | 3 | 2403 |
| 24 | 2,710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1325 | 157 | 478 | 369 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1421 | 168 | 513 | 396 | 34 | 4 | 31 | 4 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0195 | 0.0205 | 0.0195 | 0.0196 | 0.0368 | 0.0413 | 0.0603 | 0.0321 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.83E-04 | 4.74E-05 | 1.38E-04 | 1.07E-04 | 3.25E-05 | 3.82E-06 | 4.97E-05 | 7.56E-06 | 7.69E-04 |
| 2 | 1 | 8.89E-04 | 1.10E-04 | 3.21E-04 | 2.49E-04 | 1.41E-04 | 1.66E-05 | 1.21E-04 | 1.82E-05 | 1.86E-03 |
| 3 | 1 | 1.43E-03 | 1.77E-04 | 5.14E-04 | 3.99E-04 | 2.11E-04 | 2.48E-05 | 2.00E-04 | 3.02E-05 | 2.98E-03 |
| 5 | 1 | 2.65E-04 | 3.28E-05 | 9.55E-05 | 7.41E-05 | 2.10E-05 | 2.47E-06 | 2.04E-05 | 3.29E-07 | 5.11E-04 |
| 6 | 1 | 5.80E-04 | 7.19E-05 | 2.09E-04 | 1.62E-04 | 6.97E-05 | 8.20E-06 | 6.08E-05 | 6.63E-06 | 1.17E-03 |
| 8 | 1 | 5.45E-04 | 6.76E-05 | 1.97E-04 | 1.53E-04 | 5.07E-05 | 5.97E-06 | 4.57E-05 | 0.00E+00 | 1.06E-03 |
| 11 | 1 | 5.93E-06 | 7.35E-07 | 2.14E-06 | 1.66E-06 | 1.40E-06 | 1.65E-07 | 8.09E-07 | 0.00E+00 | 1.28E-05 |
| 12 | 1 | 3.01E-05 | 3.73E-06 | 1.09E-05 | 8.43E-06 | 1.71E-05 | 2.01E-06 | 6.50E-06 | 0.00E+00 | 7.87E-05 |
| 14 | 1 | 1.13E-04 | 1.40E-05 | 4.08E-05 | 3.17E-05 | 3.45E-05 | 4.06E-06 | 1.53E-05 | 1.57E-06 | 2.55E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 7.64E-06 | 9.47E-07 | 2.76E-06 | 2.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.35E-05 |
| 21 | 1 | 2.35E-04 | 2.91E-05 | 8.47E-05 | 6.57E-05 | 1.14E-05 | 1.34E-06 | 1.46E-05 | 8.77E-07 | 4.42E-04 |
| 24 | 1 | 3.62E-04 | 4.49E-05 | 1.31E-04 | 1.01E-04 | 1.53E-05 | 1.81E-06 | 2.31E-05 | 1.39E-06 | 6.81E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.01E-05 | 1.26E-06 | 3.65E-06 | 2.83E-06 | 7.89E-07 | 9.28E-08 | 1.18E-06 | 9.23E-08 | 2.00E-05 |
| 30 | 1 | 4.24E-05 | 5.26E-06 | 1.53E-05 | 1.19E-05 | 3.30E-06 | 3.89E-07 | 4.95E-06 | 3.87E-07 | 8.39E-05 |
| 31 | 1 | 1.64E-04 | 2.03E-05 | 5.91E-05 | 4.58E-05 | 7.42E-06 | 8.74E-07 | 1.12E-05 | 6.97E-07 | 3.09E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 14,679 | 2982 | 569 | 116 | 1,885 | 383 | 5,940 | 1207 | 4687 | 8.44 | 0.035 | 0.0002 | 1.1 | 5.54E-03 |
| 2 | A | 731 | 0.45 | 15,246 | 6923 | 1,105 | 502 | 2,051 | 931 | 6,387 | 2900 | 11257 | 8.52 | 0.035 | 0.0002 | 2.6 | 1.34E-02 |
| 3 | A | 2352 | 1.46 | 7,604 | 11110 | 513 | 749 | 1,055 | 1541 | 3,300 | 4822 | 18223 | 8.68 | 0.035 | 0.0002 | 4.2 | 2.22E-02 |
| 5 | A | 953 | 0.59 | 3,484 | 2063 | 126 | 75 | 265 | 157 | 89 | 53 | 2347 | 3.36 | 0.035 | 0.0001 | 0.2 | 1.08E-03 |
| 6 | A | 1099 | 0.68 | 6,615 | 4516 | 363 | 248 | 687 | 469 | 1,549 | 1057 | 6290 | 6.53 | 0.035 | 0.0002 | 1.1 | 5.73E-03 |
| 8 | A | 1091 | 0.68 | 6,270 | 4250 | 266 | 180 | 520 | 352 | 0 | 0 | 4782 | 2.97 | 0.035 | 0.0001 | 0.4 | 1.95E-03 |
| 11 | A | 1201 | 0.75 | 62 | 46 | 7 | 5 | 8 | 6 | 0 | 0 | 57 | 3.48 | 0.035 | 0.0001 | 0.0 | 2.75E-05 |
| 12 | A | 824 | 0.51 | 458 | 235 | 119 | 61 | 98 | 50 | 0 | 0 | 346 | 4.14 | 0.035 | 0.0001 | 0.0 | 1.98E-04 |
| 14 | A | 1618 | 1.01 | 878 | 882 | 122 | 123 | 117 | 118 | 249 | 251 | 1373 | 7.12 | 0.035 | 0.0002 | 0.3 | 1.37E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 40 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 2.13 | 0.035 | 0.0001 | 0.0 | 1.73E-05 |
| 21 | A | 1258 | 0.78 | 2,340 | 1829 | 52 | 41 | 144 | 112 | 179 | 140 | 2122 | 4.10 | 0.035 | 0.0001 | 0.2 | 1.20E-03 |
| 24 | A | 1946 | 1.21 | 2,334 | 2822 | 45 | 55 | 147 | 178 | 183 | 221 | 3276 | 4.14 | 0.035 | 0.0001 | 0.4 | 1.87E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 188 | 79 | 7 | 3 | 22 | 9 | 35 | 15 | 106 | 6.00 | 0.035 | 0.0002 | 0.0 | 8.82E-05 |
| 30 | A | 2827 | 1.76 | 188 | 331 | 7 | 12 | 22 | 38 | 35 | 62 | 442 | 6.00 | 0.035 | 0.0002 | 0.1 | 3.69E-04 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 52 | 26 | 169 | 86 | 218 | 111 | 1499 | 4.31 | 0.035 | 0.0001 | 0.2 | 8.94E-04 |

**World Logistics Center** With EMFAC2014 **2021 Phase 1** No Mitigation
**PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | |
|---|---|---|---|
| | 2021 | Phase 1 | No Mitigation |

**Vehicle Running Exhaust Emissions**

| | | Pollutant | PM10 |
|---|---|---|---|

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-DSL Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.79E-03 | 3.54E-03 |
| Light Logistics | Phase 1 | 4.02E-06 | 9.18E-06 |
| Utilities Service Station | Phase 1 | 3.18E-06 | 8.58E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.65E-06 | 3.49E-06 |
| Convenience Store | Phase 1 | 7.33E-06 | 5.64E-06 |
| Fire Station | Phase 1 | 6.46E-09 | 1.98E-06 |
| Total | | 1.81E-03 | 3.56E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicle Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.70E-04 | 2.35E-05 |
| Light Logistics | Phase 1 | 1.04E-06 | 1.50E-07 |
| Utilities Service Station | Phase 1 | 3.04E-06 | 4.34E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.36E-06 | 1.35E-07 |
| Convenience Store | Phase 1 | 2.12E-06 | 2.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.78E-04 | 2.44E-05 |

**Total Onsite Emission**

| | | | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 1.81E-03 | 3.56E-03 | |
| Idling Emissions (g/sec) | 1.78E-04 | 2.44E-05 | |
| Total Vehicle Emissions (g/sec) | 1.98E-03 | 3.59E-03 | 5.57E-03 |
| Yard Trucks (LPG) (g/sec) | | 2.11E-03 | |
| Forklifts (LPG) (g/sec) | | 1.74E-04 | |
| | | | Total |
| Total All Sources (g/sec) | 1.98E-03 | 5.88E-03 | 7.86E-03 |
| Size of Area Source (m2) | 4.07E+06 | 4.07E+06 | |
| **Area Emission Rate (g/m2-sec)** | **4.87E-10** | **1.44E-09** | 1.93E-09 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** PM10

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.073 | 47 | 330 | 0.21 | 7.08E-01 | 1.56E-03 | 8.20E-06 | |
| | LDT1 | 15 | 0.268 | 2 | 330 | 0.21 | 1.25E-01 | 2.74E-04 | 1.44E-06 | |
| | LDT2 | 15 | 0.055 | 2 | 330 | 0.21 | 2.50E-02 | 5.50E-05 | 2.89E-07 | |
| | MDT | 15 | 0.057 | 4 | 330 | 0.21 | 5.05E-02 | 1.11E-04 | 5.85E-07 | |
| | LHDT1 | 15 | 0.125 | 243 | 330 | 0.21 | 6.22E+00 | 1.37E-02 | 7.20E-05 | |
| | LHDT2 | 15 | 0.129 | 83 | 330 | 0.21 | 2.19E+00 | 4.82E-03 | 2.53E-05 | |
| | MHDT | 15 | 0.152 | 1264 | 330 | 0.21 | 3.93E+01 | 8.66E-02 | 4.55E-04 | |
| | HHDT | 15 | 0.126 | 4102 | 330 | 0.21 | 1.06E+02 | 2.33E-01 | 1.22E-03 | |
| | | | | | | | | | | 1.79E-03 |
| Travel at Light Logistics | LDA | 15 | 0.073 | 0 | 175 | 0.11 | 1.80E-03 | 3.96E-06 | 2.08E-08 | |
| | LDT1 | 15 | 0.268 | 0 | 175 | 0.11 | 3.17E-04 | 6.97E-07 | 3.66E-09 | |
| | LDT2 | 15 | 0.055 | 0 | 175 | 0.11 | 6.34E-05 | 1.40E-07 | 7.34E-10 | |
| | MDT | 15 | 0.057 | 0 | 175 | 0.11 | 1.28E-04 | 2.83E-07 | 1.49E-09 | |
| | LHDT1 | 15 | 0.125 | 2 | 175 | 0.11 | 2.33E-02 | 5.13E-05 | 2.70E-07 | |
| | LHDT2 | 15 | 0.129 | 1 | 175 | 0.11 | 8.19E-03 | 1.80E-05 | 9.48E-08 | |
| | MHDT | 15 | 0.152 | 6 | 175 | 0.11 | 9.68E-02 | 2.13E-04 | 1.12E-06 | |
| | HHDT | 15 | 0.126 | 16 | 175 | 0.11 | 2.17E-01 | 4.77E-04 | 2.51E-06 | 4.02E-06 |
| Travel at Utility | LDA | 15 | 0.073 | 0 | 100 | 0.06 | 1.56E-03 | 3.45E-06 | 1.81E-08 | |
| | LDT1 | 15 | 0.268 | 0 | 100 | 0.06 | 2.75E-04 | 6.06E-07 | 3.19E-09 | |
| | LDT2 | 15 | 0.055 | 0 | 100 | 0.06 | 5.51E-05 | 1.21E-07 | 6.38E-10 | |
| | MDT | 15 | 0.057 | 0 | 100 | 0.06 | 1.12E-04 | 2.46E-07 | 1.29E-09 | |
| | LHDT1 | 15 | 0.125 | 6 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | LHDT2 | 15 | 0.129 | 2 | 100 | 0.06 | 1.55E-02 | 3.42E-05 | 1.80E-07 | |
| | MHDT | 15 | 0.152 | 5 | 100 | 0.06 | 4.55E-02 | 1.00E-04 | 5.26E-07 | |
| | HHDT | 15 | 0.126 | 21 | 100 | 0.06 | 1.68E-01 | 3.70E-04 | 1.94E-06 | 3.18E-06 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.073 | 0 | 50 | 0.03 | 6.95E-04 | 1.53E-06 | 8.05E-09 | |
| | LDT1 | 15 | 0.268 | 0 | 50 | 0.03 | 1.22E-04 | 2.69E-07 | 1.42E-09 | |
| | LDT2 | 15 | 0.055 | 0 | 50 | 0.03 | 2.45E-05 | 5.40E-08 | 2.84E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 4.96E-05 | 1.09E-07 | 5.74E-10 | |
| | LHDT1 | 15 | 0.125 | 1 | 50 | 0.03 | 3.11E-03 | 6.86E-06 | 3.61E-08 | |
| | LHDT2 | 15 | 0.129 | 0 | 50 | 0.03 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | MHDT | 15 | 0.152 | 14 | 50 | 0.03 | 6.48E-02 | 1.43E-04 | 7.51E-07 | |
| | HHDT | 15 | 0.126 | 85 | 50 | 0.03 | 3.32E-01 | 7.32E-04 | 3.84E-06 | 4.65E-06 |
| Travel at Convenience Store | LDA | 15 | 0.073 | 0 | 50 | 0.03 | 1.12E-03 | 2.48E-06 | 1.30E-08 | |
| | LDT1 | 15 | 0.268 | 0 | 50 | 0.03 | 1.98E-04 | 4.35E-07 | 2.29E-09 | |
| | LDT2 | 15 | 0.055 | 0 | 50 | 0.03 | 3.96E-05 | 8.72E-08 | 4.58E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 8.02E-05 | 1.77E-07 | 9.28E-10 | |
| | LHDT1 | 15 | 0.125 | 1 | 50 | 0.03 | 4.76E-03 | 1.05E-05 | 5.50E-08 | |
| | LHDT2 | 15 | 0.129 | 0 | 50 | 0.03 | 1.67E-03 | 3.68E-06 | 1.94E-08 | |
| | MHDT | 15 | 0.152 | 23 | 50 | 0.03 | 1.06E-01 | 2.34E-04 | 1.23E-06 | |
| | HHDT | 15 | 0.126 | 133 | 50 | 0.03 | 5.19E-01 | 1.14E-03 | 6.01E-06 | 7.33E-06 |
| Travel at Fire Station | LDA | 15 | 0.073 | 0 | 50 | 0.03 | 4.35E-04 | 9.58E-07 | 5.03E-09 | |
| | LDT1 | 15 | 0.268 | 0 | 50 | 0.03 | 7.65E-05 | 1.69E-07 | 8.86E-10 | |
| | LDT2 | 15 | 0.055 | 0 | 50 | 0.03 | 1.53E-05 | 3.38E-08 | 1.77E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 3.10E-05 | 6.83E-08 | 3.59E-10 | |
| | LHDT1 | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.129 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.126 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-09 |
| Total - All Buildings | LDA | | | 49 | | | 7.14E-01 | 1.57E-03 | 8.26E-06 | |
| | LDT1 | | | 2 | | | 1.26E-01 | 2.77E-04 | 1.45E-06 | |
| | LDT2 | | | 2 | | | 2.52E-02 | 5.54E-05 | 2.91E-07 | |
| | MDT | | | 4 | | | 5.09E-02 | 1.12E-04 | 5.90E-07 | |
| | LHDT1 | | | 252 | | | 6.30E+00 | 1.39E-02 | 7.29E-05 | |
| | LHDT2 | | | 86 | | | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | MHDT | | | 1311 | | | 3.96E+01 | 8.73E-02 | 4.59E-04 | |
| | HHDT | | | 4357 | | | 1.07E+02 | 2.36E-01 | 1.24E-03 | |
| | Total | | | 6064 | | | 1.56E+02 | 3.44E-01 | 1.81E-03 | 1.81E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.760 | 5 | 121 | 7.69E+00 | 1.69E-02 | 8.90E-05 | |
| | **LHDT2** | 0.750 | 5 | 41 | 2.58E+00 | 5.68E-03 | 2.99E-05 | |
| | **MHDT** | 0.016 | 5 | 632 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **HHDT** | 0.021 | 5 | 2051 | 3.59E+00 | 7.91E-03 | 4.15E-05 | |
| | | | | 2846 | 1.47E+01 | 3.24E-02 | 1.70E-04 | 1.70E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.760 | 5 | 1 | 5.43E-02 | 1.19E-04 | 6.28E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.82E-02 | 4.01E-05 | 2.11E-07 | |
| | **MHDT** | 0.016 | 5 | 3 | 3.91E-03 | 8.62E-06 | 4.53E-08 | |
| | **HHDT** | 0.021 | 5 | 8 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | | | | 12 | 9.02E-02 | 1.99E-04 | 1.04E-06 | 1.04E-06 |
| **Idle at Utility** | **LHDT1** | 0.760 | 5 | 3 | 1.80E-01 | 3.96E-04 | 2.08E-06 | |
| | **LHDT2** | 0.750 | 5 | 1 | 6.04E-02 | 1.33E-04 | 6.99E-07 | |
| | **MHDT** | 0.016 | 5 | 2 | 3.22E-03 | 7.08E-06 | 3.72E-08 | |
| | **HHDT** | 0.021 | 5 | 11 | 1.88E-02 | 4.14E-05 | 2.17E-07 | |
| | | | | 17 | 2.62E-01 | 5.78E-04 | 3.04E-06 | 3.04E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.760 | 5 | 0 | 2.54E-02 | 5.59E-05 | 2.94E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 8.52E-03 | 1.88E-05 | 9.86E-08 | |
| | **MHDT** | 0.016 | 5 | 7 | 9.17E-03 | 2.02E-05 | 1.06E-07 | |
| | **HHDT** | 0.021 | 5 | 43 | 7.44E-02 | 1.64E-04 | 8.61E-07 | |
| | | | | 50 | 1.17E-01 | 2.59E-04 | 1.36E-06 | 1.36E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.760 | 5 | 1 | 3.88E-02 | 8.54E-05 | 4.49E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.30E-02 | 2.86E-05 | 1.51E-07 | |
| | **MHDT** | 0.016 | 5 | 11 | 1.50E-02 | 3.31E-05 | 1.74E-07 | |
| | **HHDT** | 0.021 | 5 | 66 | 1.16E-01 | 2.56E-04 | 1.35E-06 | |
| | | | | 79 | 1.83E-01 | 4.03E-04 | 2.12E-06 | 2.12E-06 |
| **Idle at Firestation** | **LHDT1** | 0.760 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.750 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.016 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.021 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3003 | 1.54E+01 | 3.38E-02 | 1.78E-04 | 1.78E-04 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 15554 | 330 | 0.21 | 1.59E+02 | 3.51E-01 | 1.85E-03 | |
| | **LDT1** | 15 | 0.053 | 1824 | 330 | 0.21 | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | 15 | 0.050 | 5417 | 330 | 0.21 | 5.55E+01 | 1.22E-01 | 6.42E-04 | |
| | **MDT** | 15 | 0.050 | 4296 | 330 | 0.21 | 4.42E+01 | 9.75E-02 | 5.12E-04 | |
| | **LHDT1** | 15 | 0.088 | 786 | 330 | 0.21 | 1.41E+01 | 3.11E-02 | 1.63E-04 | |
| | **LHDT2** | 15 | 0.100 | 83 | 330 | 0.21 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **MHDT** | 15 | 0.145 | 305 | 330 | 0.21 | 9.06E+00 | 1.99E-02 | 1.05E-04 | |
| | **HHDT** | 15 | 0.084 | 93 | 330 | 0.21 | 1.60E+00 | 3.53E-03 | 1.85E-05 | |
| | | | | | | | | | | 3.54E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 75 | 175 | 0.11 | 4.05E-01 | 8.92E-04 | 4.69E-06 | |
| | **LDT1** | 15 | 0.053 | 9 | 175 | 0.11 | 5.02E-02 | 1.11E-04 | 5.81E-07 | |
| | **LDT2** | 15 | 0.050 | 26 | 175 | 0.11 | 1.41E-01 | 3.11E-04 | 1.63E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.12E-01 | 2.48E-04 | 1.30E-06 | |
| | **LHDT1** | 15 | 0.088 | 6 | 175 | 0.11 | 5.29E-02 | 1.16E-04 | 6.12E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.34E-03 | 1.40E-05 | 7.34E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.23E-02 | 4.92E-05 | 2.58E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 175 | 0.11 | 3.28E-03 | 7.22E-06 | 3.79E-08 | 9.18E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 113 | 100 | 0.06 | 3.52E-01 | 7.76E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.053 | 13 | 100 | 0.06 | 4.37E-02 | 9.62E-05 | 5.05E-07 | |
| | **LDT2** | 15 | 0.050 | 39 | 100 | 0.06 | 1.23E-01 | 2.70E-04 | 1.42E-06 | |
| | **MDT** | 15 | 0.050 | 31 | 100 | 0.06 | 9.77E-02 | 2.15E-04 | 1.13E-06 | |
| | **LHDT1** | 15 | 0.088 | 18 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.20E-02 | 2.65E-05 | 1.39E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.05E-02 | 2.31E-05 | 1.21E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 100 | 0.06 | 2.54E-03 | 5.59E-06 | 2.94E-08 | 8.58E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 101 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.053 | 12 | 50 | 0.03 | 1.94E-02 | 4.27E-05 | 2.25E-07 | |
| | **LDT2** | 15 | 0.050 | 35 | 50 | 0.03 | 5.45E-02 | 1.20E-04 | 6.30E-07 | |
| | **MDT** | 15 | 0.050 | 28 | 50 | 0.03 | 4.34E-02 | 9.57E-05 | 5.03E-07 | |
| | **LHDT1** | 15 | 0.088 | 3 | 50 | 0.03 | 7.07E-03 | 1.56E-05 | 8.18E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.48E-04 | 1.87E-06 | 9.81E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.49E-02 | 3.29E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.084 | 2 | 50 | 0.03 | 5.03E-03 | 1.11E-05 | 5.82E-08 | 3.49E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 163 | 50 | 0.03 | 2.53E-01 | 5.57E-04 | 2.93E-06 | |
| | **LDT1** | 15 | 0.053 | 19 | 50 | 0.03 | 3.14E-02 | 6.91E-05 | 3.63E-07 | |
| | **LDT2** | 15 | 0.050 | 57 | 50 | 0.03 | 8.80E-02 | 1.94E-04 | 1.02E-06 | |
| | **MDT** | 15 | 0.050 | 45 | 50 | 0.03 | 7.02E-02 | 1.55E-04 | 8.12E-07 | |
| | **LHDT1** | 15 | 0.088 | 4 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.29E-03 | 2.85E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.39E-05 | 2.83E-07 | |
| | **HHDT** | 15 | 0.084 | 3 | 50 | 0.03 | 7.86E-03 | 1.73E-05 | 9.10E-08 | 5.64E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 63 | 50 | 0.03 | 9.79E-02 | 2.16E-04 | 1.13E-06 | |
| | **LDT1** | 15 | 0.053 | 7 | 50 | 0.03 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **LDT2** | 15 | 0.050 | 22 | 50 | 0.03 | 3.41E-02 | 7.50E-05 | 3.94E-07 | |
| | **MDT** | 15 | 0.050 | 17 | 50 | 0.03 | 2.72E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT1** | 15 | 0.088 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.084 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-06 |
| **Total - All Buildings** | **LDA** | | | 16068 | | | 1.61E+02 | 3.54E-01 | 1.86E-03 | |
| | **LDT1** | | | 1884 | | | 1.99E+01 | 4.39E-02 | 2.31E-04 | |
| | **LDT2** | | | 5596 | | | 5.59E+01 | 1.23E-01 | 6.47E-04 | |
| | **MDT** | | | 4438 | | | 4.46E+01 | 9.82E-02 | 5.16E-04 | |
| | **LHDT1** | | | 816 | | | 1.43E+01 | 3.15E-02 | 1.65E-04 | |
| | **LHDT2** | | | 86 | | | 1.71E+00 | 3.78E-03 | 1.98E-05 | |
| | **MHDT** | | | 317 | | | 9.13E+00 | 2.01E-02 | 1.06E-04 | |
| | **HHDT** | | | 98 | | | 1.62E+00 | 3.57E-03 | 1.87E-05 | |
| | **Total** | | | 29304 | | | 3.08E+02 | 6.78E-01 | 3.56E-03 | 3.56E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.043 | 5 | 393 | 1.40E+00 | 3.07E-03 | 1.62E-05 | |
| | **LHDT2** | 0.033 | 5 | 41 | 1.14E-01 | 2.52E-04 | 1.32E-06 | |
| | **MHDT** | 0.032 | 5 | 153 | 4.09E-01 | 9.01E-04 | 4.73E-06 | |
| | **HHDT** | 0.028 | 5 | 46 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | | | | 633 | 2.03E+00 | 4.46E-03 | 2.35E-05 | 2.35E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.043 | 5 | 3 | 9.85E-03 | 2.17E-05 | 1.14E-07 | |
| | **LHDT2** | 0.033 | 5 | 0 | 8.07E-04 | 1.78E-06 | 9.34E-09 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.90E-03 | 4.18E-06 | 2.20E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 4.16E-04 | 9.17E-07 | 4.82E-09 | |
| | | | | 4 | 1.30E-02 | 2.86E-05 | 1.50E-07 | 1.50E-07 |
| **Idle at Utility** | **LHDT1** | 0.043 | 5 | 9 | 3.27E-02 | 7.20E-05 | 3.78E-07 | |
| | **LHDT2** | 0.033 | 5 | 1 | 2.68E-03 | 5.90E-06 | 3.10E-08 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.56E-03 | 3.44E-06 | 1.81E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 5.64E-04 | 1.24E-06 | 6.53E-09 | |
| | | | | 11 | 3.75E-02 | 8.26E-05 | 4.34E-07 | 4.34E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.043 | 5 | 1 | 4.61E-03 | 1.02E-05 | 5.34E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 3.78E-04 | 8.32E-07 | 4.37E-09 | |
| | **MHDT** | 0.032 | 5 | 2 | 4.45E-03 | 9.81E-06 | 5.15E-08 | |
| | **HHDT** | 0.028 | 5 | 1 | 2.24E-03 | 4.92E-06 | 2.59E-08 | |
| | | | | 4 | 1.17E-02 | 2.57E-05 | 1.35E-07 | 1.35E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.043 | 5 | 2 | 7.04E-03 | 1.55E-05 | 8.15E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 5.77E-04 | 1.27E-06 | 6.67E-09 | |
| | **MHDT** | 0.032 | 5 | 3 | 7.29E-03 | 1.61E-05 | 8.44E-08 | |
| | **HHDT** | 0.028 | 5 | 2 | 3.49E-03 | 7.70E-06 | 4.04E-08 | |
| | | | | 6 | 1.84E-02 | 4.05E-05 | 2.13E-07 | 2.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.043 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.033 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 658 | 2.11E+00 | 4.64E-03 | 2.44E-05 | 2.44E-05 |

**World Logistics Center** **2021** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 ONLY Emissions** **Phase 1** No Mitigation Rev 5
**Internal Roadway Circulation** **With EMFAC2014**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 2.23E-03 | 1.83E-03 | 2.26E-02 | 2.66E-02 |
| 2 | 5.45E-03 | 4.44E-03 | 5.48E-02 | 6.47E-02 |
| 3 | 9.03E-03 | 7.10E-03 | 9.03E-02 | 1.06E-01 |
| 5 | 3.23E-04 | 1.22E-03 | 4.42E-03 | 5.96E-03 |
| 6 | 2.20E-03 | 2.78E-03 | 2.33E-02 | 2.83E-02 |
| 8 | 5.67E-04 | 2.54E-03 | 7.94E-03 | 1.10E-02 |
| 11 | 1.07E-05 | 3.05E-05 | 1.12E-04 | 1.53E-04 |
| 12 | 9.27E-05 | 1.87E-04 | 8.05E-04 | 1.09E-03 |
| 14 | 5.53E-04 | 6.07E-04 | 5.56E-03 | 6.72E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 8.91E-08 | 3.21E-05 | 7.04E-05 | 1.03E-04 |
| 21 | 3.66E-04 | 1.05E-03 | 4.89E-03 | 6.32E-03 |
| 24 | 5.77E-04 | 1.62E-03 | 7.63E-03 | 9.83E-03 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.41E-05 | 4.77E-05 | 3.59E-04 | 4.41E-04 |
| 30 | 1.43E-04 | 2.00E-04 | 1.50E-03 | 1.85E-03 |
| 31 | 2.84E-04 | 7.36E-04 | 3.64E-03 | 4.66E-03 |
| | | | Total | 2.74E-01 |

| ID | Arterial | From | To | | 2021 Project Related Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 27 | 1 | 1 | 2 | 116 | 38 | 1535 | 5840 | 7560 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 28 | 1 | 1 | 2 | 226 | 74 | 1669 | 6279 | 8281 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 105 | 34 | 859 | 3245 | 4259 |
| 5 | 3965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 8 | 216 | 87 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 24 | 559 | 1522 | 2194 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 3 | 117 | 176 | 312 |
| 24 | 2710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 5 | 0 | 0 | 0 | 11 | 3 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0569 | 0.1405 | 0.0501 | 0.0511 | 0.1120 | 0.1199 | 0.1496 | 0.1198 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.55E-06 | 4.67E-07 | 1.61E-07 | 2.85E-07 | 3.06E-05 | 1.07E-05 | 5.40E-04 | 1.64E-03 | 2.23E-03 |
| 2 | 1 | 8.24E-06 | 1.08E-06 | 3.74E-07 | 6.61E-07 | 1.33E-04 | 4.65E-05 | 1.31E-03 | 3.95E-03 | 5.45E-03 |
| 3 | 1 | 1.32E-05 | 1.74E-06 | 6.00E-07 | 1.06E-06 | 1.98E-04 | 6.95E-05 | 2.17E-03 | 6.57E-03 | 9.03E-03 |
| 5 | 1 | 2.46E-06 | 3.23E-07 | 1.11E-07 | 1.97E-07 | 1.98E-05 | 6.94E-06 | 2.21E-04 | 7.15E-05 | 3.23E-04 |
| 6 | 1 | 5.38E-06 | 7.07E-07 | 2.44E-07 | 4.31E-07 | 6.56E-05 | 2.30E-05 | 6.61E-04 | 1.44E-03 | 2.20E-03 |
| 8 | 1 | 5.06E-06 | 6.65E-07 | 2.30E-07 | 4.06E-07 | 4.77E-05 | 1.67E-05 | 4.96E-04 | 0.00E+00 | 5.67E-04 |
| 11 | 1 | 5.50E-08 | 7.23E-09 | 2.50E-09 | 4.41E-09 | 1.32E-06 | 4.63E-07 | 8.80E-06 | 0.00E+00 | 1.07E-05 |
| 12 | 1 | 2.79E-07 | 3.67E-08 | 1.27E-08 | 2.24E-08 | 1.61E-05 | 5.64E-06 | 7.06E-05 | 0.00E+00 | 9.27E-05 |
| 14 | 1 | 1.05E-06 | 1.38E-07 | 4.77E-08 | 8.43E-08 | 3.25E-05 | 1.14E-05 | 1.66E-04 | 3.41E-04 | 5.53E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 7.09E-08 | 9.31E-09 | 3.22E-09 | 5.69E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.91E-08 |
| 21 | 1 | 2.18E-06 | 2.86E-07 | 9.88E-08 | 1.75E-07 | 1.07E-05 | 3.76E-06 | 1.59E-04 | 1.91E-04 | 3.66E-04 |
| 24 | 1 | 3.36E-06 | 4.42E-07 | 1.52E-07 | 2.70E-07 | 1.45E-05 | 5.06E-06 | 2.51E-04 | 3.02E-04 | 5.77E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 9.40E-08 | 1.24E-08 | 4.26E-09 | 7.54E-09 | 7.43E-07 | 2.60E-07 | 1.29E-05 | 2.01E-05 | 3.41E-05 |
| 30 | 1 | 3.94E-07 | 5.17E-08 | 1.79E-08 | 3.16E-08 | 3.11E-06 | 1.09E-06 | 5.39E-05 | 8.41E-05 | 1.43E-04 |
| 31 | 1 | 1.52E-06 | 2.00E-07 | 6.89E-08 | 1.22E-07 | 6.99E-06 | 2.45E-06 | 1.21E-04 | 1.52E-04 | 2.84E-04 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8330 | 987 | 3008 | 2322 | 375 | 39 | 350 | 100 | 15513 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8652 | 1025 | 3124 | 2412 | 729 | 76 | 381 | 108 | 16508 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4315 | 511 | 1558 | 1203 | 338 | 35 | 196 | 56 | 8213 |
| 5 | 3,965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1977 | 234 | 714 | 551 | 83 | 9 | 49 | 1 | 3620 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3754 | 445 | 1356 | 1047 | 240 | 25 | 128 | 26 | 7019 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3558 | 422 | 1285 | 992 | 176 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 4 | 0 | 2 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 260 | 31 | 94 | 73 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 498 | 59 | 180 | 139 | 81 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1328 | 157 | 480 | 370 | 34 | 4 | 27 | 3 | 2403 |
| 24 | 2,710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1325 | 157 | 478 | 369 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1421 | 168 | 513 | 396 | 34 | 4 | 31 | 4 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0477 | 0.0467 | 0.0468 | 0.0860 | 0.0985 | 0.1434 | 0.0832 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.14E-04 | 1.11E-04 | 3.30E-04 | 2.55E-04 | 7.58E-05 | 9.11E-06 | 1.18E-04 | 1.96E-05 | 1.83E-03 |
| 2 | 1 | 2.12E-03 | 2.57E-04 | 7.66E-04 | 5.93E-04 | 3.29E-04 | 3.95E-05 | 2.87E-04 | 4.71E-05 | 4.44E-03 |
| 3 | 1 | 3.41E-03 | 4.12E-04 | 1.23E-03 | 9.51E-04 | 4.92E-04 | 5.90E-05 | 4.75E-04 | 7.83E-05 | 7.10E-03 |
| 5 | 1 | 6.32E-04 | 7.65E-05 | 2.28E-04 | 1.77E-04 | 4.91E-05 | 5.89E-06 | 4.84E-05 | 8.53E-07 | 1.22E-03 |
| 6 | 1 | 1.38E-03 | 1.68E-04 | 5.00E-04 | 3.87E-04 | 1.63E-04 | 1.95E-05 | 1.45E-04 | 1.72E-05 | 2.78E-03 |
| 8 | 1 | 1.30E-03 | 1.58E-04 | 4.70E-04 | 3.64E-04 | 1.18E-04 | 1.42E-05 | 1.09E-04 | 0.00E+00 | 2.54E-03 |
| 11 | 1 | 1.42E-05 | 1.71E-06 | 5.11E-06 | 3.95E-06 | 3.28E-06 | 3.93E-07 | 1.93E-06 | 0.00E+00 | 3.05E-05 |
| 12 | 1 | 7.19E-05 | 8.70E-06 | 2.60E-05 | 2.01E-05 | 3.99E-05 | 4.79E-06 | 1.55E-05 | 0.00E+00 | 1.87E-04 |
| 14 | 1 | 2.70E-04 | 3.27E-05 | 9.76E-05 | 7.55E-05 | 8.06E-05 | 9.67E-06 | 3.63E-05 | 4.07E-06 | 6.07E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.82E-05 | 2.21E-06 | 6.59E-06 | 5.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-05 |
| 21 | 1 | 5.61E-04 | 6.78E-05 | 2.02E-04 | 1.57E-04 | 2.66E-05 | 3.19E-06 | 3.47E-05 | 2.27E-06 | 1.05E-03 |
| 24 | 1 | 8.65E-04 | 1.05E-04 | 3.12E-04 | 2.42E-04 | 3.58E-05 | 4.30E-06 | 5.49E-05 | 3.60E-06 | 1.62E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.42E-05 | 2.93E-06 | 8.73E-06 | 6.76E-06 | 1.84E-06 | 2.21E-07 | 2.81E-06 | 2.39E-07 | 4.77E-05 |
| 30 | 1 | 1.01E-04 | 1.23E-05 | 3.66E-05 | 2.83E-05 | 7.71E-06 | 9.26E-07 | 1.18E-05 | 1.00E-06 | 2.00E-04 |
| 31 | 1 | 3.91E-04 | 4.73E-05 | 1.41E-04 | 1.09E-04 | 1.73E-05 | 2.08E-06 | 2.66E-05 | 1.81E-06 | 7.36E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 14,679 | 2982 | 569 | 116 | 1,885 | 383 | 5,940 | 1207 | 4687 | 8.44 | 0.035 | 0.0009 | 4.3 | 2.26E-02 |
| 2 | A | 731 | 0.45 | 15,246 | 6923 | 1,105 | 502 | 2,051 | 931 | 6,387 | 2900 | 11257 | 8.52 | 0.035 | 0.0009 | 10.4 | 5.48E-02 |
| 3 | A | 2352 | 1.46 | 7,604 | 11110 | 513 | 749 | 1,055 | 1541 | 3,300 | 4822 | 18223 | 8.68 | 0.035 | 0.0009 | 17.2 | 9.03E-02 |
| 5 | A | 953 | 0.59 | 3,484 | 2063 | 126 | 75 | 265 | 157 | 89 | 53 | 2347 | 3.36 | 0.035 | 0.0004 | 0.8 | 4.42E-03 |
| 6 | A | 1099 | 0.68 | 6,615 | 4516 | 363 | 248 | 687 | 469 | 1,549 | 1057 | 6290 | 6.53 | 0.035 | 0.0007 | 4.4 | 2.33E-02 |
| 8 | A | 1091 | 0.68 | 6,270 | 4250 | 266 | 180 | 520 | 352 | 0 | 0 | 4782 | 2.97 | 0.035 | 0.0003 | 1.5 | 7.94E-03 |
| 11 | A | 1201 | 0.75 | 62 | 46 | 7 | 5 | 8 | 6 | 0 | 0 | 57 | 3.48 | 0.035 | 0.0004 | 0.0 | 1.12E-04 |
| 12 | A | 824 | 0.51 | 458 | 235 | 119 | 61 | 98 | 50 | 0 | 0 | 346 | 4.14 | 0.035 | 0.0004 | 0.2 | 8.05E-04 |
| 14 | A | 1618 | 1.01 | 878 | 882 | 122 | 123 | 117 | 118 | 249 | 251 | 1373 | 7.12 | 0.035 | 0.0008 | 1.1 | 5.56E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 40 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 2.13 | 0.035 | 0.0002 | 0.0 | 7.04E-05 |
| 21 | A | 1258 | 0.78 | 2,340 | 1829 | 52 | 41 | 144 | 112 | 179 | 140 | 2122 | 4.10 | 0.035 | 0.0004 | 0.9 | 4.89E-03 |
| 24 | A | 1946 | 1.21 | 2,334 | 2822 | 45 | 55 | 147 | 178 | 183 | 221 | 3276 | 4.14 | 0.035 | 0.0004 | 1.5 | 7.63E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 188 | 79 | 7 | 3 | 22 | 9 | 35 | 15 | 106 | 6.00 | 0.035 | 0.0006 | 0.1 | 3.59E-04 |
| 30 | A | 2827 | 1.76 | 188 | 331 | 7 | 12 | 22 | 38 | 35 | 62 | 442 | 6.00 | 0.035 | 0.0006 | 0.3 | 1.50E-03 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 52 | 26 | 169 | 86 | 218 | 111 | 1499 | 4.31 | 0.035 | 0.0005 | 0.7 | 3.64E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 Annual emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2021** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10 Annual**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Gas Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.79E-03 | 3.54E-03 |
| Light Logistics | Phase 1 | 4.02E-06 | 9.18E-06 |
| Utilities Service Station | Phase 1 | 3.18E-06 | 8.58E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.65E-06 | 3.49E-06 |
| Convenience Store | Phase 1 | 7.33E-06 | 5.64E-06 |
| Fire Station | Phase 1 | 6.46E-09 | 1.98E-06 |
| Total | | 1.81E-03 | 3.56E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicle Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.70E-04 | 2.35E-05 |
| Light Logistics | Phase 1 | 1.04E-06 | 1.50E-07 |
| Utilities Service Station | Phase 1 | 3.04E-06 | 4.34E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.36E-06 | 1.35E-07 |
| Convenience Store | Phase 1 | 2.12E-06 | 2.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.78E-04 | 2.44E-05 |

**Total Onsite Emission**

| | | | |
|---|---|---|---|
| Runing Exhaust | 1.81E-03 | 3.56E-03 | |
| Idling Emissions | 1.78E-04 | 2.44E-05 | |
| Total Vehicle Emissions | 1.98E-03 | 3.59E-03 | 5.57E-03 |
| Yard Trucks (LPG) | | 2.11E-03 | |
| Forklifts (LPG) | | 1.74E-04 | |
| Emergency Generator | | | |
| Total All Sources | 1.98E-03 | 5.88E-03 | |
| Size of Area Source (m2) | 4.07E+06 | 4.07E+06 | |
| **Area Emission Rate (g/m2-sec)** | **4.87E-10** | **1.44E-09** | 1.93E-09 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Diesel Vehicle Emissions** **PM10 Annual**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Annual Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.073 | 47 | 330 | 0.21 | 7.08E-01 | 1.56E-03 | 8.20E-06 | |
| | **LDT1** | 15 | 0.268 | 2 | 330 | 0.21 | 1.25E-01 | 2.74E-04 | 1.44E-06 | |
| | **LDT2** | 15 | 0.055 | 2 | 330 | 0.21 | 2.50E-02 | 5.50E-05 | 2.89E-07 | |
| | **MDT** | 15 | 0.057 | 4 | 330 | 0.21 | 5.05E-02 | 1.11E-04 | 5.85E-07 | |
| | **LHDT1** | 15 | 0.125 | 243 | 330 | 0.21 | 6.22E+00 | 1.37E-02 | 7.20E-05 | |
| | **LHDT2** | 15 | 0.129 | 83 | 330 | 0.21 | 2.19E+00 | 4.82E-03 | 2.53E-05 | |
| | **MHDT** | 15 | 0.152 | 1264 | 330 | 0.21 | 3.93E+01 | 8.66E-02 | 4.55E-04 | |
| | **HHDT** | 15 | 0.126 | 4102 | 330 | 0.21 | 1.06E+02 | 2.33E-01 | 1.22E-03 | |
| | | | | | | | | | | 1.79E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.073 | 0 | 175 | 0.11 | 1.80E-03 | 3.96E-06 | 2.08E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 175 | 0.11 | 3.17E-04 | 6.97E-07 | 3.66E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 175 | 0.11 | 6.34E-05 | 1.40E-07 | 7.34E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 175 | 0.11 | 1.28E-04 | 2.83E-07 | 1.49E-09 | |
| | **LHDT1** | 15 | 0.125 | 2 | 175 | 0.11 | 2.33E-02 | 5.13E-05 | 2.70E-07 | |
| | **LHDT2** | 15 | 0.129 | 1 | 175 | 0.11 | 8.19E-03 | 1.80E-05 | 9.48E-08 | |
| | **MHDT** | 15 | 0.152 | 6 | 175 | 0.11 | 9.68E-02 | 2.13E-04 | 1.12E-06 | |
| | **HHDT** | 15 | 0.126 | 16 | 175 | 0.11 | 2.17E-01 | 4.77E-04 | 2.51E-06 | 4.02E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.073 | 0 | 100 | 0.06 | 1.56E-03 | 3.45E-06 | 1.81E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 100 | 0.06 | 2.75E-04 | 6.06E-07 | 3.19E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 100 | 0.06 | 5.51E-05 | 1.21E-07 | 6.38E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 100 | 0.06 | 1.12E-04 | 2.46E-07 | 1.29E-09 | |
| | **LHDT1** | 15 | 0.125 | 6 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | **LHDT2** | 15 | 0.129 | 2 | 100 | 0.06 | 1.55E-02 | 3.42E-05 | 1.80E-07 | |
| | **MHDT** | 15 | 0.152 | 5 | 100 | 0.06 | 4.55E-02 | 1.00E-04 | 5.26E-07 | |
| | **HHDT** | 15 | 0.126 | 21 | 100 | 0.06 | 1.68E-01 | 3.70E-04 | 1.94E-06 | 3.18E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 6.95E-04 | 1.53E-06 | 8.05E-09 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 1.22E-04 | 2.69E-07 | 1.42E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 2.45E-05 | 5.40E-08 | 2.84E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 4.96E-05 | 1.09E-07 | 5.74E-10 | |
| | **LHDT1** | 15 | 0.125 | 1 | 50 | 0.03 | 3.11E-03 | 6.86E-06 | 3.61E-08 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | **MHDT** | 15 | 0.152 | 14 | 50 | 0.03 | 6.48E-02 | 1.43E-04 | 7.51E-07 | |
| | **HHDT** | 15 | 0.126 | 85 | 50 | 0.03 | 3.32E-01 | 7.32E-04 | 3.84E-06 | 4.65E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 1.12E-03 | 2.48E-06 | 1.30E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 1.98E-04 | 4.35E-07 | 2.29E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 3.96E-05 | 8.72E-08 | 4.58E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 8.02E-05 | 1.77E-07 | 9.28E-10 | |
| | **LHDT1** | 15 | 0.125 | 1 | 50 | 0.03 | 4.76E-03 | 1.05E-05 | 5.50E-08 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 1.67E-03 | 3.68E-06 | 1.94E-08 | |
| | **MHDT** | 15 | 0.152 | 23 | 50 | 0.03 | 1.06E-01 | 2.34E-04 | 1.23E-06 | |
| | **HHDT** | 15 | 0.126 | 133 | 50 | 0.03 | 5.19E-01 | 1.14E-03 | 6.01E-06 | 7.33E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 4.35E-04 | 9.58E-07 | 5.03E-09 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 7.65E-05 | 1.69E-07 | 8.86E-10 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 1.53E-05 | 3.38E-08 | 1.77E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 3.10E-05 | 6.83E-08 | 3.59E-10 | |
| | **LHDT1** | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.126 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-09 |
| **Total - All Buildings** | **LDA** | | | 49 | | | 7.14E-01 | 1.57E-03 | 8.26E-06 | |
| | **LDT1** | | | 2 | | | 1.26E-01 | 2.77E-04 | 1.45E-06 | |
| | **LDT2** | | | 2 | | | 2.52E-02 | 5.54E-05 | 2.91E-07 | |
| | **MDT** | | | 4 | | | 5.09E-02 | 1.12E-04 | 5.90E-07 | |
| | **LHDT1** | | | 252 | | | 6.30E+00 | 1.39E-02 | 7.29E-05 | |
| | **LHDT2** | | | 86 | | | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **MHDT** | | | 1311 | | | 3.96E+01 | 8.73E-02 | 4.59E-04 | |
| | **HHDT** | | | 4357 | | | 1.07E+02 | 2.36E-01 | 1.24E-03 | |
| | **Total** | | | 6064 | | | 1.56E+02 | 3.44E-01 | 1.81E-03 | 1.81E-03 |

**Diesel truck Idling Emissions** **PM10 Annual Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.760 | 5 | 121 | 7.69E+00 | 1.69E-02 | 8.90E-05 | |
| | **LHDT2** | 0.750 | 5 | 41 | 2.58E+00 | 5.68E-03 | 2.99E-05 | |
| | **MHDT** | 0.016 | 5 | 632 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **HHDT** | 0.021 | 5 | 2051 | 3.59E+00 | 7.91E-03 | 4.15E-05 | |
| | | | | 2846 | 1.47E+01 | 3.24E-02 | 1.70E-04 | 1.70E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.760 | 5 | 1 | 5.43E-02 | 1.19E-04 | 6.28E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.82E-02 | 4.01E-05 | 2.11E-07 | |
| | **MHDT** | 0.016 | 5 | 3 | 3.91E-03 | 8.62E-06 | 4.53E-08 | |
| | **HHDT** | 0.021 | 5 | 8 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | | | | 12 | 9.02E-02 | 1.99E-04 | 1.04E-06 | 1.04E-06 |
| **Idle at Utility** | **LHDT1** | 0.760 | 5 | 3 | 1.80E-01 | 3.96E-04 | 2.08E-06 | |
| | **LHDT2** | 0.750 | 5 | 1 | 6.04E-02 | 1.33E-04 | 6.99E-07 | |
| | **MHDT** | 0.016 | 5 | 2 | 3.22E-03 | 7.08E-06 | 3.72E-08 | |
| | **HHDT** | 0.021 | 5 | 11 | 1.88E-02 | 4.14E-05 | 2.17E-07 | |
| | | | | 17 | 2.62E-01 | 5.78E-04 | 3.04E-06 | 3.04E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.760 | 5 | 0 | 2.54E-02 | 5.59E-05 | 2.94E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 8.52E-03 | 1.88E-05 | 9.86E-08 | |
| | **MHDT** | 0.016 | 5 | 7 | 9.17E-03 | 2.02E-05 | 1.06E-07 | |
| | **HHDT** | 0.021 | 5 | 43 | 7.44E-02 | 1.64E-04 | 8.61E-07 | |
| | | | | 50 | 1.17E-01 | 2.59E-04 | 1.36E-06 | 1.36E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.760 | 5 | 1 | 3.88E-02 | 8.54E-05 | 4.49E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.30E-02 | 2.86E-05 | 1.51E-07 | |
| | **MHDT** | 0.016 | 5 | 11 | 1.50E-02 | 3.31E-05 | 1.74E-07 | |
| | **HHDT** | 0.021 | 5 | 66 | 1.16E-01 | 2.56E-04 | 1.35E-06 | |
| | | | | 79 | 1.83E-01 | 4.03E-04 | 2.12E-06 | 2.12E-06 |
| **Idle at Firestation** | **LHDT1** | 0.760 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.750 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.016 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.021 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3003 | 1.54E+01 | 3.38E-02 | 1.78E-04 | 1.78E-04 |

**World Logistics Center** 2021 Phase 1 No Mitigation
**Non-Diesel Vehicle Emissions** **PM10 Annual**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Annual Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 15554 | 330 | 0.21 | 1.59E+02 | 3.51E-01 | 1.85E-03 | |
| | **LDT1** | 15 | 0.053 | 1824 | 330 | 0.21 | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | 15 | 0.050 | 5417 | 330 | 0.21 | 5.55E+01 | 1.22E-01 | 6.42E-04 | |
| | **MDT** | 15 | 0.050 | 4296 | 330 | 0.21 | 4.42E+01 | 9.75E-02 | 5.12E-04 | |
| | **LHDT1** | 15 | 0.088 | 786 | 330 | 0.21 | 1.41E+01 | 3.11E-02 | 1.63E-04 | |
| | **LHDT2** | 15 | 0.100 | 83 | 330 | 0.21 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **MHDT** | 15 | 0.145 | 305 | 330 | 0.21 | 9.06E+00 | 1.99E-02 | 1.05E-04 | |
| | **HHDT** | 15 | 0.084 | 93 | 330 | 0.21 | 1.60E+00 | 3.53E-03 | 1.85E-05 | |
| | | | | | | | | | | 3.54E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 75 | 175 | 0.11 | 4.05E-01 | 8.92E-04 | 4.69E-06 | |
| | **LDT1** | 15 | 0.053 | 9 | 175 | 0.11 | 5.02E-02 | 1.11E-04 | 5.81E-07 | |
| | **LDT2** | 15 | 0.050 | 26 | 175 | 0.11 | 1.41E-01 | 3.11E-04 | 1.63E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.12E-01 | 2.48E-04 | 1.30E-06 | |
| | **LHDT1** | 15 | 0.088 | 6 | 175 | 0.11 | 5.29E-02 | 1.16E-04 | 6.12E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.34E-03 | 1.40E-05 | 7.34E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.23E-02 | 4.92E-05 | 2.58E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 175 | 0.11 | 3.28E-03 | 7.22E-06 | 3.79E-08 | 9.18E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 113 | 100 | 0.06 | 3.52E-01 | 7.76E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.053 | 13 | 100 | 0.06 | 4.37E-02 | 9.62E-05 | 5.05E-07 | |
| | **LDT2** | 15 | 0.050 | 39 | 100 | 0.06 | 1.23E-01 | 2.70E-04 | 1.42E-06 | |
| | **MDT** | 15 | 0.050 | 31 | 100 | 0.06 | 9.77E-02 | 2.15E-04 | 1.13E-06 | |
| | **LHDT1** | 15 | 0.088 | 18 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.20E-02 | 2.65E-05 | 1.39E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.05E-02 | 2.31E-05 | 1.21E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 100 | 0.06 | 2.54E-03 | 5.59E-06 | 2.94E-08 | 8.58E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 101 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.053 | 12 | 50 | 0.03 | 1.94E-02 | 4.27E-05 | 2.25E-07 | |
| | **LDT2** | 15 | 0.050 | 35 | 50 | 0.03 | 5.45E-02 | 1.20E-04 | 6.30E-07 | |
| | **MDT** | 15 | 0.050 | 28 | 50 | 0.03 | 4.34E-02 | 9.57E-05 | 5.03E-07 | |
| | **LHDT1** | 15 | 0.088 | 3 | 50 | 0.03 | 7.07E-03 | 1.56E-05 | 8.18E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.48E-04 | 1.87E-06 | 9.81E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.49E-02 | 3.29E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.084 | 2 | 50 | 0.03 | 5.03E-03 | 1.11E-05 | 5.82E-08 | 3.49E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 163 | 50 | 0.03 | 2.53E-01 | 5.57E-04 | 2.93E-06 | |
| | **LDT1** | 15 | 0.053 | 19 | 50 | 0.03 | 3.14E-02 | 6.91E-05 | 3.63E-07 | |
| | **LDT2** | 15 | 0.050 | 57 | 50 | 0.03 | 8.80E-02 | 1.94E-04 | 1.02E-06 | |
| | **MDT** | 15 | 0.050 | 45 | 50 | 0.03 | 7.02E-02 | 1.55E-04 | 8.12E-07 | |
| | **LHDT1** | 15 | 0.088 | 4 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.29E-03 | 2.85E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.39E-05 | 2.83E-07 | |
| | **HHDT** | 15 | 0.084 | 3 | 50 | 0.03 | 7.86E-03 | 1.73E-05 | 9.10E-08 | 5.64E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 63 | 50 | 0.03 | 9.79E-02 | 2.16E-04 | 1.13E-06 | |
| | **LDT1** | 15 | 0.053 | 7 | 50 | 0.03 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **LDT2** | 15 | 0.050 | 22 | 50 | 0.03 | 3.41E-02 | 7.50E-05 | 3.94E-07 | |
| | **MDT** | 15 | 0.050 | 17 | 50 | 0.03 | 2.72E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT1** | 15 | 0.088 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.084 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-06 |
| **Total - All Buildings** | **LDA** | | | 16068 | | | 1.61E+02 | 3.54E-01 | 1.86E-03 | |
| | **LDT1** | | | 1884 | | | 1.99E+01 | 4.39E-02 | 2.31E-04 | |
| | **LDT2** | | | 5596 | | | 5.59E+01 | 1.23E-01 | 6.47E-04 | |
| | **MDT** | | | 4438 | | | 4.46E+01 | 9.82E-02 | 5.16E-04 | |
| | **LHDT1** | | | 816 | | | 1.43E+01 | 3.15E-02 | 1.65E-04 | |
| | **LHDT2** | | | 86 | | | 1.71E+00 | 3.78E-03 | 1.98E-05 | |
| | **MHDT** | | | 317 | | | 9.13E+00 | 2.01E-02 | 1.06E-04 | |
| | **HHDT** | | | 98 | | | 1.62E+00 | 3.57E-03 | 1.87E-05 | |
| | **Total** | | | 29304 | | | 3.08E+02 | 6.78E-01 | 3.56E-03 | 3.56E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Annual Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.043 | 5 | 393 | 1.40E+00 | 3.07E-03 | 1.62E-05 | |
| | **LHDT2** | 0.033 | 5 | 41 | 1.14E-01 | 2.52E-04 | 1.32E-06 | |
| | **MHDT** | 0.032 | 5 | 153 | 4.09E-01 | 9.01E-04 | 4.73E-06 | |
| | **HHDT** | 0.028 | 5 | 46 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | | | | 633 | 2.03E+00 | 4.46E-03 | 2.35E-05 | 2.35E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.043 | 5 | 3 | 9.85E-03 | 2.17E-05 | 1.14E-07 | |
| | **LHDT2** | 0.033 | 5 | 0 | 8.07E-04 | 1.78E-06 | 9.34E-09 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.90E-03 | 4.18E-06 | 2.20E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 4.16E-04 | 9.17E-07 | 4.82E-09 | |
| | | | | 4 | 1.30E-02 | 2.86E-05 | 1.50E-07 | 1.50E-07 |
| **Idle at Utility** | **LHDT1** | 0.043 | 5 | 9 | 3.27E-02 | 7.20E-05 | 3.78E-07 | |
| | **LHDT2** | 0.033 | 5 | 1 | 2.68E-03 | 5.90E-06 | 3.10E-08 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.56E-03 | 3.44E-06 | 1.81E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 5.64E-04 | 1.24E-06 | 6.53E-09 | |
| | | | | 11 | 3.75E-02 | 8.26E-05 | 4.34E-07 | 4.34E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.043 | 5 | 1 | 4.61E-03 | 1.02E-05 | 5.34E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 3.78E-04 | 8.32E-07 | 4.37E-09 | |
| | **MHDT** | 0.032 | 5 | 2 | 4.45E-03 | 9.81E-06 | 5.15E-08 | |
| | **HHDT** | 0.028 | 5 | 1 | 2.24E-03 | 4.92E-06 | 2.59E-08 | |
| | | | | 4 | 1.17E-02 | 2.57E-05 | 1.35E-07 | 1.35E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.043 | 5 | 2 | 7.04E-03 | 1.55E-05 | 8.15E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 5.77E-04 | 1.27E-06 | 6.67E-09 | |
| | **MHDT** | 0.032 | 5 | 3 | 7.29E-03 | 1.61E-05 | 8.44E-08 | |
| | **HHDT** | 0.028 | 5 | 2 | 3.49E-03 | 7.70E-06 | 4.04E-08 | |
| | | | | 6 | 1.84E-02 | 4.05E-05 | 2.13E-07 | 2.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.043 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.033 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 658 | 2.11E+00 | 4.64E-03 | 2.44E-05 | 2.44E-05 |

**World Logistics Center** **2021** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 ONLY Emissions** **Phase 1** No Mitigation With EMFAC2014
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 2.23E-03 | 1.83E-03 | 2.26E-02 | 2.66E-02 |
| 2 | 5.45E-03 | 4.44E-03 | 5.48E-02 | 6.47E-02 |
| 3 | 9.03E-03 | 7.10E-03 | 9.03E-02 | 1.06E-01 |
| 5 | 2.95E-04 | 1.11E-03 | 4.03E-03 | 5.44E-03 |
| 6 | 2.79E-03 | 3.53E-03 | 2.96E-02 | 3.59E-02 |
| 8 | 6.52E-04 | 2.91E-03 | 9.13E-03 | 1.27E-02 |
| 11 | 1.07E-05 | 3.05E-05 | 1.12E-04 | 1.53E-04 |
| 12 | 9.27E-05 | 1.87E-04 | 8.05E-04 | 1.09E-03 |
| 14 | 5.53E-04 | 6.07E-04 | 5.56E-03 | 6.72E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.02E-07 | 3.69E-05 | 8.08E-05 | 1.18E-04 |
| 21 | 3.98E-04 | 1.15E-03 | 5.32E-03 | 6.86E-03 |
| 24 | 6.73E-04 | 1.89E-03 | 8.91E-03 | 1.15E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.41E-05 | 4.77E-05 | 3.59E-04 | 4.41E-04 |
| 30 | 1.43E-04 | 2.00E-04 | 1.50E-03 | 1.85E-03 |
| 31 | 2.88E-04 | 7.45E-04 | 3.69E-03 | 4.72E-03 |
| | | | Total | 2.85E-01 |

| ID | Arterial | From | To | | 2021 Project Related Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 27 | 1 | 1 | 2 | 116 | 38 | 1535 | 5840 | 7560 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 28 | 1 | 1 | 2 | 226 | 74 | 1669 | 6279 | 8281 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 105 | 34 | 859 | 3245 | 4259 |
| 5 | 3965 | 3,484 | 126 | 265 | 89 | 870 | 0.540 | 6 | 0 | 0 | 1 | 26 | 8 | 216 | 87 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1394 | 0.866 | 12 | 1 | 1 | 1 | 74 | 24 | 559 | 1522 | 2194 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1254 | 0.779 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2737 | 1.700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1367 | 0.849 | 4 | 0 | 0 | 0 | 11 | 3 | 117 | 176 | 312 |
| 24 | 2710 | 2,334 | 45 | 147 | 183 | 2271 | 1.411 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 830 | 0.516 | 5 | 0 | 0 | 0 | 11 | 3 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0569 | 0.1405 | 0.0501 | 0.0511 | 0.1120 | 0.1199 | 0.1496 | 0.1198 |
| 2 | #REF! | #REF! | #REF! | #REF! | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 3 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.1067 | 0.1159 | 0.1485 | 0.0000 |
| 4 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.55E-06 | 4.67E-07 | 1.61E-07 | 2.85E-07 | 3.06E-05 | 1.07E-05 | 5.40E-04 | 1.64E-03 | 2.23E-03 |
| 2 | 1 | 8.24E-06 | 1.08E-06 | 3.74E-07 | 6.61E-07 | 1.33E-04 | 4.65E-05 | 1.31E-03 | 3.95E-03 | 5.45E-03 |
| 3 | 1 | 1.32E-05 | 1.74E-06 | 6.00E-07 | 1.06E-06 | 1.98E-04 | 6.95E-05 | 2.17E-03 | 6.57E-03 | 9.03E-03 |
| 5 | 1 | 2.24E-06 | 2.95E-07 | 1.02E-07 | 1.80E-07 | 1.81E-05 | 6.33E-06 | 2.02E-04 | 6.53E-05 | 2.95E-04 |
| 6 | 1 | 6.82E-06 | 8.96E-07 | 3.09E-07 | 5.47E-07 | 8.32E-05 | 2.92E-05 | 8.39E-04 | 1.83E-03 | 2.79E-03 |
| 8 | 1 | 5.81E-06 | 7.64E-07 | 2.64E-07 | 4.67E-07 | 5.49E-05 | 1.92E-05 | 5.71E-04 | 0.00E+00 | 6.52E-04 |
| 11 | 1 | 5.50E-08 | 7.23E-09 | 2.50E-09 | 4.41E-09 | 1.32E-06 | 4.63E-07 | 8.80E-06 | 0.00E+00 | 1.07E-05 |
| 12 | 1 | 2.79E-07 | 3.67E-08 | 1.27E-08 | 2.24E-08 | 1.61E-05 | 5.64E-06 | 7.06E-05 | 0.00E+00 | 9.27E-05 |
| 14 | 1 | 1.05E-06 | 1.38E-07 | 4.77E-08 | 8.43E-08 | 3.25E-05 | 1.14E-05 | 1.66E-04 | 3.41E-04 | 5.53E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 8.13E-08 | 1.07E-08 | 3.69E-09 | 6.52E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.02E-07 |
| 21 | 1 | 2.37E-06 | 3.11E-07 | 1.07E-07 | 1.90E-07 | 1.17E-05 | 4.08E-06 | 1.72E-04 | 2.07E-04 | 3.98E-04 |
| 24 | 1 | 3.92E-06 | 5.15E-07 | 1.78E-07 | 3.15E-07 | 1.69E-05 | 5.91E-06 | 2.93E-04 | 3.52E-04 | 6.73E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 9.40E-08 | 1.24E-08 | 4.26E-09 | 7.54E-09 | 7.43E-07 | 2.60E-07 | 1.29E-05 | 2.01E-05 | 3.41E-05 |
| 30 | 1 | 3.94E-07 | 5.17E-08 | 1.79E-08 | 3.16E-08 | 3.11E-06 | 1.09E-06 | 5.39E-05 | 8.41E-05 | 1.43E-04 |
| 31 | 1 | 1.54E-06 | 2.02E-07 | 6.97E-08 | 1.23E-07 | 7.08E-06 | 2.48E-06 | 1.23E-04 | 1.53E-04 | 2.88E-04 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8330 | 987 | 3008 | 2322 | 375 | 39 | 350 | 100 | 15513 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8652 | 1025 | 3124 | 2412 | 729 | 76 | 381 | 108 | 16508 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4315 | 511 | 1558 | 1203 | 338 | 35 | 196 | 56 | 8213 |
| 5 | 3,965 | 3,484 | 126 | 265 | 89 | 870 | 0.540 | 1977 | 234 | 714 | 551 | 83 | 9 | 49 | 1 | 3620 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1394 | 0.866 | 3754 | 445 | 1356 | 1047 | 240 | 25 | 128 | 26 | 7019 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1254 | 0.779 | 3558 | 422 | 1285 | 992 | 176 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 4 | 0 | 2 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 260 | 31 | 94 | 73 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 498 | 59 | 180 | 139 | 81 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2737 | 1.700 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1367 | 0.849 | 1328 | 157 | 480 | 370 | 34 | 4 | 27 | 3 | 2403 |
| 24 | 2,710 | 2,334 | 45 | 147 | 183 | 2271 | 1.411 | 1325 | 157 | 478 | 369 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 830 | 0.516 | 1421 | 168 | 513 | 396 | 34 | 4 | 31 | 4 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0477 | 0.0467 | 0.0468 | 0.0860 | 0.0985 | 0.1434 | 0.0832 |
| 2 | #REF! | #REF! | #REF! | #REF! | 0.0000 | #REF! | #REF! | #REF! |
| 3 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0853 | 0.0979 | 0.1429 | 0.0828 |
| 4 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.14E-04 | 1.11E-04 | 3.30E-04 | 2.55E-04 | 7.58E-05 | 9.11E-06 | 1.18E-04 | 1.96E-05 | 1.83E-03 |
| 2 | 1 | 2.12E-03 | 2.57E-04 | 7.66E-04 | 5.93E-04 | 3.29E-04 | 3.95E-05 | 2.87E-04 | 4.71E-05 | 4.44E-03 |
| 3 | 1 | 3.41E-03 | 4.12E-04 | 1.23E-03 | 9.51E-04 | 4.92E-04 | 5.90E-05 | 4.75E-04 | 7.83E-05 | 7.10E-03 |
| 5 | 1 | 5.77E-04 | 6.99E-05 | 2.08E-04 | 1.61E-04 | 4.48E-05 | 5.38E-06 | 4.42E-05 | 7.78E-07 | 1.11E-03 |
| 6 | 1 | 1.76E-03 | 2.12E-04 | 6.34E-04 | 4.90E-04 | 2.06E-04 | 2.48E-05 | 1.83E-04 | 2.18E-05 | 3.53E-03 |
| 8 | 1 | 1.50E-03 | 1.81E-04 | 5.40E-04 | 4.18E-04 | 1.36E-04 | 1.63E-05 | 1.25E-04 | 0.00E+00 | 2.91E-03 |
| 11 | 1 | 1.42E-05 | 1.71E-06 | 5.11E-06 | 3.95E-06 | 3.28E-06 | 3.93E-07 | 1.93E-06 | 0.00E+00 | 3.05E-05 |
| 12 | 1 | 7.19E-05 | 8.70E-06 | 2.60E-05 | 2.01E-05 | 3.99E-05 | 4.79E-06 | 1.55E-05 | 0.00E+00 | 1.87E-04 |
| 14 | 1 | 2.70E-04 | 3.27E-05 | 9.76E-05 | 7.55E-05 | 8.06E-05 | 9.67E-06 | 3.63E-05 | 4.07E-06 | 6.07E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 2.09E-05 | 2.53E-06 | 7.55E-06 | 5.85E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.69E-05 |
| 21 | 1 | 6.09E-04 | 7.37E-05 | 2.20E-04 | 1.70E-04 | 2.89E-05 | 3.47E-06 | 3.77E-05 | 2.47E-06 | 1.15E-03 |
| 24 | 1 | 1.01E-03 | 1.22E-04 | 3.64E-04 | 2.82E-04 | 4.18E-05 | 5.02E-06 | 6.41E-05 | 4.20E-06 | 1.89E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.42E-05 | 2.93E-06 | 8.73E-06 | 6.76E-06 | 1.84E-06 | 2.21E-07 | 2.81E-06 | 2.39E-07 | 4.77E-05 |
| 30 | 1 | 1.01E-04 | 1.23E-05 | 3.66E-05 | 2.83E-05 | 7.71E-06 | 9.26E-07 | 1.18E-05 | 1.00E-06 | 2.00E-04 |
| 31 | 1 | 3.96E-04 | 4.79E-05 | 1.43E-04 | 1.11E-04 | 1.76E-05 | 2.11E-06 | 2.69E-05 | 1.83E-06 | 7.45E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 14,679 | 2982 | 569 | 116 | 1,885 | 383 | 5,940 | 1207 | 4687 | 8.44 | 0.035 | 0.0009 | 4.3 | 2.26E-02 |
| 2 | A | 731 | 0.45 | 15,246 | 6923 | 1,105 | 502 | 2,051 | 931 | 6,387 | 2900 | 11257 | 8.52 | 0.035 | 0.0009 | 10.4 | 5.48E-02 |
| 3 | A | 2352 | 1.46 | 7,604 | 11110 | 513 | 749 | 1,055 | 1541 | 3,300 | 4822 | 18223 | 8.68 | 0.035 | 0.0009 | 17.2 | 9.03E-02 |
| 5 | A | 870 | 0.54 | 3,484 | 1883 | 126 | 68 | 265 | 143 | 89 | 48 | 2143 | 3.36 | 0.035 | 0.0004 | 0.8 | 4.03E-03 |
| 6 | A | 1394 | 0.87 | 6,615 | 5728 | 363 | 314 | 687 | 595 | 1,549 | 1341 | 7979 | 6.53 | 0.035 | 0.0007 | 5.6 | 2.96E-02 |
| 8 | A | 1254 | 0.78 | 6,270 | 4885 | 266 | 207 | 520 | 405 | 0 | 0 | 5497 | 2.97 | 0.035 | 0.0003 | 1.7 | 9.13E-03 |
| 11 | A | 1201 | 0.75 | 62 | 46 | 7 | 5 | 8 | 6 | 0 | 0 | 57 | 3.48 | 0.035 | 0.0004 | 0.0 | 1.12E-04 |
| 12 | A | 824 | 0.51 | 458 | 235 | 119 | 61 | 98 | 50 | 0 | 0 | 346 | 4.14 | 0.035 | 0.0004 | 0.2 | 8.05E-04 |
| 14 | A | 1618 | 1.01 | 878 | 882 | 122 | 123 | 117 | 118 | 249 | 251 | 1373 | 7.12 | 0.035 | 0.0008 | 1.1 | 5.56E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2737 | 1.70 | 40 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 2.13 | 0.035 | 0.0002 | 0.0 | 8.08E-05 |
| 21 | A | 1367 | 0.85 | 2,340 | 1987 | 52 | 44 | 144 | 122 | 179 | 152 | 2305 | 4.10 | 0.035 | 0.0004 | 1.0 | 5.32E-03 |
| 24 | A | 2271 | 1.41 | 2,334 | 3293 | 45 | 64 | 147 | 208 | 183 | 258 | 3823 | 4.14 | 0.035 | 0.0004 | 1.7 | 8.91E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 188 | 79 | 7 | 3 | 22 | 9 | 35 | 15 | 106 | 6.00 | 0.035 | 0.0006 | 0.1 | 3.59E-04 |
| 30 | A | 2827 | 1.76 | 188 | 331 | 7 | 12 | 22 | 38 | 35 | 62 | 442 | 6.00 | 0.035 | 0.0006 | 0.3 | 1.50E-03 |
| 31 | A | 830 | 0.52 | 2,504 | 1291 | 52 | 27 | 169 | 87 | 218 | 113 | 1518 | 4.31 | 0.035 | 0.0005 | 0.7 | 3.69E-03 |

**World Logistics Center** **With Mitigation including Tier 4 and 5 day workweek**

**Onsite Construction Exhaust Emissions in 2021**

| | Onsite Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | **VOC (lbs/day)** | **NOx (lbs/day)** | **CO (lbs/day)** | **SO2 (lbs/day)** | **PM10 exhaust (lbs/day)** | **PM2.5 exhaust (lbs/day)** |
| Maximum Daily Total | 138.4 | 457.7 | 724.1 | 1.3 | 4.4 | 4.3 |
| Concrete Pouring | 1.4 | 26.1 | 44.8 | 0.1 | 0.1 | 0.1 |
| Non-Concrete Pouring | 137.0 | 431.6 | 679.3 | 1.2 | 4.3 | 4.2 |

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |

| **Emission Rates** | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Concrete Pouring | 0.029 | 0.549 | 0.942 | 0.002 | 0.002 | 0.002 |
| Non-Concrete Pouring | 1.728 | 5.443 | 8.567 | 0.015 | 0.054 | 0.053 |
| Total | 1.757 | 5.992 | 9.508 | 0.017 | 0.056 | 0.055 |

**Number of Volume Sources:** 81

**Emissions per Volume Source**

| | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Total | 0.02169319 | 0.07396962 | 0.117387 | 0.000213 | 0.000695428 | 0.000679858 |

**Variable Emission Factors**

| | **VOC** | **NOx** | **CO** | **SO2** | **PM10 exhaust** | **PM2.5 exhaust** |
|---|---|---|---|---|---|---|
| 6am to 4pm | 0.98325359 | 0.90844033 | 0.900968 | 0.878049 | 0.962686567 | 0.961832061 |
| 4pm to Midnight | 0 | 0 | 0 | 0 | 0 | 0 |
| Midnight to 6am | 0.01674641 | 0.09155967 | 0.099032 | 0.121951 | 0.037313433 | 0.038167939 |

**Fugitive Dust**

| | **PM10 (lbs/day)** | **PM2.5 (lbs/day)** |
|---|---|---|
| All Sources | 113.8 | 16.9 |

**Duration of Construction** 10 hours

| **Emissions** | **PM10 (g/sec)** | **PM2.5 (g/sec)** |
|---|---|---|
| All Sources | 1.43514444 | 0.21312778 |

**Size of the Construction Area Source** 763712 m2

| **Area Emissions** | **PM10 (g/m2-sec)** | **PM2.5 (g/m2-sec)** |
|---|---|---|
| AllSources | 1.8792E-06 | 2.7907E-07 |

**World Logistics Center** **With Mitigation including Tier IV an 5 day work week**

**Onsite Construction Exhaust Emissions in 2021**

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |
| Construction | 260 | days/year |

**Onsite Emissions**

| | VOC (tons/year) | NOx (tons/year) | CO (tons/year) | SO2 (tons/year) | PM10 exhaust (tons/year) | PM2.5 exhaust (tons/year) |
|---|---|---|---|---|---|---|
| Annual Total | 6.5 | 45.2 | 66.7 | 0.1 | 0.5 | 0.5 |
| Concrete Pouring | 0.2 | 3.4 | 5.8 | 0.0 | 0.0 | 0.0 |
| Non-Concrete Pouring | 6.3 | 41.8 | 60.9 | 0.1 | 0.5 | 0.5 |

| **Average Emissions** | VOC (g/sec) | NOx (g/sec) | CO (g/sec) | SO2 (g/sec) | PM10 exhaust (g/sec) | PM2.5 exhaust (g/sec) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 3.23E-02 | 5.50E-01 | 9.38E-01 | 0.00E+00 | 2.92E-03 | 2.91E-03 |
| Non-Concrete Pouring | 6.11E-01 | 4.05E+00 | 5.91E+00 | 9.70E-03 | 4.55E-02 | 4.48E-02 |

**Number of Volume Sources:** 81

**Emissions per Volume Source**

| | VOC (g/sec/src) | NOx (g/sec/src) | CO (g/sec/src) | SO2 (g/sec/src) | PM10 exhaust (g/sec/src) | PM2.5 exhaust (g/sec/src) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 3.99E-04 | 6.79E-03 | 1.16E-02 | 0.00E+00 | 3.61E-05 | 3.59E-05 |
| Non Concrete Pouring | 7.55E-03 | 5.01E-02 | 7.29E-02 | 1.20E-04 | 5.61E-04 | 5.53E-04 |
| **Total** | 7.94E-03 | 5.68E-02 | 8.45E-02 | 1.20E-04 | 5.97E-04 | 5.89E-04 |

**Variable Emission Factors - PM10**

| | 6am to 4pm | 4pm to MN | MN to 6am |
|---|---|---|---|
| PM10 | 9.40E-01 | 0.00E+00 | 6.04E-02 |
| Nox | 8.81E-01 | 0.00E+00 | 1.19E-01 |

**Fugitive Dust**

| | PM10 (tons/year) | PM2.5 (tons/year) |
|---|---|---|
| All Sources | 2 | 0.42 |

**Duration of Construction** 10 hours

| **Emissions** | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|
| All Sources | 0.05758498 | 0.01209285 |

**Size of the Construction Area Source** 763712 m2

| **Area Emissions** | PM10 (g/m2-sec) | PM2.5 (g/m2-sec) |
|---|---|---|
| AllSources | 7.5401E-08 | 1.5834E-08 |

**World Logistics Center** **2021** **Annual Nox** Based on PB Traffic Results 10/3/2013
**Project Emissions** With EMFAC2014 **Rev 5** With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 5.98E-02 | 3.99E-03 | 6.38E-02 |
| 2 | 1.45E-01 | 1.00E-02 | 1.55E-01 |
| 3 | 2.40E-01 | 1.61E-02 | 2.57E-01 |
| 5 | 5.04E-03 | 2.19E-03 | 7.23E-03 |
| 6 | 5.51E-02 | 5.69E-03 | 6.08E-02 |
| 8 | 6.14E-03 | 4.54E-03 | 1.07E-02 |
| 11 | 1.14E-04 | 6.06E-05 | 1.74E-04 |
| 12 | 1.04E-03 | 4.22E-04 | 1.46E-03 |
| 14 | 1.34E-02 | 1.36E-03 | 1.48E-02 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1.67E-07 | 5.13E-05 | 5.14E-05 |
| 21 | 8.09E-03 | 1.89E-03 | 9.98E-03 |
| 24 | 1.27E-02 | 2.91E-03 | 1.56E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 8.03E-04 | 9.44E-05 | 8.98E-04 |
| 30 | 3.36E-03 | 3.96E-04 | 3.76E-03 |
| 31 | 6.34E-03 | 1.33E-03 | 7.67E-03 |
| | | | 6.08E-01 |

| ID | Arterial | From | To | | Estimated 2021 Vehicles - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

Traffic Volumes Interpolated from data provide by parsons Brinkerhoff for 2022 and 2035

**World Logistics Center** **2021** **Annual Nox** **With Mitigation: MY2010 T6 and T7 DSL**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 26 | 2 | 1 | 2 | 116 | 39 | 1535 | 5848 | 7568 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 27 | 2 | 1 | 3 | 226 | 75 | 1670 | 6288 | 8291 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 13 | 1 | 1 | 1 | 105 | 35 | 859 | 3249 | 4263 |
| 5 | 3964 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 9 | 216 | 88 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 25 | 559 | 1525 | 2197 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 4 | 117 | 176 | 313 |
| 24 | 2709 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 34 | 55 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 34 | 55 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 4 | 0 | 0 | 0 | 11 | 4 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0852 | 0.7829 | 0.0409 | 0.0418 | 1.6238 | 0.9894 | 1.5940 | 3.8920 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.15E-06 | 2.86E-06 | 1.34E-07 | 2.42E-07 | 4.44E-04 | 8.97E-05 | 5.75E-03 | 5.35E-02 | 5.98E-02 |
| 2 | 1 | 1.20E-05 | 6.65E-06 | 3.10E-07 | 5.63E-07 | 1.93E-03 | 3.90E-04 | 1.40E-02 | 1.29E-01 | 1.45E-01 |
| 3 | 1 | 1.92E-05 | 1.07E-05 | 4.98E-07 | 9.03E-07 | 2.88E-03 | 5.82E-04 | 2.32E-02 | 2.14E-01 | 2.40E-01 |
| 5 | 1 | 3.57E-06 | 1.98E-06 | 9.24E-08 | 1.68E-07 | 2.86E-04 | 5.79E-05 | 2.36E-03 | 2.34E-03 | 5.04E-03 |
| 6 | 1 | 7.81E-06 | 4.34E-06 | 2.02E-07 | 3.67E-07 | 9.52E-04 | 1.92E-04 | 7.05E-03 | 4.69E-02 | 5.51E-02 |
| 8 | 1 | 7.34E-06 | 4.08E-06 | 1.90E-07 | 3.45E-07 | 6.92E-04 | 1.40E-04 | 5.29E-03 | 0.00E+00 | 6.14E-03 |
| 11 | 1 | 8.00E-08 | 4.44E-08 | 2.07E-09 | 3.76E-09 | 2.01E-05 | 4.05E-06 | 8.97E-05 | 0.00E+00 | 1.14E-04 |
| 12 | 1 | 4.05E-07 | 2.25E-07 | 1.05E-08 | 1.91E-08 | 2.34E-04 | 4.73E-05 | 7.54E-04 | 0.00E+00 | 1.04E-03 |
| 14 | 1 | 1.53E-06 | 8.47E-07 | 3.95E-08 | 7.17E-08 | 4.71E-04 | 9.52E-05 | 1.77E-03 | 1.11E-02 | 1.34E-02 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.02E-07 | 5.69E-08 | 2.66E-09 | 4.82E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.67E-07 |
| 21 | 1 | 3.16E-06 | 1.76E-06 | 8.19E-08 | 1.49E-07 | 1.56E-04 | 3.15E-05 | 1.69E-03 | 6.20E-03 | 8.09E-03 |
| 24 | 1 | 4.88E-06 | 2.71E-06 | 1.26E-07 | 2.29E-07 | 2.09E-04 | 4.22E-05 | 2.67E-03 | 9.81E-03 | 1.27E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.36E-07 | 7.57E-08 | 3.53E-09 | 6.41E-09 | 1.13E-05 | 2.28E-06 | 1.39E-04 | 6.51E-04 | 8.03E-04 |
| 30 | 1 | 5.71E-07 | 3.17E-07 | 1.48E-08 | 2.68E-08 | 4.72E-05 | 9.54E-06 | 5.80E-04 | 2.73E-03 | 3.36E-03 |
| 31 | 1 | 2.20E-06 | 1.22E-06 | 5.71E-08 | 1.04E-07 | 1.02E-04 | 2.06E-05 | 1.29E-03 | 4.92E-03 | 6.34E-03 |

**World Logistics Center** **2021** **Annual Nox** **With Mitigation: MY2010 T6 and T7 DSL**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8226 | 1002 | 3054 | 2366 | 375 | 40 | 350 | 92 | 15505 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8543 | 1041 | 3172 | 2458 | 728 | 77 | 381 | 99 | 16498 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4261 | 519 | 1582 | 1226 | 338 | 36 | 196 | 51 | 8209 |
| 5 | 3,964 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1952 | 238 | 725 | 562 | 83 | 9 | 49 | 1 | 3619 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3707 | 451 | 1376 | 1066 | 239 | 25 | 128 | 24 | 7017 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3514 | 428 | 1305 | 1011 | 175 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 5 | 0 | 1 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 257 | 31 | 95 | 74 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 492 | 60 | 183 | 142 | 80 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 22 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1311 | 160 | 487 | 377 | 34 | 4 | 27 | 3 | 2402 |
| 24 | 2,709 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1308 | 159 | 486 | 376 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 105 | 13 | 39 | 30 | 5 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 105 | 13 | 39 | 30 | 5 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1403 | 171 | 521 | 404 | 34 | 4 | 31 | 3 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0488 | 0.1316 | 0.0732 | 0.1438 | 0.3354 | 0.1888 | 0.5022 | 3.1675 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.43E-04 | 3.10E-04 | 5.25E-04 | 8.00E-04 | 2.95E-04 | 1.76E-05 | 4.13E-04 | 6.88E-04 | 3.99E-03 |
| 2 | 1 | 2.19E-03 | 7.20E-04 | 1.22E-03 | 1.86E-03 | 1.28E-03 | 7.62E-05 | 1.01E-03 | 1.65E-03 | 1.00E-02 |
| 3 | 1 | 3.52E-03 | 1.15E-03 | 1.96E-03 | 2.98E-03 | 1.92E-03 | 1.14E-04 | 1.66E-03 | 2.75E-03 | 1.61E-02 |
| 5 | 1 | 6.53E-04 | 2.14E-04 | 3.63E-04 | 5.53E-04 | 1.91E-04 | 1.13E-05 | 1.69E-04 | 3.01E-05 | 2.19E-03 |
| 6 | 1 | 1.43E-03 | 4.69E-04 | 7.96E-04 | 1.21E-03 | 6.33E-04 | 3.77E-05 | 5.06E-04 | 6.03E-04 | 5.69E-03 |
| 8 | 1 | 1.34E-03 | 4.42E-04 | 7.49E-04 | 1.14E-03 | 4.61E-04 | 2.74E-05 | 3.80E-04 | 0.00E+00 | 4.54E-03 |
| 11 | 1 | 1.46E-05 | 4.81E-06 | 8.15E-06 | 1.24E-05 | 1.33E-05 | 7.94E-07 | 6.44E-06 | 0.00E+00 | 6.06E-05 |
| 12 | 1 | 7.42E-05 | 2.44E-05 | 4.13E-05 | 6.29E-05 | 1.56E-04 | 9.26E-06 | 5.42E-05 | 0.00E+00 | 4.22E-04 |
| 14 | 1 | 2.79E-04 | 9.17E-05 | 1.56E-04 | 2.37E-04 | 3.13E-04 | 1.86E-05 | 1.27E-04 | 1.43E-04 | 1.36E-03 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.88E-05 | 6.16E-06 | 1.04E-05 | 1.59E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.13E-05 |
| 21 | 1 | 5.79E-04 | 1.90E-04 | 3.22E-04 | 4.90E-04 | 1.04E-04 | 6.17E-06 | 1.21E-04 | 7.98E-05 | 1.89E-03 |
| 24 | 1 | 8.93E-04 | 2.93E-04 | 4.97E-04 | 7.57E-04 | 1.39E-04 | 8.27E-06 | 1.92E-04 | 1.26E-04 | 2.91E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.49E-05 | 8.19E-06 | 1.39E-05 | 2.11E-05 | 7.50E-06 | 4.46E-07 | 9.96E-06 | 8.37E-06 | 9.44E-05 |
| 30 | 1 | 1.04E-04 | 3.43E-05 | 5.82E-05 | 8.86E-05 | 3.14E-05 | 1.87E-06 | 4.17E-05 | 3.51E-05 | 3.96E-04 |
| 31 | 1 | 4.04E-04 | 1.33E-04 | 2.25E-04 | 3.42E-04 | 6.77E-05 | 4.03E-06 | 9.29E-05 | 6.34E-05 | 1.33E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2021 Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.22E-01 | 9.90E-03 |
| Light Logistics | Phase 1 | 2.28E-04 | 2.29E-05 |
| Utilities Service Station | Phase 1 | 1.73E-04 | 2.19E-05 |
| Gas Station w/Convenience Store | Phase 1 | 3.16E-04 | 7.43E-06 |
| Convenience Store | Phase 1 | 4.96E-04 | 1.21E-05 |
| Fire Station | Phase 1 | 1.53E-08 | 5.29E-06 |
| Total | | 1.23E-01 | 9.97E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 9.82E-02 | 1.83E-03 |
| Light Logistics | Phase 1 | 3.82E-04 | 8.09E-06 |
| Utilities Service Station | Phase 1 | 6.13E-04 | 1.75E-05 |
| Gas Station w/Convenience Store | Phase 1 | 1.45E-03 | 2.22E-05 |
| Convenience Store | Phase 1 | 2.28E-03 | 3.48E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.03E-01 | 1.91E-03 |

| **Total Onsite Emission** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.23E-01 | 9.97E-03 | |
| | Idling Emissions (g/sec) | 1.03E-01 | 1.91E-03 | |
| | Total Vehicle Emissions (g/sec) | 2.26E-01 | 1.19E-02 | |
| **Other Onsite Emissions** | | | | |
| | Yard Trucks (LPG) (g/sec) | | 1.74E-01 | |
| | Fork Lifts (LPG) (g/sec) | | 1.66E-02 | |
| | Total Other Onsite Sources (g/sec) | | 1.91E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 2.26E-01 | 2.03E-01 | 4.28E-01 |
| | Area (m2) | | | 4.07E+06 |
| | Total Emission Rate (g/m2-sec) | | | 1.05E-07 |

**World Logistics Center** **2021** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.122 | 55 | 330 | 0.21 | 1.38E+00 | 3.04E-03 | 1.60E-05 | |
| | **LDT1** | 15 | 0.720 | 3 | 330 | 0.21 | 4.35E-01 | 9.58E-04 | 5.03E-06 | |
| | **LDT2** | 15 | 0.090 | 3 | 330 | 0.21 | 5.27E-02 | 1.16E-04 | 6.10E-07 | |
| | **MDT** | 15 | 0.084 | 5 | 330 | 0.21 | 8.49E-02 | 1.87E-04 | 9.83E-07 | |
| | **LHDT1** | 15 | 1.594 | 275 | 330 | 0.21 | 8.99E+01 | 1.98E-01 | 1.04E-03 | |
| | **LHDT2** | 15 | 1.029 | 90 | 330 | 0.21 | 1.90E+01 | 4.18E-02 | 2.20E-04 | |
| | **MHDT** | 15 | 4.240 | 1441 | 330 | 0.21 | 1.25E+03 | 2.76E+00 | 1.45E-02 | |
| | **HHDT** | 15 | 9.580 | 4652 | 330 | 0.21 | 9.14E+03 | 2.01E+01 | 1.06E-01 | |
| | | | | | | | | | | 1.22E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.122 | 0 | 175 | 0.11 | 3.11E-03 | 6.85E-06 | 3.60E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 175 | 0.11 | 9.79E-04 | 2.16E-06 | 1.13E-08 | |
| | **LDT2** | 15 | 0.090 | 0 | 175 | 0.11 | 1.19E-04 | 2.62E-07 | 1.37E-09 | |
| | **MDT** | 15 | 0.084 | 0 | 175 | 0.11 | 1.91E-04 | 4.21E-07 | 2.21E-09 | |
| | **LHDT1** | 15 | 1.594 | 2 | 175 | 0.11 | 2.98E-01 | 6.57E-04 | 3.45E-06 | |
| | **LHDT2** | 15 | 1.029 | 1 | 175 | 0.11 | 6.30E-02 | 1.39E-04 | 7.29E-07 | |
| | **MHDT** | 15 | 4.240 | 6 | 175 | 0.11 | 2.74E+00 | 6.03E-03 | 3.17E-05 | |
| | **HHDT** | 15 | 9.580 | 16 | 175 | 0.11 | 1.66E+01 | 3.65E-02 | 1.92E-04 | 2.28E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.122 | 0 | 100 | 0.06 | 2.62E-03 | 5.77E-06 | 3.03E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 100 | 0.06 | 8.25E-04 | 1.82E-06 | 9.55E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 100 | 0.06 | 1.00E-04 | 2.20E-07 | 1.16E-09 | |
| | **MDT** | 15 | 0.084 | 0 | 100 | 0.06 | 1.61E-04 | 3.55E-07 | 1.86E-09 | |
| | **LHDT1** | 15 | 1.594 | 6 | 100 | 0.06 | 5.69E-01 | 1.25E-03 | 6.58E-06 | |
| | **LHDT2** | 15 | 1.029 | 2 | 100 | 0.06 | 1.20E-01 | 2.65E-04 | 1.39E-06 | |
| | **MHDT** | 15 | 4.240 | 5 | 100 | 0.06 | 1.29E+00 | 2.85E-03 | 1.50E-05 | |
| | **HHDT** | 15 | 9.580 | 22 | 100 | 0.06 | 1.29E+01 | 2.85E-02 | 1.50E-04 | 1.73E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.122 | 0 | 50 | 0.03 | 7.59E-04 | 1.67E-06 | 8.78E-09 | |
| | **LDT1** | 15 | 0.720 | 0 | 50 | 0.03 | 2.39E-04 | 5.26E-07 | 2.76E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 50 | 0.03 | 2.90E-05 | 6.38E-08 | 3.35E-10 | |
| | **MDT** | 15 | 0.084 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | **LHDT1** | 15 | 1.594 | 1 | 50 | 0.03 | 3.99E-02 | 8.78E-05 | 4.61E-07 | |
| | **LHDT2** | 15 | 1.029 | 0 | 50 | 0.03 | 8.42E-03 | 1.85E-05 | 9.74E-08 | |
| | **MHDT** | 15 | 4.240 | 14 | 50 | 0.03 | 1.83E+00 | 4.03E-03 | 2.12E-05 | |
| | **HHDT** | 15 | 9.580 | 85 | 50 | 0.03 | 2.54E+01 | 5.60E-02 | 2.94E-04 | 3.16E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.122 | 0 | 50 | 0.03 | 1.26E-03 | 2.77E-06 | 1.46E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 50 | 0.03 | 3.96E-04 | 8.72E-07 | 4.58E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 50 | 0.03 | 4.80E-05 | 1.06E-07 | 5.56E-10 | |
| | **MDT** | 15 | 0.084 | 0 | 50 | 0.03 | 7.73E-05 | 1.70E-07 | 8.95E-10 | |
| | **LHDT1** | 15 | 1.594 | 1 | 50 | 0.03 | 6.09E-02 | 1.34E-04 | 7.04E-07 | |
| | **LHDT2** | 15 | 1.029 | 0 | 50 | 0.03 | 1.29E-02 | 2.83E-05 | 1.49E-07 | |
| | **MHDT** | 15 | 4.240 | 23 | 50 | 0.03 | 3.00E+00 | 6.60E-03 | 3.47E-05 | |
| | **HHDT** | 15 | 9.580 | 134 | 50 | 0.03 | 3.98E+01 | 8.76E-02 | 4.60E-04 | 4.96E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.122 | 0 | 50 | 0.03 | 9.36E-04 | 2.06E-06 | 1.08E-08 | |
| | **LDT1** | 15 | 0.720 | 0 | 50 | 0.03 | 2.95E-04 | 6.49E-07 | 3.41E-09 | |
| | **LDT2** | 15 | 0.090 | 0 | 50 | 0.03 | 3.57E-05 | 7.87E-08 | 4.14E-10 | |
| | **MDT** | 15 | 0.084 | 0 | 50 | 0.03 | 5.76E-05 | 1.27E-07 | 6.66E-10 | |
| | **LHDT1** | 15 | 1.594 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.029 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.240 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.580 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-08 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | **LDT1** | | | 3 | | | 4.37E-01 | 9.64E-04 | 5.06E-06 | |
| | **LDT2** | | | 3 | | | 5.31E-02 | 1.17E-04 | 6.14E-07 | |
| | **MDT** | | | 5 | | | 8.55E-02 | 1.88E-04 | 9.89E-07 | |
| | **LHDT1** | | | 285 | | | 9.08E+01 | 2.00E-01 | 1.05E-03 | |
| | **LHDT2** | | | 93 | | | 1.92E+01 | 4.23E-02 | 2.22E-04 | |
| | **MHDT** | | | 1488 | | | 1.26E+03 | 2.78E+00 | 1.46E-02 | |
| | **HHDT** | | | 4909 | | | 9.23E+03 | 2.03E+01 | 1.07E-01 | |
| | **Total** | | | 6843 | | | 1.06E+04 | 2.34E+01 | 1.23E-01 | 1.23E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 64.000 | 5 | 138 | 7.33E+02 | 1.62E+00 | 8.49E-03 | |
| | **LHDT2** | 61.500 | 5 | 45 | 2.31E+02 | 5.08E-01 | 2.67E-03 | |
| | **MHDT** | 30.210 | 5 | 720 | 1.81E+03 | 3.99E+00 | 2.10E-02 | |
| | **HHDT** | 29.420 | 5 | 2326 | 5.70E+03 | 1.26E+01 | 6.60E-02 | |
| | | | | 3229 | 8.48E+03 | 1.87E+01 | 9.82E-02 | 9.82E-02 |
| **Idle at Light Logistics** | **LHDT1** | 64.000 | 5 | 1 | 4.59E+00 | 1.01E-02 | 5.31E-05 | |
| | **LHDT2** | 61.500 | 5 | 0 | 1.44E+00 | 3.18E-03 | 1.67E-05 | |
| | **MHDT** | 30.210 | 5 | 3 | 7.47E+00 | 1.65E-02 | 8.65E-05 | |
| | **HHDT** | 29.420 | 5 | 8 | 1.95E+01 | 4.30E-02 | 2.26E-04 | |
| | | | | 12 | 3.30E+01 | 7.27E-02 | 3.82E-04 | 3.82E-04 |
| **Idle at Utility** | **LHDT1** | 64.000 | 5 | 3 | 1.53E+01 | 3.37E-02 | 1.77E-04 | |
| | **LHDT2** | 61.500 | 5 | 1 | 4.81E+00 | 1.06E-02 | 5.57E-05 | |
| | **MHDT** | 30.210 | 5 | 2 | 6.17E+00 | 1.36E-02 | 7.15E-05 | |
| | **HHDT** | 29.420 | 5 | 11 | 2.66E+01 | 5.86E-02 | 3.08E-04 | |
| | | | | 17 | 5.29E+01 | 1.17E-01 | 6.13E-04 | 6.13E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 64.000 | 5 | 0 | 2.15E+00 | 4.73E-03 | 2.49E-05 | |
| | **LHDT2** | 61.500 | 5 | 0 | 6.75E-01 | 1.49E-03 | 7.81E-06 | |
| | **MHDT** | 30.210 | 5 | 7 | 1.75E+01 | 3.86E-02 | 2.03E-04 | |
| | **HHDT** | 29.420 | 5 | 43 | 1.05E+02 | 2.31E-01 | 1.21E-03 | |
| | | | | 50 | 1.25E+02 | 2.76E-01 | 1.45E-03 | 1.45E-03 |
| **Idle at Convenience Store** | **LHDT1** | 64.000 | 5 | 1 | 3.28E+00 | 7.22E-03 | 3.79E-05 | |
| | **LHDT2** | 61.500 | 5 | 0 | 1.03E+00 | 2.27E-03 | 1.19E-05 | |
| | **MHDT** | 30.210 | 5 | 11 | 2.87E+01 | 6.31E-02 | 3.32E-04 | |
| | **HHDT** | 29.420 | 5 | 67 | 1.64E+02 | 3.61E-01 | 1.90E-03 | |
| | | | | 79 | 1.97E+02 | 4.33E-01 | 2.28E-03 | 2.28E-03 |
| **Idle at Firestation** | **LHDT1** | 64.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 61.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 30.210 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 29.420 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 8.89E+03 | 1.96E+01 | 1.03E-01 | 1.03E-01 |

**World Logistics Center** **2021** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.071 | 17378 | 330 | 0.21 | 2.52E+02 | 5.54E-01 | 2.91E-03 | |
| | **LDT1** | 15 | 0.201 | 2059 | 330 | 0.21 | 8.49E+01 | 1.87E-01 | 9.83E-04 | |
| | **LDT2** | 15 | 0.107 | 6276 | 330 | 0.21 | 1.38E+02 | 3.04E-01 | 1.60E-03 | |
| | **MDT** | 15 | 0.202 | 4845 | 330 | 0.21 | 2.00E+02 | 4.41E-01 | 2.32E-03 | |
| | **LHDT1** | 15 | 0.394 | 888 | 330 | 0.21 | 7.18E+01 | 1.58E-01 | 8.31E-04 | |
| | **LHDT2** | 15 | 0.228 | 93 | 330 | 0.21 | 4.35E+00 | 9.58E-03 | 5.03E-05 | |
| | **MHDT** | 15 | 0.611 | 329 | 330 | 0.21 | 4.12E+01 | 9.07E-02 | 4.77E-04 | |
| | **HHDT** | 15 | 3.885 | 80 | 330 | 0.21 | 6.36E+01 | 1.40E-01 | 7.36E-04 | |
| | | | | | | | | | | 9.90E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.071 | 74 | 175 | 0.11 | 5.67E-01 | 1.25E-03 | 6.56E-06 | |
| | **LDT1** | 15 | 0.201 | 9 | 175 | 0.11 | 1.91E-01 | 4.21E-04 | 2.21E-06 | |
| | **LDT2** | 15 | 0.107 | 27 | 175 | 0.11 | 3.11E-01 | 6.84E-04 | 3.60E-06 | |
| | **MDT** | 15 | 0.202 | 21 | 175 | 0.11 | 4.51E-01 | 9.93E-04 | 5.22E-06 | |
| | **LHDT1** | 15 | 0.394 | 6 | 175 | 0.11 | 2.38E-01 | 5.25E-04 | 2.76E-06 | |
| | **LHDT2** | 15 | 0.228 | 1 | 175 | 0.11 | 1.44E-02 | 3.18E-05 | 1.67E-07 | |
| | **MHDT** | 15 | 0.611 | 1 | 175 | 0.11 | 8.99E-02 | 1.98E-04 | 1.04E-06 | |
| | **HHDT** | 15 | 3.885 | 0 | 175 | 0.11 | 1.15E-01 | 2.54E-04 | 1.34E-06 | 2.29E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.071 | 109 | 100 | 0.06 | 4.77E-01 | 1.05E-03 | 5.53E-06 | |
| | **LDT1** | 15 | 0.201 | 13 | 100 | 0.06 | 1.61E-01 | 3.55E-04 | 1.86E-06 | |
| | **LDT2** | 15 | 0.107 | 39 | 100 | 0.06 | 2.62E-01 | 5.77E-04 | 3.03E-06 | |
| | **MDT** | 15 | 0.202 | 30 | 100 | 0.06 | 3.80E-01 | 8.37E-04 | 4.40E-06 | |
| | **LHDT1** | 15 | 0.394 | 19 | 100 | 0.06 | 4.54E-01 | 1.00E-03 | 5.26E-06 | |
| | **LHDT2** | 15 | 0.228 | 2 | 100 | 0.06 | 2.75E-02 | 6.06E-05 | 3.19E-07 | |
| | **MHDT** | 15 | 0.611 | 1 | 100 | 0.06 | 4.25E-02 | 9.36E-05 | 4.92E-07 | |
| | **HHDT** | 15 | 3.885 | 0 | 100 | 0.06 | 8.99E-02 | 1.98E-04 | 1.04E-06 | 2.19E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.071 | 63 | 50 | 0.03 | 1.38E-01 | 3.05E-04 | 1.60E-06 | |
| | **LDT1** | 15 | 0.201 | 7 | 50 | 0.03 | 4.66E-02 | 1.03E-04 | 5.40E-07 | |
| | **LDT2** | 15 | 0.107 | 23 | 50 | 0.03 | 7.58E-02 | 1.67E-04 | 8.77E-07 | |
| | **MDT** | 15 | 0.202 | 18 | 50 | 0.03 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LHDT1** | 15 | 0.394 | 3 | 50 | 0.03 | 3.19E-02 | 7.02E-05 | 3.69E-07 | |
| | **LHDT2** | 15 | 0.228 | 0 | 50 | 0.03 | 1.93E-03 | 4.25E-06 | 2.23E-08 | |
| | **MHDT** | 15 | 0.611 | 3 | 50 | 0.03 | 6.02E-02 | 1.33E-04 | 6.97E-07 | |
| | **HHDT** | 15 | 3.885 | 1 | 50 | 0.03 | 1.77E-01 | 3.90E-04 | 2.05E-06 | 7.43E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.071 | 104 | 50 | 0.03 | 2.29E-01 | 5.05E-04 | 2.65E-06 | |
| | **LDT1** | 15 | 0.201 | 12 | 50 | 0.03 | 7.73E-02 | 1.70E-04 | 8.95E-07 | |
| | **LDT2** | 15 | 0.107 | 38 | 50 | 0.03 | 1.26E-01 | 2.77E-04 | 1.45E-06 | |
| | **MDT** | 15 | 0.202 | 29 | 50 | 0.03 | 1.82E-01 | 4.02E-04 | 2.11E-06 | |
| | **LHDT1** | 15 | 0.394 | 4 | 50 | 0.03 | 4.86E-02 | 1.07E-04 | 5.63E-07 | |
| | **LHDT2** | 15 | 0.228 | 0 | 50 | 0.03 | 2.95E-03 | 6.49E-06 | 3.41E-08 | |
| | **MHDT** | 15 | 0.611 | 5 | 50 | 0.03 | 9.86E-02 | 2.17E-04 | 1.14E-06 | |
| | **HHDT** | 15 | 3.885 | 2 | 50 | 0.03 | 2.77E-01 | 6.09E-04 | 3.20E-06 | 1.21E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.071 | 78 | 50 | 0.03 | 1.71E-01 | 3.76E-04 | 1.97E-06 | |
| | **LDT1** | 15 | 0.201 | 9 | 50 | 0.03 | 5.75E-02 | 1.27E-04 | 6.66E-07 | |
| | **LDT2** | 15 | 0.107 | 28 | 50 | 0.03 | 9.35E-02 | 2.06E-04 | 1.08E-06 | |
| | **MDT** | 15 | 0.202 | 22 | 50 | 0.03 | 1.36E-01 | 2.99E-04 | 1.57E-06 | |
| | **LHDT1** | 15 | 0.394 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.228 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.611 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.885 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.29E-06 |
| **Total - All Buildings** | **LDA** | | | 17806 | | | 2.53E+02 | 5.58E-01 | 2.93E-03 | |
| | **LDT1** | | | 2109 | | | 8.54E+01 | 1.88E-01 | 9.89E-04 | |
| | **LDT2** | | | 6430 | | | 1.39E+02 | 3.06E-01 | 1.61E-03 | |
| | **MDT** | | | 4964 | | | 2.01E+02 | 4.44E-01 | 2.33E-03 | |
| | **LHDT1** | | | 919 | | | 7.26E+01 | 1.60E-01 | 8.40E-04 | |
| | **LHDT2** | | | 96 | | | 4.40E+00 | 9.68E-03 | 5.09E-05 | |
| | **MHDT** | | | 340 | | | 4.15E+01 | 9.13E-02 | 4.80E-04 | |
| | **HHDT** | | | 84 | | | 6.42E+01 | 1.41E-01 | 7.43E-04 | |
| | **Total** | | | 32749 | | | 8.62E+02 | 1.90E+00 | 9.97E-03 | 9.97E-03 |

**Non-Diesel Truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 1.220 | 5 | 444 | 4.52E+01 | 9.95E-02 | 5.23E-04 | |
| | **LHDT2** | 1.210 | 5 | 47 | 4.69E+00 | 1.03E-02 | 5.43E-05 | |
| | **MHDT** | 1.820 | 5 | 164 | 2.49E+01 | 5.49E-02 | 2.89E-04 | |
| | **HHDT** | 25.014 | 5 | 40 | 8.32E+01 | 1.83E-01 | 9.63E-04 | |
| | | | | 695 | 1.58E+02 | 3.48E-01 | 1.83E-03 | 1.83E-03 |
| **Idle at Light Logistics** | **LHDT1** | 1.220 | 5 | 3 | 2.82E-01 | 6.22E-04 | 3.27E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 2.94E-02 | 6.47E-05 | 3.40E-07 | |
| | **MHDT** | 1.820 | 5 | 1 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 25.014 | 5 | 0 | 2.85E-01 | 6.27E-04 | 3.30E-06 | |
| | | | | 4 | 6.99E-01 | 1.54E-03 | 8.09E-06 | 8.09E-06 |
| **Idle at Utility** | **LHDT1** | 1.220 | 5 | 9 | 9.43E-01 | 2.08E-03 | 1.09E-05 | |
| | **LHDT2** | 1.210 | 5 | 1 | 9.80E-02 | 2.16E-04 | 1.13E-06 | |
| | **MHDT** | 1.820 | 5 | 1 | 8.49E-02 | 1.87E-04 | 9.83E-07 | |
| | **HHDT** | 25.014 | 5 | 0 | 3.88E-01 | 8.55E-04 | 4.49E-06 | |
| | | | | 11 | 1.51E+00 | 3.34E-03 | 1.75E-05 | 1.75E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 1.220 | 5 | 1 | 1.32E-01 | 2.91E-04 | 1.53E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 1.37E-02 | 3.03E-05 | 1.59E-07 | |
| | **MHDT** | 1.820 | 5 | 2 | 2.41E-01 | 5.30E-04 | 2.79E-06 | |
| | **HHDT** | 25.014 | 5 | 1 | 1.53E+00 | 3.37E-03 | 1.77E-05 | |
| | | | | 4 | 1.91E+00 | 4.22E-03 | 2.22E-05 | 2.22E-05 |
| **Idle at Convenience Store** | **LHDT1** | 1.220 | 5 | 2 | 2.02E-01 | 4.45E-04 | 2.34E-06 | |
| | **LHDT2** | 1.210 | 5 | 0 | 2.10E-02 | 4.62E-05 | 2.43E-07 | |
| | **MHDT** | 1.820 | 5 | 3 | 3.94E-01 | 8.68E-04 | 4.56E-06 | |
| | **HHDT** | 25.014 | 5 | 1 | 2.39E+00 | 5.26E-03 | 2.77E-05 | |
| | | | | 6 | 3.01E+00 | 6.62E-03 | 3.48E-05 | 3.48E-05 |
| **Idle at Firestation** | **LHDT1** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 1.210 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.820 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.014 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 1.65E+02 | 3.64E-01 | 1.91E-03 | 1.91E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2021** **Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Gas Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.84E-03 | 3.77E-03 |
| Light Logistics | Phase 1 | 3.68E-06 | 8.61E-06 |
| Utilities Service Station | Phase 1 | 2.93E-06 | 7.83E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.18E-06 | 3.28E-06 |
| Convenience Store | Phase 1 | 6.58E-06 | 5.30E-06 |
| Fire Station | Phase 1 | 6.34E-09 | 1.97E-06 |
| Total | | 1.85E-03 | 3.80E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicle Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.84E-04 | 2.43E-05 |
| Light Logistics | Phase 1 | 1.00E-06 | 1.38E-07 |
| Utilities Service Station | Phase 1 | 2.92E-06 | 3.99E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.30E-06 | 1.24E-07 |
| Convenience Store | Phase 1 | 2.02E-06 | 1.96E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.91E-04 | 2.52E-05 |

**Total Onsite Emission**

| | | | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 1.85E-03 | 3.80E-03 | |
| Idling Emissions (g/sec) | 1.91E-04 | 2.52E-05 | |
| Total Vehicle Emissions (g/sec) | 2.04E-03 | 3.83E-03 | 5.87E-03 |
| Yard Trucks (LPG) (g/sec) | | 1.90E-03 | |
| Forklifts (LPG) (g/sec) | | 1.57E-04 | |
| | | | Total |
| Total All Sources | 2.04E-03 | 5.88E-03 | 7.93E-03 |
| Size of Area Source (m2) | 4.07E+06 | 4.07E+06 | |
| **Area Emission Rate (g/m2-sec)** | **5.02E-10** | **1.45E-09** | **1.95E-09** |

**World Logistics Center** 2021 Phase 1 With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.072 | 53 | 330 | 0.21 | 7.86E-01 | 1.73E-03 | 9.09E-06 | |
| | LDT1 | 15 | 0.259 | 3 | 330 | 0.21 | 1.36E-01 | 2.98E-04 | 1.57E-06 | |
| | LDT2 | 15 | 0.054 | 3 | 330 | 0.21 | 2.80E-02 | 6.16E-05 | 3.24E-07 | |
| | MDT | 15 | 0.057 | 5 | 330 | 0.21 | 5.65E-02 | 1.24E-04 | 6.54E-07 | |
| | LHDT1 | 15 | 0.123 | 274 | 330 | 0.21 | 6.93E+00 | 1.53E-02 | 8.02E-05 | |
| | LHDT2 | 15 | 0.128 | 93 | 330 | 0.21 | 2.45E+00 | 5.39E-03 | 2.83E-05 | |
| | MHDT | 15 | 0.147 | 1425 | 330 | 0.21 | 4.29E+01 | 9.44E-02 | 4.96E-04 | |
| | HHDT | 15 | 0.111 | 4628 | 330 | 0.21 | 1.05E+02 | 2.32E-01 | 1.22E-03 | |
| | | | | | | | | | | 1.84E-03 |
| Travel at Light Logistics | LDA | 15 | 0.072 | 0 | 175 | 0.11 | 1.77E-03 | 3.90E-06 | 2.05E-08 | |
| | LDT1 | 15 | 0.259 | 0 | 175 | 0.11 | 3.05E-04 | 6.72E-07 | 3.53E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 175 | 0.11 | 6.30E-05 | 1.39E-07 | 7.29E-10 | |
| | MDT | 15 | 0.057 | 0 | 175 | 0.11 | 1.27E-04 | 2.80E-07 | 1.47E-09 | |
| | LHDT1 | 15 | 0.123 | 2 | 175 | 0.11 | 2.30E-02 | 5.07E-05 | 2.66E-07 | |
| | LHDT2 | 15 | 0.128 | 1 | 175 | 0.11 | 8.12E-03 | 1.79E-05 | 9.39E-08 | |
| | MHDT | 15 | 0.147 | 6 | 175 | 0.11 | 9.36E-02 | 2.06E-04 | 1.08E-06 | |
| | HHDT | 15 | 0.111 | 16 | 175 | 0.11 | 1.91E-01 | 4.21E-04 | 2.21E-06 | 3.68E-06 |
| Travel at Utility | LDA | 15 | 0.072 | 0 | 100 | 0.06 | 1.54E-03 | 3.39E-06 | 1.78E-08 | |
| | LDT1 | 15 | 0.259 | 0 | 100 | 0.06 | 2.65E-04 | 5.84E-07 | 3.07E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 100 | 0.06 | 5.47E-05 | 1.21E-07 | 6.33E-10 | |
| | MDT | 15 | 0.057 | 0 | 100 | 0.06 | 1.11E-04 | 2.44E-07 | 1.28E-09 | |
| | LHDT1 | 15 | 0.123 | 6 | 100 | 0.06 | 4.36E-02 | 9.60E-05 | 5.05E-07 | |
| | LHDT2 | 15 | 0.128 | 2 | 100 | 0.06 | 1.54E-02 | 3.39E-05 | 1.78E-07 | |
| | MHDT | 15 | 0.147 | 5 | 100 | 0.06 | 4.39E-02 | 9.68E-05 | 5.09E-07 | |
| | HHDT | 15 | 0.111 | 21 | 100 | 0.06 | 1.48E-01 | 3.26E-04 | 1.71E-06 | 2.93E-06 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.072 | 0 | 50 | 0.03 | 6.84E-04 | 1.51E-06 | 7.91E-09 | |
| | LDT1 | 15 | 0.259 | 0 | 50 | 0.03 | 1.18E-04 | 2.60E-07 | 1.36E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 50 | 0.03 | 2.43E-05 | 5.36E-08 | 2.81E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 4.91E-05 | 1.08E-07 | 5.69E-10 | |
| | LHDT1 | 15 | 0.123 | 1 | 50 | 0.03 | 3.07E-03 | 6.77E-06 | 3.56E-08 | |
| | LHDT2 | 15 | 0.128 | 0 | 50 | 0.03 | 1.09E-03 | 2.39E-06 | 1.26E-08 | |
| | MHDT | 15 | 0.147 | 14 | 50 | 0.03 | 6.27E-02 | 1.38E-04 | 7.26E-07 | |
| | HHDT | 15 | 0.111 | 85 | 50 | 0.03 | 2.93E-01 | 6.46E-04 | 3.39E-06 | 4.18E-06 |
| Travel at Convenience Store | LDA | 15 | 0.072 | 0 | 50 | 0.03 | 1.11E-03 | 2.43E-06 | 1.28E-08 | |
| | LDT1 | 15 | 0.259 | 0 | 50 | 0.03 | 1.91E-04 | 4.20E-07 | 2.21E-09 | |
| | LDT2 | 15 | 0.054 | 0 | 50 | 0.03 | 3.93E-05 | 8.66E-08 | 4.55E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 7.94E-05 | 1.75E-07 | 9.19E-10 | |
| | LHDT1 | 15 | 0.123 | 1 | 50 | 0.03 | 4.69E-03 | 1.03E-05 | 5.43E-08 | |
| | LHDT2 | 15 | 0.128 | 0 | 50 | 0.03 | 1.66E-03 | 3.65E-06 | 1.92E-08 | |
| | MHDT | 15 | 0.147 | 23 | 50 | 0.03 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | HHDT | 15 | 0.111 | 133 | 50 | 0.03 | 4.58E-01 | 1.01E-03 | 5.30E-06 | 6.58E-06 |
| Travel at Fire Station | LDA | 15 | 0.072 | 0 | 50 | 0.03 | 4.28E-04 | 9.42E-07 | 4.95E-09 | |
| | LDT1 | 15 | 0.259 | 0 | 50 | 0.03 | 7.38E-05 | 1.62E-07 | 8.54E-10 | |
| | LDT2 | 15 | 0.054 | 0 | 50 | 0.03 | 1.52E-05 | 3.35E-08 | 1.76E-10 | |
| | MDT | 15 | 0.057 | 0 | 50 | 0.03 | 3.07E-05 | 6.77E-08 | 3.56E-10 | |
| | LHDT1 | 15 | 0.123 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.128 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.34E-09 |
| Total - All Buildings | LDA | | | 55 | | | 7.91E-01 | 1.74E-03 | 9.16E-06 | |
| | LDT1 | | | 3 | | | 1.36E-01 | 3.01E-04 | 1.58E-06 | |
| | LDT2 | | | 3 | | | 2.81E-02 | 6.20E-05 | 3.26E-07 | |
| | MDT | | | 5 | | | 5.69E-02 | 1.25E-04 | 6.58E-07 | |
| | LHDT1 | | | 283 | | | 7.01E+00 | 1.54E-02 | 8.11E-05 | |
| | LHDT2 | | | 96 | | | 2.47E+00 | 5.45E-03 | 2.86E-05 | |
| | MHDT | | | 1472 | | | 4.32E+01 | 9.51E-02 | 5.00E-04 | |
| | HHDT | | | 4883 | | | 1.06E+02 | 2.34E-01 | 1.23E-03 | |
| | Total | | | 6800 | | | 1.60E+02 | 3.53E-01 | 1.85E-03 | 1.85E-03 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.730 | 5 | 137 | 8.33E+00 | 1.83E-02 | 9.64E-05 | |
| | **LHDT2** | 0.730 | 5 | 47 | 2.83E+00 | 6.24E-03 | 3.28E-05 | |
| | **MHDT** | 0.015 | 5 | 713 | 8.91E-01 | 1.96E-03 | 1.03E-05 | |
| | **HHDT** | 0.020 | 5 | 2314 | 3.86E+00 | 8.49E-03 | 4.46E-05 | |
| | | | | 3210 | 1.59E+01 | 3.50E-02 | 1.84E-04 | 1.84E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.730 | 5 | 1 | 5.21E-02 | 1.15E-04 | 6.03E-07 | |
| | **LHDT2** | 0.730 | 5 | 0 | 1.77E-02 | 3.90E-05 | 2.05E-07 | |
| | **MHDT** | 0.015 | 5 | 3 | 3.67E-03 | 8.08E-06 | 4.25E-08 | |
| | **HHDT** | 0.020 | 5 | 8 | 1.32E-02 | 2.91E-05 | 1.53E-07 | |
| | | | | 12 | 8.67E-02 | 1.91E-04 | 1.00E-06 | 1.00E-06 |
| **Idle at Utility** | **LHDT1** | 0.730 | 5 | 3 | 1.73E-01 | 3.81E-04 | 2.00E-06 | |
| | **LHDT2** | 0.730 | 5 | 1 | 5.88E-02 | 1.29E-04 | 6.80E-07 | |
| | **MHDT** | 0.015 | 5 | 2 | 3.01E-03 | 6.64E-06 | 3.49E-08 | |
| | **HHDT** | 0.020 | 5 | 11 | 1.79E-02 | 3.94E-05 | 2.07E-07 | |
| | | | | 17 | 2.53E-01 | 5.56E-04 | 2.92E-06 | 2.92E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.730 | 5 | 0 | 2.44E-02 | 5.37E-05 | 2.82E-07 | |
| | **LHDT2** | 0.730 | 5 | 0 | 8.29E-03 | 1.83E-05 | 9.60E-08 | |
| | **MHDT** | 0.015 | 5 | 7 | 8.60E-03 | 1.89E-05 | 9.95E-08 | |
| | **HHDT** | 0.020 | 5 | 43 | 7.09E-02 | 1.56E-04 | 8.20E-07 | |
| | | | | 50 | 1.12E-01 | 2.47E-04 | 1.30E-06 | 1.30E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.730 | 5 | 1 | 3.72E-02 | 8.20E-05 | 4.31E-07 | |
| | **LHDT2** | 0.730 | 5 | 0 | 1.27E-02 | 2.79E-05 | 1.47E-07 | |
| | **MHDT** | 0.015 | 5 | 11 | 1.41E-02 | 3.10E-05 | 1.63E-07 | |
| | **HHDT** | 0.020 | 5 | 66 | 1.11E-01 | 2.44E-04 | 1.28E-06 | |
| | | | | 79 | 1.75E-01 | 3.85E-04 | 2.02E-06 | 2.02E-06 |
| **Idle at Firestation** | **LHDT1** | 0.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.730 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.015 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.020 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 1.65E+01 | 3.64E-02 | 1.91E-04 | 1.91E-04 |

**World Logistics Center** 2021 Phase 1 With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.050 | 17546 | 330 | 0.21 | 1.78E+02 | 3.93E-01 | 2.07E-03 | |
| | LDT1 | 15 | 0.052 | 2058 | 330 | 0.21 | 2.20E+01 | 4.85E-02 | 2.55E-04 | |
| | LDT2 | 15 | 0.050 | 6111 | 330 | 0.21 | 6.21E+01 | 1.37E-01 | 7.19E-04 | |
| | MDT | 15 | 0.050 | 4846 | 330 | 0.21 | 4.95E+01 | 1.09E-01 | 5.73E-04 | |
| | LHDT1 | 15 | 0.048 | 886 | 330 | 0.21 | 8.80E+00 | 1.94E-02 | 1.02E-04 | |
| | LHDT2 | 15 | 0.048 | 93 | 330 | 0.21 | 9.11E-01 | 2.01E-03 | 1.05E-05 | |
| | MHDT | 15 | 0.048 | 344 | 330 | 0.21 | 3.35E+00 | 7.39E-03 | 3.88E-05 | |
| | HHDT | 15 | 0.047 | 104 | 330 | 0.21 | 1.01E+00 | 2.22E-03 | 1.17E-05 | |
| | | | | | | | | | | 3.77E-03 |
| Travel at Light Logistics | LDA | 15 | 0.050 | 75 | 175 | 0.11 | 4.02E-01 | 8.85E-04 | 4.65E-06 | |
| | LDT1 | 15 | 0.052 | 9 | 175 | 0.11 | 4.96E-02 | 1.09E-04 | 5.74E-07 | |
| | LDT2 | 15 | 0.050 | 26 | 175 | 0.11 | 1.40E-01 | 3.08E-04 | 1.62E-06 | |
| | MDT | 15 | 0.050 | 21 | 175 | 0.11 | 1.11E-01 | 2.46E-04 | 1.29E-06 | |
| | LHDT1 | 15 | 0.048 | 6 | 175 | 0.11 | 2.92E-02 | 6.43E-05 | 3.38E-07 | |
| | LHDT2 | 15 | 0.048 | 1 | 175 | 0.11 | 3.02E-03 | 6.66E-06 | 3.50E-08 | |
| | MHDT | 15 | 0.048 | 1 | 175 | 0.11 | 7.33E-03 | 1.61E-05 | 8.48E-08 | |
| | HHDT | 15 | 0.047 | 0 | 175 | 0.11 | 1.83E-03 | 4.03E-06 | 2.12E-08 | 8.61E-06 |
| Travel at Utility | LDA | 15 | 0.050 | 113 | 100 | 0.06 | 3.49E-01 | 7.70E-04 | 4.04E-06 | |
| | LDT1 | 15 | 0.052 | 13 | 100 | 0.06 | 4.31E-02 | 9.50E-05 | 4.99E-07 | |
| | LDT2 | 15 | 0.050 | 39 | 100 | 0.06 | 1.22E-01 | 2.68E-04 | 1.41E-06 | |
| | MDT | 15 | 0.050 | 31 | 100 | 0.06 | 9.69E-02 | 2.13E-04 | 1.12E-06 | |
| | LHDT1 | 15 | 0.048 | 18 | 100 | 0.06 | 5.53E-02 | 1.22E-04 | 6.40E-07 | |
| | LHDT2 | 15 | 0.048 | 2 | 100 | 0.06 | 5.73E-03 | 1.26E-05 | 6.63E-08 | |
| | MHDT | 15 | 0.048 | 1 | 100 | 0.06 | 3.44E-03 | 7.57E-06 | 3.98E-08 | |
| | HHDT | 15 | 0.047 | 0 | 100 | 0.06 | 1.42E-03 | 3.12E-06 | 1.64E-08 | 7.83E-06 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.050 | 101 | 50 | 0.03 | 1.55E-01 | 3.42E-04 | 1.80E-06 | |
| | LDT1 | 15 | 0.052 | 12 | 50 | 0.03 | 1.92E-02 | 4.22E-05 | 2.22E-07 | |
| | LDT2 | 15 | 0.050 | 35 | 50 | 0.03 | 5.40E-02 | 1.19E-04 | 6.25E-07 | |
| | MDT | 15 | 0.050 | 28 | 50 | 0.03 | 4.31E-02 | 9.49E-05 | 4.98E-07 | |
| | LHDT1 | 15 | 0.048 | 3 | 50 | 0.03 | 3.90E-03 | 8.59E-06 | 4.52E-08 | |
| | LHDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 4.04E-04 | 8.90E-07 | 4.68E-09 | |
| | MHDT | 15 | 0.048 | 3 | 50 | 0.03 | 4.90E-03 | 1.08E-05 | 5.68E-08 | |
| | HHDT | 15 | 0.047 | 2 | 50 | 0.03 | 2.81E-03 | 6.19E-06 | 3.25E-08 | 3.28E-06 |
| Travel at Convenience Store | LDA | 15 | 0.050 | 163 | 50 | 0.03 | 2.51E-01 | 5.53E-04 | 2.90E-06 | |
| | LDT1 | 15 | 0.052 | 19 | 50 | 0.03 | 3.10E-02 | 6.83E-05 | 3.59E-07 | |
| | LDT2 | 15 | 0.050 | 57 | 50 | 0.03 | 8.73E-02 | 1.92E-04 | 1.01E-06 | |
| | MDT | 15 | 0.050 | 45 | 50 | 0.03 | 6.96E-02 | 1.53E-04 | 8.06E-07 | |
| | LHDT1 | 15 | 0.048 | 4 | 50 | 0.03 | 5.96E-03 | 1.31E-05 | 6.89E-08 | |
| | LHDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 6.17E-04 | 1.36E-06 | 7.14E-09 | |
| | MHDT | 15 | 0.048 | 5 | 50 | 0.03 | 8.03E-03 | 1.77E-05 | 9.29E-08 | |
| | HHDT | 15 | 0.047 | 3 | 50 | 0.03 | 4.39E-03 | 9.67E-06 | 5.08E-08 | 5.30E-06 |
| Travel at Fire Station | LDA | 15 | 0.050 | 63 | 50 | 0.03 | 9.71E-02 | 2.14E-04 | 1.12E-06 | |
| | LDT1 | 15 | 0.052 | 7 | 50 | 0.03 | 1.20E-02 | 2.64E-05 | 1.39E-07 | |
| | LDT2 | 15 | 0.050 | 22 | 50 | 0.03 | 3.38E-02 | 7.44E-05 | 3.91E-07 | |
| | MDT | 15 | 0.050 | 17 | 50 | 0.03 | 2.69E-02 | 5.93E-05 | 3.12E-07 | |
| | LHDT1 | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-06 |
| Total - All Buildings | LDA | | | 18060 | | | 1.80E+02 | 3.96E-01 | 2.08E-03 | |
| | LDT1 | | | 2118 | | | 2.22E+01 | 4.89E-02 | 2.57E-04 | |
| | LDT2 | | | 6290 | | | 6.25E+01 | 1.38E-01 | 7.24E-04 | |
| | MDT | | | 4988 | | | 4.98E+01 | 1.10E-01 | 5.77E-04 | |
| | LHDT1 | | | 917 | | | 8.89E+00 | 1.96E-02 | 1.03E-04 | |
| | LHDT2 | | | 97 | | | 9.21E-01 | 2.03E-03 | 1.07E-05 | |
| | MHDT | | | 356 | | | 3.38E+00 | 7.44E-03 | 3.91E-05 | |
| | HHDT | | | 110 | | | 1.02E+00 | 2.25E-03 | 1.18E-05 | |
| | Total | | | 32936 | | | 3.28E+02 | 7.23E-01 | 3.80E-03 | 3.80E-03 |

**Non-Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.039 | 5 | 443 | 1.45E+00 | 3.19E-03 | 1.68E-05 | |
| | **LHDT2** | 0.031 | 5 | 47 | 1.19E-01 | 2.61E-04 | 1.37E-06 | |
| | **MHDT** | 0.030 | 5 | 172 | 4.24E-01 | 9.34E-04 | 4.91E-06 | |
| | **HHDT** | 0.026 | 5 | 52 | 1.12E-01 | 2.46E-04 | 1.29E-06 | |
| | | | | 714 | 2.10E+00 | 4.63E-03 | 2.43E-05 | 2.43E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.039 | 5 | 3 | 9.07E-03 | 2.00E-05 | 1.05E-07 | |
| | **LHDT2** | 0.031 | 5 | 0 | 7.42E-04 | 1.64E-06 | 8.59E-09 | |
| | **MHDT** | 0.030 | 5 | 1 | 1.75E-03 | 3.85E-06 | 2.02E-08 | |
| | **HHDT** | 0.026 | 5 | 0 | 3.83E-04 | 8.43E-07 | 4.43E-09 | |
| | | | | 4 | 1.19E-02 | 2.63E-05 | 1.38E-07 | 1.38E-07 |
| **Idle at Utility** | **LHDT1** | 0.039 | 5 | 9 | 3.01E-02 | 6.62E-05 | 3.48E-07 | |
| | **LHDT2** | 0.031 | 5 | 1 | 2.46E-03 | 5.42E-06 | 2.85E-08 | |
| | **MHDT** | 0.030 | 5 | 1 | 1.43E-03 | 3.16E-06 | 1.66E-08 | |
| | **HHDT** | 0.026 | 5 | 0 | 5.19E-04 | 1.14E-06 | 6.01E-09 | |
| | | | | 11 | 3.45E-02 | 7.60E-05 | 3.99E-07 | 3.99E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.039 | 5 | 1 | 4.24E-03 | 9.34E-06 | 4.91E-08 | |
| | **LHDT2** | 0.031 | 5 | 0 | 3.47E-04 | 7.65E-07 | 4.02E-09 | |
| | **MHDT** | 0.030 | 5 | 2 | 4.09E-03 | 9.01E-06 | 4.74E-08 | |
| | **HHDT** | 0.026 | 5 | 1 | 2.06E-03 | 4.53E-06 | 2.38E-08 | |
| | | | | 4 | 1.07E-02 | 2.37E-05 | 1.24E-07 | 1.24E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.039 | 5 | 2 | 6.48E-03 | 1.43E-05 | 7.50E-08 | |
| | **LHDT2** | 0.031 | 5 | 0 | 5.30E-04 | 1.17E-06 | 6.14E-09 | |
| | **MHDT** | 0.030 | 5 | 3 | 6.70E-03 | 1.48E-05 | 7.75E-08 | |
| | **HHDT** | 0.026 | 5 | 2 | 3.21E-03 | 7.08E-06 | 3.72E-08 | |
| | | | | 6 | 1.69E-02 | 3.73E-05 | 1.96E-07 | 1.96E-07 |
| **Idle at Firestation** | **LHDT1** | 0.039 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.031 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.030 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.026 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.18E+00 | 4.80E-03 | 2.52E-05 | 2.52E-05 |

**World Logistics Center** **2021** **PM2.5** Based on PB Traffic Results 10/3/2013
**Project Phase 1 Emissions** With EMFAC2014 **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation** Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 8.57E-04 | 7.69E-04 | 5.54E-03 | 7.17E-03 |
| 2 | 2.11E-03 | 1.86E-03 | 1.34E-02 | 1.74E-02 |
| 3 | 3.49E-03 | 2.98E-03 | 2.22E-02 | 2.86E-02 |
| 5 | 1.35E-04 | 5.11E-04 | 1.08E-03 | 1.73E-03 |
| 6 | 8.59E-04 | 1.17E-03 | 5.73E-03 | 7.76E-03 |
| 8 | 2.45E-04 | 1.06E-03 | 1.95E-03 | 3.26E-03 |
| 11 | 4.65E-06 | 1.28E-05 | 2.75E-05 | 4.50E-05 |
| 12 | 4.11E-05 | 7.87E-05 | 1.98E-04 | 3.18E-04 |
| 14 | 2.19E-04 | 2.55E-04 | 1.37E-03 | 1.84E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 4.80E-08 | 1.35E-05 | 1.73E-05 | 3.08E-05 |
| 21 | 1.46E-04 | 4.42E-04 | 1.20E-03 | 1.79E-03 |
| 24 | 2.29E-04 | 6.81E-04 | 1.87E-03 | 2.78E-03 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.34E-05 | 2.00E-05 | 8.82E-05 | 1.22E-04 |
| 30 | 5.61E-05 | 8.39E-05 | 3.69E-04 | 5.09E-04 |
| 31 | 1.13E-04 | 3.09E-04 | 8.94E-04 | 1.32E-03 |
| | | | Total | 7.47E-02 |

| ID | Arterial | From | To | | 2021 Project Related Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

**World Logistics Center** **2021** **PM2.5** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 27 | 1 | 1 | 2 | 116 | 38 | 1535 | 5840 | 7560 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 28 | 1 | 1 | 2 | 226 | 74 | 1669 | 6279 | 8281 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 105 | 34 | 859 | 3245 | 4259 |
| 5 | 3965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 8 | 216 | 87 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 24 | 559 | 1522 | 2194 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 3 | 117 | 176 | 312 |
| 24 | 2710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 5 | 0 | 0 | 0 | 11 | 3 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0294 | 0.1094 | 0.0229 | 0.0238 | 0.0589 | 0.0591 | 0.0628 | 0.0442 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.83E-06 | 3.63E-07 | 7.35E-08 | 1.33E-07 | 1.61E-05 | 5.28E-06 | 2.27E-04 | 6.07E-04 | 8.57E-04 |
| 2 | 1 | 4.26E-06 | 8.43E-07 | 1.71E-07 | 3.08E-07 | 6.99E-05 | 2.29E-05 | 5.51E-04 | 1.46E-03 | 2.11E-03 |
| 3 | 1 | 6.83E-06 | 1.35E-06 | 2.74E-07 | 4.95E-07 | 1.04E-04 | 3.42E-05 | 9.12E-04 | 2.43E-03 | 3.49E-03 |
| 5 | 1 | 1.27E-06 | 2.51E-07 | 5.09E-08 | 9.19E-08 | 1.04E-05 | 3.42E-06 | 9.29E-05 | 2.64E-05 | 1.35E-04 |
| 6 | 1 | 2.78E-06 | 5.50E-07 | 1.11E-07 | 2.01E-07 | 3.45E-05 | 1.13E-05 | 2.78E-04 | 5.32E-04 | 8.59E-04 |
| 8 | 1 | 2.61E-06 | 5.18E-07 | 1.05E-07 | 1.89E-07 | 2.51E-05 | 8.24E-06 | 2.08E-04 | 0.00E+00 | 2.45E-04 |
| 11 | 1 | 2.84E-08 | 5.63E-09 | 1.14E-09 | 2.06E-09 | 6.96E-07 | 2.28E-07 | 3.69E-06 | 0.00E+00 | 4.65E-06 |
| 12 | 1 | 1.44E-07 | 2.86E-08 | 5.79E-09 | 1.05E-08 | 8.47E-06 | 2.78E-06 | 2.97E-05 | 0.00E+00 | 4.11E-05 |
| 14 | 1 | 5.42E-07 | 1.07E-07 | 2.17E-08 | 3.93E-08 | 1.71E-05 | 5.61E-06 | 6.97E-05 | 1.26E-04 | 2.19E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 3.66E-08 | 7.25E-09 | 1.47E-09 | 2.65E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.80E-08 |
| 21 | 1 | 1.12E-06 | 2.23E-07 | 4.51E-08 | 8.15E-08 | 5.65E-06 | 1.85E-06 | 6.65E-05 | 7.04E-05 | 1.46E-04 |
| 24 | 1 | 1.73E-06 | 3.44E-07 | 6.96E-08 | 1.26E-07 | 7.61E-06 | 2.50E-06 | 1.05E-04 | 1.11E-04 | 2.29E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.85E-08 | 9.62E-09 | 1.95E-09 | 3.52E-09 | 3.91E-07 | 1.28E-07 | 5.40E-06 | 7.41E-06 | 1.34E-05 |
| 30 | 1 | 2.03E-07 | 4.03E-08 | 8.15E-09 | 1.47E-08 | 1.64E-06 | 5.37E-07 | 2.26E-05 | 3.10E-05 | 5.61E-05 |
| 31 | 1 | 7.84E-07 | 1.55E-07 | 3.14E-08 | 5.68E-08 | 3.68E-06 | 1.21E-06 | 5.09E-05 | 5.59E-05 | 1.13E-04 |

**World Logistics Center** **2021** **PM2.5** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8330 | 987 | 3008 | 2322 | 375 | 39 | 350 | 100 | 15513 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8652 | 1025 | 3124 | 2412 | 729 | 76 | 381 | 108 | 16508 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4315 | 511 | 1558 | 1203 | 338 | 35 | 196 | 56 | 8213 |
| 5 | 3,965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1977 | 234 | 714 | 551 | 83 | 9 | 49 | 1 | 3620 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3754 | 445 | 1356 | 1047 | 240 | 25 | 128 | 26 | 7019 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3558 | 422 | 1285 | 992 | 176 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 4 | 0 | 2 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 260 | 31 | 94 | 73 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 498 | 59 | 180 | 139 | 81 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1328 | 157 | 480 | 370 | 34 | 4 | 27 | 3 | 2403 |
| 24 | 2,710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1325 | 157 | 478 | 369 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1421 | 168 | 513 | 396 | 34 | 4 | 31 | 4 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0195 | 0.0205 | 0.0195 | 0.0196 | 0.0368 | 0.0413 | 0.0603 | 0.0321 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.83E-04 | 4.74E-05 | 1.38E-04 | 1.07E-04 | 3.25E-05 | 3.82E-06 | 4.97E-05 | 7.56E-06 | 7.69E-04 |
| 2 | 1 | 8.89E-04 | 1.10E-04 | 3.21E-04 | 2.49E-04 | 1.41E-04 | 1.66E-05 | 1.21E-04 | 1.82E-05 | 1.86E-03 |
| 3 | 1 | 1.43E-03 | 1.77E-04 | 5.14E-04 | 3.99E-04 | 2.11E-04 | 2.48E-05 | 2.00E-04 | 3.02E-05 | 2.98E-03 |
| 5 | 1 | 2.65E-04 | 3.28E-05 | 9.55E-05 | 7.41E-05 | 2.10E-05 | 2.47E-06 | 2.04E-05 | 3.29E-07 | 5.11E-04 |
| 6 | 1 | 5.80E-04 | 7.19E-05 | 2.09E-04 | 1.62E-04 | 6.97E-05 | 8.20E-06 | 6.08E-05 | 6.63E-06 | 1.17E-03 |
| 8 | 1 | 5.45E-04 | 6.76E-05 | 1.97E-04 | 1.53E-04 | 5.07E-05 | 5.97E-06 | 4.57E-05 | 0.00E+00 | 1.06E-03 |
| 11 | 1 | 5.93E-06 | 7.35E-07 | 2.14E-06 | 1.66E-06 | 1.40E-06 | 1.65E-07 | 8.09E-07 | 0.00E+00 | 1.28E-05 |
| 12 | 1 | 3.01E-05 | 3.73E-06 | 1.09E-05 | 8.43E-06 | 1.71E-05 | 2.01E-06 | 6.50E-06 | 0.00E+00 | 7.87E-05 |
| 14 | 1 | 1.13E-04 | 1.40E-05 | 4.08E-05 | 3.17E-05 | 3.45E-05 | 4.06E-06 | 1.53E-05 | 1.57E-06 | 2.55E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 7.64E-06 | 9.47E-07 | 2.76E-06 | 2.14E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.35E-05 |
| 21 | 1 | 2.35E-04 | 2.91E-05 | 8.47E-05 | 6.57E-05 | 1.14E-05 | 1.34E-06 | 1.46E-05 | 8.77E-07 | 4.42E-04 |
| 24 | 1 | 3.62E-04 | 4.49E-05 | 1.31E-04 | 1.01E-04 | 1.53E-05 | 1.81E-06 | 2.31E-05 | 1.39E-06 | 6.81E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.01E-05 | 1.26E-06 | 3.65E-06 | 2.83E-06 | 7.89E-07 | 9.28E-08 | 1.18E-06 | 9.23E-08 | 2.00E-05 |
| 30 | 1 | 4.24E-05 | 5.26E-06 | 1.53E-05 | 1.19E-05 | 3.30E-06 | 3.89E-07 | 4.95E-06 | 3.87E-07 | 8.39E-05 |
| 31 | 1 | 1.64E-04 | 2.03E-05 | 5.91E-05 | 4.58E-05 | 7.42E-06 | 8.74E-07 | 1.12E-05 | 6.97E-07 | 3.09E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 14,679 | 2982 | 569 | 116 | 1,885 | 383 | 5,940 | 1207 | 4687 | 8.44 | 0.035 | 0.0002 | 1.1 | 5.54E-03 |
| 2 | A | 731 | 0.45 | 15,246 | 6923 | 1,105 | 502 | 2,051 | 931 | 6,387 | 2900 | 11257 | 8.52 | 0.035 | 0.0002 | 2.6 | 1.34E-02 |
| 3 | A | 2352 | 1.46 | 7,604 | 11110 | 513 | 749 | 1,055 | 1541 | 3,300 | 4822 | 18223 | 8.68 | 0.035 | 0.0002 | 4.2 | 2.22E-02 |
| 5 | A | 953 | 0.59 | 3,484 | 2063 | 126 | 75 | 265 | 157 | 89 | 53 | 2347 | 3.36 | 0.035 | 0.0001 | 0.2 | 1.08E-03 |
| 6 | A | 1099 | 0.68 | 6,615 | 4516 | 363 | 248 | 687 | 469 | 1,549 | 1057 | 6290 | 6.53 | 0.035 | 0.0002 | 1.1 | 5.73E-03 |
| 8 | A | 1091 | 0.68 | 6,270 | 4250 | 266 | 180 | 520 | 352 | 0 | 0 | 4782 | 2.97 | 0.035 | 0.0001 | 0.4 | 1.95E-03 |
| 11 | A | 1201 | 0.75 | 62 | 46 | 7 | 5 | 8 | 6 | 0 | 0 | 57 | 3.48 | 0.035 | 0.0001 | 0.0 | 2.75E-05 |
| 12 | A | 824 | 0.51 | 458 | 235 | 119 | 61 | 98 | 50 | 0 | 0 | 346 | 4.14 | 0.035 | 0.0001 | 0.0 | 1.98E-04 |
| 14 | A | 1618 | 1.01 | 878 | 882 | 122 | 123 | 117 | 118 | 249 | 251 | 1373 | 7.12 | 0.035 | 0.0002 | 0.3 | 1.37E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 40 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 2.13 | 0.035 | 0.0001 | 0.0 | 1.73E-05 |
| 21 | A | 1258 | 0.78 | 2,340 | 1829 | 52 | 41 | 144 | 112 | 179 | 140 | 2122 | 4.10 | 0.035 | 0.0001 | 0.2 | 1.20E-03 |
| 24 | A | 1946 | 1.21 | 2,334 | 2822 | 45 | 55 | 147 | 178 | 183 | 221 | 3276 | 4.14 | 0.035 | 0.0001 | 0.4 | 1.87E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 188 | 79 | 7 | 3 | 22 | 9 | 35 | 15 | 106 | 6.00 | 0.035 | 0.0002 | 0.0 | 8.82E-05 |
| 30 | A | 2827 | 1.76 | 188 | 331 | 7 | 12 | 22 | 38 | 35 | 62 | 442 | 6.00 | 0.035 | 0.0002 | 0.1 | 3.69E-04 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 52 | 26 | 169 | 86 | 218 | 111 | 1499 | 4.31 | 0.035 | 0.0001 | 0.2 | 8.94E-04 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2021** **Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-DSL Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.65E-03 | 3.54E-03 |
| Light Logistics | Phase 1 | 3.74E-06 | 9.18E-06 |
| Utilities Service Station | Phase 1 | 2.98E-06 | 8.58E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.26E-06 | 3.49E-06 |
| Convenience Store | Phase 1 | 6.71E-06 | 5.64E-06 |
| Fire Station | Phase 1 | 6.46E-09 | 1.98E-06 |
| Total | | 1.67E-03 | 3.56E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicle Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.70E-04 | 2.35E-05 |
| Light Logistics | Phase 1 | 1.04E-06 | 1.50E-07 |
| Utilities Service Station | Phase 1 | 3.04E-06 | 4.34E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.36E-06 | 1.35E-07 |
| Convenience Store | Phase 1 | 2.12E-06 | 2.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.78E-04 | 2.44E-05 |

**Total Onsite Emission**

| | | | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 1.67E-03 | 3.56E-03 | |
| Idling Emissions (g/sec) | 1.78E-04 | 2.44E-05 | |
| Total Vehicle Emissions | 1.85E-03 | 3.59E-03 | 5.44E-03 |
| Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| Forklifts (LPG) (g/sec) | | 1.74E-04 | |
| | | | Total |
| Total All Sources | 1.85E-03 | 4.80E-03 | 6.64E-03 |
| Size of Area Source (m2) | 4.07E+06 | 4.07E+06 | |
| **Area Emission Rate (g/m2-sec)** | **4.54E-10** | **1.18E-09** | 1.63E-09 |

**World Logistics Center** **2021** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.073 | 47 | 330 | 0.21 | 7.08E-01 | 1.56E-03 | 8.20E-06 | |
| | **LDT1** | 15 | 0.268 | 2 | 330 | 0.21 | 1.25E-01 | 2.74E-04 | 1.44E-06 | |
| | **LDT2** | 15 | 0.055 | 2 | 330 | 0.21 | 2.50E-02 | 5.50E-05 | 2.89E-07 | |
| | **MDT** | 15 | 0.057 | 4 | 330 | 0.21 | 5.05E-02 | 1.11E-04 | 5.85E-07 | |
| | **LHDT1** | 15 | 0.125 | 243 | 330 | 0.21 | 6.22E+00 | 1.37E-02 | 7.20E-05 | |
| | **LHDT2** | 15 | 0.129 | 83 | 330 | 0.21 | 2.19E+00 | 4.82E-03 | 2.53E-05 | |
| | **MHDT** | 15 | 0.147 | 1264 | 330 | 0.21 | 3.81E+01 | 8.38E-02 | 4.40E-04 | |
| | **HHDT** | 15 | 0.114 | 4102 | 330 | 0.21 | 9.55E+01 | 2.10E-01 | 1.11E-03 | |
| | | | | | | | | | | 1.65E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.073 | 0 | 175 | 0.11 | 1.80E-03 | 3.96E-06 | 2.08E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 175 | 0.11 | 3.17E-04 | 6.97E-07 | 3.66E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 175 | 0.11 | 6.34E-05 | 1.40E-07 | 7.34E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 175 | 0.11 | 1.28E-04 | 2.83E-07 | 1.49E-09 | |
| | **LHDT1** | 15 | 0.125 | 2 | 175 | 0.11 | 2.33E-02 | 5.13E-05 | 2.70E-07 | |
| | **LHDT2** | 15 | 0.129 | 1 | 175 | 0.11 | 8.19E-03 | 1.80E-05 | 9.48E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.38E-02 | 2.07E-04 | 1.09E-06 | |
| | **HHDT** | 15 | 0.114 | 16 | 175 | 0.11 | 1.96E-01 | 4.31E-04 | 2.26E-06 | 3.74E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.073 | 0 | 100 | 0.06 | 1.56E-03 | 3.45E-06 | 1.81E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 100 | 0.06 | 2.75E-04 | 6.06E-07 | 3.19E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 100 | 0.06 | 5.51E-05 | 1.21E-07 | 6.38E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 100 | 0.06 | 1.12E-04 | 2.46E-07 | 1.29E-09 | |
| | **LHDT1** | 15 | 0.125 | 6 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | **LHDT2** | 15 | 0.129 | 2 | 100 | 0.06 | 1.55E-02 | 3.42E-05 | 1.80E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.40E-02 | 9.69E-05 | 5.09E-07 | |
| | **HHDT** | 15 | 0.114 | 21 | 100 | 0.06 | 1.52E-01 | 3.34E-04 | 1.75E-06 | 2.98E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 6.95E-04 | 1.53E-06 | 8.05E-09 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 1.22E-04 | 2.69E-07 | 1.42E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 2.45E-05 | 5.40E-08 | 2.84E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 4.96E-05 | 1.09E-07 | 5.74E-10 | |
| | **LHDT1** | 15 | 0.125 | 1 | 50 | 0.03 | 3.11E-03 | 6.86E-06 | 3.61E-08 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.28E-02 | 1.38E-04 | 7.27E-07 | |
| | **HHDT** | 15 | 0.114 | 85 | 50 | 0.03 | 3.00E-01 | 6.61E-04 | 3.47E-06 | 4.26E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 1.12E-03 | 2.48E-06 | 1.30E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 1.98E-04 | 4.35E-07 | 2.29E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 3.96E-05 | 8.72E-08 | 4.58E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 8.02E-05 | 1.77E-07 | 9.28E-10 | |
| | **LHDT1** | 15 | 0.125 | 1 | 50 | 0.03 | 4.76E-03 | 1.05E-05 | 5.50E-08 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 1.67E-03 | 3.68E-06 | 1.94E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 15 | 0.114 | 133 | 50 | 0.03 | 4.69E-01 | 1.03E-03 | 5.43E-06 | 6.71E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 4.35E-04 | 9.58E-07 | 5.03E-09 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 7.65E-05 | 1.69E-07 | 8.86E-10 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 1.53E-05 | 3.38E-08 | 1.77E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 3.10E-05 | 6.83E-08 | 3.59E-10 | |
| | **LHDT1** | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.114 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-09 |
| **Total - All Buildings** | **LDA** | | | 49 | | | 7.14E-01 | 1.57E-03 | 8.26E-06 | |
| | **LDT1** | | | 2 | | | 1.26E-01 | 2.77E-04 | 1.45E-06 | |
| | **LDT2** | | | 2 | | | 2.52E-02 | 5.54E-05 | 2.91E-07 | |
| | **MDT** | | | 4 | | | 5.09E-02 | 1.12E-04 | 5.90E-07 | |
| | **LHDT1** | | | 252 | | | 6.30E+00 | 1.39E-02 | 7.29E-05 | |
| | **LHDT2** | | | 86 | | | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **MHDT** | | | 1311 | | | 3.84E+01 | 8.45E-02 | 4.44E-04 | |
| | **HHDT** | | | 4357 | | | 9.66E+01 | 2.13E-01 | 1.12E-03 | |
| | **Total** | | | 6064 | | | 1.44E+02 | 3.18E-01 | 1.67E-03 | 1.67E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.760 | 5 | 121 | 7.69E+00 | 1.69E-02 | 8.90E-05 | |
| | **LHDT2** | 0.750 | 5 | 41 | 2.58E+00 | 5.68E-03 | 2.99E-05 | |
| | **MHDT** | 0.016 | 5 | 632 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **HHDT** | 0.021 | 5 | 2051 | 3.59E+00 | 7.91E-03 | 4.15E-05 | |
| | | | | 2846 | 1.47E+01 | 3.24E-02 | 1.70E-04 | 1.70E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.760 | 5 | 1 | 5.43E-02 | 1.19E-04 | 6.28E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.82E-02 | 4.01E-05 | 2.11E-07 | |
| | **MHDT** | 0.016 | 5 | 3 | 3.91E-03 | 8.62E-06 | 4.53E-08 | |
| | **HHDT** | 0.021 | 5 | 8 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | | | | 12 | 9.02E-02 | 1.99E-04 | 1.04E-06 | 1.04E-06 |
| **Idle at Utility** | **LHDT1** | 0.760 | 5 | 3 | 1.80E-01 | 3.96E-04 | 2.08E-06 | |
| | **LHDT2** | 0.750 | 5 | 1 | 6.04E-02 | 1.33E-04 | 6.99E-07 | |
| | **MHDT** | 0.016 | 5 | 2 | 3.22E-03 | 7.08E-06 | 3.72E-08 | |
| | **HHDT** | 0.021 | 5 | 11 | 1.88E-02 | 4.14E-05 | 2.17E-07 | |
| | | | | 17 | 2.62E-01 | 5.78E-04 | 3.04E-06 | 3.04E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.760 | 5 | 0 | 2.54E-02 | 5.59E-05 | 2.94E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 8.52E-03 | 1.88E-05 | 9.86E-08 | |
| | **MHDT** | 0.016 | 5 | 7 | 9.17E-03 | 2.02E-05 | 1.06E-07 | |
| | **HHDT** | 0.021 | 5 | 43 | 7.44E-02 | 1.64E-04 | 8.61E-07 | |
| | | | | 50 | 1.17E-01 | 2.59E-04 | 1.36E-06 | 1.36E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.760 | 5 | 1 | 3.88E-02 | 8.54E-05 | 4.49E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.30E-02 | 2.86E-05 | 1.51E-07 | |
| | **MHDT** | 0.016 | 5 | 11 | 1.50E-02 | 3.31E-05 | 1.74E-07 | |
| | **HHDT** | 0.021 | 5 | 66 | 1.16E-01 | 2.56E-04 | 1.35E-06 | |
| | | | | 79 | 1.83E-01 | 4.03E-04 | 2.12E-06 | 2.12E-06 |
| **Idle at Firestation** | **LHDT1** | 0.760 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.750 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.016 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.021 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3003 | 1.54E+01 | 3.38E-02 | 1.78E-04 | 1.78E-04 |

**World Logistics Center** 2021 Phase 1 With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** PM10

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 15554 | 330 | 0.21 | 1.59E+02 | 3.51E-01 | 1.85E-03 | |
| | **LDT1** | 15 | 0.053 | 1824 | 330 | 0.21 | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | 15 | 0.050 | 5417 | 330 | 0.21 | 5.55E+01 | 1.22E-01 | 6.42E-04 | |
| | **MDT** | 15 | 0.050 | 4296 | 330 | 0.21 | 4.42E+01 | 9.75E-02 | 5.12E-04 | |
| | **LHDT1** | 15 | 0.088 | 786 | 330 | 0.21 | 1.41E+01 | 3.11E-02 | 1.63E-04 | |
| | **LHDT2** | 15 | 0.100 | 83 | 330 | 0.21 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **MHDT** | 15 | 0.145 | 305 | 330 | 0.21 | 9.06E+00 | 1.99E-02 | 1.05E-04 | |
| | **HHDT** | 15 | 0.084 | 93 | 330 | 0.21 | 1.60E+00 | 3.53E-03 | 1.85E-05 | |
| | | | | | | | | | | 3.54E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 75 | 175 | 0.11 | 4.05E-01 | 8.92E-04 | 4.69E-06 | |
| | **LDT1** | 15 | 0.053 | 9 | 175 | 0.11 | 5.02E-02 | 1.11E-04 | 5.81E-07 | |
| | **LDT2** | 15 | 0.050 | 26 | 175 | 0.11 | 1.41E-01 | 3.11E-04 | 1.63E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.12E-01 | 2.48E-04 | 1.30E-06 | |
| | **LHDT1** | 15 | 0.088 | 6 | 175 | 0.11 | 5.29E-02 | 1.16E-04 | 6.12E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.34E-03 | 1.40E-05 | 7.34E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.23E-02 | 4.92E-05 | 2.58E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 175 | 0.11 | 3.28E-03 | 7.22E-06 | 3.79E-08 | 9.18E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 113 | 100 | 0.06 | 3.52E-01 | 7.76E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.053 | 13 | 100 | 0.06 | 4.37E-02 | 9.62E-05 | 5.05E-07 | |
| | **LDT2** | 15 | 0.050 | 39 | 100 | 0.06 | 1.23E-01 | 2.70E-04 | 1.42E-06 | |
| | **MDT** | 15 | 0.050 | 31 | 100 | 0.06 | 9.77E-02 | 2.15E-04 | 1.13E-06 | |
| | **LHDT1** | 15 | 0.088 | 18 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.20E-02 | 2.65E-05 | 1.39E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.05E-02 | 2.31E-05 | 1.21E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 100 | 0.06 | 2.54E-03 | 5.59E-06 | 2.94E-08 | 8.58E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 101 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.053 | 12 | 50 | 0.03 | 1.94E-02 | 4.27E-05 | 2.25E-07 | |
| | **LDT2** | 15 | 0.050 | 35 | 50 | 0.03 | 5.45E-02 | 1.20E-04 | 6.30E-07 | |
| | **MDT** | 15 | 0.050 | 28 | 50 | 0.03 | 4.34E-02 | 9.57E-05 | 5.03E-07 | |
| | **LHDT1** | 15 | 0.088 | 3 | 50 | 0.03 | 7.07E-03 | 1.56E-05 | 8.18E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.48E-04 | 1.87E-06 | 9.81E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.49E-02 | 3.29E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.084 | 2 | 50 | 0.03 | 5.03E-03 | 1.11E-05 | 5.82E-08 | 3.49E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 163 | 50 | 0.03 | 2.53E-01 | 5.57E-04 | 2.93E-06 | |
| | **LDT1** | 15 | 0.053 | 19 | 50 | 0.03 | 3.14E-02 | 6.91E-05 | 3.63E-07 | |
| | **LDT2** | 15 | 0.050 | 57 | 50 | 0.03 | 8.80E-02 | 1.94E-04 | 1.02E-06 | |
| | **MDT** | 15 | 0.050 | 45 | 50 | 0.03 | 7.02E-02 | 1.55E-04 | 8.12E-07 | |
| | **LHDT1** | 15 | 0.088 | 4 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.29E-03 | 2.85E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.39E-05 | 2.83E-07 | |
| | **HHDT** | 15 | 0.084 | 3 | 50 | 0.03 | 7.86E-03 | 1.73E-05 | 9.10E-08 | 5.64E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 63 | 50 | 0.03 | 9.79E-02 | 2.16E-04 | 1.13E-06 | |
| | **LDT1** | 15 | 0.053 | 7 | 50 | 0.03 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **LDT2** | 15 | 0.050 | 22 | 50 | 0.03 | 3.41E-02 | 7.50E-05 | 3.94E-07 | |
| | **MDT** | 15 | 0.050 | 17 | 50 | 0.03 | 2.72E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT1** | 15 | 0.088 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.084 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-06 |
| **Total - All Buildings** | **LDA** | | | 16068 | | | 1.61E+02 | 3.54E-01 | 1.86E-03 | |
| | **LDT1** | | | 1884 | | | 1.99E+01 | 4.39E-02 | 2.31E-04 | |
| | **LDT2** | | | 5596 | | | 5.59E+01 | 1.23E-01 | 6.47E-04 | |
| | **MDT** | | | 4438 | | | 4.46E+01 | 9.82E-02 | 5.16E-04 | |
| | **LHDT1** | | | 816 | | | 1.43E+01 | 3.15E-02 | 1.65E-04 | |
| | **LHDT2** | | | 86 | | | 1.71E+00 | 3.78E-03 | 1.98E-05 | |
| | **MHDT** | | | 317 | | | 9.13E+00 | 2.01E-02 | 1.06E-04 | |
| | **HHDT** | | | 98 | | | 1.62E+00 | 3.57E-03 | 1.87E-05 | |
| | **Total** | | | 29304 | | | 3.08E+02 | 6.78E-01 | 3.56E-03 | 3.56E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.043 | 5 | 393 | 1.40E+00 | 3.07E-03 | 1.62E-05 | |
| | **LHDT2** | 0.033 | 5 | 41 | 1.14E-01 | 2.52E-04 | 1.32E-06 | |
| | **MHDT** | 0.032 | 5 | 153 | 4.09E-01 | 9.01E-04 | 4.73E-06 | |
| | **HHDT** | 0.028 | 5 | 46 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | | | | 633 | 2.03E+00 | 4.46E-03 | 2.35E-05 | 2.35E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.043 | 5 | 3 | 9.85E-03 | 2.17E-05 | 1.14E-07 | |
| | **LHDT2** | 0.033 | 5 | 0 | 8.07E-04 | 1.78E-06 | 9.34E-09 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.90E-03 | 4.18E-06 | 2.20E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 4.16E-04 | 9.17E-07 | 4.82E-09 | |
| | | | | 4 | 1.30E-02 | 2.86E-05 | 1.50E-07 | 1.50E-07 |
| **Idle at Utility** | **LHDT1** | 0.043 | 5 | 9 | 3.27E-02 | 7.20E-05 | 3.78E-07 | |
| | **LHDT2** | 0.033 | 5 | 1 | 2.68E-03 | 5.90E-06 | 3.10E-08 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.56E-03 | 3.44E-06 | 1.81E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 5.64E-04 | 1.24E-06 | 6.53E-09 | |
| | | | | 11 | 3.75E-02 | 8.26E-05 | 4.34E-07 | 4.34E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.043 | 5 | 1 | 4.61E-03 | 1.02E-05 | 5.34E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 3.78E-04 | 8.32E-07 | 4.37E-09 | |
| | **MHDT** | 0.032 | 5 | 2 | 4.45E-03 | 9.81E-06 | 5.15E-08 | |
| | **HHDT** | 0.028 | 5 | 1 | 2.24E-03 | 4.92E-06 | 2.59E-08 | |
| | | | | 4 | 1.17E-02 | 2.57E-05 | 1.35E-07 | 1.35E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.043 | 5 | 2 | 7.04E-03 | 1.55E-05 | 8.15E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 5.77E-04 | 1.27E-06 | 6.67E-09 | |
| | **MHDT** | 0.032 | 5 | 3 | 7.29E-03 | 1.61E-05 | 8.44E-08 | |
| | **HHDT** | 0.028 | 5 | 2 | 3.49E-03 | 7.70E-06 | 4.04E-08 | |
| | | | | 6 | 1.84E-02 | 4.05E-05 | 2.13E-07 | 2.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.043 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.033 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 658 | 2.11E+00 | 4.64E-03 | 2.44E-05 | 2.44E-05 |

**World Logistics Center** **2021** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 ONLY Emissions** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation** **With EMFAC2014** Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 2.05E-03 | 1.83E-03 | 2.26E-02 | 2.65E-02 |
| 2 | 5.02E-03 | 4.44E-03 | 5.48E-02 | 6.43E-02 |
| 3 | 8.31E-03 | 7.10E-03 | 9.03E-02 | 1.06E-01 |
| 5 | 3.10E-04 | 1.22E-03 | 4.42E-03 | 5.95E-03 |
| 6 | 2.03E-03 | 2.78E-03 | 2.33E-02 | 2.82E-02 |
| 8 | 5.55E-04 | 2.54E-03 | 7.94E-03 | 1.10E-02 |
| 11 | 1.04E-05 | 3.05E-05 | 1.12E-04 | 1.53E-04 |
| 12 | 9.10E-05 | 1.87E-04 | 8.05E-04 | 1.08E-03 |
| 14 | 5.14E-04 | 6.07E-04 | 5.56E-03 | 6.69E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 8.91E-08 | 3.21E-05 | 7.04E-05 | 1.03E-04 |
| 21 | 3.43E-04 | 1.05E-03 | 4.89E-03 | 6.29E-03 |
| 24 | 5.40E-04 | 1.62E-03 | 7.63E-03 | 9.79E-03 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.17E-05 | 4.77E-05 | 3.59E-04 | 4.39E-04 |
| 30 | 1.33E-04 | 2.00E-04 | 1.50E-03 | 1.84E-03 |
| 31 | 2.66E-04 | 7.36E-04 | 3.64E-03 | 4.64E-03 |
| | | | Total | 2.73E-01 |

| ID | Arterial | From | To | | 2021 Project Related Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 27 | 1 | 1 | 2 | 116 | 38 | 1535 | 5840 | 7560 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 28 | 1 | 1 | 2 | 226 | 74 | 1669 | 6279 | 8281 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 105 | 34 | 859 | 3245 | 4259 |
| 5 | 3965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 8 | 216 | 87 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 24 | 559 | 1522 | 2194 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 3 | 117 | 176 | 312 |
| 24 | 2710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 5 | 0 | 0 | 0 | 11 | 3 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0569 | 0.1405 | 0.0501 | 0.0511 | 0.1120 | 0.1199 | 0.1460 | 0.1076 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.55E-06 | 4.67E-07 | 1.61E-07 | 2.85E-07 | 3.06E-05 | 1.07E-05 | 5.27E-04 | 1.48E-03 | 2.05E-03 |
| 2 | 1 | 8.24E-06 | 1.08E-06 | 3.74E-07 | 6.61E-07 | 1.33E-04 | 4.65E-05 | 1.28E-03 | 3.55E-03 | 5.02E-03 |
| 3 | 1 | 1.32E-05 | 1.74E-06 | 6.00E-07 | 1.06E-06 | 1.98E-04 | 6.95E-05 | 2.12E-03 | 5.90E-03 | 8.31E-03 |
| 5 | 1 | 2.46E-06 | 3.23E-07 | 1.11E-07 | 1.97E-07 | 1.98E-05 | 6.94E-06 | 2.16E-04 | 6.43E-05 | 3.10E-04 |
| 6 | 1 | 5.38E-06 | 7.07E-07 | 2.44E-07 | 4.31E-07 | 6.56E-05 | 2.30E-05 | 6.45E-04 | 1.29E-03 | 2.03E-03 |
| 8 | 1 | 5.06E-06 | 6.65E-07 | 2.30E-07 | 4.06E-07 | 4.77E-05 | 1.67E-05 | 4.84E-04 | 0.00E+00 | 5.55E-04 |
| 11 | 1 | 5.50E-08 | 7.23E-09 | 2.50E-09 | 4.41E-09 | 1.32E-06 | 4.63E-07 | 8.59E-06 | 0.00E+00 | 1.04E-05 |
| 12 | 1 | 2.79E-07 | 3.67E-08 | 1.27E-08 | 2.24E-08 | 1.61E-05 | 5.64E-06 | 6.89E-05 | 0.00E+00 | 9.10E-05 |
| 14 | 1 | 1.05E-06 | 1.38E-07 | 4.77E-08 | 8.43E-08 | 3.25E-05 | 1.14E-05 | 1.62E-04 | 3.07E-04 | 5.14E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 7.09E-08 | 9.31E-09 | 3.22E-09 | 5.69E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.91E-08 |
| 21 | 1 | 2.18E-06 | 2.86E-07 | 9.88E-08 | 1.75E-07 | 1.07E-05 | 3.76E-06 | 1.55E-04 | 1.71E-04 | 3.43E-04 |
| 24 | 1 | 3.36E-06 | 4.42E-07 | 1.52E-07 | 2.70E-07 | 1.45E-05 | 5.06E-06 | 2.45E-04 | 2.71E-04 | 5.40E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 9.40E-08 | 1.24E-08 | 4.26E-09 | 7.54E-09 | 7.43E-07 | 2.60E-07 | 1.25E-05 | 1.80E-05 | 3.17E-05 |
| 30 | 1 | 3.94E-07 | 5.17E-08 | 1.79E-08 | 3.16E-08 | 3.11E-06 | 1.09E-06 | 5.26E-05 | 7.56E-05 | 1.33E-04 |
| 31 | 1 | 1.52E-06 | 2.00E-07 | 6.89E-08 | 1.22E-07 | 6.99E-06 | 2.45E-06 | 1.18E-04 | 1.36E-04 | 2.66E-04 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8330 | 987 | 3008 | 2322 | 375 | 39 | 350 | 100 | 15513 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8652 | 1025 | 3124 | 2412 | 729 | 76 | 381 | 108 | 16508 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4315 | 511 | 1558 | 1203 | 338 | 35 | 196 | 56 | 8213 |
| 5 | 3,965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1977 | 234 | 714 | 551 | 83 | 9 | 49 | 1 | 3620 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3754 | 445 | 1356 | 1047 | 240 | 25 | 128 | 26 | 7019 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3558 | 422 | 1285 | 992 | 176 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 4 | 0 | 2 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 260 | 31 | 94 | 73 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 498 | 59 | 180 | 139 | 81 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1328 | 157 | 480 | 370 | 34 | 4 | 27 | 3 | 2403 |
| 24 | 2,710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1325 | 157 | 478 | 369 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1421 | 168 | 513 | 396 | 34 | 4 | 31 | 4 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0477 | 0.0467 | 0.0468 | 0.0860 | 0.0985 | 0.1434 | 0.0832 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.14E-04 | 1.11E-04 | 3.30E-04 | 2.55E-04 | 7.58E-05 | 9.11E-06 | 1.18E-04 | 1.96E-05 | 1.83E-03 |
| 2 | 1 | 2.12E-03 | 2.57E-04 | 7.66E-04 | 5.93E-04 | 3.29E-04 | 3.95E-05 | 2.87E-04 | 4.71E-05 | 4.44E-03 |
| 3 | 1 | 3.41E-03 | 4.12E-04 | 1.23E-03 | 9.51E-04 | 4.92E-04 | 5.90E-05 | 4.75E-04 | 7.83E-05 | 7.10E-03 |
| 5 | 1 | 6.32E-04 | 7.65E-05 | 2.28E-04 | 1.77E-04 | 4.91E-05 | 5.89E-06 | 4.84E-05 | 8.53E-07 | 1.22E-03 |
| 6 | 1 | 1.38E-03 | 1.68E-04 | 5.00E-04 | 3.87E-04 | 1.63E-04 | 1.95E-05 | 1.45E-04 | 1.72E-05 | 2.78E-03 |
| 8 | 1 | 1.30E-03 | 1.58E-04 | 4.70E-04 | 3.64E-04 | 1.18E-04 | 1.42E-05 | 1.09E-04 | 0.00E+00 | 2.54E-03 |
| 11 | 1 | 1.42E-05 | 1.71E-06 | 5.11E-06 | 3.95E-06 | 3.28E-06 | 3.93E-07 | 1.93E-06 | 0.00E+00 | 3.05E-05 |
| 12 | 1 | 7.19E-05 | 8.70E-06 | 2.60E-05 | 2.01E-05 | 3.99E-05 | 4.79E-06 | 1.55E-05 | 0.00E+00 | 1.87E-04 |
| 14 | 1 | 2.70E-04 | 3.27E-05 | 9.76E-05 | 7.55E-05 | 8.06E-05 | 9.67E-06 | 3.63E-05 | 4.07E-06 | 6.07E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.82E-05 | 2.21E-06 | 6.59E-06 | 5.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-05 |
| 21 | 1 | 5.61E-04 | 6.78E-05 | 2.02E-04 | 1.57E-04 | 2.66E-05 | 3.19E-06 | 3.47E-05 | 2.27E-06 | 1.05E-03 |
| 24 | 1 | 8.65E-04 | 1.05E-04 | 3.12E-04 | 2.42E-04 | 3.58E-05 | 4.30E-06 | 5.49E-05 | 3.60E-06 | 1.62E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.42E-05 | 2.93E-06 | 8.73E-06 | 6.76E-06 | 1.84E-06 | 2.21E-07 | 2.81E-06 | 2.39E-07 | 4.77E-05 |
| 30 | 1 | 1.01E-04 | 1.23E-05 | 3.66E-05 | 2.83E-05 | 7.71E-06 | 9.26E-07 | 1.18E-05 | 1.00E-06 | 2.00E-04 |
| 31 | 1 | 3.91E-04 | 4.73E-05 | 1.41E-04 | 1.09E-04 | 1.73E-05 | 2.08E-06 | 2.66E-05 | 1.81E-06 | 7.36E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 14,679 | 2982 | 569 | 116 | 1,885 | 383 | 5,940 | 1207 | 4687 | 8.44 | 0.035 | 0.0009 | 4.3 | 2.26E-02 |
| 2 | A | 731 | 0.45 | 15,246 | 6923 | 1,105 | 502 | 2,051 | 931 | 6,387 | 2900 | 11257 | 8.52 | 0.035 | 0.0009 | 10.4 | 5.48E-02 |
| 3 | A | 2352 | 1.46 | 7,604 | 11110 | 513 | 749 | 1,055 | 1541 | 3,300 | 4822 | 18223 | 8.68 | 0.035 | 0.0009 | 17.2 | 9.03E-02 |
| 5 | A | 953 | 0.59 | 3,484 | 2063 | 126 | 75 | 265 | 157 | 89 | 53 | 2347 | 3.36 | 0.035 | 0.0004 | 0.8 | 4.42E-03 |
| 6 | A | 1099 | 0.68 | 6,615 | 4516 | 363 | 248 | 687 | 469 | 1,549 | 1057 | 6290 | 6.53 | 0.035 | 0.0007 | 4.4 | 2.33E-02 |
| 8 | A | 1091 | 0.68 | 6,270 | 4250 | 266 | 180 | 520 | 352 | 0 | 0 | 4782 | 2.97 | 0.035 | 0.0003 | 1.5 | 7.94E-03 |
| 11 | A | 1201 | 0.75 | 62 | 46 | 7 | 5 | 8 | 6 | 0 | 0 | 57 | 3.48 | 0.035 | 0.0004 | 0.0 | 1.12E-04 |
| 12 | A | 824 | 0.51 | 458 | 235 | 119 | 61 | 98 | 50 | 0 | 0 | 346 | 4.14 | 0.035 | 0.0004 | 0.2 | 8.05E-04 |
| 14 | A | 1618 | 1.01 | 878 | 882 | 122 | 123 | 117 | 118 | 249 | 251 | 1373 | 7.12 | 0.035 | 0.0008 | 1.1 | 5.56E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 40 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 2.13 | 0.035 | 0.0002 | 0.0 | 7.04E-05 |
| 21 | A | 1258 | 0.78 | 2,340 | 1829 | 52 | 41 | 144 | 112 | 179 | 140 | 2122 | 4.10 | 0.035 | 0.0004 | 0.9 | 4.89E-03 |
| 24 | A | 1946 | 1.21 | 2,334 | 2822 | 45 | 55 | 147 | 178 | 183 | 221 | 3276 | 4.14 | 0.035 | 0.0004 | 1.5 | 7.63E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 188 | 79 | 7 | 3 | 22 | 9 | 35 | 15 | 106 | 6.00 | 0.035 | 0.0006 | 0.1 | 3.59E-04 |
| 30 | A | 2827 | 1.76 | 188 | 331 | 7 | 12 | 22 | 38 | 35 | 62 | 442 | 6.00 | 0.035 | 0.0006 | 0.3 | 1.50E-03 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 52 | 26 | 169 | 86 | 218 | 111 | 1499 | 4.31 | 0.035 | 0.0005 | 0.7 | 3.64E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2021

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2021** **Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-DSL Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.65E-03 | 3.54E-03 |
| Light Logistics | Phase 1 | 3.74E-06 | 9.18E-06 |
| Utilities Service Station | Phase 1 | 2.98E-06 | 8.58E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.26E-06 | 3.49E-06 |
| Convenience Store | Phase 1 | 6.71E-06 | 5.64E-06 |
| Fire Station | Phase 1 | 6.46E-09 | 1.98E-06 |
| Total | | 1.67E-03 | 3.56E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicle Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.70E-04 | 2.35E-05 |
| Light Logistics | Phase 1 | 1.04E-06 | 1.50E-07 |
| Utilities Service Station | Phase 1 | 3.04E-06 | 4.34E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.36E-06 | 1.35E-07 |
| Convenience Store | Phase 1 | 2.12E-06 | 2.13E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.78E-04 | 2.44E-05 |

**Total Onsite Emission**

| | | | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 1.67E-03 | 3.56E-03 | |
| Idling Emissions (g/sec) | 1.78E-04 | 2.44E-05 | |
| Total Vehicle Emissions | 1.85E-03 | 3.59E-03 | 5.44E-03 |
| Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| Forklifts (LPG) (g/sec) | | 1.74E-04 | |
| | | | Total |
| Total All Sources | 1.85E-03 | 4.80E-03 | 6.64E-03 |
| Size of Area Source (m2) | 4.07E+06 | 4.07E+06 | |
| **Area Emission Rate (g/m2-sec)** | **4.54E-10** | **1.18E-09** | 1.63E-09 |

**World Logistics Center** **2021** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.073 | 47 | 330 | 0.21 | 7.08E-01 | 1.56E-03 | 8.20E-06 | |
| | **LDT1** | 15 | 0.268 | 2 | 330 | 0.21 | 1.25E-01 | 2.74E-04 | 1.44E-06 | |
| | **LDT2** | 15 | 0.055 | 2 | 330 | 0.21 | 2.50E-02 | 5.50E-05 | 2.89E-07 | |
| | **MDT** | 15 | 0.057 | 4 | 330 | 0.21 | 5.05E-02 | 1.11E-04 | 5.85E-07 | |
| | **LHDT1** | 15 | 0.125 | 243 | 330 | 0.21 | 6.22E+00 | 1.37E-02 | 7.20E-05 | |
| | **LHDT2** | 15 | 0.129 | 83 | 330 | 0.21 | 2.19E+00 | 4.82E-03 | 2.53E-05 | |
| | **MHDT** | 15 | 0.147 | 1264 | 330 | 0.21 | 3.81E+01 | 8.38E-02 | 4.40E-04 | |
| | **HHDT** | 15 | 0.114 | 4102 | 330 | 0.21 | 9.55E+01 | 2.10E-01 | 1.11E-03 | |
| | | | | | | | | | | 1.65E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.073 | 0 | 175 | 0.11 | 1.80E-03 | 3.96E-06 | 2.08E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 175 | 0.11 | 3.17E-04 | 6.97E-07 | 3.66E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 175 | 0.11 | 6.34E-05 | 1.40E-07 | 7.34E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 175 | 0.11 | 1.28E-04 | 2.83E-07 | 1.49E-09 | |
| | **LHDT1** | 15 | 0.125 | 2 | 175 | 0.11 | 2.33E-02 | 5.13E-05 | 2.70E-07 | |
| | **LHDT2** | 15 | 0.129 | 1 | 175 | 0.11 | 8.19E-03 | 1.80E-05 | 9.48E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.38E-02 | 2.07E-04 | 1.09E-06 | |
| | **HHDT** | 15 | 0.114 | 16 | 175 | 0.11 | 1.96E-01 | 4.31E-04 | 2.26E-06 | 3.74E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.073 | 0 | 100 | 0.06 | 1.56E-03 | 3.45E-06 | 1.81E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 100 | 0.06 | 2.75E-04 | 6.06E-07 | 3.19E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 100 | 0.06 | 5.51E-05 | 1.21E-07 | 6.38E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 100 | 0.06 | 1.12E-04 | 2.46E-07 | 1.29E-09 | |
| | **LHDT1** | 15 | 0.125 | 6 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | **LHDT2** | 15 | 0.129 | 2 | 100 | 0.06 | 1.55E-02 | 3.42E-05 | 1.80E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.40E-02 | 9.69E-05 | 5.09E-07 | |
| | **HHDT** | 15 | 0.114 | 21 | 100 | 0.06 | 1.52E-01 | 3.34E-04 | 1.75E-06 | 2.98E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 6.95E-04 | 1.53E-06 | 8.05E-09 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 1.22E-04 | 2.69E-07 | 1.42E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 2.45E-05 | 5.40E-08 | 2.84E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 4.96E-05 | 1.09E-07 | 5.74E-10 | |
| | **LHDT1** | 15 | 0.125 | 1 | 50 | 0.03 | 3.11E-03 | 6.86E-06 | 3.61E-08 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 1.10E-03 | 2.41E-06 | 1.27E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.28E-02 | 1.38E-04 | 7.27E-07 | |
| | **HHDT** | 15 | 0.114 | 85 | 50 | 0.03 | 3.00E-01 | 6.61E-04 | 3.47E-06 | 4.26E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 1.12E-03 | 2.48E-06 | 1.30E-08 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 1.98E-04 | 4.35E-07 | 2.29E-09 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 3.96E-05 | 8.72E-08 | 4.58E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 8.02E-05 | 1.77E-07 | 9.28E-10 | |
| | **LHDT1** | 15 | 0.125 | 1 | 50 | 0.03 | 4.76E-03 | 1.05E-05 | 5.50E-08 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 1.67E-03 | 3.68E-06 | 1.94E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 15 | 0.114 | 133 | 50 | 0.03 | 4.69E-01 | 1.03E-03 | 5.43E-06 | 6.71E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.073 | 0 | 50 | 0.03 | 4.35E-04 | 9.58E-07 | 5.03E-09 | |
| | **LDT1** | 15 | 0.268 | 0 | 50 | 0.03 | 7.65E-05 | 1.69E-07 | 8.86E-10 | |
| | **LDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 1.53E-05 | 3.38E-08 | 1.77E-10 | |
| | **MDT** | 15 | 0.057 | 0 | 50 | 0.03 | 3.10E-05 | 6.83E-08 | 3.59E-10 | |
| | **LHDT1** | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.129 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.114 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-09 |
| **Total - All Buildings** | **LDA** | | | 49 | | | 7.14E-01 | 1.57E-03 | 8.26E-06 | |
| | **LDT1** | | | 2 | | | 1.26E-01 | 2.77E-04 | 1.45E-06 | |
| | **LDT2** | | | 2 | | | 2.52E-02 | 5.54E-05 | 2.91E-07 | |
| | **MDT** | | | 4 | | | 5.09E-02 | 1.12E-04 | 5.90E-07 | |
| | **LHDT1** | | | 252 | | | 6.30E+00 | 1.39E-02 | 7.29E-05 | |
| | **LHDT2** | | | 86 | | | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **MHDT** | | | 1311 | | | 3.84E+01 | 8.45E-02 | 4.44E-04 | |
| | **HHDT** | | | 4357 | | | 9.66E+01 | 2.13E-01 | 1.12E-03 | |
| | **Total** | | | 6064 | | | 1.44E+02 | 3.18E-01 | 1.67E-03 | 1.67E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.760 | 5 | 121 | 7.69E+00 | 1.69E-02 | 8.90E-05 | |
| | **LHDT2** | 0.750 | 5 | 41 | 2.58E+00 | 5.68E-03 | 2.99E-05 | |
| | **MHDT** | 0.016 | 5 | 632 | 8.42E-01 | 1.86E-03 | 9.75E-06 | |
| | **HHDT** | 0.021 | 5 | 2051 | 3.59E+00 | 7.91E-03 | 4.15E-05 | |
| | | | | 2846 | 1.47E+01 | 3.24E-02 | 1.70E-04 | 1.70E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.760 | 5 | 1 | 5.43E-02 | 1.19E-04 | 6.28E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.82E-02 | 4.01E-05 | 2.11E-07 | |
| | **MHDT** | 0.016 | 5 | 3 | 3.91E-03 | 8.62E-06 | 4.53E-08 | |
| | **HHDT** | 0.021 | 5 | 8 | 1.39E-02 | 3.05E-05 | 1.60E-07 | |
| | | | | 12 | 9.02E-02 | 1.99E-04 | 1.04E-06 | 1.04E-06 |
| **Idle at Utility** | **LHDT1** | 0.760 | 5 | 3 | 1.80E-01 | 3.96E-04 | 2.08E-06 | |
| | **LHDT2** | 0.750 | 5 | 1 | 6.04E-02 | 1.33E-04 | 6.99E-07 | |
| | **MHDT** | 0.016 | 5 | 2 | 3.22E-03 | 7.08E-06 | 3.72E-08 | |
| | **HHDT** | 0.021 | 5 | 11 | 1.88E-02 | 4.14E-05 | 2.17E-07 | |
| | | | | 17 | 2.62E-01 | 5.78E-04 | 3.04E-06 | 3.04E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.760 | 5 | 0 | 2.54E-02 | 5.59E-05 | 2.94E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 8.52E-03 | 1.88E-05 | 9.86E-08 | |
| | **MHDT** | 0.016 | 5 | 7 | 9.17E-03 | 2.02E-05 | 1.06E-07 | |
| | **HHDT** | 0.021 | 5 | 43 | 7.44E-02 | 1.64E-04 | 8.61E-07 | |
| | | | | 50 | 1.17E-01 | 2.59E-04 | 1.36E-06 | 1.36E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.760 | 5 | 1 | 3.88E-02 | 8.54E-05 | 4.49E-07 | |
| | **LHDT2** | 0.750 | 5 | 0 | 1.30E-02 | 2.86E-05 | 1.51E-07 | |
| | **MHDT** | 0.016 | 5 | 11 | 1.50E-02 | 3.31E-05 | 1.74E-07 | |
| | **HHDT** | 0.021 | 5 | 66 | 1.16E-01 | 2.56E-04 | 1.35E-06 | |
| | | | | 79 | 1.83E-01 | 4.03E-04 | 2.12E-06 | 2.12E-06 |
| **Idle at Firestation** | **LHDT1** | 0.760 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.750 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.016 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.021 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3003 | 1.54E+01 | 3.38E-02 | 1.78E-04 | 1.78E-04 |

**World Logistics Center** 2021 Phase 1 With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** PM10

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 15554 | 330 | 0.21 | 1.59E+02 | 3.51E-01 | 1.85E-03 | |
| | **LDT1** | 15 | 0.053 | 1824 | 330 | 0.21 | 1.98E+01 | 4.35E-02 | 2.29E-04 | |
| | **LDT2** | 15 | 0.050 | 5417 | 330 | 0.21 | 5.55E+01 | 1.22E-01 | 6.42E-04 | |
| | **MDT** | 15 | 0.050 | 4296 | 330 | 0.21 | 4.42E+01 | 9.75E-02 | 5.12E-04 | |
| | **LHDT1** | 15 | 0.088 | 786 | 330 | 0.21 | 1.41E+01 | 3.11E-02 | 1.63E-04 | |
| | **LHDT2** | 15 | 0.100 | 83 | 330 | 0.21 | 1.69E+00 | 3.73E-03 | 1.96E-05 | |
| | **MHDT** | 15 | 0.145 | 305 | 330 | 0.21 | 9.06E+00 | 1.99E-02 | 1.05E-04 | |
| | **HHDT** | 15 | 0.084 | 93 | 330 | 0.21 | 1.60E+00 | 3.53E-03 | 1.85E-05 | |
| | | | | | | | | | | 3.54E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 75 | 175 | 0.11 | 4.05E-01 | 8.92E-04 | 4.69E-06 | |
| | **LDT1** | 15 | 0.053 | 9 | 175 | 0.11 | 5.02E-02 | 1.11E-04 | 5.81E-07 | |
| | **LDT2** | 15 | 0.050 | 26 | 175 | 0.11 | 1.41E-01 | 3.11E-04 | 1.63E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.12E-01 | 2.48E-04 | 1.30E-06 | |
| | **LHDT1** | 15 | 0.088 | 6 | 175 | 0.11 | 5.29E-02 | 1.16E-04 | 6.12E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.34E-03 | 1.40E-05 | 7.34E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.23E-02 | 4.92E-05 | 2.58E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 175 | 0.11 | 3.28E-03 | 7.22E-06 | 3.79E-08 | 9.18E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 113 | 100 | 0.06 | 3.52E-01 | 7.76E-04 | 4.08E-06 | |
| | **LDT1** | 15 | 0.053 | 13 | 100 | 0.06 | 4.37E-02 | 9.62E-05 | 5.05E-07 | |
| | **LDT2** | 15 | 0.050 | 39 | 100 | 0.06 | 1.23E-01 | 2.70E-04 | 1.42E-06 | |
| | **MDT** | 15 | 0.050 | 31 | 100 | 0.06 | 9.77E-02 | 2.15E-04 | 1.13E-06 | |
| | **LHDT1** | 15 | 0.088 | 18 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.20E-02 | 2.65E-05 | 1.39E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.05E-02 | 2.31E-05 | 1.21E-07 | |
| | **HHDT** | 15 | 0.084 | 0 | 100 | 0.06 | 2.54E-03 | 5.59E-06 | 2.94E-08 | 8.58E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 101 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.053 | 12 | 50 | 0.03 | 1.94E-02 | 4.27E-05 | 2.25E-07 | |
| | **LDT2** | 15 | 0.050 | 35 | 50 | 0.03 | 5.45E-02 | 1.20E-04 | 6.30E-07 | |
| | **MDT** | 15 | 0.050 | 28 | 50 | 0.03 | 4.34E-02 | 9.57E-05 | 5.03E-07 | |
| | **LHDT1** | 15 | 0.088 | 3 | 50 | 0.03 | 7.07E-03 | 1.56E-05 | 8.18E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.48E-04 | 1.87E-06 | 9.81E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.49E-02 | 3.29E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.084 | 2 | 50 | 0.03 | 5.03E-03 | 1.11E-05 | 5.82E-08 | 3.49E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 163 | 50 | 0.03 | 2.53E-01 | 5.57E-04 | 2.93E-06 | |
| | **LDT1** | 15 | 0.053 | 19 | 50 | 0.03 | 3.14E-02 | 6.91E-05 | 3.63E-07 | |
| | **LDT2** | 15 | 0.050 | 57 | 50 | 0.03 | 8.80E-02 | 1.94E-04 | 1.02E-06 | |
| | **MDT** | 15 | 0.050 | 45 | 50 | 0.03 | 7.02E-02 | 1.55E-04 | 8.12E-07 | |
| | **LHDT1** | 15 | 0.088 | 4 | 50 | 0.03 | 1.08E-02 | 2.38E-05 | 1.25E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.29E-03 | 2.85E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.39E-05 | 2.83E-07 | |
| | **HHDT** | 15 | 0.084 | 3 | 50 | 0.03 | 7.86E-03 | 1.73E-05 | 9.10E-08 | 5.64E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 63 | 50 | 0.03 | 9.79E-02 | 2.16E-04 | 1.13E-06 | |
| | **LDT1** | 15 | 0.053 | 7 | 50 | 0.03 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **LDT2** | 15 | 0.050 | 22 | 50 | 0.03 | 3.41E-02 | 7.50E-05 | 3.94E-07 | |
| | **MDT** | 15 | 0.050 | 17 | 50 | 0.03 | 2.72E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT1** | 15 | 0.088 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.084 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-06 |
| **Total - All Buildings** | **LDA** | | | 16068 | | | 1.61E+02 | 3.54E-01 | 1.86E-03 | |
| | **LDT1** | | | 1884 | | | 1.99E+01 | 4.39E-02 | 2.31E-04 | |
| | **LDT2** | | | 5596 | | | 5.59E+01 | 1.23E-01 | 6.47E-04 | |
| | **MDT** | | | 4438 | | | 4.46E+01 | 9.82E-02 | 5.16E-04 | |
| | **LHDT1** | | | 816 | | | 1.43E+01 | 3.15E-02 | 1.65E-04 | |
| | **LHDT2** | | | 86 | | | 1.71E+00 | 3.78E-03 | 1.98E-05 | |
| | **MHDT** | | | 317 | | | 9.13E+00 | 2.01E-02 | 1.06E-04 | |
| | **HHDT** | | | 98 | | | 1.62E+00 | 3.57E-03 | 1.87E-05 | |
| | **Total** | | | 29304 | | | 3.08E+02 | 6.78E-01 | 3.56E-03 | 3.56E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.043 | 5 | 393 | 1.40E+00 | 3.07E-03 | 1.62E-05 | |
| | **LHDT2** | 0.033 | 5 | 41 | 1.14E-01 | 2.52E-04 | 1.32E-06 | |
| | **MHDT** | 0.032 | 5 | 153 | 4.09E-01 | 9.01E-04 | 4.73E-06 | |
| | **HHDT** | 0.028 | 5 | 46 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | | | | 633 | 2.03E+00 | 4.46E-03 | 2.35E-05 | 2.35E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.043 | 5 | 3 | 9.85E-03 | 2.17E-05 | 1.14E-07 | |
| | **LHDT2** | 0.033 | 5 | 0 | 8.07E-04 | 1.78E-06 | 9.34E-09 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.90E-03 | 4.18E-06 | 2.20E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 4.16E-04 | 9.17E-07 | 4.82E-09 | |
| | | | | 4 | 1.30E-02 | 2.86E-05 | 1.50E-07 | 1.50E-07 |
| **Idle at Utility** | **LHDT1** | 0.043 | 5 | 9 | 3.27E-02 | 7.20E-05 | 3.78E-07 | |
| | **LHDT2** | 0.033 | 5 | 1 | 2.68E-03 | 5.90E-06 | 3.10E-08 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.56E-03 | 3.44E-06 | 1.81E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 5.64E-04 | 1.24E-06 | 6.53E-09 | |
| | | | | 11 | 3.75E-02 | 8.26E-05 | 4.34E-07 | 4.34E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.043 | 5 | 1 | 4.61E-03 | 1.02E-05 | 5.34E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 3.78E-04 | 8.32E-07 | 4.37E-09 | |
| | **MHDT** | 0.032 | 5 | 2 | 4.45E-03 | 9.81E-06 | 5.15E-08 | |
| | **HHDT** | 0.028 | 5 | 1 | 2.24E-03 | 4.92E-06 | 2.59E-08 | |
| | | | | 4 | 1.17E-02 | 2.57E-05 | 1.35E-07 | 1.35E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.043 | 5 | 2 | 7.04E-03 | 1.55E-05 | 8.15E-08 | |
| | **LHDT2** | 0.033 | 5 | 0 | 5.77E-04 | 1.27E-06 | 6.67E-09 | |
| | **MHDT** | 0.032 | 5 | 3 | 7.29E-03 | 1.61E-05 | 8.44E-08 | |
| | **HHDT** | 0.028 | 5 | 2 | 3.49E-03 | 7.70E-06 | 4.04E-08 | |
| | | | | 6 | 1.84E-02 | 4.05E-05 | 2.13E-07 | 2.13E-07 |
| **Idle at Firestation** | **LHDT1** | 0.043 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.033 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 658 | 2.11E+00 | 4.64E-03 | 2.44E-05 | 2.44E-05 |

**World Logistics Center** **2021** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 ONLY Emissions** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Internal Roadway Circulation** **With EMFAC2014** Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 2.05E-03 | 1.83E-03 | 2.26E-02 | 2.65E-02 |
| 2 | 5.02E-03 | 4.44E-03 | 5.48E-02 | 6.43E-02 |
| 3 | 8.31E-03 | 7.10E-03 | 9.03E-02 | 1.06E-01 |
| 5 | 3.10E-04 | 1.22E-03 | 4.42E-03 | 5.95E-03 |
| 6 | 2.03E-03 | 2.78E-03 | 2.33E-02 | 2.82E-02 |
| 8 | 5.55E-04 | 2.54E-03 | 7.94E-03 | 1.10E-02 |
| 11 | 1.04E-05 | 3.05E-05 | 1.12E-04 | 1.53E-04 |
| 12 | 9.10E-05 | 1.87E-04 | 8.05E-04 | 1.08E-03 |
| 14 | 5.14E-04 | 6.07E-04 | 5.56E-03 | 6.69E-03 |
| 18 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 8.91E-08 | 3.21E-05 | 7.04E-05 | 1.03E-04 |
| 21 | 3.43E-04 | 1.05E-03 | 4.89E-03 | 6.29E-03 |
| 24 | 5.40E-04 | 1.62E-03 | 7.63E-03 | 9.79E-03 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.17E-05 | 4.77E-05 | 3.59E-04 | 4.39E-04 |
| 30 | 1.33E-04 | 2.00E-04 | 1.50E-03 | 1.84E-03 |
| 31 | 2.66E-04 | 7.36E-04 | 3.64E-03 | 4.64E-03 |
| | | | Total | 2.73E-01 |

| ID | Arterial | From | To | | 2021 Project Related Phase 1 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 14,679 | 569 | 1,885 | 5,940 |
| 2 | Street A | Eucalyptus Ave | Street F | | 15,246 | 1,105 | 2,051 | 6,387 |
| 3 | Street E | west of Street A | | | 7,604 | 513 | 1,055 | 3,300 |
| 5 | Street E | Street D | Street A | | 3,484 | 126 | 265 | 89 |
| 6 | Street A | Street F | Street C | | 6,615 | 363 | 687 | 1,549 |
| 8 | Street D | Street E | Cactus Ave | | 6,270 | 266 | 520 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 62 | 7 | 8 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 458 | 119 | 98 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 878 | 122 | 117 | 249 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 40 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,340 | 52 | 144 | 179 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,334 | 45 | 147 | 183 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 188 | 7 | 22 | 35 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 188 | 7 | 22 | 35 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,504 | 52 | 169 | 218 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 27 | 1 | 1 | 2 | 116 | 38 | 1535 | 5840 | 7560 |
| 2 | 24789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 28 | 1 | 1 | 2 | 226 | 74 | 1669 | 6279 | 8281 |
| 3 | 12472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 105 | 34 | 859 | 3245 | 4259 |
| 5 | 3965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 6 | 0 | 0 | 1 | 26 | 8 | 216 | 87 | 345 |
| 6 | 9214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 12 | 1 | 1 | 1 | 74 | 24 | 559 | 1522 | 2194 |
| 8 | 7056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 11 | 1 | 1 | 1 | 54 | 18 | 423 | 0 | 509 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 24 | 8 | 80 | 0 | 113 |
| 14 | 1366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 25 | 8 | 95 | 245 | 375 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 2715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 4 | 0 | 0 | 0 | 11 | 3 | 117 | 176 | 312 |
| 24 | 2710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 4 | 0 | 0 | 0 | 9 | 3 | 120 | 180 | 317 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 35 | 54 |
| 31 | 2943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 5 | 0 | 0 | 0 | 11 | 3 | 138 | 215 | 372 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0569 | 0.1405 | 0.0501 | 0.0511 | 0.1120 | 0.1199 | 0.1460 | 0.1076 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.55E-06 | 4.67E-07 | 1.61E-07 | 2.85E-07 | 3.06E-05 | 1.07E-05 | 5.27E-04 | 1.48E-03 | 2.05E-03 |
| 2 | 1 | 8.24E-06 | 1.08E-06 | 3.74E-07 | 6.61E-07 | 1.33E-04 | 4.65E-05 | 1.28E-03 | 3.55E-03 | 5.02E-03 |
| 3 | 1 | 1.32E-05 | 1.74E-06 | 6.00E-07 | 1.06E-06 | 1.98E-04 | 6.95E-05 | 2.12E-03 | 5.90E-03 | 8.31E-03 |
| 5 | 1 | 2.46E-06 | 3.23E-07 | 1.11E-07 | 1.97E-07 | 1.98E-05 | 6.94E-06 | 2.16E-04 | 6.43E-05 | 3.10E-04 |
| 6 | 1 | 5.38E-06 | 7.07E-07 | 2.44E-07 | 4.31E-07 | 6.56E-05 | 2.30E-05 | 6.45E-04 | 1.29E-03 | 2.03E-03 |
| 8 | 1 | 5.06E-06 | 6.65E-07 | 2.30E-07 | 4.06E-07 | 4.77E-05 | 1.67E-05 | 4.84E-04 | 0.00E+00 | 5.55E-04 |
| 11 | 1 | 5.50E-08 | 7.23E-09 | 2.50E-09 | 4.41E-09 | 1.32E-06 | 4.63E-07 | 8.59E-06 | 0.00E+00 | 1.04E-05 |
| 12 | 1 | 2.79E-07 | 3.67E-08 | 1.27E-08 | 2.24E-08 | 1.61E-05 | 5.64E-06 | 6.89E-05 | 0.00E+00 | 9.10E-05 |
| 14 | 1 | 1.05E-06 | 1.38E-07 | 4.77E-08 | 8.43E-08 | 3.25E-05 | 1.14E-05 | 1.62E-04 | 3.07E-04 | 5.14E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 7.09E-08 | 9.31E-09 | 3.22E-09 | 5.69E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.91E-08 |
| 21 | 1 | 2.18E-06 | 2.86E-07 | 9.88E-08 | 1.75E-07 | 1.07E-05 | 3.76E-06 | 1.55E-04 | 1.71E-04 | 3.43E-04 |
| 24 | 1 | 3.36E-06 | 4.42E-07 | 1.52E-07 | 2.70E-07 | 1.45E-05 | 5.06E-06 | 2.45E-04 | 2.71E-04 | 5.40E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 9.40E-08 | 1.24E-08 | 4.26E-09 | 7.54E-09 | 7.43E-07 | 2.60E-07 | 1.25E-05 | 1.80E-05 | 3.17E-05 |
| 30 | 1 | 3.94E-07 | 5.17E-08 | 1.79E-08 | 3.16E-08 | 3.11E-06 | 1.09E-06 | 5.26E-05 | 7.56E-05 | 1.33E-04 |
| 31 | 1 | 1.52E-06 | 2.00E-07 | 6.89E-08 | 1.22E-07 | 6.99E-06 | 2.45E-06 | 1.18E-04 | 1.36E-04 | 2.66E-04 |

**World Logistics Center** **2021** **PM10** **Phase 1**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.75% | 6.72% | 20.49% | 15.82% | 65.98% | 6.91% | 18.58% | 1.69% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23,073 | 14,679 | 569 | 1,885 | 5,940 | 327 | 0.203 | 8330 | 987 | 3008 | 2322 | 375 | 39 | 350 | 100 | 15513 |
| 2 | 24,789 | 15,246 | 1,105 | 2,051 | 6,387 | 731 | 0.454 | 8652 | 1025 | 3124 | 2412 | 729 | 76 | 381 | 108 | 16508 |
| 3 | 12,472 | 7,604 | 513 | 1,055 | 3,300 | 2352 | 1.461 | 4315 | 511 | 1558 | 1203 | 338 | 35 | 196 | 56 | 8213 |
| 5 | 3,965 | 3,484 | 126 | 265 | 89 | 953 | 0.592 | 1977 | 234 | 714 | 551 | 83 | 9 | 49 | 1 | 3620 |
| 6 | 9,214 | 6,615 | 363 | 687 | 1,549 | 1099 | 0.683 | 3754 | 445 | 1356 | 1047 | 240 | 25 | 128 | 26 | 7019 |
| 8 | 7,056 | 6,270 | 266 | 520 | 0 | 1091 | 0.678 | 3558 | 422 | 1285 | 992 | 176 | 18 | 97 | 0 | 6547 |
| 11 | 77 | 62 | 7 | 8 | 0 | 1201 | 0.746 | 35 | 4 | 13 | 10 | 4 | 0 | 2 | 0 | 68 |
| 12 | 675 | 458 | 119 | 98 | 0 | 824 | 0.512 | 260 | 31 | 94 | 73 | 78 | 8 | 18 | 0 | 562 |
| 14 | 1,366 | 878 | 122 | 117 | 249 | 1618 | 1.005 | 498 | 59 | 180 | 139 | 81 | 8 | 22 | 4 | 991 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 40 | 40 | 0 | 0 | 0 | 2386 | 1.482 | 23 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 40 |
| 21 | 2,715 | 2,340 | 52 | 144 | 179 | 1258 | 0.781 | 1328 | 157 | 480 | 370 | 34 | 4 | 27 | 3 | 2403 |
| 24 | 2,710 | 2,334 | 45 | 147 | 183 | 1946 | 1.209 | 1325 | 157 | 478 | 369 | 30 | 3 | 27 | 3 | 2392 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 252 | 188 | 7 | 22 | 35 | 675 | 0.419 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 30 | 252 | 188 | 7 | 22 | 35 | 2827 | 1.756 | 107 | 13 | 39 | 30 | 4 | 0 | 4 | 1 | 197 |
| 31 | 2,943 | 2,504 | 52 | 169 | 218 | 820 | 0.509 | 1421 | 168 | 513 | 396 | 34 | 4 | 31 | 4 | 2571 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0467 | 0.0477 | 0.0467 | 0.0468 | 0.0860 | 0.0985 | 0.1434 | 0.0832 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9.14E-04 | 1.11E-04 | 3.30E-04 | 2.55E-04 | 7.58E-05 | 9.11E-06 | 1.18E-04 | 1.96E-05 | 1.83E-03 |
| 2 | 1 | 2.12E-03 | 2.57E-04 | 7.66E-04 | 5.93E-04 | 3.29E-04 | 3.95E-05 | 2.87E-04 | 4.71E-05 | 4.44E-03 |
| 3 | 1 | 3.41E-03 | 4.12E-04 | 1.23E-03 | 9.51E-04 | 4.92E-04 | 5.90E-05 | 4.75E-04 | 7.83E-05 | 7.10E-03 |
| 5 | 1 | 6.32E-04 | 7.65E-05 | 2.28E-04 | 1.77E-04 | 4.91E-05 | 5.89E-06 | 4.84E-05 | 8.53E-07 | 1.22E-03 |
| 6 | 1 | 1.38E-03 | 1.68E-04 | 5.00E-04 | 3.87E-04 | 1.63E-04 | 1.95E-05 | 1.45E-04 | 1.72E-05 | 2.78E-03 |
| 8 | 1 | 1.30E-03 | 1.58E-04 | 4.70E-04 | 3.64E-04 | 1.18E-04 | 1.42E-05 | 1.09E-04 | 0.00E+00 | 2.54E-03 |
| 11 | 1 | 1.42E-05 | 1.71E-06 | 5.11E-06 | 3.95E-06 | 3.28E-06 | 3.93E-07 | 1.93E-06 | 0.00E+00 | 3.05E-05 |
| 12 | 1 | 7.19E-05 | 8.70E-06 | 2.60E-05 | 2.01E-05 | 3.99E-05 | 4.79E-06 | 1.55E-05 | 0.00E+00 | 1.87E-04 |
| 14 | 1 | 2.70E-04 | 3.27E-05 | 9.76E-05 | 7.55E-05 | 8.06E-05 | 9.67E-06 | 3.63E-05 | 4.07E-06 | 6.07E-04 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.82E-05 | 2.21E-06 | 6.59E-06 | 5.10E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-05 |
| 21 | 1 | 5.61E-04 | 6.78E-05 | 2.02E-04 | 1.57E-04 | 2.66E-05 | 3.19E-06 | 3.47E-05 | 2.27E-06 | 1.05E-03 |
| 24 | 1 | 8.65E-04 | 1.05E-04 | 3.12E-04 | 2.42E-04 | 3.58E-05 | 4.30E-06 | 5.49E-05 | 3.60E-06 | 1.62E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.42E-05 | 2.93E-06 | 8.73E-06 | 6.76E-06 | 1.84E-06 | 2.21E-07 | 2.81E-06 | 2.39E-07 | 4.77E-05 |
| 30 | 1 | 1.01E-04 | 1.23E-05 | 3.66E-05 | 2.83E-05 | 7.71E-06 | 9.26E-07 | 1.18E-05 | 1.00E-06 | 2.00E-04 |
| 31 | 1 | 3.91E-04 | 4.73E-05 | 1.41E-04 | 1.09E-04 | 1.73E-05 | 2.08E-06 | 2.66E-05 | 1.81E-06 | 7.36E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 14,679 | 2982 | 569 | 116 | 1,885 | 383 | 5,940 | 1207 | 4687 | 8.44 | 0.035 | 0.0009 | 4.3 | 2.26E-02 |
| 2 | A | 731 | 0.45 | 15,246 | 6923 | 1,105 | 502 | 2,051 | 931 | 6,387 | 2900 | 11257 | 8.52 | 0.035 | 0.0009 | 10.4 | 5.48E-02 |
| 3 | A | 2352 | 1.46 | 7,604 | 11110 | 513 | 749 | 1,055 | 1541 | 3,300 | 4822 | 18223 | 8.68 | 0.035 | 0.0009 | 17.2 | 9.03E-02 |
| 5 | A | 953 | 0.59 | 3,484 | 2063 | 126 | 75 | 265 | 157 | 89 | 53 | 2347 | 3.36 | 0.035 | 0.0004 | 0.8 | 4.42E-03 |
| 6 | A | 1099 | 0.68 | 6,615 | 4516 | 363 | 248 | 687 | 469 | 1,549 | 1057 | 6290 | 6.53 | 0.035 | 0.0007 | 4.4 | 2.33E-02 |
| 8 | A | 1091 | 0.68 | 6,270 | 4250 | 266 | 180 | 520 | 352 | 0 | 0 | 4782 | 2.97 | 0.035 | 0.0003 | 1.5 | 7.94E-03 |
| 11 | A | 1201 | 0.75 | 62 | 46 | 7 | 5 | 8 | 6 | 0 | 0 | 57 | 3.48 | 0.035 | 0.0004 | 0.0 | 1.12E-04 |
| 12 | A | 824 | 0.51 | 458 | 235 | 119 | 61 | 98 | 50 | 0 | 0 | 346 | 4.14 | 0.035 | 0.0004 | 0.2 | 8.05E-04 |
| 14 | A | 1618 | 1.01 | 878 | 882 | 122 | 123 | 117 | 118 | 249 | 251 | 1373 | 7.12 | 0.035 | 0.0008 | 1.1 | 5.56E-03 |
| 18 | A | 1412 | 0.88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 19 | A | 2386 | 1.48 | 40 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 2.13 | 0.035 | 0.0002 | 0.0 | 7.04E-05 |
| 21 | A | 1258 | 0.78 | 2,340 | 1829 | 52 | 41 | 144 | 112 | 179 | 140 | 2122 | 4.10 | 0.035 | 0.0004 | 0.9 | 4.89E-03 |
| 24 | A | 1946 | 1.21 | 2,334 | 2822 | 45 | 55 | 147 | 178 | 183 | 221 | 3276 | 4.14 | 0.035 | 0.0004 | 1.5 | 7.63E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 188 | 79 | 7 | 3 | 22 | 9 | 35 | 15 | 106 | 6.00 | 0.035 | 0.0006 | 0.1 | 3.59E-04 |
| 30 | A | 2827 | 1.76 | 188 | 331 | 7 | 12 | 22 | 38 | 35 | 62 | 442 | 6.00 | 0.035 | 0.0006 | 0.3 | 1.50E-03 |
| 31 | A | 820 | 0.51 | 2,504 | 1276 | 52 | 26 | 169 | 86 | 218 | 111 | 1499 | 4.31 | 0.035 | 0.0005 | 0.7 | 3.64E-03 |

**World Logistic Center Year: 2021** **No Mitigation With EMFAC2014**
**LST Analysis for PM10-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

## Existing Residences Along Redlands Boulevard Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 9.4 | | | |
| 75 | 0.3 | 0.8 | 2.3 | 3.4 |

## Existing Residences at the Western End of the Project Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 12.7 | | | |
| 25 | 3.8 | 1.2 | 2.9 | 7.9 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 13.2 | | | |
| 1200 | 0.0 | 3.8 | 0.5 | 4.3 |

## Existing Residences Along Bay Street Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 6.9 | | | |
| 35 | 1.3 | 1.2 | 2.3 | 4.8 |

**World Logistic Center Year: 2021** **No Mitigation With EMFAC20114**
**LST Analysis for PM10 Annual**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

## Existing Residences Along Redlands Boulevard Outside Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.1 | | | |
| 75 | 0.0 | 0.2 | 0.4 | 0.6 |

## Existing Residences at the Western End of the Project Within Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.2 | | | |
| 25 | 0.1 | 0.3 | 1.0 | 1.4 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.2 | | | |
| 1200 | 0.0 | 2.5 | 0.1 | 2.6 |

## Existing Residences Along Bay Outside of Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.1 | | | |
| 35 | 0.0 | 0.5 | 0.7 | 1.2 |

**World Logistic Center Year: 2021** **No Mitigation with EMFAC2014**

**LST Analysis for PM2.5-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\,x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

## Existing Residences Along Redlands Boulevard Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1.5 | | | |
| 75 | 0.0 | 0.2 | 2.1 | 2.3 |

## Existing Residences at the Western End of the Project Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 2.1 | | | |
| 25 | 0.6 | 0.3 | 2.9 | 3.8 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 2.1 | | | |
| 35 | 0.4 | 1.1 | 0.5 | 2.0 |

## Existing Residences Along Bay Street Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1.1 | | | |
| 35 | 0.2 | 0.3 | 2.3 | 2.8 |

**World Logistic Center Year: 2021** **With Mitigation including Tier IV and 5 day work week**
**LST Analysis for PM10-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

## Existing Residences Along Redlands Boulevard Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 9.1 | | | |
| 75 | 0.3 | 0.7 | 0.2 | 1.2 |

## Existing Residences at the Western End of the Project Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 13.2 | | | |
| 25 | 3.9 | 1.2 | 0.2 | 5.3 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 12.8 | | | |
| 1200 | 0.0 | 3.8 | 0.04 | 3.8 |

## Existing Residences Along BY Street Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 6.6 | | | |
| 35 | 1.2 | 1.0 | 0.2 | 2.4 |

**World Logistic Center Year: 2021** **With Mitigation**
**LST Analysis for PM10 Annual**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

## Existing Residences Along Redlands Boulevard Outside Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.1 | | | |
| 75 | 0.0 | 0.2 | 0.0 | 0.2 |

## Existing Residences at the Western End of the Project Within Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.2 | | | |
| 25 | 0.1 | 0.3 | 0.0 | 0.4 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.2 | | | |
| 1200 | 0.0 | 2.4 | 0 | 2.4 |

## Existing Residences Along Bay Street Outside of the Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 0.1 | | | |
| 35 | 0.0 | 0.5 | 0.1 | 0.6 |

**World Logistic Center Year: 2021** **With Mitigation**
**LST Analysis for PM2.5-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

## Existing Residences Along Redlands Boulevard Outside Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1.3 | | | |
| 75 | 0.0 | 0.3 | 0.2 | 0.5 |

## Existing Residences at the Western End of the Project Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 2 | | | |
| 25 | 0.6 | 0.3 | 0.2 | 1.1 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1.9 | | | |
| 1200 | 0.0 | 1.1 | 0 | 1.1 |

## Existing Residences Along Bay Street Outside Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1.0 | | | |
| 35 | 0.2 | 0.3 | 0.2 | 0.7 |

# F.5 - Project Development Schedule Emissions for 2027

**Appendix F.5 contains the calculated localized unmitigated and mitigated emissions for project construction and operation during 2027. Emissions are provided for CO, NO2, PM10, and PM2.5.**

**The individual air pollutant AERMOD project files are not provided to reduce paper consumption but are available on a separate CD.**

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for CO Pk Hr emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 1**

No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **CO Pk Hr**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 7.60E-02 | 1.20E-01 |
| Light Logistics | Phase 1 | 1.28E-04 | 3.50E-04 |
| Utilities Service Station | Phase 1 | 9.08E-05 | 3.16E-04 |
| Gas Station w/Convenience Store | Phase 1 | 1.68E-04 | 1.32E-04 |
| Convenience Store | Phase 1 | 1.91E-04 | 1.62E-04 |
| Fire Station | Phase 1 | 5.93E-07 | 2.13E-04 |
| Total | | 7.65E-02 | 1.21E-01 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.98E-02 | 3.57E-01 |
| Light Logistics | Phase 1 | 1.25E-04 | 1.53E-03 |
| Utilities Service Station | Phase 1 | 2.93E-04 | 3.80E-03 |
| Gas Station w/Convenience Store | Phase 1 | 2.44E-04 | 2.10E-03 |
| Convenience Store | Phase 1 | 3.42E-04 | 2.72E-03 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.08E-02 | 3.67E-01 |

| **Total Onsite Mobile Emissions** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.65E-02 | 1.21E-01 | |
| | Idling Emissions (g/sec) | 3.08E-02 | 3.67E-01 | |
| | Total Vehicle Emissions (g/sec) | 1.07E-01 | 4.88E-01 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 3.54E-02 | |
| | Fork Lifts (LPG) (g/sec) | | 1.32E+00 | |
| | Total Other Onsite Sources (g/sec) | | 1.36E+00 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.07E-01 | 1.84E+00 | 1.95E+00 |
| | Area (m2) | | | 4.68E+06 |
| | Total Emission Rate (g/m2-sec) | | | 4.16E-07 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **CO Pk Hr**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **CO Pk Hr Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 1.082 | 3 | 330 | 0.21 | 7.10E-01 | 1.56E-03 | 1.97E-04 | |
| | **LDT1** | 15 | 1.373 | 0 | 330 | 0.21 | 4.79E-02 | 1.06E-04 | 1.33E-05 | |
| | **LDT2** | 15 | 0.931 | 0 | 330 | 0.21 | 3.15E-02 | 6.93E-05 | 8.75E-06 | |
| | **MDT** | 15 | 1.208 | 0 | 330 | 0.21 | 7.08E-02 | 1.56E-04 | 1.97E-05 | |
| | **LHDT1** | 15 | 1.250 | 34 | 330 | 0.21 | 8.63E+00 | 1.90E-02 | 2.40E-03 | |
| | **LHDT2** | 15 | 1.159 | 11 | 330 | 0.21 | 2.62E+00 | 5.77E-03 | 7.27E-04 | |
| | **MHDT** | 15 | 0.728 | 181 | 330 | 0.21 | 2.71E+01 | 5.96E-02 | 7.52E-03 | |
| | **HHDT** | 15 | 1.967 | 581 | 330 | 0.21 | 2.34E+02 | 5.16E-01 | 6.51E-02 | |
| | | | | | | | | | | 7.60E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 1.082 | 0 | 175 | 0.11 | 2.37E-03 | 5.22E-06 | 6.59E-07 | |
| | **LDT1** | 15 | 1.373 | 0 | 175 | 0.11 | 1.60E-04 | 3.53E-07 | 4.45E-08 | |
| | **LDT2** | 15 | 0.931 | 0 | 175 | 0.11 | 1.05E-04 | 2.32E-07 | 2.92E-08 | |
| | **MDT** | 15 | 1.208 | 0 | 175 | 0.11 | 2.37E-04 | 5.21E-07 | 6.57E-08 | |
| | **LHDT1** | 15 | 1.250 | 0 | 175 | 0.11 | 2.55E-02 | 5.61E-05 | 7.07E-06 | |
| | **LHDT2** | 15 | 1.159 | 0 | 175 | 0.11 | 7.73E-03 | 1.70E-05 | 2.15E-06 | |
| | **MHDT** | 15 | 0.728 | 1 | 175 | 0.11 | 4.41E-02 | 9.72E-05 | 1.23E-05 | |
| | **HHDT** | 15 | 1.967 | 2 | 175 | 0.11 | 3.80E-01 | 8.36E-04 | 1.05E-04 | 1.28E-04 |
| **Travel at Utility** | **LDA** | 15 | 1.082 | 0 | 100 | 0.06 | 2.10E-03 | 4.62E-06 | 5.82E-07 | |
| | **LDT1** | 15 | 1.373 | 0 | 100 | 0.06 | 1.42E-04 | 3.12E-07 | 3.93E-08 | |
| | **LDT2** | 15 | 0.931 | 0 | 100 | 0.06 | 9.30E-05 | 2.05E-07 | 2.58E-08 | |
| | **MDT** | 15 | 1.208 | 0 | 100 | 0.06 | 2.09E-04 | 4.61E-07 | 5.81E-08 | |
| | **LHDT1** | 15 | 1.250 | 1 | 100 | 0.06 | 4.56E-02 | 1.00E-04 | 1.27E-05 | |
| | **LHDT2** | 15 | 1.159 | 0 | 100 | 0.06 | 1.38E-02 | 3.05E-05 | 3.84E-06 | |
| | **MHDT** | 15 | 0.728 | 1 | 100 | 0.06 | 3.56E-02 | 7.84E-05 | 9.89E-06 | |
| | **HHDT** | 15 | 1.967 | 2 | 100 | 0.06 | 2.29E-01 | 5.05E-04 | 6.37E-05 | 9.08E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 1.082 | 0 | 50 | 0.03 | 5.66E-04 | 1.25E-06 | 1.57E-07 | |
| | **LDT1** | 15 | 1.373 | 0 | 50 | 0.03 | 3.83E-05 | 8.43E-08 | 1.06E-08 | |
| | **LDT2** | 15 | 0.931 | 0 | 50 | 0.03 | 2.51E-05 | 5.54E-08 | 6.98E-09 | |
| | **MDT** | 15 | 1.208 | 0 | 50 | 0.03 | 5.65E-05 | 1.24E-07 | 1.57E-08 | |
| | **LHDT1** | 15 | 1.250 | 0 | 50 | 0.03 | 1.67E-04 | 3.67E-07 | 4.63E-08 | |
| | **LHDT2** | 15 | 1.159 | 0 | 50 | 0.03 | 5.05E-05 | 1.11E-07 | 1.40E-08 | |
| | **MHDT** | 15 | 0.728 | 2 | 50 | 0.03 | 4.29E-02 | 9.46E-05 | 1.19E-05 | |
| | **HHDT** | 15 | 1.967 | 9 | 50 | 0.03 | 5.60E-01 | 1.23E-03 | 1.56E-04 | 1.68E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 1.082 | 0 | 50 | 0.03 | 7.05E-04 | 1.55E-06 | 1.96E-07 | |
| | **LDT1** | 15 | 1.373 | 0 | 50 | 0.03 | 4.76E-05 | 1.05E-07 | 1.32E-08 | |
| | **LDT2** | 15 | 0.931 | 0 | 50 | 0.03 | 3.13E-05 | 6.89E-08 | 8.69E-09 | |
| | **MDT** | 15 | 1.208 | 0 | 50 | 0.03 | 7.03E-05 | 1.55E-07 | 1.95E-08 | |
| | **LHDT1** | 15 | 1.250 | 0 | 50 | 0.03 | 7.14E-03 | 1.57E-05 | 1.98E-06 | |
| | **LHDT2** | 15 | 1.159 | 0 | 50 | 0.03 | 2.17E-03 | 4.77E-06 | 6.02E-07 | |
| | **MHDT** | 15 | 0.728 | 1 | 50 | 0.03 | 3.27E-02 | 7.20E-05 | 9.08E-06 | |
| | **HHDT** | 15 | 1.967 | 11 | 50 | 0.03 | 6.44E-01 | 1.42E-03 | 1.79E-04 | 1.91E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 1.082 | 0 | 50 | 0.03 | 1.76E-03 | 3.88E-06 | 4.89E-07 | |
| | **LDT1** | 15 | 1.373 | 0 | 50 | 0.03 | 1.19E-04 | 2.62E-07 | 3.31E-08 | |
| | **LDT2** | 15 | 0.931 | 0 | 50 | 0.03 | 7.82E-05 | 1.72E-07 | 2.17E-08 | |
| | **MDT** | 15 | 1.208 | 0 | 50 | 0.03 | 1.76E-04 | 3.87E-07 | 4.88E-08 | |
| | **LHDT1** | 15 | 1.250 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.159 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.728 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 1.967 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.93E-07 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 7.17E-01 | 1.58E-03 | 1.99E-04 | |
| | **LDT1** | | | 0 | | | 4.84E-02 | 1.07E-04 | 1.35E-05 | |
| | **LDT2** | | | 0 | | | 3.18E-02 | 7.01E-05 | 8.84E-06 | |
| | **MDT** | | | 0 | | | 7.15E-02 | 1.58E-04 | 1.99E-05 | |
| | **LHDT1** | | | 35 | | | 8.71E+00 | 1.92E-02 | 2.42E-03 | |
| | **LHDT2** | | | 11 | | | 2.64E+00 | 5.82E-03 | 7.34E-04 | |
| | **MHDT** | | | 186 | | | 2.72E+01 | 6.00E-02 | 7.56E-03 | |
| | **HHDT** | | | 604 | | | 2.36E+02 | 5.20E-01 | 6.56E-02 | |
| | **Total** | | | 840 | | | 2.76E+02 | 6.07E-01 | 7.65E-02 | 7.65E-02 |

**Diesel truck Idling Emissions** **CO Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 17 | 3.69E+01 | 8.13E-02 | 1.03E-02 | |
| | **LHDT2** | 26.300 | 5 | 6 | 1.21E+01 | 2.66E-02 | 3.35E-03 | |
| | **MHDT** | 1.260 | 5 | 91 | 9.51E+00 | 2.10E-02 | 2.64E-03 | |
| | **HHDT** | 2.020 | 5 | 290 | 4.89E+01 | 1.08E-01 | 1.36E-02 | |
| | | | | 403 | 1.07E+02 | 2.37E-01 | 2.98E-02 | 2.98E-02 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 2.05E-01 | 4.52E-04 | 5.70E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.72E-02 | 1.48E-04 | 1.87E-05 | |
| | **MHDT** | 1.260 | 5 | 0 | 2.93E-02 | 6.44E-05 | 8.13E-06 | |
| | **HHDT** | 2.020 | 5 | 1 | 1.49E-01 | 3.29E-04 | 4.15E-05 | |
| | | | | 1 | 4.51E-01 | 9.94E-04 | 1.25E-04 | 1.25E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 6.44E-01 | 1.42E-03 | 1.79E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.11E-01 | 4.64E-04 | 5.85E-05 | |
| | **MHDT** | 1.260 | 5 | 0 | 4.13E-02 | 9.09E-05 | 1.15E-05 | |
| | **HHDT** | 2.020 | 5 | 1 | 1.58E-01 | 3.48E-04 | 4.39E-05 | |
| | | | | 2 | 1.05E+00 | 2.32E-03 | 2.93E-04 | 2.93E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 4.70E-03 | 1.04E-05 | 1.31E-06 | |
| | **LHDT2** | 26.300 | 5 | 0 | 1.54E-03 | 3.39E-06 | 4.27E-07 | |
| | **MHDT** | 1.260 | 5 | 1 | 9.96E-02 | 2.19E-04 | 2.77E-05 | |
| | **HHDT** | 2.020 | 5 | 5 | 7.72E-01 | 1.70E-03 | 2.14E-04 | |
| | | | | 6 | 8.77E-01 | 1.93E-03 | 2.44E-04 | 2.44E-04 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 2.01E-01 | 4.44E-04 | 5.60E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **MHDT** | 1.260 | 5 | 1 | 7.59E-02 | 1.67E-04 | 2.11E-05 | |
| | **HHDT** | 2.020 | 5 | 5 | 8.87E-01 | 1.95E-03 | 2.47E-04 | |
| | | | | 6 | 1.23E+00 | 2.71E-03 | 3.42E-04 | 3.42E-04 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.260 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 2.020 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 1.11E+02 | 2.44E-01 | 3.08E-02 | 3.08E-02 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **CO Pk Hr**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **CO Pk Hr Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.688 | 1004 | 330 | 0.21 | 1.42E+02 | 3.12E-01 | 3.93E-02 | |
| | **LDT1** | 15 | 1.420 | 119 | 330 | 0.21 | 3.46E+01 | 7.63E-02 | 9.62E-03 | |
| | **LDT2** | 15 | 0.853 | 363 | 330 | 0.21 | 6.34E+01 | 1.40E-01 | 1.76E-02 | |
| | **MDT** | 15 | 1.196 | 280 | 330 | 0.21 | 6.86E+01 | 1.51E-01 | 1.91E-02 | |
| | **LHDT1** | 15 | 1.068 | 109 | 330 | 0.21 | 2.38E+01 | 5.25E-02 | 6.62E-03 | |
| | **LHDT2** | 15 | 0.335 | 11 | 330 | 0.21 | 7.83E-01 | 1.72E-03 | 2.18E-04 | |
| | **MHDT** | 15 | 0.932 | 41 | 330 | 0.21 | 7.90E+00 | 1.74E-02 | 2.20E-03 | |
| | **HHDT** | 15 | 44.016 | 10 | 330 | 0.21 | 8.99E+01 | 1.98E-01 | 2.50E-02 | |
| | | | | | | | | | | 1.20E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.688 | 6 | 175 | 0.11 | 4.73E-01 | 1.04E-03 | 1.31E-04 | |
| | **LDT1** | 15 | 1.420 | 1 | 175 | 0.11 | 1.16E-01 | 2.55E-04 | 3.22E-05 | |
| | **LDT2** | 15 | 0.853 | 2 | 175 | 0.11 | 2.12E-01 | 4.67E-04 | 5.89E-05 | |
| | **MDT** | 15 | 1.196 | 2 | 175 | 0.11 | 2.29E-01 | 5.05E-04 | 6.37E-05 | |
| | **LHDT1** | 15 | 1.068 | 1 | 175 | 0.11 | 7.03E-02 | 1.55E-04 | 1.95E-05 | |
| | **LHDT2** | 15 | 0.335 | 0 | 175 | 0.11 | 2.31E-03 | 5.09E-06 | 6.42E-07 | |
| | **MHDT** | 15 | 0.932 | 0 | 175 | 0.11 | 1.29E-02 | 2.84E-05 | 3.58E-06 | |
| | **HHDT** | 15 | 44.016 | 0 | 175 | 0.11 | 1.46E-01 | 3.21E-04 | 4.05E-05 | 3.50E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.688 | 10 | 100 | 0.06 | 4.18E-01 | 9.21E-04 | 1.16E-04 | |
| | **LDT1** | 15 | 1.420 | 1 | 100 | 0.06 | 1.02E-01 | 2.25E-04 | 2.84E-05 | |
| | **LDT2** | 15 | 0.853 | 4 | 100 | 0.06 | 1.87E-01 | 4.13E-04 | 5.20E-05 | |
| | **MDT** | 15 | 1.196 | 3 | 100 | 0.06 | 2.03E-01 | 4.47E-04 | 5.63E-05 | |
| | **LHDT1** | 15 | 1.068 | 2 | 100 | 0.06 | 1.26E-01 | 2.77E-04 | 3.50E-05 | |
| | **LHDT2** | 15 | 0.335 | 0 | 100 | 0.06 | 4.14E-03 | 9.11E-06 | 1.15E-06 | |
| | **MHDT** | 15 | 0.932 | 0 | 100 | 0.06 | 1.04E-02 | 2.29E-05 | 2.89E-06 | |
| | **HHDT** | 15 | 44.016 | 0 | 100 | 0.06 | 8.80E-02 | 1.94E-04 | 2.45E-05 | 3.16E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.688 | 5 | 50 | 0.03 | 1.13E-01 | 2.49E-04 | 3.14E-05 | |
| | **LDT1** | 15 | 1.420 | 1 | 50 | 0.03 | 2.76E-02 | 6.09E-05 | 7.68E-06 | |
| | **LDT2** | 15 | 0.853 | 2 | 50 | 0.03 | 5.06E-02 | 1.12E-04 | 1.41E-05 | |
| | **MDT** | 15 | 1.196 | 1 | 50 | 0.03 | 5.48E-02 | 1.21E-04 | 1.52E-05 | |
| | **LHDT1** | 15 | 1.068 | 0 | 50 | 0.03 | 4.60E-04 | 1.01E-06 | 1.28E-07 | |
| | **LHDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 1.51E-05 | 3.33E-08 | 4.20E-09 | |
| | **MHDT** | 15 | 0.932 | 0 | 50 | 0.03 | 1.25E-02 | 2.76E-05 | 3.48E-06 | |
| | **HHDT** | 15 | 44.016 | 0 | 50 | 0.03 | 2.15E-01 | 4.74E-04 | 5.97E-05 | 1.32E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.688 | 7 | 50 | 0.03 | 1.41E-01 | 3.10E-04 | 3.91E-05 | |
| | **LDT1** | 15 | 1.420 | 1 | 50 | 0.03 | 3.44E-02 | 7.58E-05 | 9.55E-06 | |
| | **LDT2** | 15 | 0.853 | 2 | 50 | 0.03 | 6.30E-02 | 1.39E-04 | 1.75E-05 | |
| | **MDT** | 15 | 1.196 | 2 | 50 | 0.03 | 6.82E-02 | 1.50E-04 | 1.89E-05 | |
| | **LHDT1** | 15 | 1.068 | 1 | 50 | 0.03 | 1.97E-02 | 4.34E-05 | 5.47E-06 | |
| | **LHDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 6.48E-04 | 1.43E-06 | 1.80E-07 | |
| | **MHDT** | 15 | 0.932 | 0 | 50 | 0.03 | 9.55E-03 | 2.10E-05 | 2.65E-06 | |
| | **HHDT** | 15 | 44.016 | 0 | 50 | 0.03 | 2.47E-01 | 5.45E-04 | 6.87E-05 | 1.62E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.688 | 16 | 50 | 0.03 | 3.52E-01 | 7.74E-04 | 9.77E-05 | |
| | **LDT1** | 15 | 1.420 | 2 | 50 | 0.03 | 8.60E-02 | 1.89E-04 | 2.39E-05 | |
| | **LDT2** | 15 | 0.853 | 6 | 50 | 0.03 | 1.57E-01 | 3.47E-04 | 4.37E-05 | |
| | **MDT** | 15 | 1.196 | 5 | 50 | 0.03 | 1.70E-01 | 3.75E-04 | 4.73E-05 | |
| | **LHDT1** | 15 | 1.068 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.932 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 44.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 1.43E+02 | 3.15E-01 | 3.97E-02 | |
| | **LDT1** | | | 124 | | | 3.50E+01 | 7.71E-02 | 9.72E-03 | |
| | **LDT2** | | | 379 | | | 6.41E+01 | 1.41E-01 | 1.78E-02 | |
| | **MDT** | | | 292 | | | 6.94E+01 | 1.53E-01 | 1.93E-02 | |
| | **LHDT1** | | | 112 | | | 2.40E+01 | 5.29E-02 | 6.68E-03 | |
| | **LHDT2** | | | 12 | | | 7.90E-01 | 1.74E-03 | 2.19E-04 | |
| | **MHDT** | | | 42 | | | 7.95E+00 | 1.75E-02 | 2.21E-03 | |
| | **HHDT** | | | 10 | | | 9.06E+01 | 2.00E-01 | 2.52E-02 | |
| | **Total** | | | 2020 | | | 4.35E+02 | 9.58E-01 | 1.21E-01 | 1.21E-01 |

**Non-Diesel Truck Idling Emissions** **CO Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 124.900 | 5 | 54 | 5.66E+02 | 1.25E+00 | 1.57E-01 | |
| | **LHDT2** | 127.700 | 5 | 6 | 6.07E+01 | 1.34E-01 | 1.68E-02 | |
| | **MHDT** | 318.700 | 5 | 21 | 5.49E+02 | 1.21E+00 | 1.53E-01 | |
| | **HHDT** | 264.164 | 5 | 5 | 1.10E+02 | 2.42E-01 | 3.05E-02 | |
| | | | | 86 | 1.29E+03 | 2.83E+00 | 3.57E-01 | 3.57E-01 |
| **Idle at Light Logistics** | **LHDT1** | 124.900 | 5 | 0 | 3.15E+00 | 6.94E-03 | 8.75E-04 | |
| | **LHDT2** | 127.700 | 5 | 0 | 3.37E-01 | 7.43E-04 | 9.37E-05 | |
| | **MHDT** | 318.700 | 5 | 0 | 1.69E+00 | 3.72E-03 | 4.69E-04 | |
| | **HHDT** | 264.164 | 5 | 0 | 3.35E-01 | 7.38E-04 | 9.31E-05 | |
| | | | | 0 | 5.51E+00 | 1.21E-02 | 1.53E-03 | 1.53E-03 |
| **Idle at Utility** | **LHDT1** | 124.900 | 5 | 1 | 9.87E+00 | 2.17E-02 | 2.74E-03 | |
| | **LHDT2** | 127.700 | 5 | 0 | 1.06E+00 | 2.33E-03 | 2.94E-04 | |
| | **MHDT** | 318.700 | 5 | 0 | 2.38E+00 | 5.25E-03 | 6.62E-04 | |
| | **HHDT** | 264.164 | 5 | 0 | 3.54E-01 | 7.81E-04 | 9.84E-05 | |
| | | | | 1 | 1.37E+01 | 3.01E-02 | 3.80E-03 | 3.80E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 124.900 | 5 | 0 | 7.21E-02 | 1.59E-04 | 2.00E-05 | |
| | **LHDT2** | 127.700 | 5 | 0 | 7.73E-03 | 1.70E-05 | 2.15E-06 | |
| | **MHDT** | 318.700 | 5 | 0 | 5.75E+00 | 1.27E-02 | 1.60E-03 | |
| | **HHDT** | 264.164 | 5 | 0 | 1.73E+00 | 3.81E-03 | 4.81E-04 | |
| | | | | 0 | 7.56E+00 | 1.67E-02 | 2.10E-03 | 2.10E-03 |
| **Idle at Convenience Store** | **LHDT1** | 124.900 | 5 | 0 | 3.09E+00 | 6.81E-03 | 8.58E-04 | |
| | **LHDT2** | 127.700 | 5 | 0 | 3.31E-01 | 7.29E-04 | 9.20E-05 | |
| | **MHDT** | 318.700 | 5 | 0 | 4.38E+00 | 9.65E-03 | 1.22E-03 | |
| | **HHDT** | 264.164 | 5 | 0 | 1.99E+00 | 4.39E-03 | 5.53E-04 | |
| | | | | 1 | 9.79E+00 | 2.16E-02 | 2.72E-03 | 2.72E-03 |
| **Idle at Firestation** | **LHDT1** | 124.900 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 127.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 318.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 264.164 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 1.32E+03 | 2.91E+00 | 3.67E-01 | 3.67E-01 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour CO emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | |
|---|---|---|---|
| | 2027 | Phase 2 | No Mitigation |

**Vehicle Running Exhaust Emissions**

| | | | Pollutant | Peak Hour CO |
|---|---|---|---|---|
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 2 | 3.60E-02 | 5.67E-02 | |
| Light Logistics | Phase 2 | 4.34E-04 | 1.19E-03 | |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 | |
| Total | | 3.64E-02 | 5.79E-02 | |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.41E-02 | 1.69E-01 |
| Light Logistics | Phase 2 | 4.26E-04 | 5.20E-03 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.46E-02 | 1.74E-01 |

**Total Onsite Mobile Emissions**

| | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 3.64E-02 | 5.79E-02 | |
| | Idling Emissions (g/sec) | 1.46E-02 | 1.74E-01 | |
| | Total Vehicle Emissions (g/sec) | 5.10E-02 | 2.32E-01 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.73E-02 | |
| | Forklifts (LPG) (g/sec) | | 6.43E-01 | |
| | Total Other Onsite Sources (g/sec) | | 6.60E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 5.10E-02 | 8.92E-01 | 9.43E-01 |
| | Area (m2) | | | 4.69E+06 |
| | Emission Rate (g/m2-sec) | | | 2.01E-07 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per HR (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 1.082 | 2 | 330 | 0.21 | 3.36E-01 | 7.41E-04 | 9.34E-05 | |
| | **LDT1** | 15 | 1.373 | 0 | 330 | 0.21 | 2.27E-02 | 5.00E-05 | 6.31E-06 | |
| | **LDT2** | 15 | 0.931 | 0 | 330 | 0.21 | 1.49E-02 | 3.29E-05 | 4.14E-06 | |
| | **MDT** | 15 | 1.208 | 0 | 330 | 0.21 | 3.35E-02 | 7.39E-05 | 9.32E-06 | |
| | **LHDT1** | 15 | 1.250 | 16 | 330 | 0.21 | 4.09E+00 | 9.01E-03 | 1.14E-03 | |
| | **LHDT2** | 15 | 1.159 | 5 | 330 | 0.21 | 1.24E+00 | 2.73E-03 | 3.45E-04 | |
| | **MHDT** | 15 | 0.728 | 86 | 330 | 0.21 | 1.28E+01 | 2.82E-02 | 3.56E-03 | |
| | **HHDT** | 15 | 1.967 | 275 | 330 | 0.21 | 1.11E+02 | 2.44E-01 | 3.08E-02 | |
| | | | | | | | | | | 3.60E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 1.082 | 0 | 175 | 0.11 | 8.05E-03 | 1.77E-05 | 2.24E-06 | |
| | **LDT1** | 15 | 1.373 | 0 | 175 | 0.11 | 5.44E-04 | 1.20E-06 | 1.51E-07 | |
| | **LDT2** | 15 | 0.931 | 0 | 175 | 0.11 | 3.57E-04 | 7.87E-07 | 9.92E-08 | |
| | **MDT** | 15 | 1.208 | 0 | 175 | 0.11 | 8.03E-04 | 1.77E-06 | 2.23E-07 | |
| | **LHDT1** | 15 | 1.250 | 1 | 175 | 0.11 | 8.65E-02 | 1.90E-04 | 2.40E-05 | |
| | **LHDT2** | 15 | 1.159 | 0 | 175 | 0.11 | 2.62E-02 | 5.78E-05 | 7.29E-06 | |
| | **MHDT** | 15 | 0.728 | 2 | 175 | 0.11 | 1.50E-01 | 3.30E-04 | 4.16E-05 | |
| | **HHDT** | 15 | 1.967 | 6 | 175 | 0.11 | 1.29E+00 | 2.84E-03 | 3.58E-04 | 4.34E-04 |
| **Travel at Utility** | **LDA** | 15 | 1.082 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.373 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.931 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.208 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.250 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.159 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.728 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 1.967 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 1.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.373 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.931 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.208 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.250 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.159 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.728 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 1.967 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 1.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.373 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.931 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.208 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.250 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.159 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.728 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 1.967 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 1.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.373 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.931 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.208 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.250 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.159 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.728 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 1.967 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 2 | | | 3.44E-01 | 7.58E-04 | 9.56E-05 | |
| | **LDT1** | | | 0 | | | 2.33E-02 | 5.12E-05 | 6.46E-06 | |
| | **LDT2** | | | 0 | | | 1.53E-02 | 3.36E-05 | 4.24E-06 | |
| | **MDT** | | | 0 | | | 3.43E-02 | 7.57E-05 | 9.54E-06 | |
| | **LHDT1** | | | 17 | | | 4.18E+00 | 9.20E-03 | 1.16E-03 | |
| | **LHDT2** | | | 5 | | | 1.27E+00 | 2.79E-03 | 3.52E-04 | |
| | **MHDT** | | | 88 | | | 1.30E+01 | 2.86E-02 | 3.60E-03 | |
| | **HHDT** | | | 281 | | | 1.12E+02 | 2.47E-01 | 3.12E-02 | |
| | **Total** | | | 393 | | | 1.31E+02 | 2.89E-01 | 3.64E-02 | 3.64E-02 |

**Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 8 | 1.75E+01 | 3.85E-02 | 4.86E-03 | |
| | **LHDT2** | 26.300 | 5 | 3 | 5.72E+00 | 1.26E-02 | 1.59E-03 | |
| | **MHDT** | 1.260 | 5 | 43 | 4.51E+00 | 9.93E-03 | 1.25E-03 | |
| | **HHDT** | 2.020 | 5 | 138 | 2.32E+01 | 5.10E-02 | 6.43E-03 | |
| | | | | 191 | 5.09E+01 | 1.12E-01 | 1.41E-02 | 1.41E-02 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 6.97E-01 | 1.54E-03 | 1.94E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.28E-01 | 5.02E-04 | 6.34E-05 | |
| | **MHDT** | 1.260 | 5 | 1 | 9.93E-02 | 2.19E-04 | 2.76E-05 | |
| | **HHDT** | 2.020 | 5 | 3 | 5.07E-01 | 1.12E-03 | 1.41E-04 | |
| | | | | 4 | 1.53E+00 | 3.37E-03 | 4.26E-04 | 4.26E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.260 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 2.020 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.260 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 2.020 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.260 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 2.020 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.260 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 2.020 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 196 | 5.24E+01 | 1.15E-01 | 1.46E-02 | 1.46E-02 |

**World Logistics Center** 2027 Phase 2 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.688 | 476 | 330 | 0.21 | 6.71E+01 | 1.48E-01 | 1.86E-02 | |
| | **LDT1** | 15 | 1.420 | 56 | 330 | 0.21 | 1.64E+01 | 3.61E-02 | 4.56E-03 | |
| | **LDT2** | 15 | 0.853 | 172 | 330 | 0.21 | 3.01E+01 | 6.62E-02 | 8.35E-03 | |
| | **MDT** | 15 | 1.196 | 133 | 330 | 0.21 | 3.25E+01 | 7.16E-02 | 9.03E-03 | |
| | **LHDT1** | 15 | 1.068 | 52 | 330 | 0.21 | 1.13E+01 | 2.49E-02 | 3.14E-03 | |
| | **LHDT2** | 15 | 0.335 | 5 | 330 | 0.21 | 3.71E-01 | 8.17E-04 | 1.03E-04 | |
| | **MHDT** | 15 | 0.932 | 20 | 330 | 0.21 | 3.74E+00 | 8.25E-03 | 1.04E-03 | |
| | **HHDT** | 15 | 44.016 | 5 | 330 | 0.21 | 4.26E+01 | 9.38E-02 | 1.18E-02 | |
| | | | | | | | | | | 5.67E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.688 | 21 | 175 | 0.11 | 1.61E+00 | 3.54E-03 | 4.46E-04 | |
| | **LDT1** | 15 | 1.420 | 3 | 175 | 0.11 | 3.93E-01 | 8.66E-04 | 1.09E-04 | |
| | **LDT2** | 15 | 0.853 | 8 | 175 | 0.11 | 7.20E-01 | 1.59E-03 | 2.00E-04 | |
| | **MDT** | 15 | 1.196 | 6 | 175 | 0.11 | 7.79E-01 | 1.72E-03 | 2.16E-04 | |
| | **LHDT1** | 15 | 1.068 | 2 | 175 | 0.11 | 2.39E-01 | 5.26E-04 | 6.63E-05 | |
| | **LHDT2** | 15 | 0.335 | 0 | 175 | 0.11 | 7.84E-03 | 1.73E-05 | 2.18E-06 | |
| | **MHDT** | 15 | 0.932 | 0 | 175 | 0.11 | 4.38E-02 | 9.64E-05 | 1.22E-05 | |
| | **HHDT** | 15 | 44.016 | 0 | 175 | 0.11 | 4.95E-01 | 1.09E-03 | 1.37E-04 | 1.19E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.688 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.420 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.853 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.196 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.068 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.335 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.932 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 44.016 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.688 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.853 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.196 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.068 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.932 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 44.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.688 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.853 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.196 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.068 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.932 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 44.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.688 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 1.420 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.853 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 1.196 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 1.068 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.932 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 44.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 497 | | | 6.87E+01 | 1.51E-01 | 1.91E-02 | |
| | **LDT1** | | | 59 | | | 1.68E+01 | 3.70E-02 | 4.67E-03 | |
| | **LDT2** | | | 180 | | | 3.08E+01 | 6.78E-02 | 8.55E-03 | |
| | **MDT** | | | 139 | | | 3.33E+01 | 7.34E-02 | 9.25E-03 | |
| | **LHDT1** | | | 54 | | | 1.15E+01 | 2.54E-02 | 3.20E-03 | |
| | **LHDT2** | | | 6 | | | 3.79E-01 | 8.35E-04 | 1.05E-04 | |
| | **MHDT** | | | 20 | | | 3.79E+00 | 8.34E-03 | 1.05E-03 | |
| | **HHDT** | | | 5 | | | 4.31E+01 | 9.49E-02 | 1.20E-02 | |
| | **Total** | | | 959 | | | 2.08E+02 | 4.59E-01 | 5.79E-02 | 5.79E-02 |

**Non-Diesel Truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 124.900 | 5 | 26 | 2.68E+02 | 5.91E-01 | 7.45E-02 | |
| | **LHDT2** | 127.700 | 5 | 3 | 2.87E+01 | 6.33E-02 | 7.98E-03 | |
| | **MHDT** | 318.700 | 5 | 10 | 2.60E+02 | 5.73E-01 | 7.23E-02 | |
| | **HHDT** | 264.164 | 5 | 2 | 5.20E+01 | 1.14E-01 | 1.44E-02 | |
| | | | | 41 | 6.09E+02 | 1.34E+00 | 1.69E-01 | 1.69E-01 |
| **Idle at Light Logistics** | **LHDT1** | 124.900 | 5 | 1 | 1.07E+01 | 2.36E-02 | 2.97E-03 | |
| | **LHDT2** | 127.700 | 5 | 0 | 1.15E+00 | 2.52E-03 | 3.18E-04 | |
| | **MHDT** | 318.700 | 5 | 0 | 5.73E+00 | 1.26E-02 | 1.59E-03 | |
| | **HHDT** | 264.164 | 5 | 0 | 1.14E+00 | 2.51E-03 | 3.16E-04 | |
| | | | | 1 | 1.87E+01 | 4.12E-02 | 5.20E-03 | 5.20E-03 |
| **Idle at Utility** | **LHDT1** | 124.900 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 127.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 318.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 264.164 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 124.900 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 127.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 318.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 264.164 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 124.900 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 127.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 318.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 264.164 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 124.900 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 127.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 318.700 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 264.164 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 42 | 6.28E+02 | 1.38E+00 | 1.74E-01 | 1.74E-01 |

**World Logistics Center Project in 2027** | **2027** | **CO Pk Hr With EMFAC2014** | Based on PB Traffic Results 10/3/2013 No Mitigation Rev 5

**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 3.32E-02 | 5.80E-02 | 9.12E-02 |
| 2 | 1.05E-01 | 1.67E-01 | 2.73E-01 |
| 3 | 1.39E-01 | 2.24E-01 | 3.63E-01 |
| 5 | 7.70E-03 | 5.99E-02 | 6.76E-02 |
| 6 | 4.90E-02 | 9.82E-02 | 1.47E-01 |
| 8 | 6.16E-03 | 9.87E-02 | 1.05E-01 |
| 11 | 1.76E-04 | 2.29E-03 | 2.47E-03 |
| 12 | 3.69E-04 | 3.30E-03 | 3.66E-03 |
| 14 | 6.46E-02 | 8.13E-02 | 1.46E-01 |
| 18 | 6.72E-03 | 1.78E-02 | 2.45E-02 |
| 19 | 4.00E-02 | 5.71E-02 | 9.70E-02 |
| 21 | 2.13E-02 | 7.56E-02 | 9.69E-02 |
| 24 | 3.98E-02 | 1.31E-01 | 1.71E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.07E-02 | 1.89E-02 | 2.96E-02 |
| 30 | 4.84E-02 | 9.76E-02 | 1.46E-01 |
| 31 | 1.18E-02 | 4.99E-02 | 6.17E-02 |
| Total (g/sec) | 5.84E-01 | 1.24E+00 | 1.82E+00 |
| Total (lbs/day) | 1.11E+02 | 2.36E+02 | 3.47E+02 |
| Total VMT (mi/day) | 2.44E+03 | 5.68E+03 | 8.12E+03 |

| ID | Arterial | From | To | | Estimated Project 2027 - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,125 | 75 | 161 | 516 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,332 | 155 | 206 | 736 |
| 3 | Street E | west of Street A | | | 559 | 63 | 84 | 301 |
| 5 | Street E | Street D | Street A | | 545 | 35 | 55 | 25 |
| 6 | Street A | Street F | Street C | | 589 | 54 | 77 | 223 |
| 8 | Street D | Street E | Cactus Ave | | 813 | 56 | 85 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 16 | 2 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 30 | 8 | 6 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 249 | 31 | 40 | 210 |
| 18 | Street B | Street A | Gilman Springs Rd | | 89 | 11 | 12 | 22 |
| 19 | Street F | Street A | Street C | | 131 | 14 | 23 | 86 |
| 21 | Street C | Street A | Street F | | 472 | 31 | 51 | 77 |
| 24 | Street C | Street F | Gilman Springs Rd | | 524 | 30 | 49 | 97 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 179 | 12 | 23 | 81 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 232 | 16 | 29 | 86 |
| 31 | Gilman Springs Rd | south of Street C | | | 497 | 26 | 40 | 66 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013) for 2022 and 2035 and Interpolated to 2027

**World Logistics Center** **2027** **CO Pk Hr** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1877 | 1,125 | 75 | 161 | 516 | 327 | 0.203 | 2 | 0 | 0 | 0 | 15 | 5 | 131 | 508 | 662 | 134 |
| 2 | 2429 | 1,332 | 155 | 206 | 736 | 731 | 0.454 | 2 | 0 | 0 | 0 | 32 | 11 | 167 | 724 | 937 | 425 |
| 3 | 1007 | 559 | 63 | 84 | 301 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 69 | 297 | 384 | 560 |
| 5 | 660 | 545 | 35 | 55 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 7 | 2 | 45 | 25 | 80 | 48 |
| 6 | 943 | 589 | 54 | 77 | 223 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 11 | 4 | 63 | 219 | 298 | 203 |
| 8 | 953 | 813 | 56 | 85 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 11 | 4 | 69 | 0 | 86 | 58 |
| 11 | 20 | 16 | 2 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 12 | 44 | 30 | 8 | 6 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 0 | 7 | 3 |
| 14 | 530 | 249 | 31 | 40 | 210 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 6 | 2 | 33 | 207 | 248 | 250 |
| 18 | 133 | 89 | 11 | 12 | 22 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 2 | 1 | 9 | 22 | 34 | 30 |
| 19 | 255 | 131 | 14 | 23 | 86 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 3 | 1 | 19 | 85 | 108 | 159 |
| 21 | 631 | 472 | 31 | 51 | 77 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 75 | 127 | 99 |
| 24 | 700 | 524 | 30 | 49 | 97 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 6 | 2 | 40 | 96 | 145 | 175 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 295 | 179 | 12 | 23 | 81 | 675 | 0.419 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 80 | 102 | 43 |
| 30 | 363 | 232 | 16 | 29 | 86 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 3 | 1 | 24 | 85 | 113 | 199 |
| 31 | 630 | 497 | 26 | 40 | 66 | 820 | 0.509 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 65 | 106 | 54 |
| | | | | | | | | | | | | | | | | Total | 2444 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1626 | 0.4215 | 0.1313 | 0.1720 | 0.3953 | 0.3125 | 0.3862 | 1.0425 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.81E-05 | 2.84E-06 | 7.89E-07 | 1.84E-06 | 3.41E-04 | 8.94E-05 | 2.86E-03 | 2.99E-02 | 3.32E-02 |
| 2 | 1 | 4.79E-05 | 7.50E-06 | 2.09E-06 | 4.86E-06 | 1.58E-03 | 4.15E-04 | 8.16E-03 | 9.52E-02 | 1.05E-01 |
| 3 | 1 | 6.46E-05 | 1.01E-05 | 2.82E-06 | 6.56E-06 | 2.05E-03 | 5.38E-04 | 1.08E-02 | 1.26E-01 | 1.39E-01 |
| 5 | 1 | 2.55E-05 | 4.00E-06 | 1.11E-06 | 2.59E-06 | 4.71E-04 | 1.23E-04 | 2.86E-03 | 4.22E-03 | 7.70E-03 |
| 6 | 1 | 3.18E-05 | 4.99E-06 | 1.39E-06 | 3.23E-06 | 8.34E-04 | 2.19E-04 | 4.58E-03 | 4.33E-02 | 4.90E-02 |
| 8 | 1 | 4.36E-05 | 6.83E-06 | 1.90E-06 | 4.42E-06 | 8.46E-04 | 2.22E-04 | 5.03E-03 | 0.00E+00 | 6.16E-03 |
| 11 | 1 | 9.58E-07 | 1.50E-07 | 4.18E-08 | 9.72E-08 | 3.53E-05 | 9.27E-06 | 1.30E-04 | 0.00E+00 | 1.76E-04 |
| 12 | 1 | 1.22E-06 | 1.91E-07 | 5.32E-08 | 1.24E-07 | 9.44E-05 | 2.48E-05 | 2.48E-04 | 0.00E+00 | 3.69E-04 |
| 14 | 1 | 1.98E-05 | 3.10E-06 | 8.64E-07 | 2.01E-06 | 7.02E-04 | 1.84E-04 | 3.52E-03 | 6.02E-02 | 6.46E-02 |
| 18 | 1 | 6.17E-06 | 9.67E-07 | 2.69E-07 | 6.26E-07 | 2.08E-04 | 5.45E-05 | 8.94E-04 | 5.56E-03 | 6.72E-03 |
| 19 | 1 | 1.54E-05 | 2.41E-06 | 6.72E-07 | 1.56E-06 | 4.80E-04 | 1.26E-04 | 2.95E-03 | 3.64E-02 | 4.00E-02 |
| 21 | 1 | 2.92E-05 | 4.58E-06 | 1.27E-06 | 2.96E-06 | 5.49E-04 | 1.44E-04 | 3.48E-03 | 1.71E-02 | 2.13E-02 |
| 24 | 1 | 5.01E-05 | 7.85E-06 | 2.19E-06 | 5.09E-06 | 8.23E-04 | 2.16E-04 | 5.14E-03 | 3.35E-02 | 3.98E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 5.94E-06 | 9.30E-07 | 2.59E-07 | 6.03E-07 | 1.15E-04 | 3.02E-05 | 8.34E-04 | 9.70E-03 | 1.07E-02 |
| 30 | 1 | 3.23E-05 | 5.06E-06 | 1.41E-06 | 3.28E-06 | 6.35E-04 | 1.66E-04 | 4.43E-03 | 4.31E-02 | 4.84E-02 |
| 31 | 1 | 2.00E-05 | 3.14E-06 | 8.74E-07 | 2.03E-06 | 3.02E-04 | 7.93E-05 | 1.79E-03 | 9.62E-03 | 1.18E-02 |

**World Logistics Center** **2027** **CO Pk Hr** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1877 | 1,125 | 75 | 161 | 516 | 327 | 0.203 | 630 | 77 | 234 | 181 | 49 | 5 | 30 | 8 | 1215 | 247 |
| 2 | 2429 | 1,332 | 155 | 206 | 736 | 731 | 0.454 | 746 | 91 | 277 | 215 | 102 | 11 | 38 | 11 | 1492 | 677 |
| 3 | 1007 | 559 | 63 | 84 | 301 | 2352 | 1.461 | 313 | 38 | 116 | 90 | 41 | 4 | 16 | 5 | 624 | 911 |
| 5 | 660 | 545 | 35 | 55 | 25 | 953 | 0.592 | 305 | 37 | 113 | 88 | 23 | 2 | 10 | 0 | 580 | 343 |
| 6 | 943 | 589 | 54 | 77 | 223 | 1099 | 0.683 | 330 | 40 | 123 | 95 | 36 | 4 | 14 | 3 | 645 | 440 |
| 8 | 953 | 813 | 56 | 85 | 0 | 1091 | 0.678 | 455 | 55 | 169 | 131 | 37 | 4 | 16 | 0 | 867 | 588 |
| 11 | 20 | 16 | 2 | 2 | 0 | 1201 | 0.746 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 18 | 14 |
| 12 | 44 | 30 | 8 | 6 | 0 | 824 | 0.512 | 17 | 2 | 6 | 5 | 5 | 1 | 1 | 0 | 37 | 19 |
| 14 | 530 | 249 | 31 | 40 | 210 | 1618 | 1.005 | 139 | 17 | 52 | 40 | 20 | 2 | 7 | 3 | 282 | 283 |
| 18 | 133 | 89 | 11 | 12 | 22 | 1412 | 0.877 | 50 | 6 | 18 | 14 | 7 | 1 | 2 | 0 | 99 | 87 |
| 19 | 255 | 131 | 14 | 23 | 86 | 2386 | 1.482 | 74 | 9 | 27 | 21 | 10 | 1 | 4 | 1 | 147 | 218 |
| 21 | 631 | 472 | 31 | 51 | 77 | 1258 | 0.781 | 264 | 32 | 98 | 76 | 21 | 2 | 9 | 1 | 504 | 394 |
| 24 | 700 | 524 | 30 | 49 | 97 | 1946 | 1.209 | 294 | 36 | 109 | 84 | 20 | 2 | 9 | 2 | 555 | 671 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 295 | 179 | 12 | 23 | 81 | 675 | 0.419 | 100 | 12 | 37 | 29 | 8 | 1 | 4 | 1 | 193 | 81 |
| 30 | 363 | 232 | 16 | 29 | 86 | 2827 | 1.756 | 130 | 16 | 48 | 37 | 11 | 1 | 5 | 1 | 250 | 439 |
| 31 | 630 | 497 | 26 | 40 | 66 | 820 | 0.509 | 278 | 34 | 103 | 80 | 17 | 2 | 7 | 1 | 523 | 267 |
| | | | | | | | | | | | | | | | | Total | 5680 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.4796 | 0.9186 | 0.5950 | 0.8486 | 0.8121 | 0.2677 | 0.7733 | 36.9988 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.71E-02 | 3.98E-03 | 7.86E-03 | 8.68E-03 | 2.26E-03 | 7.85E-05 | 1.31E-03 | 1.68E-02 | 5.80E-02 |
| 2 | 1 | 4.52E-02 | 1.05E-02 | 2.08E-02 | 2.30E-02 | 1.05E-02 | 3.65E-04 | 3.73E-03 | 5.34E-02 | 1.67E-01 |
| 3 | 1 | 6.10E-02 | 1.42E-02 | 2.81E-02 | 3.10E-02 | 1.36E-02 | 4.73E-04 | 4.92E-03 | 7.04E-02 | 2.24E-01 |
| 5 | 1 | 2.41E-02 | 5.62E-03 | 1.11E-02 | 1.23E-02 | 3.12E-03 | 1.09E-04 | 1.30E-03 | 2.37E-03 | 5.99E-02 |
| 6 | 1 | 3.00E-02 | 7.00E-03 | 1.38E-02 | 1.53E-02 | 5.52E-03 | 1.92E-04 | 2.09E-03 | 2.43E-02 | 9.82E-02 |
| 8 | 1 | 4.11E-02 | 9.59E-03 | 1.89E-02 | 2.09E-02 | 5.60E-03 | 1.95E-04 | 2.30E-03 | 0.00E+00 | 9.87E-02 |
| 11 | 1 | 9.04E-04 | 2.11E-04 | 4.16E-04 | 4.60E-04 | 2.34E-04 | 8.14E-06 | 5.95E-05 | 0.00E+00 | 2.29E-03 |
| 12 | 1 | 1.15E-03 | 2.68E-04 | 5.30E-04 | 5.86E-04 | 6.25E-04 | 2.18E-05 | 1.13E-04 | 0.00E+00 | 3.30E-03 |
| 14 | 1 | 1.87E-02 | 4.35E-03 | 8.60E-03 | 9.50E-03 | 4.64E-03 | 1.62E-04 | 1.61E-03 | 3.38E-02 | 8.13E-02 |
| 18 | 1 | 5.82E-03 | 1.36E-03 | 2.68E-03 | 2.96E-03 | 1.38E-03 | 4.79E-05 | 4.08E-04 | 3.12E-03 | 1.78E-02 |
| 19 | 1 | 1.45E-02 | 3.39E-03 | 6.69E-03 | 7.40E-03 | 3.18E-03 | 1.11E-04 | 1.35E-03 | 2.04E-02 | 5.71E-02 |
| 21 | 1 | 2.75E-02 | 6.42E-03 | 1.27E-02 | 1.40E-02 | 3.64E-03 | 1.27E-04 | 1.59E-03 | 9.58E-03 | 7.56E-02 |
| 24 | 1 | 4.73E-02 | 1.10E-02 | 2.18E-02 | 2.41E-02 | 5.45E-03 | 1.90E-04 | 2.35E-03 | 1.88E-02 | 1.31E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 5.60E-03 | 1.31E-03 | 2.58E-03 | 2.85E-03 | 7.61E-04 | 2.65E-05 | 3.81E-04 | 5.44E-03 | 1.89E-02 |
| 30 | 1 | 3.04E-02 | 7.10E-03 | 1.40E-02 | 1.55E-02 | 4.20E-03 | 1.46E-04 | 2.02E-03 | 2.42E-02 | 9.76E-02 |
| 31 | 1 | 1.89E-02 | 4.41E-03 | 8.70E-03 | 9.62E-03 | 2.00E-03 | 6.97E-05 | 8.20E-04 | 5.39E-03 | 4.99E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 for Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for NOx Pk Hr emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **NOx Pk Hr**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 3.48E-01 | 1.07E-02 |
| Light Logistics | Phase 1 | 5.66E-04 | 3.06E-05 |
| Utilities Service Station | Phase 1 | 3.63E-04 | 3.02E-05 |
| Gas Station w/Convenience Store | Phase 1 | 7.90E-04 | 1.11E-05 |
| Convenience Store | Phase 1 | 8.82E-04 | 1.42E-05 |
| Fire Station | Phase 1 | 3.72E-08 | 1.60E-05 |
| Total | | 3.50E-01 | 1.08E-02 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.65E-01 | 5.01E-03 |
| Light Logistics | Phase 1 | 5.49E-04 | 1.86E-05 |
| Utilities Service Station | Phase 1 | 8.21E-04 | 3.60E-05 |
| Gas Station w/Convenience Store | Phase 1 | 2.14E-03 | 5.35E-05 |
| Convenience Store | Phase 1 | 2.40E-03 | 6.49E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.71E-01 | 5.18E-03 |

| **Total Onsite Mobile Emissions** | | Emissions (g/sec) | Emissions (g/sec) | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 3.50E-01 | 1.08E-02 | |
| | Idling Emissions (g/sec) | 1.71E-01 | 5.18E-03 | |
| | Total Vehicle Emissions (g/sec) | 5.21E-01 | 1.60E-02 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.77E+00 | |
| | Fork Lifts (LPG) (g/sec) | | 1.40E-01 | |
| | Total Other Onsite Sources (g/sec) | | 1.91E+00 | |
| | | | | Total |
| | Total All Sources (g/sec) | 5.21E-01 | FALSE | 5.21E-01 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 1.11E-07 |

**World Logistics Center** 2027 **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **NOx Pk Hr**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **NOx Pk Hr Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.053 | 3 | 330 | 0.21 | 3.50E-02 | 7.71E-05 | 9.73E-06 | |
| | **LDT1** | 15 | 0.380 | 0 | 330 | 0.21 | 1.33E-02 | 2.92E-05 | 3.69E-06 | |
| | **LDT2** | 15 | 0.082 | 0 | 330 | 0.21 | 2.78E-03 | 6.13E-06 | 7.73E-07 | |
| | **MDT** | 15 | 0.049 | 0 | 330 | 0.21 | 2.90E-03 | 6.38E-06 | 8.04E-07 | |
| | **LHDT1** | 15 | 0.778 | 34 | 330 | 0.21 | 5.37E+00 | 1.18E-02 | 1.49E-03 | |
| | **LHDT2** | 15 | 0.424 | 11 | 330 | 0.21 | 9.58E-01 | 2.11E-03 | 2.66E-04 | |
| | **MHDT** | 15 | 4.407 | 181 | 330 | 0.21 | 1.64E+02 | 3.61E-01 | 4.55E-02 | |
| | **HHDT** | 15 | 9.078 | 581 | 330 | 0.21 | 1.08E+03 | 2.38E+00 | 3.00E-01 | |
| | | | | | | | | | | 3.48E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.053 | 0 | 175 | 0.11 | 1.17E-04 | 2.58E-07 | 3.25E-08 | |
| | **LDT1** | 15 | 0.380 | 0 | 175 | 0.11 | 4.44E-05 | 9.77E-08 | 1.23E-08 | |
| | **LDT2** | 15 | 0.082 | 0 | 175 | 0.11 | 9.30E-06 | 2.05E-08 | 2.58E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 175 | 0.11 | 9.68E-06 | 2.13E-08 | 2.69E-09 | |
| | **LHDT1** | 15 | 0.778 | 0 | 175 | 0.11 | 1.59E-02 | 3.49E-05 | 4.40E-06 | |
| | **LHDT2** | 15 | 0.424 | 0 | 175 | 0.11 | 2.83E-03 | 6.23E-06 | 7.85E-07 | |
| | **MHDT** | 15 | 4.407 | 1 | 175 | 0.11 | 2.67E-01 | 5.88E-04 | 7.41E-05 | |
| | **HHDT** | 15 | 9.078 | 2 | 175 | 0.11 | 1.75E+00 | 3.86E-03 | 4.87E-04 | 5.66E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.053 | 0 | 100 | 0.06 | 1.03E-04 | 2.28E-07 | 2.87E-08 | |
| | **LDT1** | 15 | 0.380 | 0 | 100 | 0.06 | 3.92E-05 | 8.63E-08 | 1.09E-08 | |
| | **LDT2** | 15 | 0.082 | 0 | 100 | 0.06 | 8.22E-06 | 1.81E-08 | 2.28E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 100 | 0.06 | 8.55E-06 | 1.88E-08 | 2.38E-09 | |
| | **LHDT1** | 15 | 0.778 | 1 | 100 | 0.06 | 2.84E-02 | 6.26E-05 | 7.89E-06 | |
| | **LHDT2** | 15 | 0.424 | 0 | 100 | 0.06 | 5.06E-03 | 1.11E-05 | 1.41E-06 | |
| | **MHDT** | 15 | 4.407 | 1 | 100 | 0.06 | 2.15E-01 | 4.74E-04 | 5.98E-05 | |
| | **HHDT** | 15 | 9.078 | 2 | 100 | 0.06 | 1.06E+00 | 2.33E-03 | 2.94E-04 | 3.63E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 2.79E-05 | 6.16E-08 | 7.76E-09 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 1.06E-05 | 2.33E-08 | 2.94E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 2.22E-06 | 4.89E-09 | 6.17E-10 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 2.31E-06 | 5.09E-09 | 6.42E-10 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 1.04E-04 | 2.28E-07 | 2.88E-08 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 1.85E-05 | 4.07E-08 | 5.14E-09 | |
| | **MHDT** | 15 | 4.407 | 2 | 50 | 0.03 | 2.60E-01 | 5.72E-04 | 7.22E-05 | |
| | **HHDT** | 15 | 9.078 | 9 | 50 | 0.03 | 2.58E+00 | 5.69E-03 | 7.18E-04 | 7.90E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 3.48E-05 | 7.66E-08 | 9.66E-09 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 1.32E-05 | 2.90E-08 | 3.66E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 2.76E-06 | 6.09E-09 | 7.68E-10 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 2.88E-06 | 6.33E-09 | 7.99E-10 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 4.45E-03 | 9.79E-06 | 1.23E-06 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 7.92E-04 | 1.75E-06 | 2.20E-07 | |
| | **MHDT** | 15 | 4.407 | 1 | 50 | 0.03 | 1.98E-01 | 4.36E-04 | 5.49E-05 | |
| | **HHDT** | 15 | 9.078 | 11 | 50 | 0.03 | 2.97E+00 | 6.55E-03 | 8.26E-04 | 8.82E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 8.69E-05 | 1.91E-07 | 2.41E-08 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 3.30E-05 | 7.26E-08 | 9.15E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 6.91E-06 | 1.52E-08 | 1.92E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 7.19E-06 | 1.58E-08 | 2.00E-09 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.72E-08 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 3.54E-02 | 7.79E-05 | 9.83E-06 | |
| | **LDT1** | | | 0 | | | 1.34E-02 | 2.95E-05 | 3.73E-06 | |
| | **LDT2** | | | 0 | | | 2.81E-03 | 6.20E-06 | 7.81E-07 | |
| | **MDT** | | | 0 | | | 2.93E-03 | 6.45E-06 | 8.13E-07 | |
| | **LHDT1** | | | 35 | | | 5.42E+00 | 1.19E-02 | 1.51E-03 | |
| | **LHDT2** | | | 11 | | | 9.67E-01 | 2.13E-03 | 2.69E-04 | |
| | **MHDT** | | | 186 | | | 1.65E+02 | 3.63E-01 | 4.57E-02 | |
| | **HHDT** | | | 604 | | | 1.09E+03 | 2.40E+00 | 3.03E-01 | |
| | **Total** | | | 840 | | | 1.26E+03 | 2.78E+00 | 3.50E-01 | 3.50E-01 |

**Diesel truck Idling Emissions** **NOx Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.500 | 5 | 17 | 4.84E+01 | 1.07E-01 | 1.34E-02 | |
| | **LHDT2** | 29.600 | 5 | 6 | 1.36E+01 | 2.99E-02 | 3.77E-03 | |
| | **MHDT** | 18.000 | 5 | 91 | 1.36E+02 | 2.99E-01 | 3.78E-02 | |
| | **HHDT** | 16.430 | 5 | 290 | 3.98E+02 | 8.76E-01 | 1.10E-01 | |
| | | | | 403 | 5.96E+02 | 1.31E+00 | 1.65E-01 | 1.65E-01 |
| **Idle at Light Logistics** | **LHDT1** | 34.500 | 5 | 0 | 2.69E-01 | 5.93E-04 | 7.48E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 7.56E-02 | 1.67E-04 | 2.10E-05 | |
| | **MHDT** | 18.000 | 5 | 0 | 4.18E-01 | 9.20E-04 | 1.16E-04 | |
| | **HHDT** | 16.430 | 5 | 1 | 1.22E+00 | 2.68E-03 | 3.38E-04 | |
| | | | | 1 | 1.98E+00 | 4.36E-03 | 5.49E-04 | 5.49E-04 |
| **Idle at Utility** | **LHDT1** | 34.500 | 5 | 0 | 8.44E-01 | 1.86E-03 | 2.34E-04 | |
| | **LHDT2** | 29.600 | 5 | 0 | 2.37E-01 | 5.22E-04 | 6.58E-05 | |
| | **MHDT** | 18.000 | 5 | 0 | 5.90E-01 | 1.30E-03 | 1.64E-04 | |
| | **HHDT** | 16.430 | 5 | 1 | 1.28E+00 | 2.83E-03 | 3.57E-04 | |
| | | | | 2 | 2.96E+00 | 6.51E-03 | 8.21E-04 | 8.21E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 6.17E-03 | 1.36E-05 | 1.71E-06 | |
| | **LHDT2** | 29.600 | 5 | 0 | 1.73E-03 | 3.81E-06 | 4.81E-07 | |
| | **MHDT** | 18.000 | 5 | 1 | 1.42E+00 | 3.14E-03 | 3.95E-04 | |
| | **HHDT** | 16.430 | 5 | 5 | 6.28E+00 | 1.38E-02 | 1.74E-03 | |
| | | | | 6 | 7.71E+00 | 1.70E-02 | 2.14E-03 | 2.14E-03 |
| **Idle at Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 2.64E-01 | 5.82E-04 | 7.34E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 7.42E-02 | 1.63E-04 | 2.06E-05 | |
| | **MHDT** | 18.000 | 5 | 1 | 1.08E+00 | 2.39E-03 | 3.01E-04 | |
| | **HHDT** | 16.430 | 5 | 5 | 7.22E+00 | 1.59E-02 | 2.01E-03 | |
| | | | | 6 | 8.64E+00 | 1.90E-02 | 2.40E-03 | 2.40E-03 |
| **Idle at Firestation** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 6.17E+02 | 1.36E+00 | 1.71E-01 | 1.71E-01 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **NOx Pk Hr**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **NOx Pk Hr Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.046 | 1004 | 330 | 0.21 | 9.50E+00 | 2.09E-02 | 2.64E-03 | |
| | **LDT1** | 15 | 0.115 | 119 | 330 | 0.21 | 2.82E+00 | 6.20E-03 | 7.82E-04 | |
| | **LDT2** | 15 | 0.064 | 363 | 330 | 0.21 | 4.74E+00 | 1.04E-02 | 1.32E-03 | |
| | **MDT** | 15 | 0.108 | 280 | 330 | 0.21 | 6.18E+00 | 1.36E-02 | 1.72E-03 | |
| | **LHDT1** | 15 | 0.243 | 109 | 330 | 0.21 | 5.42E+00 | 1.19E-02 | 1.51E-03 | |
| | **LHDT2** | 15 | 0.106 | 11 | 330 | 0.21 | 2.47E-01 | 5.43E-04 | 6.85E-05 | |
| | **MHDT** | 15 | 0.249 | 41 | 330 | 0.21 | 2.11E+00 | 4.65E-03 | 5.86E-04 | |
| | **HHDT** | 15 | 3.697 | 10 | 330 | 0.21 | 7.55E+00 | 1.66E-02 | 2.10E-03 | |
| | | | | | | | | | | 1.07E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.046 | 6 | 175 | 0.11 | 3.17E-02 | 6.99E-05 | 8.82E-06 | |
| | **LDT1** | 15 | 0.115 | 1 | 175 | 0.11 | 9.41E-03 | 2.07E-05 | 2.61E-06 | |
| | **LDT2** | 15 | 0.064 | 2 | 175 | 0.11 | 1.58E-02 | 3.49E-05 | 4.40E-06 | |
| | **MDT** | 15 | 0.108 | 2 | 175 | 0.11 | 2.07E-02 | 4.55E-05 | 5.74E-06 | |
| | **LHDT1** | 15 | 0.243 | 1 | 175 | 0.11 | 1.60E-02 | 3.52E-05 | 4.44E-06 | |
| | **LHDT2** | 15 | 0.106 | 0 | 175 | 0.11 | 7.28E-04 | 1.60E-06 | 2.02E-07 | |
| | **MHDT** | 15 | 0.249 | 0 | 175 | 0.11 | 3.44E-03 | 7.58E-06 | 9.56E-07 | |
| | **HHDT** | 15 | 3.697 | 0 | 175 | 0.11 | 1.22E-02 | 2.70E-05 | 3.40E-06 | 3.06E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.046 | 10 | 100 | 0.06 | 2.81E-02 | 6.18E-05 | 7.79E-06 | |
| | **LDT1** | 15 | 0.115 | 1 | 100 | 0.06 | 8.32E-03 | 1.83E-05 | 2.31E-06 | |
| | **LDT2** | 15 | 0.064 | 4 | 100 | 0.06 | 1.40E-02 | 3.08E-05 | 3.89E-06 | |
| | **MDT** | 15 | 0.108 | 3 | 100 | 0.06 | 1.83E-02 | 4.02E-05 | 5.07E-06 | |
| | **LHDT1** | 15 | 0.243 | 2 | 100 | 0.06 | 2.86E-02 | 6.31E-05 | 7.96E-06 | |
| | **LHDT2** | 15 | 0.106 | 0 | 100 | 0.06 | 1.30E-03 | 2.87E-06 | 3.62E-07 | |
| | **MHDT** | 15 | 0.249 | 0 | 100 | 0.06 | 2.78E-03 | 6.11E-06 | 7.71E-07 | |
| | **HHDT** | 15 | 3.697 | 0 | 100 | 0.06 | 7.39E-03 | 1.63E-05 | 2.05E-06 | 3.02E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.046 | 5 | 50 | 0.03 | 7.58E-03 | 1.67E-05 | 2.11E-06 | |
| | **LDT1** | 15 | 0.115 | 1 | 50 | 0.03 | 2.25E-03 | 4.95E-06 | 6.24E-07 | |
| | **LDT2** | 15 | 0.064 | 2 | 50 | 0.03 | 3.79E-03 | 8.34E-06 | 1.05E-06 | |
| | **MDT** | 15 | 0.108 | 1 | 50 | 0.03 | 4.93E-03 | 1.09E-05 | 1.37E-06 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 1.05E-04 | 2.30E-07 | 2.91E-08 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 4.76E-06 | 1.05E-08 | 1.32E-09 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 3.35E-03 | 7.37E-06 | 9.30E-07 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 1.81E-02 | 3.98E-05 | 5.02E-06 | 1.11E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.046 | 7 | 50 | 0.03 | 9.43E-03 | 2.08E-05 | 2.62E-06 | |
| | **LDT1** | 15 | 0.115 | 1 | 50 | 0.03 | 2.80E-03 | 6.16E-06 | 7.77E-07 | |
| | **LDT2** | 15 | 0.064 | 2 | 50 | 0.03 | 4.71E-03 | 1.04E-05 | 1.31E-06 | |
| | **MDT** | 15 | 0.108 | 2 | 50 | 0.03 | 6.14E-03 | 1.35E-05 | 1.71E-06 | |
| | **LHDT1** | 15 | 0.243 | 1 | 50 | 0.03 | 4.48E-03 | 9.88E-06 | 1.25E-06 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 2.04E-04 | 4.49E-07 | 5.67E-08 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 2.55E-03 | 5.62E-06 | 7.08E-07 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 2.08E-02 | 4.57E-05 | 5.77E-06 | 1.42E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.046 | 16 | 50 | 0.03 | 2.36E-02 | 5.20E-05 | 6.55E-06 | |
| | **LDT1** | 15 | 0.115 | 2 | 50 | 0.03 | 6.99E-03 | 1.54E-05 | 1.94E-06 | |
| | **LDT2** | 15 | 0.064 | 6 | 50 | 0.03 | 1.18E-02 | 2.59E-05 | 3.27E-06 | |
| | **MDT** | 15 | 0.108 | 5 | 50 | 0.03 | 1.53E-02 | 3.38E-05 | 4.26E-06 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.60E-05 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 9.60E+00 | 2.11E-02 | 2.67E-03 | |
| | **LDT1** | | | 124 | | | 2.85E+00 | 6.27E-03 | 7.90E-04 | |
| | **LDT2** | | | 379 | | | 4.79E+00 | 1.06E-02 | 1.33E-03 | |
| | **MDT** | | | 292 | | | 6.25E+00 | 1.38E-02 | 1.74E-03 | |
| | **LHDT1** | | | 112 | | | 5.47E+00 | 1.21E-02 | 1.52E-03 | |
| | **LHDT2** | | | 12 | | | 2.49E-01 | 5.48E-04 | 6.91E-05 | |
| | **MHDT** | | | 42 | | | 2.12E+00 | 4.67E-03 | 5.90E-04 | |
| | **HHDT** | | | 10 | | | 7.61E+00 | 1.68E-02 | 2.11E-03 | |
| | **Total** | | | 2020 | | | 3.89E+01 | 8.58E-02 | 1.08E-02 | 1.08E-02 |

**Diesel truck Idling Emissions** **NOx Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 54 | 4.35E+00 | 9.58E-03 | 1.21E-03 | |
| | **LHDT2** | 0.840 | 5 | 6 | 3.99E-01 | 8.79E-04 | 1.11E-04 | |
| | **MHDT** | 1.920 | 5 | 21 | 3.31E+00 | 7.29E-03 | 9.19E-04 | |
| | **HHDT** | 24.037 | 5 | 5 | 9.98E+00 | 2.20E-02 | 2.77E-03 | |
| | | | | 86 | 1.80E+01 | 3.97E-02 | 5.01E-03 | 5.01E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 0 | 2.42E-02 | 5.33E-05 | 6.72E-06 | |
| | **LHDT2** | 0.840 | 5 | 0 | 2.22E-03 | 4.89E-06 | 6.17E-07 | |
| | **MHDT** | 1.920 | 5 | 0 | 1.02E-02 | 2.24E-05 | 2.83E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 3.05E-02 | 6.72E-05 | 8.47E-06 | |
| | | | | 0 | 6.71E-02 | 1.48E-04 | 1.86E-05 | 1.86E-05 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 1 | 7.59E-02 | 1.67E-04 | 2.11E-05 | |
| | **LHDT2** | 0.840 | 5 | 0 | 6.96E-03 | 1.53E-05 | 1.93E-06 | |
| | **MHDT** | 1.920 | 5 | 0 | 1.44E-02 | 3.16E-05 | 3.99E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 3.22E-02 | 7.10E-05 | 8.96E-06 | |
| | | | | 1 | 1.29E-01 | 2.85E-04 | 3.60E-05 | 3.60E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 5.54E-04 | 1.22E-06 | 1.54E-07 | |
| | **LHDT2** | 0.840 | 5 | 0 | 5.08E-05 | 1.12E-07 | 1.41E-08 | |
| | **MHDT** | 1.920 | 5 | 0 | 3.47E-02 | 7.63E-05 | 9.63E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 1.57E-01 | 3.47E-04 | 4.37E-05 | |
| | | | | 0 | 1.93E-01 | 4.25E-04 | 5.35E-05 | 5.35E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 2.38E-02 | 5.23E-05 | 6.60E-06 | |
| | **LHDT2** | 0.840 | 5 | 0 | 2.18E-03 | 4.80E-06 | 6.05E-07 | |
| | **MHDT** | 1.920 | 5 | 0 | 2.64E-02 | 5.81E-05 | 7.33E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 1.81E-01 | 3.99E-04 | 5.03E-05 | |
| | | | | 1 | 2.33E-01 | 5.14E-04 | 6.49E-05 | 6.49E-05 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 1.87E+01 | 4.11E-02 | 5.18E-03 | 5.18E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour Nox emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Peak Hour Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.65E-01 | 5.08E-03 |
| Light Logistics | Phase 2 | 1.92E-03 | 1.04E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.67E-01 | 5.18E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 7.84E-02 | 2.37E-03 |
| Light Logistics | Phase 2 | 1.87E-03 | 6.33E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 8.02E-02 | 2.44E-03 |

**Total Onsite Mobile Emissions**

| | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.67E-01 | 5.18E-03 | |
| | Idling Emissions (g/sec) | 8.02E-02 | 2.44E-03 | |
| | Total Vehicle Emissions (g/sec) | 2.47E-01 | 7.62E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 8.60E-01 | |
| | Forklifts (LPG) (g/sec) | | 6.83E-02 | |
| | Total Other Onsite Emissions (g/sec) | | 9.28E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 2.47E-01 | 9.36E-01 | 1.18E+00 |
| | Area (m2) | | | 4686695 |
| | Emission Rate (g/m2-sec) | | | 2.52E-07 |

**World Logistics Center** 2027 Phase 2 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.053 | 2 | 330 | 0.21 | 1.66E-02 | 3.65E-05 | 4.61E-06 | |
| | **LDT1** | 15 | 0.380 | 0 | 330 | 0.21 | 6.29E-03 | 1.39E-05 | 1.75E-06 | |
| | **LDT2** | 15 | 0.082 | 0 | 330 | 0.21 | 1.32E-03 | 2.90E-06 | 3.66E-07 | |
| | **MDT** | 15 | 0.049 | 0 | 330 | 0.21 | 1.37E-03 | 3.02E-06 | 3.81E-07 | |
| | **LHDT1** | 15 | 0.778 | 16 | 330 | 0.21 | 2.55E+00 | 5.61E-03 | 7.07E-04 | |
| | **LHDT2** | 15 | 0.424 | 5 | 330 | 0.21 | 4.54E-01 | 1.00E-03 | 1.26E-04 | |
| | **MHDT** | 15 | 4.407 | 86 | 330 | 0.21 | 7.76E+01 | 1.71E-01 | 2.15E-02 | |
| | **HHDT** | 15 | 9.078 | 275 | 330 | 0.21 | 5.12E+02 | 1.13E+00 | 1.42E-01 | |
| | | | | | | | | | | 1.65E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.053 | 0 | 175 | 0.11 | 3.97E-04 | 8.75E-07 | 1.10E-07 | |
| | **LDT1** | 15 | 0.380 | 0 | 175 | 0.11 | 1.51E-04 | 3.32E-07 | 4.18E-08 | |
| | **LDT2** | 15 | 0.082 | 0 | 175 | 0.11 | 3.16E-05 | 6.96E-08 | 8.77E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 175 | 0.11 | 3.29E-05 | 7.24E-08 | 9.13E-09 | |
| | **LHDT1** | 15 | 0.778 | 1 | 175 | 0.11 | 5.38E-02 | 1.19E-04 | 1.50E-05 | |
| | **LHDT2** | 15 | 0.424 | 0 | 175 | 0.11 | 9.60E-03 | 2.11E-05 | 2.67E-06 | |
| | **MHDT** | 15 | 4.407 | 2 | 175 | 0.11 | 9.06E-01 | 2.00E-03 | 2.52E-04 | |
| | **HHDT** | 15 | 9.078 | 6 | 175 | 0.11 | 5.95E+00 | 1.31E-02 | 1.65E-03 | 1.92E-03 |
| **Travel at Utility** | **LDA** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 2 | | | 1.70E-02 | 3.74E-05 | 4.72E-06 | |
| | **LDT1** | | | 0 | | | 6.44E-03 | 1.42E-05 | 1.79E-06 | |
| | **LDT2** | | | 0 | | | 1.35E-03 | 2.97E-06 | 3.75E-07 | |
| | **MDT** | | | 0 | | | 1.40E-03 | 3.09E-06 | 3.90E-07 | |
| | **LHDT1** | | | 17 | | | 2.60E+00 | 5.73E-03 | 7.22E-04 | |
| | **LHDT2** | | | 5 | | | 4.63E-01 | 1.02E-03 | 1.29E-04 | |
| | **MHDT** | | | 88 | | | 7.85E+01 | 1.73E-01 | 2.18E-02 | |
| | **HHDT** | | | 281 | | | 5.18E+02 | 1.14E+00 | 1.44E-01 | |
| | **Total** | | | 393 | | | 6.00E+02 | 1.32E+00 | 1.67E-01 | 1.67E-01 |

**Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.500 | 5 | 8 | 2.29E+01 | 5.05E-02 | 6.37E-03 | |
| | **LHDT2** | 29.600 | 5 | 3 | 6.44E+00 | 1.42E-02 | 1.79E-03 | |
| | **MHDT** | 18.000 | 5 | 43 | 6.44E+01 | 1.42E-01 | 1.79E-02 | |
| | **HHDT** | 16.430 | 5 | 138 | 1.88E+02 | 4.15E-01 | 5.23E-02 | |
| | | | | 191 | 2.82E+02 | 6.22E-01 | 7.84E-02 | 7.84E-02 |
| **Idle at Light Logistics** | **LHDT1** | 34.500 | 5 | 0 | 9.15E-01 | 2.01E-03 | 2.54E-04 | |
| | **LHDT2** | 29.600 | 5 | 0 | 2.57E-01 | 5.65E-04 | 7.13E-05 | |
| | **MHDT** | 18.000 | 5 | 1 | 1.42E+00 | 3.13E-03 | 3.94E-04 | |
| | **HHDT** | 16.430 | 5 | 3 | 4.13E+00 | 9.09E-03 | 1.15E-03 | |
| | | | | 4 | 6.72E+00 | 1.48E-02 | 1.87E-03 | 1.87E-03 |
| **Idle at Utility** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 196 | 2.89E+02 | 6.36E-01 | 8.02E-02 | 8.02E-02 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.046 | 476 | 330 | 0.21 | 4.50E+00 | 9.91E-03 | 1.25E-03 | |
| | **LDT1** | 15 | 0.115 | 56 | 330 | 0.21 | 1.33E+00 | 2.94E-03 | 3.71E-04 | |
| | **LDT2** | 15 | 0.064 | 172 | 330 | 0.21 | 2.25E+00 | 4.95E-03 | 6.24E-04 | |
| | **MDT** | 15 | 0.108 | 133 | 330 | 0.21 | 2.93E+00 | 6.45E-03 | 8.14E-04 | |
| | **LHDT1** | 15 | 0.243 | 52 | 330 | 0.21 | 2.57E+00 | 5.66E-03 | 7.14E-04 | |
| | **LHDT2** | 15 | 0.106 | 5 | 330 | 0.21 | 1.17E-01 | 2.57E-04 | 3.25E-05 | |
| | **MHDT** | 15 | 0.249 | 20 | 330 | 0.21 | 1.00E+00 | 2.20E-03 | 2.78E-04 | |
| | **HHDT** | 15 | 3.697 | 5 | 330 | 0.21 | 3.58E+00 | 7.88E-03 | 9.94E-04 | |
| | | | | | | | | | | 5.08E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.046 | 21 | 175 | 0.11 | 1.08E-01 | 2.37E-04 | 2.99E-05 | |
| | **LDT1** | 15 | 0.115 | 3 | 175 | 0.11 | 3.20E-02 | 7.04E-05 | 8.88E-06 | |
| | **LDT2** | 15 | 0.064 | 8 | 175 | 0.11 | 5.38E-02 | 1.19E-04 | 1.49E-05 | |
| | **MDT** | 15 | 0.108 | 6 | 175 | 0.11 | 7.01E-02 | 1.55E-04 | 1.95E-05 | |
| | **LHDT1** | 15 | 0.243 | 2 | 175 | 0.11 | 5.43E-02 | 1.20E-04 | 1.51E-05 | |
| | **LHDT2** | 15 | 0.106 | 0 | 175 | 0.11 | 2.47E-03 | 5.44E-06 | 6.86E-07 | |
| | **MHDT** | 15 | 0.249 | 0 | 175 | 0.11 | 1.17E-02 | 2.57E-05 | 3.24E-06 | |
| | **HHDT** | 15 | 3.697 | 0 | 175 | 0.11 | 4.16E-02 | 9.15E-05 | 1.15E-05 | 1.04E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.046 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.046 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.046 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.046 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 497 | | | 4.61E+00 | 1.02E-02 | 1.28E-03 | |
| | **LDT1** | | | 59 | | | 1.37E+00 | 3.01E-03 | 3.79E-04 | |
| | **LDT2** | | | 180 | | | 2.30E+00 | 5.07E-03 | 6.39E-04 | |
| | **MDT** | | | 139 | | | 3.00E+00 | 6.61E-03 | 8.33E-04 | |
| | **LHDT1** | | | 54 | | | 2.62E+00 | 5.78E-03 | 7.29E-04 | |
| | **LHDT2** | | | 6 | | | 1.19E-01 | 2.63E-04 | 3.31E-05 | |
| | **MHDT** | | | 20 | | | 1.01E+00 | 2.23E-03 | 2.81E-04 | |
| | **HHDT** | | | 5 | | | 3.62E+00 | 7.97E-03 | 1.01E-03 | |
| | **Total** | | | 959 | | | 1.86E+01 | 4.11E-02 | 5.18E-03 | 5.18E-03 |

**Non-Diesel Truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 26 | 2.06E+00 | 4.54E-03 | 5.73E-04 | |
| | **LHDT2** | 0.840 | 5 | 3 | 1.89E-01 | 4.16E-04 | 5.25E-05 | |
| | **MHDT** | 1.920 | 5 | 10 | 1.57E+00 | 3.45E-03 | 4.35E-04 | |
| | **HHDT** | 24.037 | 5 | 2 | 4.73E+00 | 1.04E-02 | 1.31E-03 | |
| | | | | 41 | 8.55E+00 | 1.88E-02 | 2.37E-03 | 2.37E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 1 | 8.22E-02 | 1.81E-04 | 2.28E-05 | |
| | **LHDT2** | 0.840 | 5 | 0 | 7.54E-03 | 1.66E-05 | 2.09E-06 | |
| | **MHDT** | 1.920 | 5 | 0 | 3.45E-02 | 7.61E-05 | 9.60E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 1.04E-01 | 2.28E-04 | 2.88E-05 | |
| | | | | 1 | 2.28E-01 | 5.02E-04 | 6.33E-05 | 6.33E-05 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 42 | 8.77E+00 | 1.93E-02 | 2.44E-03 | 2.44E-03 |

**World Logistics Center Project in 2027**
**Internal Roadway Circulation**

**2027**
**With EMFAC2014**

**NOx Pk Hr**

Based on PB Traffic Results 10/3/2013
No Mitigation Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 1.00E-01 | 4.99E-03 | 1.05E-01 |
| 2 | 3.16E-01 | 1.52E-02 | 3.32E-01 |
| 3 | 4.17E-01 | 2.02E-02 | 4.37E-01 |
| 5 | 2.42E-02 | 5.14E-03 | 2.94E-02 |
| 6 | 1.47E-01 | 8.71E-03 | 1.56E-01 |
| 8 | 2.07E-02 | 8.54E-03 | 2.92E-02 |
| 11 | 5.66E-04 | 2.20E-04 | 7.85E-04 |
| 12 | 1.14E-03 | 3.76E-04 | 1.51E-03 |
| 14 | 1.93E-01 | 7.35E-03 | 2.00E-01 |
| 18 | 2.03E-02 | 1.64E-03 | 2.19E-02 |
| 19 | 1.20E-01 | 5.15E-03 | 1.25E-01 |
| 21 | 6.49E-02 | 6.49E-03 | 7.13E-02 |
| 24 | 1.20E-01 | 1.10E-02 | 1.31E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.21E-02 | 1.63E-03 | 3.37E-02 |
| 30 | 1.46E-01 | 8.40E-03 | 1.54E-01 |
| 31 | 3.59E-02 | 4.15E-03 | 4.00E-02 |
| Total (g/sec) | 1.76E+00 | 1.09E-01 | 1.87E+00 |
| Total (lbs/day) | 3.35E+02 | 2.08E+01 | 3.56E+02 |
| Total VMT (mi/day) | 2.44E+03 | 5.68E+03 | 8.12E+03 |

| ID | Arterial | From | To | | Estimated Project 2027 - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,125 | 75 | 161 | 516 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,332 | 155 | 206 | 736 |
| 3 | Street E | west of Street A | | | 559 | 63 | 84 | 301 |
| 5 | Street E | Street D | Street A | | 545 | 35 | 55 | 25 |
| 6 | Street A | Street F | Street C | | 589 | 54 | 77 | 223 |
| 8 | Street D | Street E | Cactus Ave | | 813 | 56 | 85 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 16 | 2 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 30 | 8 | 6 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 249 | 31 | 40 | 210 |
| 18 | Street B | Street A | Gilman Springs Rd | | 89 | 11 | 12 | 22 |
| 19 | Street F | Street A | Street C | | 131 | 14 | 23 | 86 |
| 21 | Street C | Street A | Street F | | 472 | 31 | 51 | 77 |
| 24 | Street C | Street F | Gilman Springs Rd | | 524 | 30 | 49 | 97 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 179 | 12 | 23 | 81 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 232 | 16 | 29 | 86 |
| 31 | Gilman Springs Rd | south of Street C | | | 497 | 26 | 40 | 66 |

**World Logistics Center** **2027** **NOx Pk Hr** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1877 | 1,125 | 75 | 161 | 516 | 327 | 0.203 | 2 | 0 | 0 | 0 | 15 | 5 | 131 | 508 | 662 | 134 |
| 2 | 2429 | 1,332 | 155 | 206 | 736 | 731 | 0.454 | 2 | 0 | 0 | 0 | 32 | 11 | 167 | 724 | 937 | 425 |
| 3 | 1007 | 559 | 63 | 84 | 301 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 69 | 297 | 384 | 560 |
| 5 | 660 | 545 | 35 | 55 | 25 | 953 | 0.592 | 1 | 0 | 0 | 0 | 7 | 2 | 45 | 25 | 80 | 48 |
| 6 | 943 | 589 | 54 | 77 | 223 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 11 | 4 | 63 | 219 | 298 | 203 |
| 8 | 953 | 813 | 56 | 85 | 0 | 1091 | 0.678 | 1 | 0 | 0 | 0 | 11 | 4 | 69 | 0 | 86 | 58 |
| 11 | 20 | 16 | 2 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 12 | 44 | 30 | 8 | 6 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 0 | 7 | 3 |
| 14 | 530 | 249 | 31 | 40 | 210 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 6 | 2 | 33 | 207 | 248 | 250 |
| 18 | 133 | 89 | 11 | 12 | 22 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 2 | 1 | 9 | 22 | 34 | 30 |
| 19 | 255 | 131 | 14 | 23 | 86 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 3 | 1 | 19 | 85 | 108 | 159 |
| 21 | 631 | 472 | 31 | 51 | 77 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 75 | 127 | 99 |
| 24 | 700 | 524 | 30 | 49 | 97 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 6 | 2 | 40 | 96 | 145 | 175 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 295 | 179 | 12 | 23 | 81 | 675 | 0.419 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 80 | 102 | 43 |
| 30 | 363 | 232 | 16 | 29 | 86 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 3 | 1 | 24 | 85 | 113 | 199 |
| 31 | 630 | 497 | 26 | 40 | 66 | 820 | 0.509 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 65 | 106 | 54 |
| | | | | | | | | | | | | | | | | Total | 2444 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0284 | 0.3605 | 0.0312 | 0.0208 | 0.7677 | 0.3590 | 1.4399 | 3.0907 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.16E-06 | 2.42E-06 | 1.87E-07 | 2.22E-07 | 6.62E-04 | 1.03E-04 | 1.07E-02 | 8.86E-02 | 1.00E-01 |
| 2 | 1 | 8.36E-06 | 6.41E-06 | 4.96E-07 | 5.88E-07 | 3.08E-03 | 4.77E-04 | 3.04E-02 | 2.82E-01 | 3.16E-01 |
| 3 | 1 | 1.13E-05 | 8.66E-06 | 6.69E-07 | 7.94E-07 | 3.98E-03 | 6.18E-04 | 4.02E-02 | 3.72E-01 | 4.17E-01 |
| 5 | 1 | 4.46E-06 | 3.42E-06 | 2.64E-07 | 3.14E-07 | 9.14E-04 | 1.42E-04 | 1.06E-02 | 1.25E-02 | 2.42E-02 |
| 6 | 1 | 5.56E-06 | 4.27E-06 | 3.30E-07 | 3.91E-07 | 1.62E-03 | 2.51E-04 | 1.71E-02 | 1.28E-01 | 1.47E-01 |
| 8 | 1 | 7.62E-06 | 5.84E-06 | 4.52E-07 | 5.36E-07 | 1.64E-03 | 2.55E-04 | 1.88E-02 | 0.00E+00 | 2.07E-02 |
| 11 | 1 | 1.67E-07 | 1.28E-07 | 9.92E-09 | 1.18E-08 | 6.86E-05 | 1.06E-05 | 4.86E-04 | 0.00E+00 | 5.66E-04 |
| 12 | 1 | 2.13E-07 | 1.63E-07 | 1.26E-08 | 1.50E-08 | 1.83E-04 | 2.84E-05 | 9.26E-04 | 0.00E+00 | 1.14E-03 |
| 14 | 1 | 3.46E-06 | 2.65E-06 | 2.05E-07 | 2.43E-07 | 1.36E-03 | 2.11E-04 | 1.31E-02 | 1.78E-01 | 1.93E-01 |
| 18 | 1 | 1.08E-06 | 8.27E-07 | 6.39E-08 | 7.58E-08 | 4.03E-04 | 6.26E-05 | 3.33E-03 | 1.65E-02 | 2.03E-02 |
| 19 | 1 | 2.69E-06 | 2.06E-06 | 1.60E-07 | 1.89E-07 | 9.33E-04 | 1.45E-04 | 1.10E-02 | 1.08E-01 | 1.20E-01 |
| 21 | 1 | 5.10E-06 | 3.91E-06 | 3.02E-07 | 3.59E-07 | 1.07E-03 | 1.66E-04 | 1.30E-02 | 5.06E-02 | 6.49E-02 |
| 24 | 1 | 8.76E-06 | 6.72E-06 | 5.19E-07 | 6.16E-07 | 1.60E-03 | 2.48E-04 | 1.92E-02 | 9.94E-02 | 1.20E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.04E-06 | 7.96E-07 | 6.15E-08 | 7.30E-08 | 2.23E-04 | 3.46E-05 | 3.11E-03 | 2.87E-02 | 3.21E-02 |
| 30 | 1 | 5.64E-06 | 4.33E-06 | 3.34E-07 | 3.97E-07 | 1.23E-03 | 1.91E-04 | 1.65E-02 | 1.28E-01 | 1.46E-01 |
| 31 | 1 | 3.50E-06 | 2.68E-06 | 2.07E-07 | 2.46E-07 | 5.87E-04 | 9.11E-05 | 6.69E-03 | 2.85E-02 | 3.59E-02 |

**World Logistics Center** **2027** **NOx Pk Hr** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1877 | 1,125 | 75 | 161 | 516 | 327 | 0.203 | 630 | 77 | 234 | 181 | 49 | 5 | 30 | 8 | 1215 | 247 |
| 2 | 2429 | 1,332 | 155 | 206 | 736 | 731 | 0.454 | 746 | 91 | 277 | 215 | 102 | 11 | 38 | 11 | 1492 | 677 |
| 3 | 1007 | 559 | 63 | 84 | 301 | 2352 | 1.461 | 313 | 38 | 116 | 90 | 41 | 4 | 16 | 5 | 624 | 911 |
| 5 | 660 | 545 | 35 | 55 | 25 | 953 | 0.592 | 305 | 37 | 113 | 88 | 23 | 2 | 10 | 0 | 580 | 343 |
| 6 | 943 | 589 | 54 | 77 | 223 | 1099 | 0.683 | 330 | 40 | 123 | 95 | 36 | 4 | 14 | 3 | 645 | 440 |
| 8 | 953 | 813 | 56 | 85 | 0 | 1091 | 0.678 | 455 | 55 | 169 | 131 | 37 | 4 | 16 | 0 | 867 | 588 |
| 11 | 20 | 16 | 2 | 2 | 0 | 1201 | 0.746 | 9 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 18 | 14 |
| 12 | 44 | 30 | 8 | 6 | 0 | 824 | 0.512 | 17 | 2 | 6 | 5 | 5 | 1 | 1 | 0 | 37 | 19 |
| 14 | 530 | 249 | 31 | 40 | 210 | 1618 | 1.005 | 139 | 17 | 52 | 40 | 20 | 2 | 7 | 3 | 282 | 283 |
| 18 | 133 | 89 | 11 | 12 | 22 | 1412 | 0.877 | 50 | 6 | 18 | 14 | 7 | 1 | 2 | 0 | 99 | 87 |
| 19 | 255 | 131 | 14 | 23 | 86 | 2386 | 1.482 | 74 | 9 | 27 | 21 | 10 | 1 | 4 | 1 | 147 | 218 |
| 21 | 631 | 472 | 31 | 51 | 77 | 1258 | 0.781 | 264 | 32 | 98 | 76 | 21 | 2 | 9 | 1 | 504 | 394 |
| 24 | 700 | 524 | 30 | 49 | 97 | 1946 | 1.209 | 294 | 36 | 109 | 84 | 20 | 2 | 9 | 2 | 555 | 671 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 295 | 179 | 12 | 23 | 81 | 675 | 0.419 | 100 | 12 | 37 | 29 | 8 | 1 | 4 | 1 | 193 | 81 |
| 30 | 363 | 232 | 16 | 29 | 86 | 2827 | 1.756 | 130 | 16 | 48 | 37 | 11 | 1 | 5 | 1 | 250 | 439 |
| 31 | 630 | 497 | 26 | 40 | 66 | 820 | 0.509 | 278 | 34 | 103 | 80 | 17 | 2 | 7 | 1 | 523 | 267 |
| | | | | | | | | | | | | | | | | Total | 5680 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0318 | 0.0438 | 0.0438 | 0.0759 | 0.2063 | 0.0876 | 0.2041 | 3.0254 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.13E-03 | 1.90E-04 | 5.78E-04 | 7.77E-04 | 5.73E-04 | 2.57E-05 | 3.45E-04 | 1.37E-03 | 4.99E-03 |
| 2 | 1 | 2.99E-03 | 5.02E-04 | 1.53E-03 | 2.06E-03 | 2.66E-03 | 1.19E-04 | 9.84E-04 | 4.37E-03 | 1.52E-02 |
| 3 | 1 | 4.04E-03 | 6.78E-04 | 2.07E-03 | 2.78E-03 | 3.45E-03 | 1.55E-04 | 1.30E-03 | 5.76E-03 | 2.02E-02 |
| 5 | 1 | 1.60E-03 | 2.68E-04 | 8.16E-04 | 1.10E-03 | 7.92E-04 | 3.55E-05 | 3.44E-04 | 1.94E-04 | 5.14E-03 |
| 6 | 1 | 1.99E-03 | 3.34E-04 | 1.02E-03 | 1.37E-03 | 1.40E-03 | 6.29E-05 | 5.52E-04 | 1.99E-03 | 8.71E-03 |
| 8 | 1 | 2.73E-03 | 4.57E-04 | 1.39E-03 | 1.87E-03 | 1.42E-03 | 6.38E-05 | 6.07E-04 | 0.00E+00 | 8.54E-03 |
| 11 | 1 | 5.99E-05 | 1.00E-05 | 3.06E-05 | 4.11E-05 | 5.94E-05 | 2.66E-06 | 1.57E-05 | 0.00E+00 | 2.20E-04 |
| 12 | 1 | 7.63E-05 | 1.28E-05 | 3.90E-05 | 5.24E-05 | 1.59E-04 | 7.12E-06 | 2.99E-05 | 0.00E+00 | 3.76E-04 |
| 14 | 1 | 1.24E-03 | 2.08E-04 | 6.33E-04 | 8.50E-04 | 1.18E-03 | 5.29E-05 | 4.25E-04 | 2.76E-03 | 7.35E-03 |
| 18 | 1 | 3.86E-04 | 6.47E-05 | 1.97E-04 | 2.65E-04 | 3.49E-04 | 1.57E-05 | 1.08E-04 | 2.55E-04 | 1.64E-03 |
| 19 | 1 | 9.64E-04 | 1.62E-04 | 4.93E-04 | 6.62E-04 | 8.08E-04 | 3.62E-05 | 3.56E-04 | 1.67E-03 | 5.15E-03 |
| 21 | 1 | 1.83E-03 | 3.06E-04 | 9.33E-04 | 1.25E-03 | 9.24E-04 | 4.14E-05 | 4.20E-04 | 7.84E-04 | 6.49E-03 |
| 24 | 1 | 3.14E-03 | 5.26E-04 | 1.60E-03 | 2.15E-03 | 1.38E-03 | 6.20E-05 | 6.20E-04 | 1.54E-03 | 1.10E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.71E-04 | 6.23E-05 | 1.90E-04 | 2.55E-04 | 1.93E-04 | 8.67E-06 | 1.01E-04 | 4.45E-04 | 1.63E-03 |
| 30 | 1 | 2.02E-03 | 3.39E-04 | 1.03E-03 | 1.39E-03 | 1.07E-03 | 4.78E-05 | 5.34E-04 | 1.98E-03 | 8.40E-03 |
| 31 | 1 | 1.25E-03 | 2.10E-04 | 6.40E-04 | 8.60E-04 | 5.08E-04 | 2.28E-05 | 2.16E-04 | 4.41E-04 | 4.15E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.16E-01 | 6.08E-03 |
| Light Logistics | Phase 1 | 2.17E-04 | 1.40E-05 |
| Utilities Service Station | Phase 1 | 1.61E-04 | 1.34E-05 |
| Gas Station w/Convenience Store | Phase 1 | 3.01E-04 | 5.03E-06 |
| Convenience Store | Phase 1 | 4.73E-04 | 8.11E-06 |
| Fire Station | Phase 1 | 7.33E-09 | 3.15E-06 |
| Total | | 1.17E-01 | 6.13E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.21E-01 | 9.68E-03 |
| Light Logistics | Phase 1 | 4.48E-04 | 5.73E-05 |
| Utilities Service Station | Phase 1 | 6.25E-04 | 1.82E-04 |
| Gas Station w/Convenience Store | Phase 1 | 1.89E-03 | 4.47E-05 |
| Convenience Store | Phase 1 | 2.98E-03 | 6.91E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.27E-01 | 1.00E-02 |

**Total Onsite Emission**

| | Emissions (g/sec) | Emissions (g/sec) | |
|---|---|---|---|
| Runing Exhaust (g/sec) | 1.17E-01 | 6.13E-03 | |
| Idling Emissions (g/sec) | 1.27E-01 | 1.00E-02 | |
| Total Vehicle Emissions (g/sec) | 2.44E-01 | 1.62E-02 | |

**Other Onsite Emissions**

| | | | |
|---|---|---|---|
| Yard Trucks (LPG) (g/sec) | | 5.15E-01 | |
| Fork Lifts (LPG) (g/sec) | | 1.66E-02 | |
| Total Other Onsite Sources (g/sec) | | 5.32E-01 | |
| | | | Total |
| Total All Sources (g/sec) | 2.44E-01 | 5.48E-01 | 7.91E-01 |
| Area (m2) | | | 4683563 |
| Total Emission Rate (g/m2-sec) | | | 1.69E-07 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.053 | 55 | 330 | 0.21 | 6.06E-01 | 1.33E-03 | 7.01E-06 | |
| | **LDT1** | 15 | 0.380 | 3 | 330 | 0.21 | 2.30E-01 | 5.06E-04 | 2.66E-06 | |
| | **LDT2** | 15 | 0.082 | 3 | 330 | 0.21 | 4.82E-02 | 1.06E-04 | 5.57E-07 | |
| | **MDT** | 15 | 0.049 | 5 | 330 | 0.21 | 5.01E-02 | 1.10E-04 | 5.80E-07 | |
| | **LHDT1** | 15 | 0.778 | 275 | 330 | 0.21 | 4.39E+01 | 9.67E-02 | 5.08E-04 | |
| | **LHDT2** | 15 | 0.424 | 90 | 330 | 0.21 | 7.82E+00 | 1.72E-02 | 9.05E-05 | |
| | **MHDT** | 15 | 4.407 | 1441 | 330 | 0.21 | 1.30E+03 | 2.87E+00 | 1.51E-02 | |
| | **HHDT** | 15 | 9.078 | 4652 | 330 | 0.21 | 8.66E+03 | 1.91E+01 | 1.00E-01 | |
| | | | | | | | | | | 1.16E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.053 | 0 | 175 | 0.11 | 1.36E-03 | 3.01E-06 | 1.58E-08 | |
| | **LDT1** | 15 | 0.380 | 0 | 175 | 0.11 | 5.17E-04 | 1.14E-06 | 5.99E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 175 | 0.11 | 1.08E-04 | 2.39E-07 | 1.26E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 175 | 0.11 | 1.13E-04 | 2.49E-07 | 1.31E-09 | |
| | **LHDT1** | 15 | 0.778 | 2 | 175 | 0.11 | 1.46E-01 | 3.21E-04 | 1.69E-06 | |
| | **LHDT2** | 15 | 0.424 | 1 | 175 | 0.11 | 2.60E-02 | 5.72E-05 | 3.00E-07 | |
| | **MHDT** | 15 | 4.407 | 6 | 175 | 0.11 | 2.84E+00 | 6.26E-03 | 3.29E-05 | |
| | **HHDT** | 15 | 9.078 | 16 | 175 | 0.11 | 1.57E+01 | 3.46E-02 | 1.82E-04 | 2.17E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.053 | 0 | 100 | 0.06 | 1.15E-03 | 2.53E-06 | 1.33E-08 | |
| | **LDT1** | 15 | 0.380 | 0 | 100 | 0.06 | 4.36E-04 | 9.60E-07 | 5.04E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 100 | 0.06 | 9.14E-05 | 2.01E-07 | 1.06E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 100 | 0.06 | 9.51E-05 | 2.09E-07 | 1.10E-09 | |
| | **LHDT1** | 15 | 0.778 | 6 | 100 | 0.06 | 2.78E-01 | 6.12E-04 | 3.21E-06 | |
| | **LHDT2** | 15 | 0.424 | 2 | 100 | 0.06 | 4.95E-02 | 1.09E-04 | 5.73E-07 | |
| | **MHDT** | 15 | 4.407 | 5 | 100 | 0.06 | 1.34E+00 | 2.96E-03 | 1.55E-05 | |
| | **HHDT** | 15 | 9.078 | 22 | 100 | 0.06 | 1.22E+01 | 2.70E-02 | 1.42E-04 | 1.61E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 3.33E-04 | 7.33E-07 | 3.85E-09 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 1.26E-04 | 2.78E-07 | 1.46E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 2.65E-05 | 5.83E-08 | 3.06E-10 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 2.75E-05 | 6.06E-08 | 3.19E-10 | |
| | **LHDT1** | 15 | 0.778 | 1 | 50 | 0.03 | 1.95E-02 | 4.29E-05 | 2.25E-07 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 3.47E-03 | 7.64E-06 | 4.02E-08 | |
| | **MHDT** | 15 | 4.407 | 14 | 50 | 0.03 | 1.90E+00 | 4.19E-03 | 2.20E-05 | |
| | **HHDT** | 15 | 9.078 | 85 | 50 | 0.03 | 2.41E+01 | 5.31E-02 | 2.79E-04 | 3.01E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 5.52E-04 | 1.22E-06 | 6.39E-09 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 2.09E-04 | 4.61E-07 | 2.42E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 4.39E-05 | 9.66E-08 | 5.08E-10 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 4.56E-05 | 1.01E-07 | 5.28E-10 | |
| | **LHDT1** | 15 | 0.778 | 1 | 50 | 0.03 | 2.97E-02 | 6.55E-05 | 3.44E-07 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 5.30E-03 | 1.17E-05 | 6.13E-08 | |
| | **MHDT** | 15 | 4.407 | 23 | 50 | 0.03 | 3.12E+00 | 6.86E-03 | 3.61E-05 | |
| | **HHDT** | 15 | 9.078 | 134 | 50 | 0.03 | 3.77E+01 | 8.30E-02 | 4.36E-04 | 4.73E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 4.11E-04 | 9.05E-07 | 4.75E-09 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 1.56E-04 | 3.43E-07 | 1.80E-09 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 3.26E-05 | 7.19E-08 | 3.78E-10 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 3.40E-05 | 7.48E-08 | 3.93E-10 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.33E-09 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 6.10E-01 | 1.34E-03 | 7.06E-06 | |
| | **LDT1** | | | 3 | | | 2.31E-01 | 5.09E-04 | 2.67E-06 | |
| | **LDT2** | | | 3 | | | 4.85E-02 | 1.07E-04 | 5.61E-07 | |
| | **MDT** | | | 5 | | | 5.04E-02 | 1.11E-04 | 5.84E-07 | |
| | **LHDT1** | | | 285 | | | 4.44E+01 | 9.77E-02 | 5.14E-04 | |
| | **LHDT2** | | | 93 | | | 7.91E+00 | 1.74E-02 | 9.15E-05 | |
| | **MHDT** | | | 1488 | | | 1.31E+03 | 2.89E+00 | 1.52E-02 | |
| | **HHDT** | | | 4909 | | | 8.75E+03 | 1.93E+01 | 1.01E-01 | |
| | **Total** | | | 6843 | | | 1.01E+04 | 2.23E+01 | 1.17E-01 | 1.17E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.500 | 5 | 138 | 3.95E+02 | 8.71E-01 | 4.58E-03 | |
| | **LHDT2** | 29.600 | 5 | 45 | 1.11E+02 | 2.44E-01 | 1.28E-03 | |
| | **MHDT** | 38.409 | 5 | 720 | 2.31E+03 | 5.08E+00 | 2.67E-02 | |
| | **HHDT** | 39.286 | 5 | 2326 | 7.62E+03 | 1.68E+01 | 8.81E-02 | |
| | | | | 3229 | 1.04E+04 | 2.30E+01 | 1.21E-01 | 1.21E-01 |
| **Idle at Light Logistics** | **LHDT1** | 34.500 | 5 | 1 | 2.47E+00 | 5.45E-03 | 2.86E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 6.94E-01 | 1.53E-03 | 8.03E-06 | |
| | **MHDT** | 38.409 | 5 | 3 | 9.50E+00 | 2.09E-02 | 1.10E-04 | |
| | **HHDT** | 39.286 | 5 | 8 | 2.61E+01 | 5.74E-02 | 3.02E-04 | |
| | | | | 12 | 3.87E+01 | 8.53E-02 | 4.48E-04 | 4.48E-04 |
| **Idle at Utility** | **LHDT1** | 34.500 | 5 | 3 | 8.26E+00 | 1.82E-02 | 9.56E-05 | |
| | **LHDT2** | 29.600 | 5 | 1 | 2.32E+00 | 5.10E-03 | 2.68E-05 | |
| | **MHDT** | 38.409 | 5 | 2 | 7.85E+00 | 1.73E-02 | 9.09E-05 | |
| | **HHDT** | 39.286 | 5 | 11 | 3.56E+01 | 7.83E-02 | 4.11E-04 | |
| | | | | 17 | 5.40E+01 | 1.19E-01 | 6.25E-04 | 6.25E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 1.16E+00 | 2.55E-03 | 1.34E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 3.25E-01 | 7.16E-04 | 3.76E-06 | |
| | **MHDT** | 38.409 | 5 | 7 | 2.23E+01 | 4.90E-02 | 2.58E-04 | |
| | **HHDT** | 39.286 | 5 | 43 | 1.40E+02 | 3.08E-01 | 1.62E-03 | |
| | | | | 50 | 1.64E+02 | 3.60E-01 | 1.89E-03 | 1.89E-03 |
| **Idle at Convenience Store** | **LHDT1** | 34.500 | 5 | 1 | 1.77E+00 | 3.89E-03 | 2.05E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 4.96E-01 | 1.09E-03 | 5.74E-06 | |
| | **MHDT** | 38.409 | 5 | 11 | 3.64E+01 | 8.03E-02 | 4.22E-04 | |
| | **HHDT** | 39.286 | 5 | 67 | 2.19E+02 | 4.82E-01 | 2.53E-03 | |
| | | | | 79 | 2.57E+02 | 5.67E-01 | 2.98E-03 | 2.98E-03 |
| **Idle at Firestation** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 38.409 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 39.286 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 1.09E+04 | 2.41E+01 | 1.27E-01 | 1.27E-01 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.046 | 17378 | 330 | 0.21 | 1.64E+02 | 3.62E-01 | 1.90E-03 | |
| | **LDT1** | 15 | 0.115 | 2059 | 330 | 0.21 | 4.87E+01 | 1.07E-01 | 5.64E-04 | |
| | **LDT2** | 15 | 0.064 | 6276 | 330 | 0.21 | 8.20E+01 | 1.81E-01 | 9.50E-04 | |
| | **MDT** | 15 | 0.108 | 4845 | 330 | 0.21 | 1.07E+02 | 2.36E-01 | 1.24E-03 | |
| | **LHDT1** | 15 | 0.243 | 888 | 330 | 0.21 | 4.43E+01 | 9.75E-02 | 5.13E-04 | |
| | **LHDT2** | 15 | 0.106 | 93 | 330 | 0.21 | 2.01E+00 | 4.44E-03 | 2.33E-05 | |
| | **MHDT** | 15 | 0.249 | 329 | 330 | 0.21 | 1.68E+01 | 3.70E-02 | 1.94E-04 | |
| | **HHDT** | 15 | 3.697 | 80 | 330 | 0.21 | 6.05E+01 | 1.33E-01 | 7.00E-04 | |
| | | | | | | | | | | 6.08E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.046 | 74 | 175 | 0.11 | 3.70E-01 | 8.16E-04 | 4.29E-06 | |
| | **LDT1** | 15 | 0.115 | 9 | 175 | 0.11 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LDT2** | 15 | 0.064 | 27 | 175 | 0.11 | 1.85E-01 | 4.07E-04 | 2.14E-06 | |
| | **MDT** | 15 | 0.108 | 21 | 175 | 0.11 | 2.41E-01 | 5.31E-04 | 2.79E-06 | |
| | **LHDT1** | 15 | 0.243 | 6 | 175 | 0.11 | 1.47E-01 | 3.24E-04 | 1.70E-06 | |
| | **LHDT2** | 15 | 0.106 | 1 | 175 | 0.11 | 6.68E-03 | 1.47E-05 | 7.73E-08 | |
| | **MHDT** | 15 | 0.249 | 1 | 175 | 0.11 | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **HHDT** | 15 | 3.697 | 0 | 175 | 0.11 | 1.10E-01 | 2.42E-04 | 1.27E-06 | 1.40E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.046 | 109 | 100 | 0.06 | 3.12E-01 | 6.87E-04 | 3.61E-06 | |
| | **LDT1** | 15 | 0.115 | 13 | 100 | 0.06 | 9.24E-02 | 2.04E-04 | 1.07E-06 | |
| | **LDT2** | 15 | 0.064 | 39 | 100 | 0.06 | 1.56E-01 | 3.43E-04 | 1.80E-06 | |
| | **MDT** | 15 | 0.108 | 30 | 100 | 0.06 | 2.03E-01 | 4.47E-04 | 2.35E-06 | |
| | **LHDT1** | 15 | 0.243 | 19 | 100 | 0.06 | 2.80E-01 | 6.17E-04 | 3.24E-06 | |
| | **LHDT2** | 15 | 0.106 | 2 | 100 | 0.06 | 1.27E-02 | 2.81E-05 | 1.47E-07 | |
| | **MHDT** | 15 | 0.249 | 1 | 100 | 0.06 | 1.73E-02 | 3.81E-05 | 2.00E-07 | |
| | **HHDT** | 15 | 3.697 | 0 | 100 | 0.06 | 8.56E-02 | 1.88E-04 | 9.90E-07 | 1.34E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.046 | 63 | 50 | 0.03 | 9.03E-02 | 1.99E-04 | 1.05E-06 | |
| | **LDT1** | 15 | 0.115 | 7 | 50 | 0.03 | 2.68E-02 | 5.90E-05 | 3.10E-07 | |
| | **LDT2** | 15 | 0.064 | 23 | 50 | 0.03 | 4.51E-02 | 9.93E-05 | 5.22E-07 | |
| | **MDT** | 15 | 0.108 | 18 | 50 | 0.03 | 5.88E-02 | 1.29E-04 | 6.80E-07 | |
| | **LHDT1** | 15 | 0.243 | 3 | 50 | 0.03 | 1.96E-02 | 4.33E-05 | 2.27E-07 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 8.93E-04 | 1.97E-06 | 1.03E-08 | |
| | **MHDT** | 15 | 0.249 | 3 | 50 | 0.03 | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **HHDT** | 15 | 3.697 | 1 | 50 | 0.03 | 1.68E-01 | 3.71E-04 | 1.95E-06 | 5.03E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.046 | 104 | 50 | 0.03 | 1.50E-01 | 3.30E-04 | 1.73E-06 | |
| | **LDT1** | 15 | 0.115 | 12 | 50 | 0.03 | 4.44E-02 | 9.77E-05 | 5.14E-07 | |
| | **LDT2** | 15 | 0.064 | 38 | 50 | 0.03 | 7.47E-02 | 1.65E-04 | 8.65E-07 | |
| | **MDT** | 15 | 0.108 | 29 | 50 | 0.03 | 9.74E-02 | 2.15E-04 | 1.13E-06 | |
| | **LHDT1** | 15 | 0.243 | 4 | 50 | 0.03 | 3.00E-02 | 6.60E-05 | 3.47E-07 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 1.36E-03 | 3.00E-06 | 1.58E-08 | |
| | **MHDT** | 15 | 0.249 | 5 | 50 | 0.03 | 4.02E-02 | 8.85E-05 | 4.65E-07 | |
| | **HHDT** | 15 | 3.697 | 2 | 50 | 0.03 | 2.63E-01 | 5.80E-04 | 3.05E-06 | 8.11E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.046 | 78 | 50 | 0.03 | 1.11E-01 | 2.45E-04 | 1.29E-06 | |
| | **LDT1** | 15 | 0.115 | 9 | 50 | 0.03 | 3.30E-02 | 7.27E-05 | 3.82E-07 | |
| | **LDT2** | 15 | 0.064 | 28 | 50 | 0.03 | 5.56E-02 | 1.23E-04 | 6.44E-07 | |
| | **MDT** | 15 | 0.108 | 22 | 50 | 0.03 | 7.25E-02 | 1.60E-04 | 8.39E-07 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-06 |
| **Total - All Buildings** | **LDA** | | | 17806 | | | 1.65E+02 | 3.64E-01 | 1.91E-03 | |
| | **LDT1** | | | 2109 | | | 4.90E+01 | 1.08E-01 | 5.67E-04 | |
| | **LDT2** | | | 6430 | | | 8.26E+01 | 1.82E-01 | 9.56E-04 | |
| | **MDT** | | | 4964 | | | 1.08E+02 | 2.37E-01 | 1.25E-03 | |
| | **LHDT1** | | | 919 | | | 4.48E+01 | 9.86E-02 | 5.18E-04 | |
| | **LHDT2** | | | 96 | | | 2.04E+00 | 4.48E-03 | 2.36E-05 | |
| | **MHDT** | | | 340 | | | 1.69E+01 | 3.72E-02 | 1.96E-04 | |
| | **HHDT** | | | 84 | | | 6.11E+01 | 1.35E-01 | 7.07E-04 | |
| | **Total** | | | 32749 | | | 5.29E+02 | 1.17E+00 | 6.13E-03 | 6.13E-03 |

**Non-Diesel Truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 18.000 | 5 | 444 | 6.66E+02 | 1.47E+00 | 7.71E-03 | |
| | **LHDT2** | 16.430 | 5 | 47 | 6.37E+01 | 1.40E-01 | 7.38E-04 | |
| | **MHDT** | 1.920 | 5 | 164 | 2.63E+01 | 5.79E-02 | 3.04E-04 | |
| | **HHDT** | 24.037 | 5 | 40 | 7.99E+01 | 1.76E-01 | 9.25E-04 | |
| | | | | 695 | 8.36E+02 | 1.84E+00 | 9.68E-03 | 9.68E-03 |
| **Idle at Light Logistics** | **LHDT1** | 18.000 | 5 | 3 | 4.17E+00 | 9.18E-03 | 4.82E-05 | |
| | **LHDT2** | 16.430 | 5 | 0 | 3.99E-01 | 8.78E-04 | 4.61E-06 | |
| | **MHDT** | 1.920 | 5 | 1 | 1.08E-01 | 2.39E-04 | 1.25E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 2.74E-01 | 6.03E-04 | 3.17E-06 | |
| | | | | 4 | 4.95E+00 | 1.09E-02 | 5.73E-05 | 5.73E-05 |
| **Idle at Utility** | **LHDT1** | 18.000 | 5 | 9 | 1.39E+01 | 3.06E-02 | 1.61E-04 | |
| | **LHDT2** | 16.430 | 5 | 1 | 1.33E+00 | 2.93E-03 | 1.54E-05 | |
| | **MHDT** | 1.920 | 5 | 1 | 8.96E-02 | 1.97E-04 | 1.04E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 3.73E-01 | 8.22E-04 | 4.32E-06 | |
| | | | | 11 | 1.57E+01 | 3.46E-02 | 1.82E-04 | 1.82E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 18.000 | 5 | 1 | 1.95E+00 | 4.30E-03 | 2.26E-05 | |
| | **LHDT2** | 16.430 | 5 | 0 | 1.87E-01 | 4.11E-04 | 2.16E-06 | |
| | **MHDT** | 1.920 | 5 | 2 | 2.54E-01 | 5.59E-04 | 2.94E-06 | |
| | **HHDT** | 24.037 | 5 | 1 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | | | | 4 | 3.86E+00 | 8.50E-03 | 4.47E-05 | 4.47E-05 |
| **Idle at Convenience Store** | **LHDT1** | 18.000 | 5 | 2 | 2.98E+00 | 6.56E-03 | 3.45E-05 | |
| | **LHDT2** | 16.430 | 5 | 0 | 2.85E-01 | 6.27E-04 | 3.30E-06 | |
| | **MHDT** | 1.920 | 5 | 3 | 4.16E-01 | 9.16E-04 | 4.81E-06 | |
| | **HHDT** | 24.037 | 5 | 1 | 2.30E+00 | 5.06E-03 | 2.66E-05 | |
| | | | | 6 | 5.97E+00 | 1.32E-02 | 6.91E-05 | 6.91E-05 |
| **Idle at Firestation** | **LHDT1** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 8.67E+02 | 1.91E+00 | 1.00E-02 | 1.00E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

| | |
|---|---|
| Facility Operations for Warehouses (hr): | 24 |
| Facility operations for All Others (hr): | 24 |

## World Logistics Center

**With EMFAC2014** **2027** **Phase 2**

**No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 5.49E-02 | 2.88E-03 |
| Light Logistics | Phase 2 | 7.36E-04 | 4.74E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 5.56E-02 | 2.93E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.62E-02 | 7.95E-04 |
| Light Logistics | Phase 2 | 7.28E-04 | 2.45E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.69E-02 | 8.20E-04 |

**Total Onsite Mobile Emissions**

| | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 5.56E-02 | 2.93E-03 | |
| | Idling Emissions (g/sec) | 2.69E-02 | 8.20E-04 | |
| | Total Vehicle Emissions (g/sec) | 8.25E-02 | 3.75E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.40E-01 | |
| | Forklifts (LPG) (g/sec) | | 8.10E-03 | |
| | Total Other Onsite Sources (g/sec) | | 1.49E-01 | |
| | | | | Total |
| | Total All Sources (g/sec) | 8.25E-02 | 1.52E-01 | 2.35E-01 |
| | Area (m2) | | | 4.69E+06 |
| | Total Emission Rate (g/m2-sec) | | | 5.01E-08 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.053 | 26 | 330 | 0.21 | 2.87E-01 | 6.32E-04 | 3.32E-06 | |
| | **LDT1** | 15 | 0.380 | 1 | 330 | 0.21 | 1.09E-01 | 2.40E-04 | 1.26E-06 | |
| | **LDT2** | 15 | 0.082 | 1 | 330 | 0.21 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **MDT** | 15 | 0.049 | 2 | 330 | 0.21 | 2.37E-02 | 5.23E-05 | 2.75E-07 | |
| | **LHDT1** | 15 | 0.778 | 130 | 330 | 0.21 | 2.08E+01 | 4.58E-02 | 2.41E-04 | |
| | **LHDT2** | 15 | 0.424 | 43 | 330 | 0.21 | 3.71E+00 | 8.16E-03 | 4.29E-05 | |
| | **MHDT** | 15 | 4.407 | 683 | 330 | 0.21 | 6.17E+02 | 1.36E+00 | 7.14E-03 | |
| | **HHDT** | 15 | 9.078 | 2204 | 330 | 0.21 | 4.10E+03 | 9.04E+00 | 4.75E-02 | |
| | | | | | | | | | | 5.49E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.053 | 1 | 175 | 0.11 | 4.63E-03 | 1.02E-05 | 5.36E-08 | |
| | **LDT1** | 15 | 0.380 | 0 | 175 | 0.11 | 1.76E-03 | 3.87E-06 | 2.03E-08 | |
| | **LDT2** | 15 | 0.082 | 0 | 175 | 0.11 | 3.68E-04 | 8.11E-07 | 4.26E-09 | |
| | **MDT** | 15 | 0.049 | 0 | 175 | 0.11 | 3.83E-04 | 8.44E-07 | 4.44E-09 | |
| | **LHDT1** | 15 | 0.778 | 6 | 175 | 0.11 | 4.94E-01 | 1.09E-03 | 5.72E-06 | |
| | **LHDT2** | 15 | 0.424 | 2 | 175 | 0.11 | 8.81E-02 | 1.94E-04 | 1.02E-06 | |
| | **MHDT** | 15 | 4.407 | 20 | 175 | 0.11 | 9.65E+00 | 2.13E-02 | 1.12E-04 | |
| | **HHDT** | 15 | 9.078 | 54 | 175 | 0.11 | 5.34E+01 | 1.18E-01 | 6.18E-04 | 7.36E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.380 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.082 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.778 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.424 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.407 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 9.078 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 27 | | | 2.92E-01 | 6.42E-04 | 3.38E-06 | |
| | **LDT1** | | | 1 | | | 1.11E-01 | 2.44E-04 | 1.28E-06 | |
| | **LDT2** | | | 1 | | | 2.32E-02 | 5.11E-05 | 2.68E-07 | |
| | **MDT** | | | 2 | | | 2.41E-02 | 5.31E-05 | 2.79E-07 | |
| | **LHDT1** | | | 136 | | | 2.13E+01 | 4.69E-02 | 2.46E-04 | |
| | **LHDT2** | | | 45 | | | 3.79E+00 | 8.36E-03 | 4.39E-05 | |
| | **MHDT** | | | 703 | | | 6.26E+02 | 1.38E+00 | 7.25E-03 | |
| | **HHDT** | | | 2258 | | | 4.16E+03 | 9.15E+00 | 4.81E-02 | |
| | **Total** | | | 3174 | | | 4.81E+03 | 1.06E+01 | 5.56E-02 | 5.56E-02 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.500 | 5 | 65 | 1.87E+02 | 4.13E-01 | 2.17E-03 | |
| | **LHDT2** | 29.600 | 5 | 21 | 5.26E+01 | 1.16E-01 | 6.09E-04 | |
| | **MHDT** | 18.000 | 5 | 341 | 5.12E+02 | 1.13E+00 | 5.93E-03 | |
| | **HHDT** | 16.430 | 5 | 1102 | 1.51E+03 | 3.32E+00 | 1.75E-02 | |
| | | | | 1530 | 2.26E+03 | 4.98E+00 | 2.62E-02 | 2.62E-02 |
| **Idle at Light Logistics** | **LHDT1** | 34.500 | 5 | 3 | 8.40E+00 | 1.85E-02 | 9.72E-05 | |
| | **LHDT2** | 29.600 | 5 | 1 | 2.36E+00 | 5.19E-03 | 2.73E-05 | |
| | **MHDT** | 18.000 | 5 | 10 | 1.51E+01 | 3.33E-02 | 1.75E-04 | |
| | **HHDT** | 16.430 | 5 | 27 | 3.70E+01 | 8.15E-02 | 4.28E-04 | |
| | | | | 41 | 6.29E+01 | 1.39E-01 | 7.28E-04 | 7.28E-04 |
| **Idle at Utility** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 1571 | 2.32E+03 | 5.12E+00 | 2.69E-02 | 2.69E-02 |

**World Logistics Center** 2027 Phase 2 No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.046 | 8234 | 330 | 0.21 | 7.79E+01 | 1.72E-01 | 9.01E-04 | |
| | **LDT1** | 15 | 0.115 | 975 | 330 | 0.21 | 2.31E+01 | 5.08E-02 | 2.67E-04 | |
| | **LDT2** | 15 | 0.064 | 2973 | 330 | 0.21 | 3.89E+01 | 8.56E-02 | 4.50E-04 | |
| | **MDT** | 15 | 0.108 | 2296 | 330 | 0.21 | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **LHDT1** | 15 | 0.243 | 421 | 330 | 0.21 | 2.10E+01 | 4.62E-02 | 2.43E-04 | |
| | **LHDT2** | 15 | 0.106 | 44 | 330 | 0.21 | 9.54E-01 | 2.10E-03 | 1.10E-05 | |
| | **MHDT** | 15 | 0.249 | 156 | 330 | 0.21 | 7.95E+00 | 1.75E-02 | 9.20E-05 | |
| | **HHDT** | 15 | 3.697 | 38 | 330 | 0.21 | 2.87E+01 | 6.31E-02 | 3.32E-04 | |
| | | | | | | | | | | 2.88E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.046 | 251 | 175 | 0.11 | 1.26E+00 | 2.77E-03 | 1.46E-05 | |
| | **LDT1** | 15 | 0.115 | 30 | 175 | 0.11 | 3.73E-01 | 8.21E-04 | 4.31E-06 | |
| | **LDT2** | 15 | 0.064 | 91 | 175 | 0.11 | 6.28E-01 | 1.38E-03 | 7.26E-06 | |
| | **MDT** | 15 | 0.108 | 70 | 175 | 0.11 | 8.18E-01 | 1.80E-03 | 9.47E-06 | |
| | **LHDT1** | 15 | 0.243 | 19 | 175 | 0.11 | 4.99E-01 | 1.10E-03 | 5.77E-06 | |
| | **LHDT2** | 15 | 0.106 | 2 | 175 | 0.11 | 2.27E-02 | 5.00E-05 | 2.63E-07 | |
| | **MHDT** | 15 | 0.249 | 5 | 175 | 0.11 | 1.24E-01 | 2.74E-04 | 1.44E-06 | |
| | **HHDT** | 15 | 3.697 | 1 | 175 | 0.11 | 3.73E-01 | 8.21E-04 | 4.31E-06 | 4.74E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.046 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.046 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.046 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.046 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.243 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.249 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.697 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 8484 | | | 7.91E+01 | 1.74E-01 | 9.16E-04 | |
| | **LDT1** | | | 1005 | | | 2.35E+01 | 5.17E-02 | 2.71E-04 | |
| | **LDT2** | | | 3064 | | | 3.95E+01 | 8.70E-02 | 4.57E-04 | |
| | **MDT** | | | 2365 | | | 5.15E+01 | 1.13E-01 | 5.96E-04 | |
| | **LHDT1** | | | 440 | | | 2.15E+01 | 4.73E-02 | 2.49E-04 | |
| | **LHDT2** | | | 46 | | | 9.77E-01 | 2.15E-03 | 1.13E-05 | |
| | **MHDT** | | | 160 | | | 8.07E+00 | 1.78E-02 | 9.34E-05 | |
| | **HHDT** | | | 39 | | | 2.90E+01 | 6.39E-02 | 3.36E-04 | |
| | **Total** | | | 15604 | | | 2.53E+02 | 5.58E-01 | 2.93E-03 | 2.93E-03 |

**Non-Diesel Truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 210 | 1.68E+01 | 3.71E-02 | 1.95E-04 | |
| | **LHDT2** | 0.840 | 5 | 22 | 1.54E+00 | 3.40E-03 | 1.79E-05 | |
| | **MHDT** | 1.920 | 5 | 78 | 1.25E+01 | 2.75E-02 | 1.44E-04 | |
| | **HHDT** | 24.037 | 5 | 19 | 3.79E+01 | 8.34E-02 | 4.38E-04 | |
| | | | | 329 | 6.87E+01 | 1.51E-01 | 7.95E-04 | 7.95E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 9 | 7.55E-01 | 1.66E-03 | 8.74E-06 | |
| | **LHDT2** | 0.840 | 5 | 1 | 6.92E-02 | 1.52E-04 | 8.01E-07 | |
| | **MHDT** | 1.920 | 5 | 2 | 3.68E-01 | 8.10E-04 | 4.26E-06 | |
| | **HHDT** | 24.037 | 5 | 0 | 9.29E-01 | 2.05E-03 | 1.08E-05 | |
| | | | | 13 | 2.12E+00 | 4.67E-03 | 2.45E-05 | 2.45E-05 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 24.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 343 | 7.08E+01 | 1.56E-01 | 8.20E-04 | 8.20E-04 |

**World Logistics Center** **2027** **Annual Nox** Based on PB Traffic Results 10/3/2013
**Project Emissions** **With EMFAC2014** No Mitigation REV 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 6.28E-02 | 3.19E-03 | 6.60E-02 |
| 2 | 1.57E-01 | 8.42E-03 | 1.66E-01 |
| 3 | 2.19E-01 | 1.18E-02 | 2.31E-01 |
| 5 | 6.60E-03 | 2.32E-03 | 8.92E-03 |
| 6 | 7.09E-02 | 4.61E-03 | 7.55E-02 |
| 8 | 8.73E-03 | 4.07E-03 | 1.28E-02 |
| 11 | 1.61E-04 | 8.61E-05 | 2.47E-04 |
| 12 | 5.06E-04 | 1.65E-04 | 6.71E-04 |
| 14 | 2.93E-02 | 1.91E-03 | 3.12E-02 |
| 18 | 1.08E-02 | 1.00E-03 | 1.18E-02 |
| 19 | 4.79E-02 | 2.31E-03 | 5.02E-02 |
| 21 | 2.94E-02 | 3.16E-03 | 3.26E-02 |
| 24 | 5.18E-02 | 5.54E-03 | 5.73E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.90E-02 | 1.04E-03 | 2.01E-02 |
| 30 | 8.96E-02 | 5.64E-03 | 9.52E-02 |
| 31 | 1.61E-02 | 2.29E-03 | 1.84E-02 |
| | | | 8.78E-01 |

| ID | Arterial | From | To | | Estimated 2027 Vehicles - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 17,798 | 794 | 2,397 | 7,804 |
| 2 | Street A | Eucalyptus Ave | Street F | | 19,915 | 1,464 | 2,739 | 8,703 |
| 3 | Street E | west of Street A | | | 8,750 | 621 | 1,195 | 3,761 |
| 5 | Street E | Street D | Street A | | 6,218 | 269 | 556 | 86 |
| 6 | Street A | Street F | Street C | | 8,078 | 491 | 959 | 2,552 |
| 8 | Street D | Street E | Cactus Ave | | 9,553 | 441 | 880 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 172 | 13 | 14 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 353 | 70 | 62 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,074 | 203 | 269 | 711 |
| 18 | Street B | Street A | Gilman Springs Rd | | 1,479 | 100 | 161 | 281 |
| 19 | Street F | Street A | Street C | | 1,600 | 114 | 251 | 813 |
| 21 | Street C | Street A | Street F | | 5,695 | 260 | 570 | 833 |
| 24 | Street C | Street F | Gilman Springs Rd | | 6,617 | 250 | 555 | 987 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 2,896 | 135 | 354 | 1,145 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,949 | 184 | 454 | 1,262 |
| 31 | Gilman Springs Rd | south of Street C | | | 6,821 | 242 | 504 | 688 |

Traffic Volumes Interpolated from data provide by Parsons Brinkerhoff for 2022 and 2035

**World Logistics Center** **2027** **Annual Nox** **No Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 31 | 2 | 2 | 3 | 162 | 54 | 1952 | 7683 | 9889 |
| 2 | 32821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 35 | 2 | 2 | 3 | 299 | 99 | 2230 | 8568 | 11239 |
| 3 | 14326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 127 | 42 | 973 | 3702 | 4863 |
| 5 | 7130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 11 | 1 | 1 | 1 | 55 | 18 | 453 | 85 | 624 |
| 6 | 12079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 100 | 33 | 781 | 2512 | 3443 |
| 8 | 10874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 17 | 1 | 1 | 2 | 90 | 30 | 716 | 0 | 857 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 11 | 0 | 15 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 14 | 5 | 50 | 0 | 70 |
| 14 | 3257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 4 | 0 | 0 | 0 | 42 | 14 | 219 | 700 | 978 |
| 18 | 2021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 3 | 0 | 0 | 0 | 20 | 7 | 131 | 277 | 438 |
| 19 | 2779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 3 | 0 | 0 | 0 | 23 | 8 | 204 | 801 | 1040 |
| 21 | 7358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 10 | 1 | 1 | 1 | 53 | 18 | 464 | 820 | 1367 |
| 24 | 8410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 12 | 1 | 1 | 1 | 51 | 17 | 452 | 972 | 1506 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 5 | 0 | 0 | 0 | 28 | 9 | 289 | 1128 | 1459 |
| 30 | 5849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 38 | 12 | 370 | 1242 | 1671 |
| 31 | 8255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 12 | 1 | 1 | 1 | 49 | 16 | 411 | 678 | 1168 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0284 | 0.3605 | 0.0312 | 0.0208 | 0.7677 | 0.3590 | 1.4399 | 3.0907 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2.08E-06 | 1.60E-06 | 1.24E-07 | 1.47E-07 | 2.93E-04 | 4.55E-05 | 6.61E-03 | 5.58E-02 | 6.28E-02 |
| 2 | 1 | 5.21E-06 | 4.00E-06 | 3.09E-07 | 3.67E-07 | 1.21E-03 | 1.87E-04 | 1.69E-02 | 1.39E-01 | 1.57E-01 |
| 3 | 1 | 7.37E-06 | 5.65E-06 | 4.37E-07 | 5.18E-07 | 1.65E-03 | 2.55E-04 | 2.37E-02 | 1.93E-01 | 2.19E-01 |
| 5 | 1 | 2.12E-06 | 1.63E-06 | 1.26E-07 | 1.49E-07 | 2.89E-04 | 4.48E-05 | 4.47E-03 | 1.79E-03 | 6.60E-03 |
| 6 | 1 | 3.18E-06 | 2.44E-06 | 1.88E-07 | 2.23E-07 | 6.08E-04 | 9.43E-05 | 8.88E-03 | 6.13E-02 | 7.09E-02 |
| 8 | 1 | 3.73E-06 | 2.86E-06 | 2.21E-07 | 2.62E-07 | 5.43E-04 | 8.42E-05 | 8.09E-03 | 0.00E+00 | 8.73E-03 |
| 11 | 1 | 7.38E-08 | 5.66E-08 | 4.38E-09 | 5.19E-09 | 1.76E-05 | 2.73E-06 | 1.41E-04 | 0.00E+00 | 1.61E-04 |
| 12 | 1 | 1.04E-07 | 7.99E-08 | 6.17E-09 | 7.32E-09 | 6.48E-05 | 1.01E-05 | 4.31E-04 | 0.00E+00 | 5.06E-04 |
| 14 | 1 | 1.20E-06 | 9.21E-07 | 7.12E-08 | 8.45E-08 | 3.71E-04 | 5.75E-05 | 3.67E-03 | 2.52E-02 | 2.93E-02 |
| 18 | 1 | 7.47E-07 | 5.73E-07 | 4.43E-08 | 5.26E-08 | 1.59E-04 | 2.47E-05 | 1.91E-03 | 8.68E-03 | 1.08E-02 |
| 19 | 1 | 1.37E-06 | 1.05E-06 | 8.10E-08 | 9.61E-08 | 3.06E-04 | 4.75E-05 | 5.05E-03 | 4.25E-02 | 4.79E-02 |
| 21 | 1 | 2.56E-06 | 1.97E-06 | 1.52E-07 | 1.80E-07 | 3.69E-04 | 5.72E-05 | 6.04E-03 | 2.29E-02 | 2.94E-02 |
| 24 | 1 | 4.61E-06 | 3.54E-06 | 2.73E-07 | 3.24E-07 | 5.49E-04 | 8.52E-05 | 9.11E-03 | 4.20E-02 | 5.18E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 7.00E-07 | 5.37E-07 | 4.15E-08 | 4.92E-08 | 1.03E-04 | 1.60E-05 | 2.02E-03 | 1.69E-02 | 1.90E-02 |
| 30 | 1 | 4.00E-06 | 3.06E-06 | 2.37E-07 | 2.81E-07 | 5.85E-04 | 9.08E-05 | 1.08E-02 | 7.80E-02 | 8.96E-02 |
| 31 | 1 | 2.00E-06 | 1.54E-06 | 1.19E-07 | 1.41E-07 | 2.24E-04 | 3.47E-05 | 3.49E-03 | 1.23E-02 | 1.61E-02 |

**World Logistics Center** **2027** **Annual Nox** **No Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 9974 | 1215 | 3703 | 2869 | 523 | 55 | 445 | 121 | 18905 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 11159 | 1359 | 4144 | 3210 | 964 | 102 | 509 | 135 | 21582 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 4903 | 597 | 1820 | 1410 | 409 | 43 | 222 | 59 | 9463 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 3485 | 424 | 1294 | 1002 | 177 | 19 | 103 | 1 | 6505 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 4526 | 551 | 1681 | 1302 | 323 | 34 | 178 | 40 | 8635 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 5353 | 652 | 1988 | 1540 | 291 | 31 | 163 | 0 | 10017 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 96 | 12 | 36 | 28 | 9 | 1 | 3 | 0 | 183 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 198 | 24 | 73 | 57 | 46 | 5 | 12 | 0 | 415 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 1162 | 142 | 432 | 334 | 134 | 14 | 50 | 11 | 2279 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 829 | 101 | 308 | 238 | 66 | 7 | 30 | 4 | 1583 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 897 | 109 | 333 | 258 | 75 | 8 | 47 | 13 | 1739 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 3191 | 389 | 1185 | 918 | 171 | 18 | 106 | 13 | 5991 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 3708 | 452 | 1377 | 1067 | 165 | 17 | 103 | 15 | 6904 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 1623 | 198 | 603 | 467 | 89 | 9 | 66 | 18 | 3072 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 2213 | 270 | 822 | 637 | 121 | 13 | 84 | 20 | 4178 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 3822 | 466 | 1419 | 1099 | 159 | 17 | 94 | 11 | 7087 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0318 | 0.0741 | 0.0438 | 0.0759 | 0.2063 | 0.0876 | 0.2041 | 3.0254 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.46E-04 | 2.12E-04 | 3.81E-04 | 5.12E-04 | 2.54E-04 | 1.14E-05 | 2.14E-04 | 8.64E-04 | 3.19E-03 |
| 2 | 1 | 1.87E-03 | 5.30E-04 | 9.54E-04 | 1.28E-03 | 1.04E-03 | 4.68E-05 | 5.46E-04 | 2.15E-03 | 8.42E-03 |
| 3 | 1 | 2.64E-03 | 7.49E-04 | 1.35E-03 | 1.81E-03 | 1.43E-03 | 6.39E-05 | 7.66E-04 | 2.99E-03 | 1.18E-02 |
| 5 | 1 | 7.60E-04 | 2.16E-04 | 3.88E-04 | 5.21E-04 | 2.50E-04 | 1.12E-05 | 1.45E-04 | 2.77E-05 | 2.32E-03 |
| 6 | 1 | 1.14E-03 | 3.23E-04 | 5.81E-04 | 7.81E-04 | 5.27E-04 | 2.36E-05 | 2.87E-04 | 9.49E-04 | 4.61E-03 |
| 8 | 1 | 1.34E-03 | 3.79E-04 | 6.83E-04 | 9.17E-04 | 4.70E-04 | 2.11E-05 | 2.62E-04 | 0.00E+00 | 4.07E-03 |
| 11 | 1 | 2.64E-05 | 7.50E-06 | 1.35E-05 | 1.82E-05 | 1.52E-05 | 6.83E-07 | 4.55E-06 | 0.00E+00 | 8.61E-05 |
| 12 | 1 | 3.73E-05 | 1.06E-05 | 1.91E-05 | 2.56E-05 | 5.61E-05 | 2.52E-06 | 1.39E-05 | 0.00E+00 | 1.65E-04 |
| 14 | 1 | 4.30E-04 | 1.22E-04 | 2.20E-04 | 2.95E-04 | 3.21E-04 | 1.44E-05 | 1.19E-04 | 3.89E-04 | 1.91E-03 |
| 18 | 1 | 2.68E-04 | 7.60E-05 | 1.37E-04 | 1.84E-04 | 1.38E-04 | 6.18E-06 | 6.18E-05 | 1.34E-04 | 1.00E-03 |
| 19 | 1 | 4.89E-04 | 1.39E-04 | 2.50E-04 | 3.36E-04 | 2.65E-04 | 1.19E-05 | 1.63E-04 | 6.57E-04 | 2.31E-03 |
| 21 | 1 | 9.18E-04 | 2.61E-04 | 4.69E-04 | 6.30E-04 | 3.19E-04 | 1.43E-05 | 1.95E-04 | 3.55E-04 | 3.16E-03 |
| 24 | 1 | 1.65E-03 | 4.68E-04 | 8.43E-04 | 1.13E-03 | 4.75E-04 | 2.13E-05 | 2.95E-04 | 6.50E-04 | 5.54E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.51E-04 | 7.11E-05 | 1.28E-04 | 1.72E-04 | 8.91E-05 | 4.00E-06 | 6.52E-05 | 2.62E-04 | 1.04E-03 |
| 30 | 1 | 1.43E-03 | 4.06E-04 | 7.31E-04 | 9.82E-04 | 5.07E-04 | 2.27E-05 | 3.50E-04 | 1.21E-03 | 5.64E-03 |
| 31 | 1 | 7.17E-04 | 2.03E-04 | 3.66E-04 | 4.92E-04 | 1.94E-04 | 8.69E-06 | 1.13E-04 | 1.91E-04 | 2.29E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 1**
**No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 7.61E-04 | 1.77E-03 |
| Light Logistics | Phase 1 | 1.54E-06 | 4.07E-06 |
| Utilities Service Station | Phase 1 | 1.25E-06 | 3.71E-06 |
| Gas Station w/Convenience Store | Phase 1 | 1.70E-06 | 1.02E-06 |
| Convenience Store | Phase 1 | 2.68E-06 | 1.68E-06 |
| Fire Station | Phase 1 | 3.15E-09 | 1.10E-06 |
| Total | | 7.68E-04 | 1.78E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.70E-05 | 2.34E-05 |
| Light Logistics | Phase 1 | 5.22E-07 | 1.32E-07 |
| Utilities Service Station | Phase 1 | 1.68E-06 | 3.79E-07 |
| Gas Station w/Convenience Store | Phase 1 | 3.68E-07 | 1.22E-07 |
| Convenience Store | Phase 1 | 5.68E-07 | 1.92E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 9.01E-05 | 2.42E-05 |

| **Total Onsite Mobile Emissions** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.68E-04 | 1.78E-03 | |
| | Idling Emissions (g/sec) | 9.01E-05 | 2.42E-05 | |
| | Total Vehicle Emissions (g/sec) | 8.58E-04 | 1.80E-03 | |
| **Other Onsite Emissions** | | | | |
| | Yard Trucks (LPG) (g/sec) | | 9.30E-04 | |
| | Fork Lifts (LPG) (g/sec) | | 2.75E-04 | |
| | Total Other Onsite Emissions (g/sec) | | 1.20E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 8.58E-04 | 3.01E-03 | 3.87E-03 |
| | Area (m2) | 4.68E+06 | 4.68E+06 | |
| | Total Emission Rate (g/m2-sec) | 1.83E-10 | 6.42E-10 | 8.25E-10 |

**World Logistics Center** 2027 **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.026 | 55 | 330 | 0.21 | 2.97E-01 | 6.55E-04 | 3.44E-06 | |
| | **LDT1** | 15 | 0.108 | 3 | 330 | 0.21 | 6.51E-02 | 1.43E-04 | 7.53E-07 | |
| | **LDT2** | 15 | 0.025 | 3 | 330 | 0.21 | 1.49E-02 | 3.28E-05 | 1.72E-07 | |
| | **MDT** | 15 | 0.023 | 5 | 330 | 0.21 | 2.36E-02 | 5.20E-05 | 2.73E-07 | |
| | **LHDT1** | 15 | 0.059 | 275 | 330 | 0.21 | 3.33E+00 | 7.33E-03 | 3.85E-05 | |
| | **LHDT2** | 15 | 0.059 | 90 | 330 | 0.21 | 1.09E+00 | 2.41E-03 | 1.27E-05 | |
| | **MHDT** | 15 | 0.064 | 1441 | 330 | 0.21 | 1.88E+01 | 4.14E-02 | 2.17E-04 | |
| | **HHDT** | 15 | 0.044 | 4652 | 330 | 0.21 | 4.22E+01 | 9.29E-02 | 4.88E-04 | |
| | | | | | | | | | | 7.61E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.026 | 0 | 175 | 0.11 | 6.70E-04 | 1.48E-06 | 7.75E-09 | |
| | **LDT1** | 15 | 0.108 | 0 | 175 | 0.11 | 1.47E-04 | 3.23E-07 | 1.70E-09 | |
| | **LDT2** | 15 | 0.025 | 0 | 175 | 0.11 | 3.36E-05 | 7.39E-08 | 3.88E-10 | |
| | **MDT** | 15 | 0.023 | 0 | 175 | 0.11 | 5.32E-05 | 1.17E-07 | 6.16E-10 | |
| | **LHDT1** | 15 | 0.059 | 2 | 175 | 0.11 | 1.10E-02 | 2.43E-05 | 1.28E-07 | |
| | **LHDT2** | 15 | 0.059 | 1 | 175 | 0.11 | 3.63E-03 | 7.99E-06 | 4.20E-08 | |
| | **MHDT** | 15 | 0.064 | 6 | 175 | 0.11 | 4.10E-02 | 9.03E-05 | 4.75E-07 | |
| | **HHDT** | 15 | 0.044 | 16 | 175 | 0.11 | 7.65E-02 | 1.69E-04 | 8.86E-07 | 1.54E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.026 | 0 | 100 | 0.06 | 5.64E-04 | 1.24E-06 | 6.53E-09 | |
| | **LDT1** | 15 | 0.108 | 0 | 100 | 0.06 | 1.23E-04 | 2.72E-07 | 1.43E-09 | |
| | **LDT2** | 15 | 0.025 | 0 | 100 | 0.06 | 2.83E-05 | 6.23E-08 | 3.27E-10 | |
| | **MDT** | 15 | 0.023 | 0 | 100 | 0.06 | 4.48E-05 | 9.87E-08 | 5.19E-10 | |
| | **LHDT1** | 15 | 0.059 | 6 | 100 | 0.06 | 2.10E-02 | 4.64E-05 | 2.44E-07 | |
| | **LHDT2** | 15 | 0.059 | 2 | 100 | 0.06 | 6.92E-03 | 1.52E-05 | 8.01E-08 | |
| | **MHDT** | 15 | 0.064 | 5 | 100 | 0.06 | 1.94E-02 | 4.27E-05 | 2.24E-07 | |
| | **HHDT** | 15 | 0.044 | 22 | 100 | 0.06 | 5.96E-02 | 1.31E-04 | 6.90E-07 | 1.25E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 1.63E-04 | 3.60E-07 | 1.89E-09 | |
| | **LDT1** | 15 | 0.108 | 0 | 50 | 0.03 | 3.57E-05 | 7.87E-08 | 4.14E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 8.19E-06 | 1.80E-08 | 9.47E-11 | |
| | **MDT** | 15 | 0.023 | 0 | 50 | 0.03 | 1.30E-05 | 2.86E-08 | 1.50E-10 | |
| | **LHDT1** | 15 | 0.059 | 1 | 50 | 0.03 | 1.48E-03 | 3.25E-06 | 1.71E-08 | |
| | **LHDT2** | 15 | 0.059 | 0 | 50 | 0.03 | 4.85E-04 | 1.07E-06 | 5.61E-09 | |
| | **MHDT** | 15 | 0.064 | 14 | 50 | 0.03 | 2.75E-02 | 6.05E-05 | 3.18E-07 | |
| | **HHDT** | 15 | 0.044 | 85 | 50 | 0.03 | 1.17E-01 | 2.59E-04 | 1.36E-06 | 1.70E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 2.71E-04 | 5.97E-07 | 3.13E-09 | |
| | **LDT1** | 15 | 0.108 | 0 | 50 | 0.03 | 5.93E-05 | 1.31E-07 | 6.86E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 1.36E-05 | 2.99E-08 | 1.57E-10 | |
| | **MDT** | 15 | 0.023 | 0 | 50 | 0.03 | 2.15E-05 | 4.74E-08 | 2.49E-10 | |
| | **LHDT1** | 15 | 0.059 | 1 | 50 | 0.03 | 2.25E-03 | 4.96E-06 | 2.61E-08 | |
| | **LHDT2** | 15 | 0.059 | 0 | 50 | 0.03 | 7.41E-04 | 1.63E-06 | 8.57E-09 | |
| | **MHDT** | 15 | 0.064 | 23 | 50 | 0.03 | 4.50E-02 | 9.90E-05 | 5.20E-07 | |
| | **HHDT** | 15 | 0.044 | 134 | 50 | 0.03 | 1.83E-01 | 4.04E-04 | 2.12E-06 | 2.68E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.026 | 0 | 50 | 0.03 | 2.02E-04 | 4.44E-07 | 2.33E-09 | |
| | **LDT1** | 15 | 0.108 | 0 | 50 | 0.03 | 4.41E-05 | 9.71E-08 | 5.10E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 1.01E-05 | 2.22E-08 | 1.17E-10 | |
| | **MDT** | 15 | 0.023 | 0 | 50 | 0.03 | 1.60E-05 | 3.53E-08 | 1.85E-10 | |
| | **LHDT1** | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-09 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 2.99E-01 | 6.59E-04 | 3.46E-06 | |
| | **LDT1** | | | 3 | | | 6.55E-02 | 1.44E-04 | 7.58E-07 | |
| | **LDT2** | | | 3 | | | 1.50E-02 | 3.30E-05 | 1.74E-07 | |
| | **MDT** | | | 5 | | | 2.38E-02 | 5.24E-05 | 2.75E-07 | |
| | **LHDT1** | | | 285 | | | 3.36E+00 | 7.41E-03 | 3.89E-05 | |
| | **LHDT2** | | | 93 | | | 1.11E+00 | 2.43E-03 | 1.28E-05 | |
| | **MHDT** | | | 1488 | | | 1.89E+01 | 4.17E-02 | 2.19E-04 | |
| | **HHDT** | | | 4909 | | | 4.26E+01 | 9.38E-02 | 4.93E-04 | |
| | **Total** | | | 6843 | | | 6.64E+01 | 1.46E-01 | 7.68E-04 | 7.68E-04 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.437 | 5 | 138 | 5.01E+00 | 1.10E-02 | 5.80E-05 | |
| | **LHDT2** | 0.482 | 5 | 45 | 1.81E+00 | 3.98E-03 | 2.09E-05 | |
| | **MHDT** | 0.002 | 5 | 720 | 1.20E-01 | 2.64E-04 | 1.39E-06 | |
| | **HHDT** | 0.003 | 5 | 2326 | 5.82E-01 | 1.28E-03 | 6.73E-06 | |
| | | | | 3229 | 7.52E+00 | 1.66E-02 | 8.70E-05 | 8.70E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.437 | 5 | 1 | 3.13E-02 | 6.90E-05 | 3.63E-07 | |
| | **LHDT2** | 0.482 | 5 | 0 | 1.13E-02 | 2.49E-05 | 1.31E-07 | |
| | **MHDT** | 0.002 | 5 | 3 | 4.95E-04 | 1.09E-06 | 5.72E-09 | |
| | **HHDT** | 0.003 | 5 | 8 | 1.99E-03 | 4.38E-06 | 2.30E-08 | |
| | | | | 12 | 4.51E-02 | 9.94E-05 | 5.22E-07 | 5.22E-07 |
| **Idle at Utility** | **LHDT1** | 0.437 | 5 | 3 | 1.05E-01 | 2.30E-04 | 1.21E-06 | |
| | **LHDT2** | 0.482 | 5 | 1 | 3.77E-02 | 8.31E-05 | 4.37E-07 | |
| | **MHDT** | 0.002 | 5 | 2 | 4.09E-04 | 9.00E-07 | 4.73E-09 | |
| | **HHDT** | 0.003 | 5 | 11 | 2.71E-03 | 5.98E-06 | 3.14E-08 | |
| | | | | 17 | 1.45E-01 | 3.20E-04 | 1.68E-06 | 1.68E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.437 | 5 | 0 | 1.47E-02 | 3.23E-05 | 1.70E-07 | |
| | **LHDT2** | 0.482 | 5 | 0 | 5.29E-03 | 1.17E-05 | 6.12E-08 | |
| | **MHDT** | 0.002 | 5 | 7 | 1.16E-03 | 2.55E-06 | 1.34E-08 | |
| | **HHDT** | 0.003 | 5 | 43 | 1.07E-02 | 2.35E-05 | 1.24E-07 | |
| | | | | 50 | 3.18E-02 | 7.00E-05 | 3.68E-07 | 3.68E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.437 | 5 | 1 | 2.24E-02 | 4.93E-05 | 2.59E-07 | |
| | **LHDT2** | 0.482 | 5 | 0 | 8.08E-03 | 1.78E-05 | 9.35E-08 | |
| | **MHDT** | 0.002 | 5 | 11 | 1.90E-03 | 4.18E-06 | 2.20E-08 | |
| | **HHDT** | 0.003 | 5 | 67 | 1.67E-02 | 3.68E-05 | 1.93E-07 | |
| | | | | 79 | 4.91E-02 | 1.08E-04 | 5.68E-07 | 5.68E-07 |
| **Idle at Firestation** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 7.79E+00 | 1.72E-02 | 9.01E-05 | 9.01E-05 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.022 | 17378 | 330 | 0.21 | 7.94E+01 | 1.75E-01 | 9.19E-04 | |
| | **LDT1** | 15 | 0.024 | 2059 | 330 | 0.21 | 9.93E+00 | 2.19E-02 | 1.15E-04 | |
| | **LDT2** | 15 | 0.022 | 6276 | 330 | 0.21 | 2.87E+01 | 6.33E-02 | 3.33E-04 | |
| | **MDT** | 15 | 0.022 | 4845 | 330 | 0.21 | 2.22E+01 | 4.89E-02 | 2.57E-04 | |
| | **LHDT1** | 15 | 0.038 | 888 | 330 | 0.21 | 6.94E+00 | 1.53E-02 | 8.03E-05 | |
| | **LHDT2** | 15 | 0.043 | 93 | 330 | 0.21 | 8.15E-01 | 1.79E-03 | 9.43E-06 | |
| | **MHDT** | 15 | 0.062 | 329 | 330 | 0.21 | 4.16E+00 | 9.16E-03 | 4.81E-05 | |
| | **HHDT** | 15 | 0.034 | 80 | 330 | 0.21 | 5.51E-01 | 1.21E-03 | 6.38E-06 | |
| | | | | | | | | | | 1.77E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.022 | 74 | 175 | 0.11 | 1.79E-01 | 3.94E-04 | 2.07E-06 | |
| | **LDT1** | 15 | 0.024 | 9 | 175 | 0.11 | 2.24E-02 | 4.93E-05 | 2.59E-07 | |
| | **LDT2** | 15 | 0.022 | 27 | 175 | 0.11 | 6.47E-02 | 1.43E-04 | 7.49E-07 | |
| | **MDT** | 15 | 0.022 | 21 | 175 | 0.11 | 5.01E-02 | 1.10E-04 | 5.79E-07 | |
| | **LHDT1** | 15 | 0.038 | 6 | 175 | 0.11 | 2.30E-02 | 5.07E-05 | 2.66E-07 | |
| | **LHDT2** | 15 | 0.043 | 1 | 175 | 0.11 | 2.70E-03 | 5.95E-06 | 3.13E-08 | |
| | **MHDT** | 15 | 0.062 | 1 | 175 | 0.11 | 9.08E-03 | 2.00E-05 | 1.05E-07 | |
| | **HHDT** | 15 | 0.034 | 0 | 175 | 0.11 | 1.00E-03 | 2.20E-06 | 1.16E-08 | 4.07E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.022 | 109 | 100 | 0.06 | 1.51E-01 | 3.32E-04 | 1.74E-06 | |
| | **LDT1** | 15 | 0.024 | 13 | 100 | 0.06 | 1.88E-02 | 4.15E-05 | 2.18E-07 | |
| | **LDT2** | 15 | 0.022 | 39 | 100 | 0.06 | 5.45E-02 | 1.20E-04 | 6.31E-07 | |
| | **MDT** | 15 | 0.022 | 30 | 100 | 0.06 | 4.22E-02 | 9.29E-05 | 4.88E-07 | |
| | **LHDT1** | 15 | 0.038 | 19 | 100 | 0.06 | 4.39E-02 | 9.67E-05 | 5.08E-07 | |
| | **LHDT2** | 15 | 0.043 | 2 | 100 | 0.06 | 5.15E-03 | 1.14E-05 | 5.97E-08 | |
| | **MHDT** | 15 | 0.062 | 1 | 100 | 0.06 | 4.29E-03 | 9.45E-06 | 4.97E-08 | |
| | **HHDT** | 15 | 0.034 | 0 | 100 | 0.06 | 7.79E-04 | 1.72E-06 | 9.02E-09 | 3.71E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.022 | 63 | 50 | 0.03 | 4.36E-02 | 9.60E-05 | 5.05E-07 | |
| | **LDT1** | 15 | 0.024 | 7 | 50 | 0.03 | 5.46E-03 | 1.20E-05 | 6.31E-08 | |
| | **LDT2** | 15 | 0.022 | 23 | 50 | 0.03 | 1.58E-02 | 3.48E-05 | 1.83E-07 | |
| | **MDT** | 15 | 0.022 | 18 | 50 | 0.03 | 1.22E-02 | 2.69E-05 | 1.41E-07 | |
| | **LHDT1** | 15 | 0.038 | 3 | 50 | 0.03 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 3.61E-04 | 7.96E-07 | 4.18E-09 | |
| | **MHDT** | 15 | 0.062 | 3 | 50 | 0.03 | 6.08E-03 | 1.34E-05 | 7.04E-08 | |
| | **HHDT** | 15 | 0.034 | 1 | 50 | 0.03 | 1.53E-03 | 3.38E-06 | 1.77E-08 | 1.02E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.022 | 104 | 50 | 0.03 | 7.23E-02 | 1.59E-04 | 8.37E-07 | |
| | **LDT1** | 15 | 0.024 | 12 | 50 | 0.03 | 9.04E-03 | 1.99E-05 | 1.05E-07 | |
| | **LDT2** | 15 | 0.022 | 38 | 50 | 0.03 | 2.62E-02 | 5.77E-05 | 3.03E-07 | |
| | **MDT** | 15 | 0.022 | 29 | 50 | 0.03 | 2.02E-02 | 4.46E-05 | 2.34E-07 | |
| | **LHDT1** | 15 | 0.038 | 4 | 50 | 0.03 | 4.70E-03 | 1.04E-05 | 5.44E-08 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 5.52E-04 | 1.21E-06 | 6.38E-09 | |
| | **MHDT** | 15 | 0.062 | 5 | 50 | 0.03 | 9.96E-03 | 2.19E-05 | 1.15E-07 | |
| | **HHDT** | 15 | 0.034 | 2 | 50 | 0.03 | 2.40E-03 | 5.28E-06 | 2.78E-08 | 1.68E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.022 | 78 | 50 | 0.03 | 5.38E-02 | 1.19E-04 | 6.23E-07 | |
| | **LDT1** | 15 | 0.024 | 9 | 50 | 0.03 | 6.73E-03 | 1.48E-05 | 7.79E-08 | |
| | **LDT2** | 15 | 0.022 | 28 | 50 | 0.03 | 1.95E-02 | 4.29E-05 | 2.25E-07 | |
| | **MDT** | 15 | 0.022 | 22 | 50 | 0.03 | 1.51E-02 | 3.32E-05 | 1.74E-07 | |
| | **LHDT1** | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-06 |
| **Total - All Buildings** | **LDA** | | | 17806 | | | 7.99E+01 | 1.76E-01 | 9.24E-04 | |
| | **LDT1** | | | 2109 | | | 9.99E+00 | 2.20E-02 | 1.16E-04 | |
| | **LDT2** | | | 6430 | | | 2.89E+01 | 6.37E-02 | 3.35E-04 | |
| | **MDT** | | | 4964 | | | 2.24E+01 | 4.93E-02 | 2.59E-04 | |
| | **LHDT1** | | | 919 | | | 7.01E+00 | 1.55E-02 | 8.12E-05 | |
| | **LHDT2** | | | 96 | | | 8.23E-01 | 1.81E-03 | 9.53E-06 | |
| | **MHDT** | | | 340 | | | 4.19E+00 | 9.22E-03 | 4.85E-05 | |
| | **HHDT** | | | 84 | | | 5.57E-01 | 1.23E-03 | 6.44E-06 | |
| | **Total** | | | 32749 | | | 1.54E+02 | 3.39E-01 | 1.78E-03 | 1.78E-03 |

**Non-Diesel Truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.036 | 5 | 444 | 1.35E+00 | 2.97E-03 | 1.56E-05 | |
| | **LHDT2** | 0.032 | 5 | 47 | 1.24E-01 | 2.73E-04 | 1.43E-06 | |
| | **MHDT** | 0.032 | 5 | 164 | 4.39E-01 | 9.67E-04 | 5.08E-06 | |
| | **HHDT** | 0.032 | 5 | 40 | 1.07E-01 | 2.35E-04 | 1.24E-06 | |
| | | | | 695 | 2.02E+00 | 4.45E-03 | 2.34E-05 | 2.34E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.036 | 5 | 3 | 8.44E-03 | 1.86E-05 | 9.77E-08 | |
| | **LHDT2** | 0.032 | 5 | 0 | 7.75E-04 | 1.71E-06 | 8.97E-09 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.81E-03 | 3.98E-06 | 2.09E-08 | |
| | **HHDT** | 0.032 | 5 | 0 | 3.65E-04 | 8.05E-07 | 4.23E-09 | |
| | | | | 4 | 1.14E-02 | 2.51E-05 | 1.32E-07 | 1.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.036 | 5 | 9 | 2.82E-02 | 6.20E-05 | 3.26E-07 | |
| | **LHDT2** | 0.032 | 5 | 1 | 2.59E-03 | 5.70E-06 | 2.99E-08 | |
| | **MHDT** | 0.032 | 5 | 1 | 1.49E-03 | 3.29E-06 | 1.73E-08 | |
| | **HHDT** | 0.032 | 5 | 0 | 4.98E-04 | 1.10E-06 | 5.77E-09 | |
| | | | | 11 | 3.27E-02 | 7.21E-05 | 3.79E-07 | 3.79E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.036 | 5 | 1 | 3.95E-03 | 8.70E-06 | 4.57E-08 | |
| | **LHDT2** | 0.032 | 5 | 0 | 3.63E-04 | 7.99E-07 | 4.20E-09 | |
| | **MHDT** | 0.032 | 5 | 2 | 4.24E-03 | 9.33E-06 | 4.90E-08 | |
| | **HHDT** | 0.032 | 5 | 1 | 1.96E-03 | 4.32E-06 | 2.27E-08 | |
| | | | | 4 | 1.05E-02 | 2.32E-05 | 1.22E-07 | 1.22E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.036 | 5 | 2 | 6.03E-03 | 1.33E-05 | 6.98E-08 | |
| | **LHDT2** | 0.032 | 5 | 0 | 5.54E-04 | 1.22E-06 | 6.41E-09 | |
| | **MHDT** | 0.032 | 5 | 3 | 6.94E-03 | 1.53E-05 | 8.03E-08 | |
| | **HHDT** | 0.032 | 5 | 1 | 3.07E-03 | 6.76E-06 | 3.55E-08 | |
| | | | | 6 | 1.66E-02 | 3.65E-05 | 1.92E-07 | 1.92E-07 |
| **Idle at Firestation** | **LHDT1** | 0.036 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 2.09E+00 | 4.60E-03 | 2.42E-05 | 2.42E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 2**

No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 3.61E-04 | 8.38E-04 |
| Light Logistics | Phase 2 | 5.23E-06 | 1.38E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 3.66E-04 | 8.51E-04 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 4.12E-05 | 1.11E-05 |
| Light Logistics | Phase 2 | 1.77E-06 | 4.48E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 4.30E-05 | 1.15E-05 |

| **Total Onsite Emission** | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 3.66E-04 | 8.51E-04 | |
| | Idling Emissions (g/sec) | 4.30E-05 | 1.15E-05 | |
| | Total Vehicle Emissions (g/sec) | 4.09E-04 | 8.63E-04 | |
| **Other Onsite Emission Sources** | Yard Trucks (LPG) (g/sec) | | 2.54E-04 | |
| | Forklifts (LPG) (g/sec) | | 1.34E-04 | |
| | Total Other Onsite Sources (g/sec) | | 3.87E-04 | |
| | | | | Total |
| | Total All Sources (g/sec) | 4.09E-04 | 1.25E-03 | 1.66E-03 |
| | Area (m2) | | | 4.69E+06 |
| | Total Emission Rate (g/m2-sec) | | | 3.54E-10 |

**World Logistics Center** 2027 Phase 2 No Mitigation
**Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.026 | 26 | 330 | 0.21 | 1.41E-01 | 3.10E-04 | 1.63E-06 | |
| | LDT1 | 15 | 0.108 | 1 | 330 | 0.21 | 3.08E-02 | 6.79E-05 | 3.57E-07 | |
| | LDT2 | 15 | 0.025 | 1 | 330 | 0.21 | 7.06E-03 | 1.56E-05 | 8.17E-08 | |
| | MDT | 15 | 0.023 | 2 | 330 | 0.21 | 1.12E-02 | 2.47E-05 | 1.30E-07 | |
| | LHDT1 | 15 | 0.059 | 130 | 330 | 0.21 | 1.58E+00 | 3.47E-03 | 1.82E-05 | |
| | LHDT2 | 15 | 0.059 | 43 | 330 | 0.21 | 5.18E-01 | 1.14E-03 | 6.00E-06 | |
| | MHDT | 15 | 0.064 | 683 | 330 | 0.21 | 8.90E+00 | 1.96E-02 | 1.03E-04 | |
| | HHDT | 15 | 0.044 | 2204 | 330 | 0.21 | 2.00E+01 | 4.40E-02 | 2.31E-04 | |
| | | | | | | | | | | 3.61E-04 |
| Travel at Light Logistics | LDA | 15 | 0.026 | 1 | 175 | 0.11 | 2.27E-03 | 5.01E-06 | 2.63E-08 | |
| | LDT1 | 15 | 0.108 | 0 | 175 | 0.11 | 4.98E-04 | 1.10E-06 | 5.76E-09 | |
| | LDT2 | 15 | 0.025 | 0 | 175 | 0.11 | 1.14E-04 | 2.51E-07 | 1.32E-09 | |
| | MDT | 15 | 0.023 | 0 | 175 | 0.11 | 1.81E-04 | 3.98E-07 | 2.09E-09 | |
| | LHDT1 | 15 | 0.059 | 6 | 175 | 0.11 | 3.75E-02 | 8.25E-05 | 4.34E-07 | |
| | LHDT2 | 15 | 0.059 | 2 | 175 | 0.11 | 1.23E-02 | 2.71E-05 | 1.43E-07 | |
| | MHDT | 15 | 0.064 | 20 | 175 | 0.11 | 1.39E-01 | 3.07E-04 | 1.61E-06 | |
| | HHDT | 15 | 0.044 | 54 | 175 | 0.11 | 2.60E-01 | 5.72E-04 | 3.01E-06 | 5.23E-06 |
| Travel at Utility | LDA | 15 | 0.026 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.108 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.025 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.023 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.059 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.059 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.064 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.044 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.025 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.023 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.025 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.023 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.025 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.023 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.059 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.064 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.044 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 27 | | | 1.43E-01 | 3.15E-04 | 1.66E-06 | |
| | LDT1 | | | 1 | | | 3.13E-02 | 6.90E-05 | 3.63E-07 | |
| | LDT2 | | | 1 | | | 7.17E-03 | 1.58E-05 | 8.30E-08 | |
| | MDT | | | 2 | | | 1.14E-02 | 2.51E-05 | 1.32E-07 | |
| | LHDT1 | | | 136 | | | 1.61E+00 | 3.55E-03 | 1.87E-05 | |
| | LHDT2 | | | 45 | | | 5.30E-01 | 1.17E-03 | 6.14E-06 | |
| | MHDT | | | 703 | | | 9.04E+00 | 1.99E-02 | 1.05E-04 | |
| | HHDT | | | 2258 | | | 2.02E+01 | 4.46E-02 | 2.34E-04 | |
| | Total | | | 3174 | | | 3.16E+01 | 6.96E-02 | 3.66E-04 | 3.66E-04 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.437 | 5 | 65 | 2.37E+00 | 5.23E-03 | 2.75E-05 | |
| | **LHDT2** | 0.482 | 5 | 21 | 8.56E-01 | 1.89E-03 | 9.91E-06 | |
| | **MHDT** | 0.002 | 5 | 341 | 5.69E-02 | 1.25E-04 | 6.58E-07 | |
| | **HHDT** | 0.003 | 5 | 1102 | 2.76E-01 | 6.07E-04 | 3.19E-06 | |
| | | | | 1530 | 3.56E+00 | 7.84E-03 | 4.12E-05 | 4.12E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.437 | 5 | 3 | 1.06E-01 | 2.34E-04 | 1.23E-06 | |
| | **LHDT2** | 0.482 | 5 | 1 | 3.84E-02 | 8.45E-05 | 4.44E-07 | |
| | **MHDT** | 0.002 | 5 | 10 | 1.68E-03 | 3.70E-06 | 1.94E-08 | |
| | **HHDT** | 0.003 | 5 | 27 | 6.76E-03 | 1.49E-05 | 7.82E-08 | |
| | | | | 41 | 1.53E-01 | 3.37E-04 | 1.77E-06 | 1.77E-06 |
| **Idle at Utility** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 1571 | 3.71E+00 | 8.18E-03 | 4.30E-05 | 4.30E-05 |

**World Logistics Center** 2027 Phase 2 No Mitigation
**Non-Diesel Vehicle Emissions** PM2.5

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 hrs/day
24 hrs/day

**Onsite Running Exhaust Emissions** PM2.5 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.022 | 8234 | 330 | 0.21 | 3.76E+01 | 8.28E-02 | 4.35E-04 | |
| | LDT1 | 15 | 0.024 | 975 | 330 | 0.21 | 4.71E+00 | 1.04E-02 | 5.45E-05 | |
| | LDT2 | 15 | 0.022 | 2973 | 330 | 0.21 | 1.36E+01 | 3.00E-02 | 1.58E-04 | |
| | MDT | 15 | 0.022 | 2296 | 330 | 0.21 | 1.05E+01 | 2.32E-02 | 1.22E-04 | |
| | LHDT1 | 15 | 0.038 | 421 | 330 | 0.21 | 3.29E+00 | 7.24E-03 | 3.81E-05 | |
| | LHDT2 | 15 | 0.043 | 44 | 330 | 0.21 | 3.86E-01 | 8.50E-04 | 4.47E-06 | |
| | MHDT | 15 | 0.062 | 156 | 330 | 0.21 | 1.97E+00 | 4.34E-03 | 2.28E-05 | |
| | HHDT | 15 | 0.034 | 38 | 330 | 0.21 | 2.61E-01 | 5.75E-04 | 3.02E-06 | |
| | | | | | | | | | | 8.38E-04 |
| Travel at Light Logistics | LDA | 15 | 0.022 | 251 | 175 | 0.11 | 6.07E-01 | 1.34E-03 | 7.03E-06 | |
| | LDT1 | 15 | 0.024 | 30 | 175 | 0.11 | 7.60E-02 | 1.67E-04 | 8.79E-07 | |
| | LDT2 | 15 | 0.022 | 91 | 175 | 0.11 | 2.20E-01 | 4.84E-04 | 2.54E-06 | |
| | MDT | 15 | 0.022 | 70 | 175 | 0.11 | 1.70E-01 | 3.74E-04 | 1.97E-06 | |
| | LHDT1 | 15 | 0.038 | 19 | 175 | 0.11 | 7.82E-02 | 1.72E-04 | 9.05E-07 | |
| | LHDT2 | 15 | 0.043 | 2 | 175 | 0.11 | 9.17E-03 | 2.02E-05 | 1.06E-07 | |
| | MHDT | 15 | 0.062 | 5 | 175 | 0.11 | 3.08E-02 | 6.79E-05 | 3.57E-07 | |
| | HHDT | 15 | 0.034 | 1 | 175 | 0.11 | 3.40E-03 | 7.48E-06 | 3.93E-08 | 1.38E-05 |
| Travel at Utility | LDA | 15 | 0.022 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.024 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.022 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.022 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.038 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.043 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.062 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.034 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.022 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 8484 | | | 3.82E+01 | 8.42E-02 | 4.42E-04 | |
| | LDT1 | | | 1005 | | | 4.78E+00 | 1.05E-02 | 5.53E-05 | |
| | LDT2 | | | 3064 | | | 1.38E+01 | 3.05E-02 | 1.60E-04 | |
| | MDT | | | 2365 | | | 1.07E+01 | 2.36E-02 | 1.24E-04 | |
| | LHDT1 | | | 440 | | | 3.37E+00 | 7.41E-03 | 3.90E-05 | |
| | LHDT2 | | | 46 | | | 3.95E-01 | 8.70E-04 | 4.57E-06 | |
| | MHDT | | | 160 | | | 2.00E+00 | 4.41E-03 | 2.32E-05 | |
| | HHDT | | | 39 | | | 2.64E-01 | 5.82E-04 | 3.06E-06 | |
| | Total | | | 15604 | | | 7.36E+01 | 1.62E-01 | 8.51E-04 | 8.51E-04 |

**Non-Diesel Truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.036 | 5 | 210 | 6.39E-01 | 1.41E-03 | 7.40E-06 | |
| | **LHDT2** | 0.032 | 5 | 22 | 5.87E-02 | 1.29E-04 | 6.79E-07 | |
| | **MHDT** | 0.032 | 5 | 78 | 2.08E-01 | 4.58E-04 | 2.41E-06 | |
| | **HHDT** | 0.032 | 5 | 19 | 5.06E-02 | 1.11E-04 | 5.86E-07 | |
| | | | | 329 | 9.56E-01 | 2.11E-03 | 1.11E-05 | 1.11E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.036 | 5 | 9 | 2.87E-02 | 6.31E-05 | 3.32E-07 | |
| | **LHDT2** | 0.032 | 5 | 1 | 2.63E-03 | 5.80E-06 | 3.05E-08 | |
| | **MHDT** | 0.032 | 5 | 2 | 6.14E-03 | 1.35E-05 | 7.11E-08 | |
| | **HHDT** | 0.032 | 5 | 0 | 1.24E-03 | 2.73E-06 | 1.44E-08 | |
| | | | | 13 | 3.87E-02 | 8.52E-05 | 4.48E-07 | 4.48E-07 |
| **Idle at Utility** | **LHDT1** | 0.036 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.036 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.036 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.036 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.032 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 343 | 9.95E-01 | 2.19E-03 | 1.15E-05 | 1.15E-05 |

**World Logistics Center Project in 2027** | **2027** | **PM2.5 With EMFAC2014** | Based on PB Traffic Results 10/1/2013 No Mitigation Rev 5

**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Entrained Road Dust (g/sec) | Total (g/sec) |
|---|---|---|---|---|
| 1 | 1.26E-03 | 1.02E-03 | 7.18E-03 | 9.46E-03 |
| 2 | 3.19E-03 | 2.65E-03 | 1.82E-02 | 2.40E-02 |
| 3 | 4.45E-03 | 3.74E-03 | 2.53E-02 | 3.35E-02 |
| 5 | 2.64E-04 | 1.01E-03 | 1.90E-03 | 3.17E-03 |
| 6 | 1.48E-03 | 1.58E-03 | 8.64E-03 | 1.17E-02 |
| 8 | 4.25E-04 | 1.78E-03 | 3.09E-03 | 5.30E-03 |
| 11 | 8.18E-06 | 3.63E-05 | 6.17E-05 | 1.06E-04 |
| 12 | 2.60E-05 | 6.08E-05 | 1.32E-04 | 2.19E-04 |
| 14 | 6.20E-04 | 6.25E-04 | 3.55E-03 | 4.80E-03 |
| 18 | 2.47E-04 | 3.71E-04 | 1.48E-03 | 2.10E-03 |
| 19 | 9.64E-04 | 7.01E-04 | 5.39E-03 | 7.06E-03 |
| 21 | 6.93E-04 | 1.23E-03 | 4.31E-03 | 6.23E-03 |
| 24 | 1.17E-03 | 2.18E-03 | 7.55E-03 | 1.09E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 3.82E-04 | 3.43E-04 | 2.22E-03 | 2.94E-03 |
| 30 | 1.85E-03 | 1.95E-03 | 1.08E-02 | 1.46E-02 |
| 31 | 3.87E-04 | 9.38E-04 | 2.67E-03 | 3.99E-03 |
| Total (g/sec) | 1.74E-02 | 2.02E-02 | 1.02E-01 | 1.40E-01 |
| Total (lbs/day) | 3.31E+00 | 3.85E+00 | 1.95E+01 | 2.67E+01 |
| Total VMT (mi/day) | 2.75E+04 | 7.59E+04 | | 1.03E+05 |

| ID | Arterial | From | To | | Estimated Project 2027 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 17,798 | 794 | 2,397 | 7,804 |
| 2 | Street A | Eucalyptus Ave | Street F | | 19,915 | 1,464 | 2,739 | 8,703 |
| 3 | Street E | west of Street A | | | 8,750 | 621 | 1,195 | 3,761 |
| 5 | Street E | Street D | Street A | | 6,218 | 269 | 556 | 86 |
| 6 | Street A | Street F | Street C | | 8,078 | 491 | 959 | 2,552 |
| 8 | Street D | Street E | Cactus Ave | | 9,553 | 441 | 880 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 172 | 13 | 14 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 353 | 70 | 62 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,074 | 203 | 269 | 711 |
| 18 | Street B | Street A | Gilman Springs Rd | | 1,479 | 100 | 161 | 281 |
| 19 | Street F | Street A | Street C | | 1,600 | 114 | 251 | 813 |
| 21 | Street C | Street A | Street F | | 5,695 | 260 | 570 | 833 |
| 24 | Street C | Street F | Gilman Springs Rd | | 6,617 | 250 | 555 | 987 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 2,896 | 135 | 354 | 1,145 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,949 | 184 | 454 | 1,262 |
| 31 | Gilman Springs Rd | south of Street C | | | 6,821 | 242 | 504 | 688 |

Traffic volumes provided by Parsons Brinkerhoff; traffic volumes for 2027 interpolated between 2022 and 2035 in accordance with the project's conceptual occupancy schedule

**World Logistics Center** **2027** **PM2.5** **No Mitigation**

Project in 2027

Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 31 | 2 | 2 | 3 | 162 | 54 | 1952 | 7683 | 9889 | 2009 |
| 2 | 32821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 35 | 2 | 2 | 3 | 299 | 99 | 2230 | 8568 | 11239 | 5104 |
| 3 | 14326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 15 | 1 | 1 | 1 | 127 | 42 | 973 | 3702 | 4863 | 7105 |
| 5 | 7130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 11 | 1 | 1 | 1 | 55 | 18 | 453 | 85 | 624 | 369 |
| 6 | 12079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 100 | 33 | 781 | 2512 | 3443 | 2351 |
| 8 | 10874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 17 | 1 | 1 | 2 | 90 | 30 | 716 | 0 | 857 | 581 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 11 | 0 | 15 | 11 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 14 | 5 | 50 | 0 | 70 | 36 |
| 14 | 3257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 4 | 0 | 0 | 0 | 42 | 14 | 219 | 700 | 978 | 983 |
| 18 | 2021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 3 | 0 | 0 | 0 | 20 | 7 | 131 | 277 | 438 | 384 |
| 19 | 2779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 3 | 0 | 0 | 0 | 23 | 8 | 204 | 801 | 1040 | 1541 |
| 21 | 7358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 10 | 1 | 1 | 1 | 53 | 18 | 464 | 820 | 1367 | 1068 |
| 24 | 8410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 12 | 1 | 1 | 1 | 51 | 17 | 452 | 972 | 1506 | 1821 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 5 | 0 | 0 | 0 | 28 | 9 | 289 | 1128 | 1459 | 612 |
| 30 | 5849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 7 | 0 | 0 | 1 | 38 | 12 | 370 | 1242 | 1671 | 2934 |
| 31 | 8255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 12 | 1 | 1 | 1 | 49 | 16 | 411 | 678 | 1168 | 595 |
| | | | | | | | | | | | | | | | | Total | 27504 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0238 | 0.0570 | 0.0243 | 0.0229 | 0.0548 | 0.0569 | 0.0657 | 0.0511 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.75E-06 | 2.53E-07 | 9.61E-08 | 1.61E-07 | 2.09E-05 | 7.21E-06 | 3.01E-04 | 9.24E-04 | 1.26E-03 |
| 2 | 1 | 4.36E-06 | 6.32E-07 | 2.40E-07 | 4.03E-07 | 8.61E-05 | 2.97E-05 | 7.70E-04 | 2.30E-03 | 3.19E-03 |
| 3 | 1 | 6.17E-06 | 8.94E-07 | 3.40E-07 | 5.70E-07 | 1.17E-04 | 4.05E-05 | 1.08E-03 | 3.20E-03 | 4.45E-03 |
| 5 | 1 | 1.78E-06 | 2.57E-07 | 9.79E-08 | 1.64E-07 | 2.06E-05 | 7.11E-06 | 2.04E-04 | 2.97E-05 | 2.64E-04 |
| 6 | 1 | 2.66E-06 | 3.86E-07 | 1.47E-07 | 2.46E-07 | 4.34E-05 | 1.50E-05 | 4.05E-04 | 1.01E-03 | 1.48E-03 |
| 8 | 1 | 3.12E-06 | 4.53E-07 | 1.72E-07 | 2.89E-07 | 3.87E-05 | 1.34E-05 | 3.69E-04 | 0.00E+00 | 4.25E-04 |
| 11 | 1 | 6.19E-08 | 8.96E-09 | 3.41E-09 | 5.72E-09 | 1.26E-06 | 4.33E-07 | 6.41E-06 | 0.00E+00 | 8.18E-06 |
| 12 | 1 | 8.72E-08 | 1.26E-08 | 4.80E-09 | 8.06E-09 | 4.62E-06 | 1.60E-06 | 1.96E-05 | 0.00E+00 | 2.60E-05 |
| 14 | 1 | 1.01E-06 | 1.46E-07 | 5.54E-08 | 9.30E-08 | 2.64E-05 | 9.13E-06 | 1.67E-04 | 4.16E-04 | 6.20E-04 |
| 18 | 1 | 6.26E-07 | 9.07E-08 | 3.45E-08 | 5.79E-08 | 1.14E-05 | 3.92E-06 | 8.72E-05 | 1.44E-04 | 2.47E-04 |
| 19 | 1 | 1.14E-06 | 1.66E-07 | 6.31E-08 | 1.06E-07 | 2.19E-05 | 7.54E-06 | 2.30E-04 | 7.02E-04 | 9.64E-04 |
| 21 | 1 | 2.15E-06 | 3.11E-07 | 1.18E-07 | 1.99E-07 | 2.63E-05 | 9.07E-06 | 2.76E-04 | 3.79E-04 | 6.93E-04 |
| 24 | 1 | 3.86E-06 | 5.59E-07 | 2.13E-07 | 3.57E-07 | 3.92E-05 | 1.35E-05 | 4.16E-04 | 6.95E-04 | 1.17E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 5.86E-07 | 8.49E-08 | 3.23E-08 | 5.42E-08 | 7.34E-06 | 2.53E-06 | 9.20E-05 | 2.80E-04 | 3.82E-04 |
| 30 | 1 | 3.35E-06 | 4.85E-07 | 1.84E-07 | 3.09E-07 | 4.17E-05 | 1.44E-05 | 4.94E-04 | 1.29E-03 | 1.85E-03 |
| 31 | 1 | 1.68E-06 | 2.43E-07 | 9.24E-08 | 1.55E-07 | 1.60E-05 | 5.51E-06 | 1.59E-04 | 2.04E-04 | 3.87E-04 |

**World Logistics Center** **2027** **PM2.5** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 9974 | 1215 | 3703 | 2869 | 523 | 55 | 445 | 121 | 18905 | 3840 |
| 2 | 32821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 11159 | 1359 | 4144 | 3210 | 964 | 102 | 509 | 135 | 21582 | 9800 |
| 3 | 14326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 4903 | 597 | 1820 | 1410 | 409 | 43 | 222 | 59 | 9463 | 13827 |
| 5 | 7130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 3485 | 424 | 1294 | 1002 | 177 | 19 | 103 | 1 | 6505 | 3851 |
| 6 | 12079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 4526 | 551 | 1681 | 1302 | 323 | 34 | 178 | 40 | 8635 | 5895 |
| 8 | 10874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 5353 | 652 | 1988 | 1540 | 291 | 31 | 163 | 0 | 10017 | 6789 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 96 | 12 | 36 | 28 | 9 | 1 | 3 | 0 | 183 | 137 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 198 | 24 | 73 | 57 | 46 | 5 | 12 | 0 | 415 | 212 |
| 14 | 3257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 1162 | 142 | 432 | 334 | 134 | 14 | 50 | 11 | 2279 | 2290 |
| 18 | 2021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 829 | 101 | 308 | 238 | 66 | 7 | 30 | 4 | 1583 | 1388 |
| 19 | 2779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 897 | 109 | 333 | 258 | 75 | 8 | 47 | 13 | 1739 | 2578 |
| 21 | 7358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 3191 | 389 | 1185 | 918 | 171 | 18 | 106 | 13 | 5991 | 4682 |
| 24 | 8410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 3708 | 452 | 1377 | 1067 | 165 | 17 | 103 | 15 | 6904 | 8346 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 1623 | 198 | 603 | 467 | 89 | 9 | 66 | 18 | 3072 | 1288 |
| 30 | 5849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 2213 | 270 | 822 | 637 | 121 | 13 | 84 | 20 | 4178 | 7338 |
| 31 | 8255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 3822 | 466 | 1419 | 1099 | 159 | 17 | 94 | 11 | 7087 | 3610 |
| | | | | | | | | | | | | | | | | Total | 75872 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0214 | 0.0218 | 0.0214 | 0.0214 | 0.0386 | 0.0434 | 0.0624 | 0.0344 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.02E-04 | 6.24E-05 | 1.87E-04 | 1.45E-04 | 4.75E-05 | 5.63E-06 | 6.53E-05 | 9.82E-06 | 1.02E-03 |
| 2 | 1 | 1.26E-03 | 1.56E-04 | 4.67E-04 | 3.62E-04 | 1.96E-04 | 2.32E-05 | 1.67E-04 | 2.45E-05 | 2.65E-03 |
| 3 | 1 | 1.78E-03 | 2.21E-04 | 6.60E-04 | 5.12E-04 | 2.67E-04 | 3.17E-05 | 2.34E-04 | 3.40E-05 | 3.74E-03 |
| 5 | 1 | 5.12E-04 | 6.35E-05 | 1.90E-04 | 1.47E-04 | 4.68E-05 | 5.56E-06 | 4.42E-05 | 3.15E-07 | 1.01E-03 |
| 6 | 1 | 7.66E-04 | 9.52E-05 | 2.85E-04 | 2.21E-04 | 9.86E-05 | 1.17E-05 | 8.78E-05 | 1.08E-05 | 1.58E-03 |
| 8 | 1 | 9.00E-04 | 1.12E-04 | 3.34E-04 | 2.59E-04 | 8.80E-05 | 1.04E-05 | 8.00E-05 | 0.00E+00 | 1.78E-03 |
| 11 | 1 | 1.78E-05 | 2.21E-06 | 6.62E-06 | 5.13E-06 | 2.85E-06 | 3.39E-07 | 1.39E-06 | 0.00E+00 | 3.63E-05 |
| 12 | 1 | 2.51E-05 | 3.12E-06 | 9.33E-06 | 7.23E-06 | 1.05E-05 | 1.25E-06 | 4.26E-06 | 0.00E+00 | 6.08E-05 |
| 14 | 1 | 2.90E-04 | 3.60E-05 | 1.08E-04 | 8.34E-05 | 6.01E-05 | 7.13E-06 | 3.62E-05 | 4.42E-06 | 6.25E-04 |
| 18 | 1 | 1.80E-04 | 2.24E-05 | 6.70E-05 | 5.19E-05 | 2.58E-05 | 3.06E-06 | 1.89E-05 | 1.53E-06 | 3.71E-04 |
| 19 | 1 | 3.30E-04 | 4.09E-05 | 1.22E-04 | 9.49E-05 | 4.97E-05 | 5.89E-06 | 4.99E-05 | 7.47E-06 | 7.01E-04 |
| 21 | 1 | 6.18E-04 | 7.68E-05 | 2.30E-04 | 1.78E-04 | 5.97E-05 | 7.09E-06 | 5.97E-05 | 4.03E-06 | 1.23E-03 |
| 24 | 1 | 1.11E-03 | 1.38E-04 | 4.13E-04 | 3.20E-04 | 8.90E-05 | 1.06E-05 | 9.01E-05 | 7.39E-06 | 2.18E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.69E-04 | 2.10E-05 | 6.27E-05 | 4.86E-05 | 1.67E-05 | 1.98E-06 | 1.99E-05 | 2.97E-06 | 3.43E-04 |
| 30 | 1 | 9.64E-04 | 1.20E-04 | 3.58E-04 | 2.78E-04 | 9.49E-05 | 1.13E-05 | 1.07E-04 | 1.37E-05 | 1.95E-03 |
| 31 | 1 | 4.83E-04 | 6.00E-05 | 1.79E-04 | 1.39E-04 | 3.63E-05 | 4.30E-06 | 3.44E-05 | 2.17E-06 | 9.38E-04 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 17,798 | 3615 | 794 | 161 | 2,397 | 487 | 7,804 | 1585 | 5849 | 8.75 | 0.035 | 0.0002 | 1.4 | 7.18E-03 |
| 2 | A | 731 | 0.45 | 19,915 | 9043 | 1,464 | 665 | 2,739 | 1244 | 8,703 | 3952 | 14904 | 8.69 | 0.035 | 0.0002 | 3.5 | 1.82E-02 |
| 3 | A | 2352 | 1.46 | 8,750 | 12784 | 621 | 907 | 1,195 | 1747 | 3,761 | 5495 | 20932 | 8.63 | 0.035 | 0.0002 | 4.8 | 2.53E-02 |
| 5 | A | 953 | 0.59 | 6,218 | 3681 | 269 | 159 | 556 | 329 | 86 | 51 | 4221 | 3.27 | 0.035 | 0.0001 | 0.4 | 1.90E-03 |
| 6 | A | 1099 | 0.68 | 8,078 | 5515 | 491 | 335 | 959 | 655 | 2,552 | 1742 | 8246 | 7.50 | 0.035 | 0.0002 | 1.6 | 8.64E-03 |
| 8 | A | 1091 | 0.68 | 9,553 | 6474 | 441 | 299 | 880 | 596 | 0 | 0 | 7370 | 3.05 | 0.035 | 0.0001 | 0.6 | 3.09E-03 |
| 11 | A | 1201 | 0.75 | 172 | 128 | 13 | 10 | 14 | 10 | 0 | 0 | 148 | 3.03 | 0.035 | 0.0001 | 0.0 | 6.17E-05 |
| 12 | A | 824 | 0.51 | 353 | 181 | 70 | 36 | 62 | 32 | 0 | 0 | 248 | 3.86 | 0.035 | 0.0001 | 0.0 | 1.32E-04 |
| 14 | A | 1618 | 1.01 | 2,074 | 2085 | 203 | 204 | 269 | 270 | 711 | 714 | 3274 | 7.75 | 0.035 | 0.0002 | 0.7 | 3.55E-03 |
| 18 | A | 1412 | 0.88 | 1,479 | 1297 | 100 | 88 | 161 | 141 | 281 | 247 | 1772 | 6.01 | 0.035 | 0.0002 | 0.3 | 1.48E-03 |
| 19 | A | 2386 | 1.48 | 1,600 | 2372 | 114 | 169 | 251 | 372 | 813 | 1206 | 4118 | 9.33 | 0.035 | 0.0002 | 1.0 | 5.39E-03 |
| 21 | A | 1258 | 0.78 | 5,695 | 4450 | 260 | 203 | 570 | 445 | 833 | 651 | 5750 | 5.39 | 0.035 | 0.0001 | 0.8 | 4.31E-03 |
| 24 | A | 1946 | 1.21 | 6,617 | 7999 | 250 | 302 | 555 | 671 | 987 | 1194 | 10167 | 5.35 | 0.035 | 0.0001 | 1.4 | 7.55E-03 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 2,896 | 1214 | 135 | 57 | 354 | 149 | 1,145 | 480 | 1900 | 8.33 | 0.035 | 0.0002 | 0.4 | 2.22E-03 |
| 30 | A | 2827 | 1.76 | 3,949 | 6935 | 184 | 322 | 454 | 798 | 1,262 | 2216 | 10271 | 7.54 | 0.035 | 0.0002 | 2.1 | 1.08E-02 |
| 31 | A | 820 | 0.51 | 6,821 | 3474 | 242 | 123 | 504 | 257 | 688 | 351 | 4205 | 4.58 | 0.035 | 0.0001 | 0.5 | 2.67E-03 |

**World Logistics Center** EMFAC2014 **2027 Phase 1** No Mitigation
**PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 1**
**No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.80E-03 | 3.94E-03 |
| Light Logistics | Phase 1 | 3.60E-06 | 9.09E-06 |
| Utilities Service Station | Phase 1 | 2.84E-06 | 8.29E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.09E-06 | 2.28E-06 |
| Convenience Store | Phase 1 | 6.45E-06 | 3.77E-06 |
| Fire Station | Phase 1 | 6.07E-09 | 2.45E-06 |
| Total | | 1.81E-03 | 3.97E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.26E-04 | 2.54E-05 |
| Light Logistics | Phase 1 | 7.35E-07 | 1.43E-07 |
| Utilities Service Station | Phase 1 | 2.31E-06 | 4.12E-07 |
| Gas Station w/Convenience Store | Phase 1 | 6.61E-07 | 1.32E-07 |
| Convenience Store | Phase 1 | 1.02E-06 | 2.09E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.31E-04 | 2.63E-05 |

| **Total Onsite Emission** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.81E-03 | 3.97E-03 | |
| | Idling Emissions (g/sec) | 1.31E-04 | 2.63E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.95E-03 | 4.00E-03 | |
| **Other Onsite Emissions** | | | | |
| | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Fork Lifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.95E-03 | 5.33E-03 | 7.28E-03 |
| | Area (m2) | | | 4.68E+06 |
| | Total Emission Rate (g/m2-sec) | | | 1.55E-09 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.054 | 55 | 330 | 0.21 | 6.08E-01 | 1.34E-03 | 7.04E-06 | |
| | **LDT1** | 15 | 0.139 | 3 | 330 | 0.21 | 8.38E-02 | 1.85E-04 | 9.70E-07 | |
| | **LDT2** | 15 | 0.053 | 3 | 330 | 0.21 | 3.09E-02 | 6.81E-05 | 3.58E-07 | |
| | **MDT** | 15 | 0.051 | 5 | 330 | 0.21 | 5.13E-02 | 1.13E-04 | 5.93E-07 | |
| | **LHDT1** | 15 | 0.112 | 275 | 330 | 0.21 | 6.32E+00 | 1.39E-02 | 7.31E-05 | |
| | **LHDT2** | 15 | 0.120 | 90 | 330 | 0.21 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **MHDT** | 15 | 0.147 | 1441 | 330 | 0.21 | 4.34E+01 | 9.55E-02 | 5.02E-04 | |
| | **HHDT** | 15 | 0.108 | 4652 | 330 | 0.21 | 1.03E+02 | 2.26E-01 | 1.19E-03 | |
| | | | | | | | | | | 1.80E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.054 | 0 | 175 | 0.11 | 1.37E-03 | 3.02E-06 | 1.59E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 175 | 0.11 | 1.89E-04 | 4.16E-07 | 2.19E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 6.96E-05 | 1.53E-07 | 8.06E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 175 | 0.11 | 1.15E-04 | 2.54E-07 | 1.34E-09 | |
| | **LHDT1** | 15 | 0.112 | 2 | 175 | 0.11 | 2.10E-02 | 4.62E-05 | 2.43E-07 | |
| | **LHDT2** | 15 | 0.120 | 1 | 175 | 0.11 | 7.35E-03 | 1.62E-05 | 8.51E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.47E-02 | 2.09E-04 | 1.10E-06 | |
| | **HHDT** | 15 | 0.108 | 16 | 175 | 0.11 | 1.86E-01 | 4.10E-04 | 2.16E-06 | 3.60E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.054 | 0 | 100 | 0.06 | 1.15E-03 | 2.54E-06 | 1.34E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 100 | 0.06 | 1.59E-04 | 3.50E-07 | 1.84E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 5.86E-05 | 1.29E-07 | 6.78E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 9.72E-05 | 2.14E-07 | 1.13E-09 | |
| | **LHDT1** | 15 | 0.112 | 6 | 100 | 0.06 | 4.00E-02 | 8.80E-05 | 4.63E-07 | |
| | **LHDT2** | 15 | 0.120 | 2 | 100 | 0.06 | 1.40E-02 | 3.09E-05 | 1.62E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.47E-02 | 9.85E-05 | 5.18E-07 | |
| | **HHDT** | 15 | 0.108 | 22 | 100 | 0.06 | 1.45E-01 | 3.20E-04 | 1.68E-06 | 2.84E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 3.34E-04 | 7.36E-07 | 3.87E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 4.60E-05 | 1.01E-07 | 5.33E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 1.70E-05 | 3.74E-08 | 1.96E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 2.82E-05 | 6.20E-08 | 3.26E-10 | |
| | **LHDT1** | 15 | 0.112 | 1 | 50 | 0.03 | 2.80E-03 | 6.17E-06 | 3.24E-08 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 9.83E-04 | 2.16E-06 | 1.14E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.34E-02 | 1.40E-04 | 7.34E-07 | |
| | **HHDT** | 15 | 0.108 | 85 | 50 | 0.03 | 2.86E-01 | 6.29E-04 | 3.31E-06 | 4.09E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 5.54E-04 | 1.22E-06 | 6.41E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 7.63E-05 | 1.68E-07 | 8.84E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.81E-05 | 6.20E-08 | 3.26E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | **LHDT1** | 15 | 0.112 | 1 | 50 | 0.03 | 4.28E-03 | 9.42E-06 | 4.95E-08 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 1.50E-03 | 3.30E-06 | 1.74E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.04E-01 | 2.29E-04 | 1.20E-06 | |
| | **HHDT** | 15 | 0.108 | 134 | 50 | 0.03 | 4.47E-01 | 9.84E-04 | 5.17E-06 | 6.45E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 4.12E-04 | 9.08E-07 | 4.77E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 5.68E-05 | 1.25E-07 | 6.58E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.09E-05 | 4.61E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 3.47E-05 | 7.65E-08 | 4.02E-10 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.07E-09 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 6.12E-01 | 1.35E-03 | 7.08E-06 | |
| | **LDT1** | | | 3 | | | 8.43E-02 | 1.86E-04 | 9.76E-07 | |
| | **LDT2** | | | 3 | | | 3.11E-02 | 6.85E-05 | 3.60E-07 | |
| | **MDT** | | | 5 | | | 5.16E-02 | 1.14E-04 | 5.97E-07 | |
| | **LHDT1** | | | 285 | | | 6.39E+00 | 1.41E-02 | 7.39E-05 | |
| | **LHDT2** | | | 93 | | | 2.24E+00 | 4.93E-03 | 2.59E-05 | |
| | **MHDT** | | | 1488 | | | 4.37E+01 | 9.62E-02 | 5.05E-04 | |
| | **HHDT** | | | 4909 | | | 1.04E+02 | 2.28E-01 | 1.20E-03 | |
| | **Total** | | | 6843 | | | 1.57E+02 | 3.45E-01 | 1.81E-03 | 1.81E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.600 | 5 | 138 | 6.88E+00 | 1.51E-02 | 7.96E-05 | |
| | **LHDT2** | 0.615 | 5 | 45 | 2.31E+00 | 5.08E-03 | 2.67E-05 | |
| | **MHDT** | 0.003 | 5 | 720 | 1.80E-01 | 3.97E-04 | 2.08E-06 | |
| | **HHDT** | 0.008 | 5 | 2326 | 1.55E+00 | 3.42E-03 | 1.79E-05 | |
| | | | | 3229 | 1.09E+01 | 2.40E-02 | 1.26E-04 | 1.26E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.600 | 5 | 1 | 4.30E-02 | 9.47E-05 | 4.98E-07 | |
| | **LHDT2** | 0.615 | 5 | 0 | 1.44E-02 | 3.18E-05 | 1.67E-07 | |
| | **MHDT** | 0.003 | 5 | 3 | 7.42E-04 | 1.63E-06 | 8.59E-09 | |
| | **HHDT** | 0.008 | 5 | 8 | 5.31E-03 | 1.17E-05 | 6.14E-08 | |
| | | | | 12 | 6.35E-02 | 1.40E-04 | 7.35E-07 | 7.35E-07 |
| **Idle at Utility** | **LHDT1** | 0.600 | 5 | 3 | 1.44E-01 | 3.16E-04 | 1.66E-06 | |
| | **LHDT2** | 0.615 | 5 | 1 | 4.81E-02 | 1.06E-04 | 5.57E-07 | |
| | **MHDT** | 0.003 | 5 | 2 | 6.13E-04 | 1.35E-06 | 7.10E-09 | |
| | **HHDT** | 0.008 | 5 | 11 | 7.24E-03 | 1.59E-05 | 8.38E-08 | |
| | | | | 17 | 2.00E-01 | 4.40E-04 | 2.31E-06 | 2.31E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.600 | 5 | 0 | 2.01E-02 | 4.43E-05 | 2.33E-07 | |
| | **LHDT2** | 0.615 | 5 | 0 | 6.75E-03 | 1.49E-05 | 7.81E-08 | |
| | **MHDT** | 0.003 | 5 | 7 | 1.74E-03 | 3.83E-06 | 2.01E-08 | |
| | **HHDT** | 0.008 | 5 | 43 | 2.85E-02 | 6.28E-05 | 3.30E-07 | |
| | | | | 50 | 5.71E-02 | 1.26E-04 | 6.61E-07 | 6.61E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.600 | 5 | 1 | 3.07E-02 | 6.77E-05 | 3.56E-07 | |
| | **LHDT2** | 0.615 | 5 | 0 | 1.03E-02 | 2.27E-05 | 1.19E-07 | |
| | **MHDT** | 0.003 | 5 | 11 | 2.85E-03 | 6.27E-06 | 3.29E-08 | |
| | **HHDT** | 0.008 | 5 | 67 | 4.45E-02 | 9.81E-05 | 5.16E-07 | |
| | | | | 79 | 8.84E-02 | 1.95E-04 | 1.02E-06 | 1.02E-06 |
| **Idle at Firestation** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 1.13E+01 | 2.49E-02 | 1.31E-04 | 1.31E-04 |

**World Logistics Center** 2027 Phase 1 No Mitigation
**Non-Diesel Vehicle Emissions** PM10

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 hrs/day
24 hrs/day

**Onsite Running Exhaust Emissions** PM10 Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.050 | 17378 | 330 | 0.21 | 1.77E+02 | 3.90E-01 | 2.05E-03 | |
| | LDT1 | 15 | 0.051 | 2059 | 330 | 0.21 | 2.15E+01 | 4.74E-02 | 2.49E-04 | |
| | LDT2 | 15 | 0.050 | 6276 | 330 | 0.21 | 6.40E+01 | 1.41E-01 | 7.40E-04 | |
| | MDT | 15 | 0.050 | 4845 | 330 | 0.21 | 4.94E+01 | 1.09E-01 | 5.72E-04 | |
| | LHDT1 | 15 | 0.087 | 888 | 330 | 0.21 | 1.59E+01 | 3.51E-02 | 1.84E-04 | |
| | LHDT2 | 15 | 0.100 | 93 | 330 | 0.21 | 1.91E+00 | 4.20E-03 | 2.21E-05 | |
| | MHDT | 15 | 0.145 | 329 | 330 | 0.21 | 9.77E+00 | 2.15E-02 | 1.13E-04 | |
| | HHDT | 15 | 0.085 | 80 | 330 | 0.21 | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | | | | | | | | | | 3.94E-03 |
| Travel at Light Logistics | LDA | 15 | 0.050 | 74 | 175 | 0.11 | 3.98E-01 | 8.78E-04 | 4.61E-06 | |
| | LDT1 | 15 | 0.051 | 9 | 175 | 0.11 | 4.85E-02 | 1.07E-04 | 5.61E-07 | |
| | LDT2 | 15 | 0.050 | 27 | 175 | 0.11 | 1.44E-01 | 3.17E-04 | 1.67E-06 | |
| | MDT | 15 | 0.050 | 21 | 175 | 0.11 | 1.11E-01 | 2.45E-04 | 1.29E-06 | |
| | LHDT1 | 15 | 0.087 | 6 | 175 | 0.11 | 5.28E-02 | 1.16E-04 | 6.11E-07 | |
| | LHDT2 | 15 | 0.100 | 1 | 175 | 0.11 | 6.33E-03 | 1.39E-05 | 7.32E-08 | |
| | MHDT | 15 | 0.145 | 1 | 175 | 0.11 | 2.13E-02 | 4.70E-05 | 2.47E-07 | |
| | HHDT | 15 | 0.085 | 0 | 175 | 0.11 | 2.52E-03 | 5.55E-06 | 2.92E-08 | 9.09E-06 |
| Travel at Utility | LDA | 15 | 0.050 | 109 | 100 | 0.06 | 3.36E-01 | 7.39E-04 | 3.88E-06 | |
| | LDT1 | 15 | 0.051 | 13 | 100 | 0.06 | 4.08E-02 | 9.00E-05 | 4.73E-07 | |
| | LDT2 | 15 | 0.050 | 39 | 100 | 0.06 | 1.21E-01 | 2.67E-04 | 1.40E-06 | |
| | MDT | 15 | 0.050 | 30 | 100 | 0.06 | 9.38E-02 | 2.07E-04 | 1.09E-06 | |
| | LHDT1 | 15 | 0.087 | 19 | 100 | 0.06 | 1.01E-01 | 2.22E-04 | 1.17E-06 | |
| | LHDT2 | 15 | 0.100 | 2 | 100 | 0.06 | 1.21E-02 | 2.66E-05 | 1.40E-07 | |
| | MHDT | 15 | 0.145 | 1 | 100 | 0.06 | 1.01E-02 | 2.22E-05 | 1.17E-07 | |
| | HHDT | 15 | 0.085 | 0 | 100 | 0.06 | 1.97E-03 | 4.33E-06 | 2.27E-08 | 8.29E-06 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.050 | 63 | 50 | 0.03 | 9.72E-02 | 2.14E-04 | 1.12E-06 | |
| | LDT1 | 15 | 0.051 | 7 | 50 | 0.03 | 1.18E-02 | 2.61E-05 | 1.37E-07 | |
| | LDT2 | 15 | 0.050 | 23 | 50 | 0.03 | 3.51E-02 | 7.74E-05 | 4.07E-07 | |
| | MDT | 15 | 0.050 | 18 | 50 | 0.03 | 2.71E-02 | 5.98E-05 | 3.14E-07 | |
| | LHDT1 | 15 | 0.087 | 3 | 50 | 0.03 | 7.06E-03 | 1.55E-05 | 8.17E-08 | |
| | LHDT2 | 15 | 0.100 | 0 | 50 | 0.03 | 8.46E-04 | 1.86E-06 | 9.79E-09 | |
| | MHDT | 15 | 0.145 | 3 | 50 | 0.03 | 1.43E-02 | 3.15E-05 | 1.65E-07 | |
| | HHDT | 15 | 0.085 | 1 | 50 | 0.03 | 3.87E-03 | 8.52E-06 | 4.48E-08 | 2.28E-06 |
| Travel at Convenience Store | LDA | 15 | 0.050 | 104 | 50 | 0.03 | 1.61E-01 | 3.55E-04 | 1.86E-06 | |
| | LDT1 | 15 | 0.051 | 12 | 50 | 0.03 | 1.96E-02 | 4.32E-05 | 2.27E-07 | |
| | LDT2 | 15 | 0.050 | 38 | 50 | 0.03 | 5.83E-02 | 1.28E-04 | 6.74E-07 | |
| | MDT | 15 | 0.050 | 29 | 50 | 0.03 | 4.50E-02 | 9.91E-05 | 5.21E-07 | |
| | LHDT1 | 15 | 0.087 | 4 | 50 | 0.03 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | LHDT2 | 15 | 0.100 | 0 | 50 | 0.03 | 1.29E-03 | 2.84E-06 | 1.49E-08 | |
| | MHDT | 15 | 0.145 | 5 | 50 | 0.03 | 2.34E-02 | 5.15E-05 | 2.71E-07 | |
| | HHDT | 15 | 0.085 | 2 | 50 | 0.03 | 6.05E-03 | 1.33E-05 | 7.00E-08 | 3.77E-06 |
| Travel at Fire Station | LDA | 15 | 0.050 | 78 | 50 | 0.03 | 1.20E-01 | 2.64E-04 | 1.39E-06 | |
| | LDT1 | 15 | 0.051 | 9 | 50 | 0.03 | 1.46E-02 | 3.21E-05 | 1.69E-07 | |
| | LDT2 | 15 | 0.050 | 28 | 50 | 0.03 | 4.34E-02 | 9.55E-05 | 5.02E-07 | |
| | MDT | 15 | 0.050 | 22 | 50 | 0.03 | 3.35E-02 | 7.38E-05 | 3.88E-07 | |
| | LHDT1 | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-06 |
| Total - All Buildings | LDA | | | 17806 | | | 1.78E+02 | 3.92E-01 | 2.06E-03 | |
| | LDT1 | | | 2109 | | | 2.17E+01 | 4.77E-02 | 2.51E-04 | |
| | LDT2 | | | 6430 | | | 6.44E+01 | 1.42E-01 | 7.45E-04 | |
| | MDT | | | 4964 | | | 4.97E+01 | 1.10E-01 | 5.76E-04 | |
| | LHDT1 | | | 919 | | | 1.61E+01 | 3.54E-02 | 1.86E-04 | |
| | LHDT2 | | | 96 | | | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | MHDT | | | 340 | | | 9.84E+00 | 2.17E-02 | 1.14E-04 | |
| | HHDT | | | 84 | | | 1.40E+00 | 3.09E-03 | 1.62E-05 | |
| | Total | | | 32749 | | | 3.43E+02 | 7.56E-01 | 3.97E-03 | 3.97E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.040 | 5 | 444 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | **LHDT2** | 0.035 | 5 | 47 | 1.35E-01 | 2.97E-04 | 1.56E-06 | |
| | **MHDT** | 0.035 | 5 | 164 | 4.77E-01 | 1.05E-03 | 5.53E-06 | |
| | **HHDT** | 0.035 | 5 | 40 | 1.16E-01 | 2.56E-04 | 1.34E-06 | |
| | | | | 695 | 2.20E+00 | 4.84E-03 | 2.54E-05 | 2.54E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.040 | 5 | 3 | 9.18E-03 | 2.02E-05 | 1.06E-07 | |
| | **LHDT2** | 0.035 | 5 | 0 | 8.43E-04 | 1.86E-06 | 9.76E-09 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.97E-03 | 4.33E-06 | 2.28E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 3.97E-04 | 8.75E-07 | 4.60E-09 | |
| | | | | 4 | 1.24E-02 | 2.73E-05 | 1.43E-07 | 1.43E-07 |
| **Idle at Utility** | **LHDT1** | 0.040 | 5 | 9 | 3.06E-02 | 6.75E-05 | 3.55E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.81E-03 | 6.20E-06 | 3.26E-08 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.63E-03 | 3.58E-06 | 1.88E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 5.42E-04 | 1.19E-06 | 6.27E-09 | |
| | | | | 11 | 3.56E-02 | 7.84E-05 | 4.12E-07 | 4.12E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.040 | 5 | 1 | 4.30E-03 | 9.46E-06 | 4.97E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 3.94E-04 | 8.69E-07 | 4.57E-09 | |
| | **MHDT** | 0.035 | 5 | 2 | 4.61E-03 | 1.01E-05 | 5.33E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 2.13E-03 | 4.70E-06 | 2.47E-08 | |
| | | | | 4 | 1.14E-02 | 2.52E-05 | 1.32E-07 | 1.32E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.040 | 5 | 2 | 6.56E-03 | 1.44E-05 | 7.59E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 6.02E-04 | 1.33E-06 | 6.97E-09 | |
| | **MHDT** | 0.035 | 5 | 3 | 7.54E-03 | 1.66E-05 | 8.73E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 3.34E-03 | 7.35E-06 | 3.86E-08 | |
| | | | | 6 | 1.80E-02 | 3.97E-05 | 2.09E-07 | 2.09E-07 |
| **Idle at Firestation** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 2.27E+00 | 5.01E-03 | 2.63E-05 | 2.63E-05 |

**World Logistics Center** With EMFAC2014 **2027 Phase 2** No Mitigation
**PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 2**

No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 8.52E-04 | 1.87E-03 |
| Light Logistics | Phase 2 | 1.22E-05 | 3.09E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 8.64E-04 | 1.90E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 5.99E-05 | 1.20E-05 |
| Light Logistics | Phase 2 | 2.50E-06 | 4.87E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 6.24E-05 | 1.25E-05 |

**Total Onsite Mobile Emissiona**

| | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust (g/sec) | 8.64E-04 | 1.90E-03 |
| Idling Emissions (g/sec) | 6.24E-05 | 1.25E-05 |
| Total Vehicle Emissions (g/sec) | 9.26E-04 | 1.91E-03 |

**Other Onsite Emissions**

| | | |
|---|---|---|
| Yard Trucks (LPG) (g/sec) | | 2.82E-04 |
| Forklifts (LPG) (g/sec) | | 1.49E-04 |
| Total Other Onsite Emissions (g/sec) | | 4.30E-04 |

| | | | Total |
|---|---|---|---|
| Total All Sources (g/sec) | 9.26E-04 | 2.34E-03 | 3.27E-03 |
| Area (m2) | | | 4.69E+06 |
| Total Emission Rate (g/m2-sec) | | | 6.97E-10 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.054 | 26 | 330 | 0.21 | 2.88E-01 | 6.35E-04 | 3.33E-06 | |
| | **LDT1** | 15 | 0.139 | 1 | 330 | 0.21 | 3.97E-02 | 8.75E-05 | 4.60E-07 | |
| | **LDT2** | 15 | 0.053 | 1 | 330 | 0.21 | 1.46E-02 | 3.22E-05 | 1.69E-07 | |
| | **MDT** | 15 | 0.051 | 2 | 330 | 0.21 | 2.43E-02 | 5.35E-05 | 2.81E-07 | |
| | **LHDT1** | 15 | 0.112 | 130 | 330 | 0.21 | 2.99E+00 | 6.59E-03 | 3.46E-05 | |
| | **LHDT2** | 15 | 0.120 | 43 | 330 | 0.21 | 1.05E+00 | 2.31E-03 | 1.22E-05 | |
| | **MHDT** | 15 | 0.147 | 683 | 330 | 0.21 | 2.05E+01 | 4.52E-02 | 2.38E-04 | |
| | **HHDT** | 15 | 0.108 | 2204 | 330 | 0.21 | 4.86E+01 | 1.07E-01 | 5.63E-04 | |
| | | | | | | | | | | 8.52E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.054 | 1 | 175 | 0.11 | 4.65E-03 | 1.02E-05 | 5.38E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 175 | 0.11 | 6.41E-04 | 1.41E-06 | 7.42E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 2.36E-04 | 5.21E-07 | 2.74E-09 | |
| | **MDT** | 15 | 0.051 | 0 | 175 | 0.11 | 3.92E-04 | 8.63E-07 | 4.54E-09 | |
| | **LHDT1** | 15 | 0.112 | 6 | 175 | 0.11 | 7.12E-02 | 1.57E-04 | 8.24E-07 | |
| | **LHDT2** | 15 | 0.120 | 2 | 175 | 0.11 | 2.50E-02 | 5.50E-05 | 2.89E-07 | |
| | **MHDT** | 15 | 0.147 | 20 | 175 | 0.11 | 3.22E-01 | 7.08E-04 | 3.72E-06 | |
| | **HHDT** | 15 | 0.108 | 54 | 175 | 0.11 | 6.33E-01 | 1.39E-03 | 7.32E-06 | 1.22E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.054 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.108 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.108 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 27 | | | 2.93E-01 | 6.45E-04 | 3.39E-06 | |
| | **LDT1** | | | 1 | | | 4.04E-02 | 8.89E-05 | 4.67E-07 | |
| | **LDT2** | | | 1 | | | 1.49E-02 | 3.28E-05 | 1.72E-07 | |
| | **MDT** | | | 2 | | | 2.47E-02 | 5.43E-05 | 2.86E-07 | |
| | **LHDT1** | | | 136 | | | 3.06E+00 | 6.75E-03 | 3.55E-05 | |
| | **LHDT2** | | | 45 | | | 1.07E+00 | 2.37E-03 | 1.24E-05 | |
| | **MHDT** | | | 703 | | | 2.09E+01 | 4.60E-02 | 2.41E-04 | |
| | **HHDT** | | | 2258 | | | 4.93E+01 | 1.09E-01 | 5.70E-04 | |
| | **Total** | | | 3174 | | | 7.46E+01 | 1.64E-01 | 8.64E-04 | 8.64E-04 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.600 | 5 | 65 | 3.26E+00 | 7.18E-03 | 3.77E-05 | |
| | **LHDT2** | 0.615 | 5 | 21 | 1.09E+00 | 2.41E-03 | 1.26E-05 | |
| | **MHDT** | 0.003 | 5 | 341 | 9.39E-02 | 2.07E-04 | 1.09E-06 | |
| | **HHDT** | 0.008 | 5 | 1102 | 7.35E-01 | 1.62E-03 | 8.50E-06 | |
| | | | | 1530 | 5.18E+00 | 1.14E-02 | 5.99E-05 | 5.99E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.600 | 5 | 3 | 1.46E-01 | 3.22E-04 | 1.69E-06 | |
| | **LHDT2** | 0.615 | 5 | 1 | 4.90E-02 | 1.08E-04 | 5.67E-07 | |
| | **MHDT** | 0.003 | 5 | 10 | 2.77E-03 | 6.10E-06 | 3.21E-08 | |
| | **HHDT** | 0.008 | 5 | 27 | 1.80E-02 | 3.97E-05 | 2.09E-07 | |
| | | | | 41 | 2.16E-01 | 4.75E-04 | 2.50E-06 | 2.50E-06 |
| **Idle at Utility** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 1571 | 5.39E+00 | 1.19E-02 | 6.24E-05 | 6.24E-05 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 8234 | 330 | 0.21 | 8.38E+01 | 1.85E-01 | 9.70E-04 | |
| | **LDT1** | 15 | 0.051 | 975 | 330 | 0.21 | 1.02E+01 | 2.25E-02 | 1.18E-04 | |
| | **LDT2** | 15 | 0.050 | 2973 | 330 | 0.21 | 3.03E+01 | 6.68E-02 | 3.51E-04 | |
| | **MDT** | 15 | 0.050 | 2296 | 330 | 0.21 | 2.34E+01 | 5.16E-02 | 2.71E-04 | |
| | **LHDT1** | 15 | 0.087 | 421 | 330 | 0.21 | 7.54E+00 | 1.66E-02 | 8.73E-05 | |
| | **LHDT2** | 15 | 0.100 | 44 | 330 | 0.21 | 9.03E-01 | 1.99E-03 | 1.05E-05 | |
| | **MHDT** | 15 | 0.145 | 156 | 330 | 0.21 | 4.63E+00 | 1.02E-02 | 5.36E-05 | |
| | **HHDT** | 15 | 0.085 | 38 | 330 | 0.21 | 6.58E-01 | 1.45E-03 | 7.62E-06 | |
| | | | | | | | | | | 1.87E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 251 | 175 | 0.11 | 1.35E+00 | 2.98E-03 | 1.57E-05 | |
| | **LDT1** | 15 | 0.051 | 30 | 175 | 0.11 | 1.65E-01 | 3.63E-04 | 1.91E-06 | |
| | **LDT2** | 15 | 0.050 | 91 | 175 | 0.11 | 4.89E-01 | 1.08E-03 | 5.66E-06 | |
| | **MDT** | 15 | 0.050 | 70 | 175 | 0.11 | 3.78E-01 | 8.33E-04 | 4.37E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 175 | 0.11 | 1.79E-01 | 3.95E-04 | 2.07E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 175 | 0.11 | 2.15E-02 | 4.73E-05 | 2.49E-07 | |
| | **MHDT** | 15 | 0.145 | 5 | 175 | 0.11 | 7.25E-02 | 1.60E-04 | 8.39E-07 | |
| | **HHDT** | 15 | 0.085 | 1 | 175 | 0.11 | 8.56E-03 | 1.89E-05 | 9.91E-08 | 3.09E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 8484 | | | 8.52E+01 | 1.88E-01 | 9.86E-04 | |
| | **LDT1** | | | 1005 | | | 1.04E+01 | 2.28E-02 | 1.20E-04 | |
| | **LDT2** | | | 3064 | | | 3.08E+01 | 6.78E-02 | 3.56E-04 | |
| | **MDT** | | | 2365 | | | 2.38E+01 | 5.24E-02 | 2.75E-04 | |
| | **LHDT1** | | | 440 | | | 7.72E+00 | 1.70E-02 | 8.93E-05 | |
| | **LHDT2** | | | 46 | | | 9.25E-01 | 2.04E-03 | 1.07E-05 | |
| | **MHDT** | | | 160 | | | 4.70E+00 | 1.04E-02 | 5.44E-05 | |
| | **HHDT** | | | 39 | | | 6.67E-01 | 1.47E-03 | 7.72E-06 | |
| | **Total** | | | 15604 | | | 1.64E+02 | 3.62E-01 | 1.90E-03 | 1.90E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.040 | 5 | 210 | 6.95E-01 | 1.53E-03 | 8.05E-06 | |
| | **LHDT2** | 0.035 | 5 | 22 | 6.38E-02 | 1.41E-04 | 7.39E-07 | |
| | **MHDT** | 0.035 | 5 | 78 | 2.26E-01 | 4.98E-04 | 2.62E-06 | |
| | **HHDT** | 0.035 | 5 | 19 | 5.50E-02 | 1.21E-04 | 6.37E-07 | |
| | | | | 329 | 1.04E+00 | 2.29E-03 | 1.20E-05 | 1.20E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.040 | 5 | 9 | 3.12E-02 | 6.86E-05 | 3.61E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.86E-03 | 6.30E-06 | 3.31E-08 | |
| | **MHDT** | 0.035 | 5 | 2 | 6.68E-03 | 1.47E-05 | 7.73E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 1.35E-03 | 2.97E-06 | 1.56E-08 | |
| | | | | 13 | 4.21E-02 | 9.26E-05 | 4.87E-07 | 4.87E-07 |
| **Idle at Utility** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 343 | 1.08E+00 | 2.38E-03 | 1.25E-05 | 1.25E-05 |

**World Logistics Center Project in 2027** | **2027** | **PM10** | Based on PB Traffic Results 10/3/2013

**With EMFAC2014** | No Mitigation | Rev 5

**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Entrained Road Dist (g/sec) | Total (g/sec) |
|---|---|---|---|---|
| 1 | 2.64E-03 | 2.24E-03 | 2.92E-02 | 3.41E-02 |
| 2 | 6.70E-03 | 5.80E-03 | 7.40E-02 | 8.65E-02 |
| 3 | 9.33E-03 | 8.16E-03 | 1.03E-01 | 1.21E-01 |
| 5 | 5.72E-04 | 2.20E-03 | 7.05E-03 | 9.83E-03 |
| 6 | 3.12E-03 | 3.44E-03 | 4.47E-02 | 5.12E-02 |
| 8 | 9.28E-04 | 3.89E-03 | 1.45E-02 | 1.93E-02 |
| 11 | 1.77E-05 | 7.93E-05 | 2.51E-04 | 3.48E-04 |
| 12 | 5.59E-05 | 1.33E-04 | 5.39E-04 | 7.28E-04 |
| 14 | 1.30E-03 | 1.37E-03 | 1.45E-02 | 1.71E-02 |
| 18 | 5.21E-04 | 8.09E-04 | 6.04E-03 | 7.37E-03 |
| 19 | 2.02E-03 | 1.53E-03 | 2.52E-02 | 2.88E-02 |
| 21 | 1.47E-03 | 2.69E-03 | 1.91E-02 | 2.32E-02 |
| 24 | 2.47E-03 | 4.75E-03 | 3.59E-02 | 4.31E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 8.03E-04 | 7.48E-04 | 9.03E-03 | 1.06E-02 |
| 30 | 3.88E-03 | 4.25E-03 | 4.41E-02 | 5.23E-02 |
| 31 | 8.21E-04 | 2.04E-03 | 1.10E-02 | 1.39E-02 |
| Total (g/sec) | 3.67E-02 | 4.41E-02 | 4.38E-01 | 5.19E-01 |
| Total (lbs/day) | 6.98E+00 | 8.40E+00 | 8.34E+01 | 9.88E+01 |
| Total VMT (mi/day) | 2.75E+04 | 7.59E+04 | | 1.03E+05 |

**World Logistics Center** **2027**
**Vehicle Fleet Mix**

**Vehicle VMT for SoCAB as per EMFAC2011 @ All Speeds**

| **GAS Vehicle Class** | **VMT (mils/day)** |
|---|---|
| LDA-GAS | 207,171,313 |
| LDT1-GAS | 25,231,789 |
| LDT2-GAS | 76,923,082 |
| MDT-GAS | 59,595,978 |
| LHDT1-GAS | 14,199,272 |
| LHDT2-GAS | 1,499,571 |
| MHDT-GAS | 1,298,377 |
| HHDT-GAS | 239,072 |
| Subtotal | 386158455 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 647,950.68 |
| LDT1-DSL | 39,165.61 |
| LDT2-DSL | 35,014.72 |
| MDT-DSL | 62,136.30 |
| LHDT1-DSL | 4,406,150.09 |
| LHDT2-DSL | 1,462,067.79 |
| MHDT-DSL | 5,692,458.73 |
| HHDT-DSL | 15,124,324.79 |
| Subtotal | 27469269 |
| | |
| Grand Total | 413627724 |

| **Vehicle Class** | | **VMT-GAS** | **VMT-DSL** | **VMT-Total** | **% VMT-Total** | **%GAS** | **%DSL** |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 207171313 | 647951 | 207819264 | 56.21% | 99.7% | 0.31% |
| LDT1 | | 25231789 | 39166 | 25270955 | 6.84% | 99.8% | 0.15% |
| LDT2 | | 76923082 | 35015 | 76958097 | 20.82% | 100.0% | 0.05% |
| MDT | | 59595978 | 62136 | 59658114 | 16.14% | 99.9% | 0.10% |
| Subtotal | | 368922162 | 784267 | 369706430 | 100.00% | 99.8% | 0.21% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 14199272 | 4406150 | 18605422 | 86.27% | 76.3% | 23.68% |
| LHDT2 | | 1499571 | 1462068 | 2961638 | 13.73% | 50.6% | 49.37% |
| Subtotal | | 15698843 | 5868218 | 21567061 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1298377 | 5692459 | 6990836 | 100% | 18.6% | 81.43% |
| HHDT | Heavy Heavy Truck | 239072 | 15124325 | 15363397 | 100% | 1.6% | 98.44% |

**World Logistics Center** **2027** **PM10** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 31 | 2 | 2 | 3 | 162 | 54 | 1952 | 7683 | 9889 | 2009 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 35 | 2 | 2 | 3 | 299 | 99 | 2230 | 8568 | 11239 | 5104 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2,352 | 1.461 | 15 | 1 | 1 | 1 | 127 | 42 | 973 | 3702 | 4863 | 7105 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 11 | 1 | 1 | 1 | 55 | 18 | 453 | 85 | 624 | 369 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1,099 | 0.683 | 14 | 1 | 1 | 1 | 100 | 33 | 781 | 2512 | 3443 | 2351 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1,091 | 0.678 | 17 | 1 | 1 | 2 | 90 | 30 | 716 | 0 | 857 | 581 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1,201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 11 | 0 | 15 | 11 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 14 | 5 | 50 | 0 | 70 | 36 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1,618 | 1.005 | 4 | 0 | 0 | 0 | 42 | 14 | 219 | 700 | 978 | 983 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1,412 | 0.877 | 3 | 0 | 0 | 0 | 20 | 7 | 131 | 277 | 438 | 384 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2,386 | 1.482 | 3 | 0 | 0 | 0 | 23 | 8 | 204 | 801 | 1040 | 1541 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1,258 | 0.781 | 10 | 1 | 1 | 1 | 53 | 18 | 464 | 820 | 1367 | 1068 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1,946 | 1.209 | 12 | 1 | 1 | 1 | 51 | 17 | 452 | 972 | 1506 | 1821 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 5 | 0 | 0 | 0 | 28 | 9 | 289 | 1128 | 1459 | 612 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2,827 | 1.756 | 7 | 0 | 0 | 1 | 38 | 12 | 370 | 1242 | 1671 | 2934 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 12 | 1 | 1 | 1 | 49 | 16 | 411 | 678 | 1168 | 595 |
| | | | | | | | | | | | | | | | | Total | 27504 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0490 | 0.0837 | 0.0494 | 0.0481 | 0.1045 | 0.1145 | 0.1458 | 0.1056 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.59E-06 | 3.71E-07 | 1.96E-07 | 3.38E-07 | 3.99E-05 | 1.45E-05 | 6.69E-04 | 1.91E-03 | 2.64E-03 |
| 2 | 1 | 8.98E-06 | 9.28E-07 | 4.90E-07 | 8.46E-07 | 1.64E-04 | 5.97E-05 | 1.71E-03 | 4.76E-03 | 6.70E-03 |
| 3 | 1 | 1.27E-05 | 1.31E-06 | 6.93E-07 | 1.20E-06 | 2.24E-04 | 8.15E-05 | 2.40E-03 | 6.61E-03 | 9.33E-03 |
| 5 | 1 | 3.66E-06 | 3.78E-07 | 2.00E-07 | 3.44E-07 | 3.93E-05 | 1.43E-05 | 4.53E-04 | 6.13E-05 | 5.72E-04 |
| 6 | 1 | 5.48E-06 | 5.66E-07 | 2.99E-07 | 5.16E-07 | 8.28E-05 | 3.01E-05 | 9.00E-04 | 2.10E-03 | 3.12E-03 |
| 8 | 1 | 6.43E-06 | 6.65E-07 | 3.51E-07 | 6.05E-07 | 7.39E-05 | 2.69E-05 | 8.20E-04 | 0.00E+00 | 9.28E-04 |
| 11 | 1 | 1.27E-07 | 1.32E-08 | 6.95E-09 | 1.20E-08 | 2.40E-06 | 8.72E-07 | 1.42E-05 | 0.00E+00 | 1.77E-05 |
| 12 | 1 | 1.79E-07 | 1.85E-08 | 9.79E-09 | 1.69E-08 | 8.82E-06 | 3.21E-06 | 4.36E-05 | 0.00E+00 | 5.59E-05 |
| 14 | 1 | 2.07E-06 | 2.14E-07 | 1.13E-07 | 1.95E-07 | 5.05E-05 | 1.84E-05 | 3.71E-04 | 8.60E-04 | 1.30E-03 |
| 18 | 1 | 1.29E-06 | 1.33E-07 | 7.03E-08 | 1.21E-07 | 2.17E-05 | 7.88E-06 | 1.94E-04 | 2.97E-04 | 5.21E-04 |
| 19 | 1 | 2.36E-06 | 2.43E-07 | 1.29E-07 | 2.22E-07 | 4.17E-05 | 1.52E-05 | 5.12E-04 | 1.45E-03 | 2.02E-03 |
| 21 | 1 | 4.42E-06 | 4.57E-07 | 2.41E-07 | 4.16E-07 | 5.02E-05 | 1.82E-05 | 6.12E-04 | 7.84E-04 | 1.47E-03 |
| 24 | 1 | 7.95E-06 | 8.21E-07 | 4.34E-07 | 7.48E-07 | 7.47E-05 | 2.72E-05 | 9.23E-04 | 1.44E-03 | 2.47E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.21E-06 | 1.25E-07 | 6.58E-08 | 1.14E-07 | 1.40E-05 | 5.10E-06 | 2.04E-04 | 5.78E-04 | 8.03E-04 |
| 30 | 1 | 6.89E-06 | 7.12E-07 | 3.76E-07 | 6.48E-07 | 7.96E-05 | 2.90E-05 | 1.10E-03 | 2.67E-03 | 3.88E-03 |
| 31 | 1 | 3.45E-06 | 3.57E-07 | 1.88E-07 | 3.25E-07 | 3.05E-05 | 1.11E-05 | 3.53E-04 | 4.22E-04 | 8.21E-04 |

**World Logistics Center** **2027** **PM10** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 9,974 | 1,215 | 3,703 | 2,869 | 523 | 55 | 445 | 121 | 18,905 | 3,840 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 11,159 | 1,359 | 4,144 | 3,210 | 964 | 102 | 509 | 135 | 21,582 | 9,800 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 4,903 | 597 | 1,820 | 1,410 | 409 | 43 | 222 | 59 | 9,463 | 13,827 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 3,485 | 424 | 1,294 | 1,002 | 177 | 19 | 103 | 1 | 6,505 | 3,851 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 4,526 | 551 | 1,681 | 1,302 | 323 | 34 | 178 | 40 | 8,635 | 5,895 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 5,353 | 652 | 1,988 | 1,540 | 291 | 31 | 163 | 0 | 10,017 | 6,789 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 96 | 12 | 36 | 28 | 9 | 1 | 3 | 0 | 183 | 137 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 198 | 24 | 73 | 57 | 46 | 5 | 12 | 0 | 415 | 212 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 1,162 | 142 | 432 | 334 | 134 | 14 | 50 | 11 | 2,279 | 2,290 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 829 | 101 | 308 | 238 | 66 | 7 | 30 | 4 | 1,583 | 1,388 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 897 | 109 | 333 | 258 | 75 | 8 | 47 | 13 | 1,739 | 2,578 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 3,191 | 389 | 1,185 | 918 | 171 | 18 | 106 | 13 | 5,991 | 4,682 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 3,708 | 452 | 1,377 | 1,067 | 165 | 17 | 103 | 15 | 6,904 | 8,346 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 1,623 | 198 | 603 | 467 | 89 | 9 | 66 | 18 | 3,072 | 1,288 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 2,213 | 270 | 822 | 637 | 121 | 13 | 84 | 20 | 4,178 | 7,338 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 3,822 | 466 | 1,419 | 1,099 | 159 | 17 | 94 | 11 | 7,087 | 3,610 |
| | | | | | | | | | | | | | | | | Total | 75,872 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0466 | 0.0470 | 0.0466 | 0.0466 | 0.0858 | 0.0985 | 0.1435 | 0.0835 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.09E-03 | 1.34E-04 | 4.05E-04 | 3.14E-04 | 1.05E-04 | 1.28E-05 | 1.50E-04 | 2.38E-05 | 2.24E-03 |
| 2 | 1 | 2.73E-03 | 3.36E-04 | 1.01E-03 | 7.86E-04 | 4.34E-04 | 5.27E-05 | 3.84E-04 | 5.94E-05 | 5.80E-03 |
| 3 | 1 | 3.86E-03 | 4.75E-04 | 1.43E-03 | 1.11E-03 | 5.93E-04 | 7.19E-05 | 5.39E-04 | 8.26E-05 | 8.16E-03 |
| 5 | 1 | 1.11E-03 | 1.37E-04 | 4.13E-04 | 3.20E-04 | 1.04E-04 | 1.26E-05 | 1.02E-04 | 7.66E-07 | 2.20E-03 |
| 6 | 1 | 1.66E-03 | 2.05E-04 | 6.18E-04 | 4.79E-04 | 2.19E-04 | 2.66E-05 | 2.02E-04 | 2.62E-05 | 3.44E-03 |
| 8 | 1 | 1.95E-03 | 2.40E-04 | 7.26E-04 | 5.63E-04 | 1.95E-04 | 2.37E-05 | 1.84E-04 | 0.00E+00 | 3.89E-03 |
| 11 | 1 | 3.87E-05 | 4.76E-06 | 1.44E-05 | 1.11E-05 | 6.34E-06 | 7.69E-07 | 3.20E-06 | 0.00E+00 | 7.93E-05 |
| 12 | 1 | 5.46E-05 | 6.71E-06 | 2.03E-05 | 1.57E-05 | 2.33E-05 | 2.83E-06 | 9.79E-06 | 0.00E+00 | 1.33E-04 |
| 14 | 1 | 6.29E-04 | 7.74E-05 | 2.34E-04 | 1.81E-04 | 1.33E-04 | 1.62E-05 | 8.34E-05 | 1.07E-05 | 1.37E-03 |
| 18 | 1 | 3.92E-04 | 4.82E-05 | 1.45E-04 | 1.13E-04 | 5.73E-05 | 6.95E-06 | 4.34E-05 | 3.71E-06 | 8.09E-04 |
| 19 | 1 | 7.16E-04 | 8.81E-05 | 2.66E-04 | 2.06E-04 | 1.10E-04 | 1.34E-05 | 1.15E-04 | 1.81E-05 | 1.53E-03 |
| 21 | 1 | 1.34E-03 | 1.65E-04 | 4.99E-04 | 3.87E-04 | 1.33E-04 | 1.61E-05 | 1.37E-04 | 9.80E-06 | 2.69E-03 |
| 24 | 1 | 2.42E-03 | 2.97E-04 | 8.97E-04 | 6.95E-04 | 1.98E-04 | 2.40E-05 | 2.07E-04 | 1.80E-05 | 4.75E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.67E-04 | 4.51E-05 | 1.36E-04 | 1.06E-04 | 3.71E-05 | 4.49E-06 | 4.58E-05 | 7.22E-06 | 7.48E-04 |
| 30 | 1 | 2.09E-03 | 2.58E-04 | 7.78E-04 | 6.03E-04 | 2.11E-04 | 2.56E-05 | 2.46E-04 | 3.33E-05 | 4.25E-03 |
| 31 | 1 | 1.05E-03 | 1.29E-04 | 3.90E-04 | 3.02E-04 | 8.06E-05 | 9.77E-06 | 7.92E-05 | 5.27E-06 | 2.04E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 17,798 | 3615 | 794 | 161 | 2,397 | 487 | 7,804 | 1585 | 5849 | 8.75 | 0.035 | 0.0010 | 5.6 | 2.92E-02 |
| 2 | A | 731 | 0.45 | 19,915 | 9043 | 1,464 | 665 | 2,739 | 1244 | 8,703 | 3952 | 14904 | 8.69 | 0.035 | 0.0009 | 14.1 | 7.40E-02 |
| 3 | A | 2352 | 1.46 | 8,750 | 12784 | 621 | 907 | 1,195 | 1747 | 3,761 | 5495 | 20932 | 8.63 | 0.035 | 0.0009 | 19.6 | 1.03E-01 |
| 5 | A | 870 | 0.54 | 6,218 | 3361 | 269 | 145 | 556 | 301 | 86 | 46 | 3853 | 3.27 | 0.035 | 0.0003 | 1.3 | 7.05E-03 |
| 6 | A | 1394 | 0.87 | 8,078 | 6995 | 491 | 425 | 959 | 830 | 2,552 | 2210 | 10460 | 7.50 | 0.035 | 0.0008 | 8.5 | 4.47E-02 |
| 8 | A | 1254 | 0.78 | 9,553 | 7442 | 441 | 344 | 880 | 685 | 0 | 0 | 8471 | 3.05 | 0.035 | 0.0003 | 2.8 | 1.45E-02 |
| 11 | A | 1201 | 0.75 | 172 | 128 | 13 | 10 | 14 | 10 | 0 | 0 | 148 | 3.03 | 0.035 | 0.0003 | 0.0 | 2.51E-04 |
| 12 | A | 824 | 0.51 | 353 | 181 | 70 | 36 | 62 | 32 | 0 | 0 | 248 | 3.86 | 0.035 | 0.0004 | 0.1 | 5.39E-04 |
| 14 | A | 1618 | 1.01 | 2,074 | 2085 | 203 | 204 | 269 | 270 | 711 | 714 | 3274 | 7.75 | 0.035 | 0.0008 | 2.8 | 1.45E-02 |
| 18 | A | 1412 | 0.88 | 1,479 | 1297 | 100 | 88 | 161 | 141 | 281 | 247 | 1772 | 6.01 | 0.035 | 0.0006 | 1.1 | 6.04E-03 |
| 19 | A | 2737 | 1.70 | 1,600 | 2721 | 114 | 194 | 251 | 427 | 813 | 1383 | 4724 | 9.33 | 0.035 | 0.0010 | 4.8 | 2.52E-02 |
| 21 | A | 1367 | 0.85 | 5,695 | 4836 | 260 | 221 | 570 | 484 | 833 | 708 | 6248 | 5.39 | 0.035 | 0.0006 | 3.6 | 1.91E-02 |
| 24 | A | 2271 | 1.41 | 6,617 | 9335 | 250 | 353 | 555 | 784 | 987 | 1393 | 11865 | 5.35 | 0.035 | 0.0006 | 6.8 | 3.59E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 2,896 | 1214 | 135 | 57 | 354 | 149 | 1,145 | 480 | 1900 | 8.33 | 0.035 | 0.0009 | 1.7 | 9.03E-03 |
| 30 | A | 2827 | 1.76 | 3,949 | 6935 | 184 | 322 | 454 | 798 | 1,262 | 2216 | 10271 | 7.54 | 0.035 | 0.0008 | 8.4 | 4.41E-02 |
| 31 | A | 830 | 0.52 | 6,821 | 3517 | 242 | 125 | 504 | 260 | 688 | 355 | 4256 | 4.58 | 0.035 | 0.0005 | 2.1 | 1.10E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.78E-03 | 3.75E-03 |
| Light Logistics | Phase 1 | 3.56E-06 | 8.56E-06 |
| Utilities Service Station | Phase 1 | 2.81E-06 | 7.57E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.03E-06 | 2.10E-06 |
| Convenience Store | Phase 1 | 6.35E-06 | 3.47E-06 |
| Fire Station | Phase 1 | 6.05E-09 | 2.43E-06 |
| Total | | 1.79E-03 | 3.77E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 1 | 1.26E-04 | 2.54E-05 |
| Light Logistics | Phase 1 | 7.35E-07 | 1.43E-07 |
| Utilities Service Station | Phase 1 | 2.31E-06 | 4.12E-07 |
| Gas Station w/Convenience Store | Phase 1 | 6.61E-07 | 1.32E-07 |
| Convenience Store | Phase 1 | 1.02E-06 | 2.09E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.31E-04 | 2.63E-05 |

| **Total Onsite Emission** | | Emissions (g/sec) | Emissions (g/sec) | |
|---|---|---|---|---|
| | Runing Exhaust | 1.79E-03 | 3.77E-03 | |
| | Idling Emissions | 1.31E-04 | 2.63E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.92E-03 | 3.80E-03 | |
| **Other Onsite Emissions** | | | | |
| | Yard Trucks (LPG) | | 1.03E-03 | |
| | Fork Lifts (LPG) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | Total All Sources (g/sec) | 1.92E-03 | 5.14E-03 | 7.06E-03 |
| | Area (m2) | | | 4.68E+06 |
| | Total Emission Rate (g/m2-sec) | | | 1.51E-09 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.053 | 55 | 330 | 0.21 | 6.05E-01 | 1.33E-03 | 7.00E-06 | |
| | **LDT1** | 15 | 0.139 | 3 | 330 | 0.21 | 8.37E-02 | 1.84E-04 | 9.68E-07 | |
| | **LDT2** | 15 | 0.053 | 3 | 330 | 0.21 | 3.08E-02 | 6.77E-05 | 3.56E-07 | |
| | **MDT** | 15 | 0.050 | 5 | 330 | 0.21 | 5.10E-02 | 1.12E-04 | 5.90E-07 | |
| | **LHDT1** | 15 | 0.112 | 275 | 330 | 0.21 | 6.34E+00 | 1.40E-02 | 7.34E-05 | |
| | **LHDT2** | 15 | 0.120 | 90 | 330 | 0.21 | 2.22E+00 | 4.89E-03 | 2.57E-05 | |
| | **MHDT** | 15 | 0.147 | 1441 | 330 | 0.21 | 4.35E+01 | 9.57E-02 | 5.03E-04 | |
| | **HHDT** | 15 | 0.106 | 4652 | 330 | 0.21 | 1.01E+02 | 2.22E-01 | 1.17E-03 | |
| | | | | | | | | | | 1.78E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.053 | 0 | 175 | 0.11 | 1.36E-03 | 3.00E-06 | 1.58E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 175 | 0.11 | 1.88E-04 | 4.15E-07 | 2.18E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 6.93E-05 | 1.53E-07 | 8.02E-10 | |
| | **MDT** | 15 | 0.050 | 0 | 175 | 0.11 | 1.15E-04 | 2.53E-07 | 1.33E-09 | |
| | **LHDT1** | 15 | 0.112 | 2 | 175 | 0.11 | 2.10E-02 | 4.63E-05 | 2.44E-07 | |
| | **LHDT2** | 15 | 0.120 | 1 | 175 | 0.11 | 7.36E-03 | 1.62E-05 | 8.52E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.49E-02 | 2.09E-04 | 1.10E-06 | |
| | **HHDT** | 15 | 0.106 | 16 | 175 | 0.11 | 1.83E-01 | 4.03E-04 | 2.12E-06 | 3.56E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.053 | 0 | 100 | 0.06 | 1.15E-03 | 2.53E-06 | 1.33E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 100 | 0.06 | 1.59E-04 | 3.50E-07 | 1.84E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 5.83E-05 | 1.29E-07 | 6.75E-10 | |
| | **MDT** | 15 | 0.050 | 0 | 100 | 0.06 | 9.68E-05 | 2.13E-07 | 1.12E-09 | |
| | **LHDT1** | 15 | 0.112 | 6 | 100 | 0.06 | 4.01E-02 | 8.84E-05 | 4.64E-07 | |
| | **LHDT2** | 15 | 0.120 | 2 | 100 | 0.06 | 1.40E-02 | 3.09E-05 | 1.63E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.48E-02 | 9.87E-05 | 5.19E-07 | |
| | **HHDT** | 15 | 0.106 | 22 | 100 | 0.06 | 1.42E-01 | 3.14E-04 | 1.65E-06 | 2.81E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 3.32E-04 | 7.32E-07 | 3.85E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 4.60E-05 | 1.01E-07 | 5.32E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 1.69E-05 | 3.72E-08 | 1.96E-10 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 2.80E-05 | 6.17E-08 | 3.24E-10 | |
| | **LHDT1** | 15 | 0.112 | 1 | 50 | 0.03 | 2.81E-03 | 6.20E-06 | 3.26E-08 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 9.84E-04 | 2.17E-06 | 1.14E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.36E-02 | 1.40E-04 | 7.36E-07 | |
| | **HHDT** | 15 | 0.106 | 85 | 50 | 0.03 | 2.80E-01 | 6.17E-04 | 3.24E-06 | 4.03E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 5.51E-04 | 1.21E-06 | 6.38E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 7.62E-05 | 1.68E-07 | 8.82E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.80E-05 | 6.17E-08 | 3.24E-10 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 4.64E-05 | 1.02E-07 | 5.38E-10 | |
| | **LHDT1** | 15 | 0.112 | 1 | 50 | 0.03 | 4.29E-03 | 9.46E-06 | 4.97E-08 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 1.50E-03 | 3.31E-06 | 1.74E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.04E-01 | 2.29E-04 | 1.20E-06 | |
| | **HHDT** | 15 | 0.106 | 134 | 50 | 0.03 | 4.38E-01 | 9.65E-04 | 5.07E-06 | 6.35E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 4.10E-04 | 9.04E-07 | 4.75E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 5.67E-05 | 1.25E-07 | 6.56E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.08E-05 | 4.59E-08 | 2.41E-10 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 3.46E-05 | 7.61E-08 | 4.00E-10 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.05E-09 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 6.09E-01 | 1.34E-03 | 7.05E-06 | |
| | **LDT1** | | | 3 | | | 8.42E-02 | 1.85E-04 | 9.74E-07 | |
| | **LDT2** | | | 3 | | | 3.09E-02 | 6.82E-05 | 3.58E-07 | |
| | **MDT** | | | 5 | | | 5.13E-02 | 1.13E-04 | 5.94E-07 | |
| | **LHDT1** | | | 285 | | | 6.41E+00 | 1.41E-02 | 7.42E-05 | |
| | **LHDT2** | | | 93 | | | 2.24E+00 | 4.94E-03 | 2.60E-05 | |
| | **MHDT** | | | 1488 | | | 4.38E+01 | 9.64E-02 | 5.07E-04 | |
| | **HHDT** | | | 4909 | | | 1.02E+02 | 2.24E-01 | 1.18E-03 | |
| | **Total** | | | 6843 | | | 1.55E+02 | 3.41E-01 | 1.79E-03 | 1.79E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.600 | 5 | 138 | 6.88E+00 | 1.51E-02 | 7.96E-05 | |
| | **LHDT2** | 0.615 | 5 | 45 | 2.31E+00 | 5.08E-03 | 2.67E-05 | |
| | **MHDT** | 0.003 | 5 | 720 | 1.80E-01 | 3.97E-04 | 2.08E-06 | |
| | **HHDT** | 0.008 | 5 | 2326 | 1.55E+00 | 3.42E-03 | 1.79E-05 | |
| | | | | 3229 | 1.09E+01 | 2.40E-02 | 1.26E-04 | 1.26E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.600 | 5 | 1 | 4.30E-02 | 9.47E-05 | 4.98E-07 | |
| | **LHDT2** | 0.615 | 5 | 0 | 1.44E-02 | 3.18E-05 | 1.67E-07 | |
| | **MHDT** | 0.003 | 5 | 3 | 7.42E-04 | 1.63E-06 | 8.59E-09 | |
| | **HHDT** | 0.008 | 5 | 8 | 5.31E-03 | 1.17E-05 | 6.14E-08 | |
| | | | | 12 | 6.35E-02 | 1.40E-04 | 7.35E-07 | 7.35E-07 |
| **Idle at Utility** | **LHDT1** | 0.600 | 5 | 3 | 1.44E-01 | 3.16E-04 | 1.66E-06 | |
| | **LHDT2** | 0.615 | 5 | 1 | 4.81E-02 | 1.06E-04 | 5.57E-07 | |
| | **MHDT** | 0.003 | 5 | 2 | 6.13E-04 | 1.35E-06 | 7.10E-09 | |
| | **HHDT** | 0.008 | 5 | 11 | 7.24E-03 | 1.59E-05 | 8.38E-08 | |
| | | | | 17 | 2.00E-01 | 4.40E-04 | 2.31E-06 | 2.31E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.600 | 5 | 0 | 2.01E-02 | 4.43E-05 | 2.33E-07 | |
| | **LHDT2** | 0.615 | 5 | 0 | 6.75E-03 | 1.49E-05 | 7.81E-08 | |
| | **MHDT** | 0.003 | 5 | 7 | 1.74E-03 | 3.83E-06 | 2.01E-08 | |
| | **HHDT** | 0.008 | 5 | 43 | 2.85E-02 | 6.28E-05 | 3.30E-07 | |
| | | | | 50 | 5.71E-02 | 1.26E-04 | 6.61E-07 | 6.61E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.600 | 5 | 1 | 3.07E-02 | 6.77E-05 | 3.56E-07 | |
| | **LHDT2** | 0.615 | 5 | 0 | 1.03E-02 | 2.27E-05 | 1.19E-07 | |
| | **MHDT** | 0.003 | 5 | 11 | 2.85E-03 | 6.27E-06 | 3.29E-08 | |
| | **HHDT** | 0.008 | 5 | 67 | 4.45E-02 | 9.81E-05 | 5.16E-07 | |
| | | | | 79 | 8.84E-02 | 1.95E-04 | 1.02E-06 | 1.02E-06 |
| **Idle at Firestation** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 1.13E+01 | 2.49E-02 | 1.31E-04 | 1.31E-04 |

**World Logistics Center** **2027** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.049 | 17378 | 330 | 0.21 | 1.76E+02 | 3.88E-01 | 2.04E-03 | |
| | **LDT1** | 15 | 0.051 | 2059 | 330 | 0.21 | 2.14E+01 | 4.72E-02 | 2.48E-04 | |
| | **LDT2** | 15 | 0.049 | 6276 | 330 | 0.21 | 6.36E+01 | 1.40E-01 | 7.37E-04 | |
| | **MDT** | 15 | 0.050 | 4845 | 330 | 0.21 | 4.92E+01 | 1.08E-01 | 5.69E-04 | |
| | **LHDT1** | 15 | 0.048 | 888 | 330 | 0.21 | 8.77E+00 | 1.93E-02 | 1.01E-04 | |
| | **LHDT2** | 15 | 0.048 | 93 | 330 | 0.21 | 9.10E-01 | 2.00E-03 | 1.05E-05 | |
| | **MHDT** | 15 | 0.048 | 329 | 330 | 0.21 | 3.21E+00 | 7.08E-03 | 3.72E-05 | |
| | **HHDT** | 15 | 0.048 | 80 | 330 | 0.21 | 7.80E-01 | 1.72E-03 | 9.02E-06 | |
| | | | | | | | | | | 3.75E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.049 | 74 | 175 | 0.11 | 3.96E-01 | 8.73E-04 | 4.59E-06 | |
| | **LDT1** | 15 | 0.051 | 9 | 175 | 0.11 | 4.83E-02 | 1.06E-04 | 5.59E-07 | |
| | **LDT2** | 15 | 0.049 | 27 | 175 | 0.11 | 1.43E-01 | 3.16E-04 | 1.66E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.11E-01 | 2.44E-04 | 1.28E-06 | |
| | **LHDT1** | 15 | 0.048 | 6 | 175 | 0.11 | 2.91E-02 | 6.40E-05 | 3.37E-07 | |
| | **LHDT2** | 15 | 0.048 | 1 | 175 | 0.11 | 3.02E-03 | 6.65E-06 | 3.49E-08 | |
| | **MHDT** | 15 | 0.048 | 1 | 175 | 0.11 | 7.02E-03 | 1.55E-05 | 8.12E-08 | |
| | **HHDT** | 15 | 0.048 | 0 | 175 | 0.11 | 1.42E-03 | 3.12E-06 | 1.64E-08 | 8.56E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.049 | 109 | 100 | 0.06 | 3.34E-01 | 7.36E-04 | 3.86E-06 | |
| | **LDT1** | 15 | 0.051 | 13 | 100 | 0.06 | 4.06E-02 | 8.95E-05 | 4.70E-07 | |
| | **LDT2** | 15 | 0.049 | 39 | 100 | 0.06 | 1.21E-01 | 2.66E-04 | 1.40E-06 | |
| | **MDT** | 15 | 0.050 | 30 | 100 | 0.06 | 9.33E-02 | 2.05E-04 | 1.08E-06 | |
| | **LHDT1** | 15 | 0.048 | 19 | 100 | 0.06 | 5.55E-02 | 1.22E-04 | 6.42E-07 | |
| | **LHDT2** | 15 | 0.048 | 2 | 100 | 0.06 | 5.76E-03 | 1.27E-05 | 6.66E-08 | |
| | **MHDT** | 15 | 0.048 | 1 | 100 | 0.06 | 3.32E-03 | 7.30E-06 | 3.84E-08 | |
| | **HHDT** | 15 | 0.048 | 0 | 100 | 0.06 | 1.10E-03 | 2.43E-06 | 1.28E-08 | 7.57E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.049 | 63 | 50 | 0.03 | 9.67E-02 | 2.13E-04 | 1.12E-06 | |
| | **LDT1** | 15 | 0.051 | 7 | 50 | 0.03 | 1.18E-02 | 2.59E-05 | 1.36E-07 | |
| | **LDT2** | 15 | 0.049 | 23 | 50 | 0.03 | 3.50E-02 | 7.70E-05 | 4.05E-07 | |
| | **MDT** | 15 | 0.050 | 18 | 50 | 0.03 | 2.70E-02 | 5.95E-05 | 3.13E-07 | |
| | **LHDT1** | 15 | 0.048 | 3 | 50 | 0.03 | 3.89E-03 | 8.56E-06 | 4.50E-08 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 4.03E-04 | 8.89E-07 | 4.67E-09 | |
| | **MHDT** | 15 | 0.048 | 3 | 50 | 0.03 | 4.70E-03 | 1.04E-05 | 5.44E-08 | |
| | **HHDT** | 15 | 0.048 | 1 | 50 | 0.03 | 2.17E-03 | 4.78E-06 | 2.51E-08 | 2.10E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.049 | 104 | 50 | 0.03 | 1.60E-01 | 3.53E-04 | 1.86E-06 | |
| | **LDT1** | 15 | 0.051 | 12 | 50 | 0.03 | 1.95E-02 | 4.30E-05 | 2.26E-07 | |
| | **LDT2** | 15 | 0.049 | 38 | 50 | 0.03 | 5.80E-02 | 1.28E-04 | 6.71E-07 | |
| | **MDT** | 15 | 0.050 | 29 | 50 | 0.03 | 4.48E-02 | 9.86E-05 | 5.18E-07 | |
| | **LHDT1** | 15 | 0.048 | 4 | 50 | 0.03 | 5.94E-03 | 1.31E-05 | 6.87E-08 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 6.16E-04 | 1.36E-06 | 7.13E-09 | |
| | **MHDT** | 15 | 0.048 | 5 | 50 | 0.03 | 7.70E-03 | 1.69E-05 | 8.91E-08 | |
| | **HHDT** | 15 | 0.048 | 2 | 50 | 0.03 | 3.39E-03 | 7.47E-06 | 3.93E-08 | 3.47E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.049 | 78 | 50 | 0.03 | 1.19E-01 | 2.63E-04 | 1.38E-06 | |
| | **LDT1** | 15 | 0.051 | 9 | 50 | 0.03 | 1.45E-02 | 3.20E-05 | 1.68E-07 | |
| | **LDT2** | 15 | 0.049 | 28 | 50 | 0.03 | 4.31E-02 | 9.50E-05 | 4.99E-07 | |
| | **MDT** | 15 | 0.050 | 22 | 50 | 0.03 | 3.33E-02 | 7.34E-05 | 3.86E-07 | |
| | **LHDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-06 |
| **Total - All Buildings** | **LDA** | | | 17806 | | | 1.77E+02 | 3.90E-01 | 2.05E-03 | |
| | **LDT1** | | | 2109 | | | 2.16E+01 | 4.75E-02 | 2.50E-04 | |
| | **LDT2** | | | 6430 | | | 6.40E+01 | 1.41E-01 | 7.41E-04 | |
| | **MDT** | | | 4964 | | | 4.95E+01 | 1.09E-01 | 5.73E-04 | |
| | **LHDT1** | | | 919 | | | 8.86E+00 | 1.95E-02 | 1.03E-04 | |
| | **LHDT2** | | | 96 | | | 9.19E-01 | 2.03E-03 | 1.06E-05 | |
| | **MHDT** | | | 340 | | | 3.24E+00 | 7.13E-03 | 3.75E-05 | |
| | **HHDT** | | | 84 | | | 7.88E-01 | 1.74E-03 | 9.12E-06 | |
| | **Total** | | | 32749 | | | 3.26E+02 | 7.18E-01 | 3.77E-03 | 3.77E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.040 | 5 | 444 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | **LHDT2** | 0.035 | 5 | 47 | 1.35E-01 | 2.97E-04 | 1.56E-06 | |
| | **MHDT** | 0.035 | 5 | 164 | 4.77E-01 | 1.05E-03 | 5.53E-06 | |
| | **HHDT** | 0.035 | 5 | 40 | 1.16E-01 | 2.56E-04 | 1.34E-06 | |
| | | | | 695 | 2.20E+00 | 4.84E-03 | 2.54E-05 | 2.54E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.040 | 5 | 3 | 9.18E-03 | 2.02E-05 | 1.06E-07 | |
| | **LHDT2** | 0.035 | 5 | 0 | 8.43E-04 | 1.86E-06 | 9.76E-09 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.97E-03 | 4.33E-06 | 2.28E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 3.97E-04 | 8.75E-07 | 4.60E-09 | |
| | | | | 4 | 1.24E-02 | 2.73E-05 | 1.43E-07 | 1.43E-07 |
| **Idle at Utility** | **LHDT1** | 0.040 | 5 | 9 | 3.06E-02 | 6.75E-05 | 3.55E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.81E-03 | 6.20E-06 | 3.26E-08 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.63E-03 | 3.58E-06 | 1.88E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 5.42E-04 | 1.19E-06 | 6.27E-09 | |
| | | | | 11 | 3.56E-02 | 7.84E-05 | 4.12E-07 | 4.12E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.040 | 5 | 1 | 4.30E-03 | 9.46E-06 | 4.97E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 3.94E-04 | 8.69E-07 | 4.57E-09 | |
| | **MHDT** | 0.035 | 5 | 2 | 4.61E-03 | 1.01E-05 | 5.33E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 2.13E-03 | 4.70E-06 | 2.47E-08 | |
| | | | | 4 | 1.14E-02 | 2.52E-05 | 1.32E-07 | 1.32E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.040 | 5 | 2 | 6.56E-03 | 1.44E-05 | 7.59E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 6.02E-04 | 1.33E-06 | 6.97E-09 | |
| | **MHDT** | 0.035 | 5 | 3 | 7.54E-03 | 1.66E-05 | 8.73E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 3.34E-03 | 7.35E-06 | 3.86E-08 | |
| | | | | 6 | 1.80E-02 | 3.97E-05 | 2.09E-07 | 2.09E-07 |
| **Idle at Firestation** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 2.27E+00 | 5.01E-03 | 2.63E-05 | 2.63E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 8.42E-04 | 1.78E-03 |
| Light Logistics | Phase 2 | 1.21E-05 | 2.91E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 8.54E-04 | 1.81E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 5.98E-05 | 1.19E-05 |
| Light Logistics | Phase 2 | 2.50E-06 | 4.84E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 6.23E-05 | 1.24E-05 |

**Total Onsite Mobile Emissiona**

| | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust (g/sec) | 8.54E-04 | 1.81E-03 |
| Idling Emissions (g/sec) | 6.23E-05 | 1.24E-05 |
| Total Vehicle Emissions (g/sec) | 9.16E-04 | 1.82E-03 |

**Other Onsite Emissions**

| | | | |
|---|---|---|---|
| Yard Trucks (LPG) (g/sec) | | 2.82E-04 | |
| Forklifts (LPG) (g/sec) | | 1.49E-04 | |
| Total Other Onsite Emissions (g/sec) | | 4.30E-04 | |
| | | | Total |
| Total All Sources (g/sec) | 9.16E-04 | 2.25E-03 | 3.16E-03 |
| Area (m2) | | | 4.69E+06 |
| Total Emission Rate (g/m2-sec) | | | 6.75E-10 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.053 | 26 | 330 | 0.21 | 2.87E-01 | 6.32E-04 | 3.32E-06 | |
| | **LDT1** | 15 | 0.139 | 1 | 330 | 0.21 | 3.96E-02 | 8.73E-05 | 4.59E-07 | |
| | **LDT2** | 15 | 0.053 | 1 | 330 | 0.21 | 1.46E-02 | 3.21E-05 | 1.69E-07 | |
| | **MDT** | 15 | 0.050 | 2 | 330 | 0.21 | 2.42E-02 | 5.32E-05 | 2.80E-07 | |
| | **LHDT1** | 15 | 0.112 | 130 | 330 | 0.21 | 3.00E+00 | 6.62E-03 | 3.48E-05 | |
| | **LHDT2** | 15 | 0.120 | 43 | 330 | 0.21 | 1.05E+00 | 2.32E-03 | 1.22E-05 | |
| | **MHDT** | 15 | 0.147 | 683 | 330 | 0.21 | 2.06E+01 | 4.54E-02 | 2.38E-04 | |
| | **HHDT** | 15 | 0.106 | 2204 | 330 | 0.21 | 4.77E+01 | 1.05E-01 | 5.52E-04 | |
| | | | | | | | | | | 8.42E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.053 | 1 | 175 | 0.11 | 4.63E-03 | 1.02E-05 | 5.36E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 175 | 0.11 | 6.40E-04 | 1.41E-06 | 7.41E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 2.35E-04 | 5.18E-07 | 2.72E-09 | |
| | **MDT** | 15 | 0.050 | 0 | 175 | 0.11 | 3.90E-04 | 8.59E-07 | 4.51E-09 | |
| | **LHDT1** | 15 | 0.112 | 6 | 175 | 0.11 | 7.14E-02 | 1.57E-04 | 8.27E-07 | |
| | **LHDT2** | 15 | 0.120 | 2 | 175 | 0.11 | 2.50E-02 | 5.51E-05 | 2.89E-07 | |
| | **MHDT** | 15 | 0.147 | 20 | 175 | 0.11 | 3.22E-01 | 7.10E-04 | 3.73E-06 | |
| | **HHDT** | 15 | 0.106 | 54 | 175 | 0.11 | 6.21E-01 | 1.37E-03 | 7.18E-06 | 1.21E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.106 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.106 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 27 | | | 2.91E-01 | 6.42E-04 | 3.37E-06 | |
| | **LDT1** | | | 1 | | | 4.03E-02 | 8.87E-05 | 4.66E-07 | |
| | **LDT2** | | | 1 | | | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MDT** | | | 2 | | | 2.46E-02 | 5.41E-05 | 2.84E-07 | |
| | **LHDT1** | | | 136 | | | 3.08E+00 | 6.78E-03 | 3.56E-05 | |
| | **LHDT2** | | | 45 | | | 1.08E+00 | 2.37E-03 | 1.25E-05 | |
| | **MHDT** | | | 703 | | | 2.09E+01 | 4.61E-02 | 2.42E-04 | |
| | **HHDT** | | | 2258 | | | 4.83E+01 | 1.06E-01 | 5.59E-04 | |
| | **Total** | | | 3174 | | | 7.38E+01 | 1.62E-01 | 8.54E-04 | 8.54E-04 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.600 | 5 | 65 | 3.26E+00 | 7.18E-03 | 3.77E-05 | |
| | **LHDT2** | 0.615 | 5 | 21 | 1.09E+00 | 2.41E-03 | 1.26E-05 | |
| | **MHDT** | 0.003 | 5 | 341 | 8.53E-02 | 1.88E-04 | 9.88E-07 | |
| | **HHDT** | 0.008 | 5 | 1102 | 7.35E-01 | 1.62E-03 | 8.50E-06 | |
| | | | | 1530 | 5.17E+00 | 1.14E-02 | 5.98E-05 | 5.98E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.600 | 5 | 3 | 1.46E-01 | 3.22E-04 | 1.69E-06 | |
| | **LHDT2** | 0.615 | 5 | 1 | 4.90E-02 | 1.08E-04 | 5.67E-07 | |
| | **MHDT** | 0.003 | 5 | 10 | 2.52E-03 | 5.55E-06 | 2.92E-08 | |
| | **HHDT** | 0.008 | 5 | 27 | 1.80E-02 | 3.97E-05 | 2.09E-07 | |
| | | | | 41 | 2.16E-01 | 4.75E-04 | 2.50E-06 | 2.50E-06 |
| **Idle at Utility** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.615 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.008 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 1571 | 5.39E+00 | 1.19E-02 | 6.23E-05 | 6.23E-05 |

**World Logistics Center** **2027** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.049 | 8234 | 330 | 0.21 | 8.34E+01 | 1.84E-01 | 9.65E-04 | |
| | **LDT1** | 15 | 0.051 | 975 | 330 | 0.21 | 1.02E+01 | 2.24E-02 | 1.17E-04 | |
| | **LDT2** | 15 | 0.049 | 2973 | 330 | 0.21 | 3.02E+01 | 6.64E-02 | 3.49E-04 | |
| | **MDT** | 15 | 0.050 | 2296 | 330 | 0.21 | 2.33E+01 | 5.13E-02 | 2.70E-04 | |
| | **LHDT1** | 15 | 0.048 | 421 | 330 | 0.21 | 4.15E+00 | 9.15E-03 | 4.81E-05 | |
| | **LHDT2** | 15 | 0.048 | 44 | 330 | 0.21 | 4.31E-01 | 9.49E-04 | 4.99E-06 | |
| | **MHDT** | 15 | 0.048 | 156 | 330 | 0.21 | 1.52E+00 | 3.35E-03 | 1.76E-05 | |
| | **HHDT** | 15 | 0.048 | 38 | 330 | 0.21 | 3.69E-01 | 8.14E-04 | 4.28E-06 | |
| | | | | | | | | | | 1.78E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.049 | 251 | 175 | 0.11 | 1.35E+00 | 2.97E-03 | 1.56E-05 | |
| | **LDT1** | 15 | 0.051 | 30 | 175 | 0.11 | 1.64E-01 | 3.61E-04 | 1.90E-06 | |
| | **LDT2** | 15 | 0.049 | 91 | 175 | 0.11 | 4.87E-01 | 1.07E-03 | 5.63E-06 | |
| | **MDT** | 15 | 0.050 | 70 | 175 | 0.11 | 3.76E-01 | 8.28E-04 | 4.35E-06 | |
| | **LHDT1** | 15 | 0.048 | 19 | 175 | 0.11 | 9.87E-02 | 2.17E-04 | 1.14E-06 | |
| | **LHDT2** | 15 | 0.048 | 2 | 175 | 0.11 | 1.02E-02 | 2.26E-05 | 1.19E-07 | |
| | **MHDT** | 15 | 0.048 | 5 | 175 | 0.11 | 2.38E-02 | 5.25E-05 | 2.76E-07 | |
| | **HHDT** | 15 | 0.048 | 1 | 175 | 0.11 | 4.81E-03 | 1.06E-05 | 5.56E-08 | 2.91E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.049 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.049 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.049 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 8484 | | | 8.47E+01 | 1.87E-01 | 9.81E-04 | |
| | **LDT1** | | | 1005 | | | 1.03E+01 | 2.27E-02 | 1.19E-04 | |
| | **LDT2** | | | 3064 | | | 3.06E+01 | 6.75E-02 | 3.55E-04 | |
| | **MDT** | | | 2365 | | | 2.37E+01 | 5.21E-02 | 2.74E-04 | |
| | **LHDT1** | | | 440 | | | 4.25E+00 | 9.36E-03 | 4.92E-05 | |
| | **LHDT2** | | | 46 | | | 4.41E-01 | 9.72E-04 | 5.11E-06 | |
| | **MHDT** | | | 160 | | | 1.55E+00 | 3.41E-03 | 1.79E-05 | |
| | **HHDT** | | | 39 | | | 3.74E-01 | 8.24E-04 | 4.33E-06 | |
| | **Total** | | | 15604 | | | 1.56E+02 | 3.44E-01 | 1.81E-03 | 1.81E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.040 | 5 | 210 | 6.95E-01 | 1.53E-03 | 8.05E-06 | |
| | **LHDT2** | 0.035 | 5 | 22 | 6.38E-02 | 1.41E-04 | 7.39E-07 | |
| | **MHDT** | 0.035 | 5 | 78 | 2.26E-01 | 4.98E-04 | 2.62E-06 | |
| | **HHDT** | 0.028 | 5 | 19 | 4.39E-02 | 9.68E-05 | 5.09E-07 | |
| | | | | 329 | 1.03E+00 | 2.27E-03 | 1.19E-05 | 1.19E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.040 | 5 | 9 | 3.12E-02 | 6.86E-05 | 3.61E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.86E-03 | 6.30E-06 | 3.31E-08 | |
| | **MHDT** | 0.035 | 5 | 2 | 6.68E-03 | 1.47E-05 | 7.73E-08 | |
| | **HHDT** | 0.028 | 5 | 0 | 1.08E-03 | 2.37E-06 | 1.25E-08 | |
| | | | | 13 | 4.18E-02 | 9.20E-05 | 4.84E-07 | 4.84E-07 |
| **Idle at Utility** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.028 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 343 | 1.07E+00 | 2.36E-03 | 1.24E-05 | 1.24E-05 |

**World Logistics Center Project in 2027**
**Internal Roadway Circulation**

**2027**
**With EMFAC2014**

**PM10**

Based on PB Traffic Results 10/3/2013
No Mitigation Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Entrained Road Dust (g/sec) | Total (g/sec) |
|---|---|---|---|---|
| 1 | 2.60E-03 | 2.06E-03 | 2.92E-02 | 3.39E-02 |
| 2 | 6.61E-03 | 5.26E-03 | 7.40E-02 | 8.59E-02 |
| 3 | 9.21E-03 | 7.42E-03 | 1.03E-01 | 1.20E-01 |
| 5 | 5.72E-04 | 2.07E-03 | 7.73E-03 | 1.04E-02 |
| 6 | 3.08E-03 | 3.16E-03 | 3.52E-02 | 4.15E-02 |
| 8 | 9.31E-04 | 3.64E-03 | 1.26E-02 | 1.71E-02 |
| 11 | 1.77E-05 | 7.34E-05 | 2.51E-04 | 3.42E-04 |
| 12 | 5.60E-05 | 1.14E-04 | 5.39E-04 | 7.09E-04 |
| 14 | 1.29E-03 | 1.23E-03 | 1.45E-02 | 1.70E-02 |
| 18 | 5.16E-04 | 7.45E-04 | 6.04E-03 | 7.30E-03 |
| 19 | 2.00E-03 | 1.38E-03 | 2.20E-02 | 2.53E-02 |
| 21 | 1.46E-03 | 2.51E-03 | 1.75E-02 | 2.15E-02 |
| 24 | 2.45E-03 | 4.48E-03 | 3.08E-02 | 3.77E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 7.92E-04 | 6.91E-04 | 9.03E-03 | 1.05E-02 |
| 30 | 3.83E-03 | 3.94E-03 | 4.41E-02 | 5.19E-02 |
| 31 | 8.13E-04 | 1.94E-03 | 1.09E-02 | 1.36E-02 |
| Total (g/sec) | 3.62E-02 | 4.07E-02 | 4.18E-01 | 4.94E-01 |
| Total (lbs/day) | 6.89E+00 | 7.74E+00 | 7.95E+01 | 9.41E+01 |
| Total VMT (mi/day) | 2.75E+04 | 7.59E+04 | | 1.03E+05 |

| ID | Arterial | From | To | | Estimated Project 2027 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 17,798 | 794 | 2,397 | 7,804 |
| 2 | Street A | Eucalyptus Ave | Street F | | 19,915 | 1,464 | 2,739 | 8,703 |
| 3 | Street E | west of Street A | | | 8,750 | 621 | 1,195 | 3,761 |
| 5 | Street E | Street D | Street A | | 6,218 | 269 | 556 | 86 |
| 6 | Street A | Street F | Street C | | 8,078 | 491 | 959 | 2,552 |
| 8 | Street D | Street E | Cactus Ave | | 9,553 | 441 | 880 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 172 | 13 | 14 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 353 | 70 | 62 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,074 | 203 | 269 | 711 |
| 18 | Street B | Street A | Gilman Springs Rd | | 1,479 | 100 | 161 | 281 |
| 19 | Street F | Street A | Street C | | 1,600 | 114 | 251 | 813 |
| 21 | Street C | Street A | Street F | | 5,695 | 260 | 570 | 833 |
| 24 | Street C | Street F | Gilman Springs Rd | | 6,617 | 250 | 555 | 987 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 2,896 | 135 | 354 | 1,145 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,949 | 184 | 454 | 1,262 |
| 31 | Gilman Springs Rd | south of Street C | | | 6,821 | 242 | 504 | 688 |

Traffic volumes provided by Parsons Brinkerhoff; traffic volumes for 2027 interpolated between 2022 and 2035 in accordance with the project's conceptual occupancy schedule

**World Logistics Center** **2027** **PM10** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 31 | 2 | 2 | 3 | 162 | 54 | 1952 | 7683 | 9889 | 2009 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 35 | 2 | 2 | 3 | 299 | 99 | 2230 | 8568 | 11239 | 5104 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2,352 | 1.461 | 15 | 1 | 1 | 1 | 127 | 42 | 973 | 3702 | 4863 | 7105 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 11 | 1 | 1 | 1 | 55 | 18 | 453 | 85 | 624 | 369 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1,099 | 0.683 | 14 | 1 | 1 | 1 | 100 | 33 | 781 | 2512 | 3443 | 2351 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1,091 | 0.678 | 17 | 1 | 1 | 2 | 90 | 30 | 716 | 0 | 857 | 581 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1,201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 11 | 0 | 15 | 11 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 14 | 5 | 50 | 0 | 70 | 36 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1,618 | 1.005 | 4 | 0 | 0 | 0 | 42 | 14 | 219 | 700 | 978 | 983 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1,412 | 0.877 | 3 | 0 | 0 | 0 | 20 | 7 | 131 | 277 | 438 | 384 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2,386 | 1.482 | 3 | 0 | 0 | 0 | 23 | 8 | 204 | 801 | 1040 | 1541 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1,258 | 0.781 | 10 | 1 | 1 | 1 | 53 | 18 | 464 | 820 | 1367 | 1068 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1,946 | 1.209 | 12 | 1 | 1 | 1 | 51 | 17 | 452 | 972 | 1506 | 1821 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 5 | 0 | 0 | 0 | 28 | 9 | 289 | 1128 | 1459 | 612 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2,827 | 1.756 | 7 | 0 | 0 | 1 | 38 | 12 | 370 | 1242 | 1671 | 2934 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 12 | 1 | 1 | 1 | 49 | 16 | 411 | 678 | 1168 | 595 |
| | | | | | | | | | | | | | | | | Total | 27504 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0487 | 0.0835 | 0.0492 | 0.0478 | 0.1049 | 0.1147 | 0.1462 | 0.1036 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.57E-06 | 3.70E-07 | 1.95E-07 | 3.36E-07 | 4.00E-05 | 1.45E-05 | 6.71E-04 | 1.87E-03 | 2.60E-03 |
| 2 | 1 | 8.94E-06 | 9.25E-07 | 4.88E-07 | 8.41E-07 | 1.65E-04 | 5.98E-05 | 1.71E-03 | 4.66E-03 | 6.61E-03 |
| 3 | 1 | 1.26E-05 | 1.31E-06 | 6.89E-07 | 1.19E-06 | 2.25E-04 | 8.16E-05 | 2.41E-03 | 6.48E-03 | 9.21E-03 |
| 5 | 1 | 3.64E-06 | 3.77E-07 | 1.99E-07 | 3.42E-07 | 3.95E-05 | 1.43E-05 | 4.54E-04 | 6.01E-05 | 5.72E-04 |
| 6 | 1 | 5.45E-06 | 5.64E-07 | 2.97E-07 | 5.13E-07 | 8.31E-05 | 3.02E-05 | 9.02E-04 | 2.06E-03 | 3.08E-03 |
| 8 | 1 | 6.40E-06 | 6.63E-07 | 3.49E-07 | 6.02E-07 | 7.42E-05 | 2.69E-05 | 8.22E-04 | 0.00E+00 | 9.31E-04 |
| 11 | 1 | 1.27E-07 | 1.31E-08 | 6.91E-09 | 1.19E-08 | 2.41E-06 | 8.73E-07 | 1.43E-05 | 0.00E+00 | 1.77E-05 |
| 12 | 1 | 1.79E-07 | 1.85E-08 | 9.74E-09 | 1.68E-08 | 8.86E-06 | 3.21E-06 | 4.37E-05 | 0.00E+00 | 5.60E-05 |
| 14 | 1 | 2.06E-06 | 2.13E-07 | 1.12E-07 | 1.94E-07 | 5.07E-05 | 1.84E-05 | 3.72E-04 | 8.43E-04 | 1.29E-03 |
| 18 | 1 | 1.28E-06 | 1.33E-07 | 7.00E-08 | 1.21E-07 | 2.18E-05 | 7.89E-06 | 1.94E-04 | 2.91E-04 | 5.16E-04 |
| 19 | 1 | 2.34E-06 | 2.43E-07 | 1.28E-07 | 2.21E-07 | 4.19E-05 | 1.52E-05 | 5.13E-04 | 1.42E-03 | 2.00E-03 |
| 21 | 1 | 4.40E-06 | 4.55E-07 | 2.40E-07 | 4.14E-07 | 5.04E-05 | 1.83E-05 | 6.13E-04 | 7.69E-04 | 1.46E-03 |
| 24 | 1 | 7.90E-06 | 8.19E-07 | 4.31E-07 | 7.44E-07 | 7.50E-05 | 2.72E-05 | 9.25E-04 | 1.41E-03 | 2.45E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.20E-06 | 1.24E-07 | 6.55E-08 | 1.13E-07 | 1.41E-05 | 5.10E-06 | 2.05E-04 | 5.67E-04 | 7.92E-04 |
| 30 | 1 | 6.85E-06 | 7.10E-07 | 3.74E-07 | 6.45E-07 | 8.00E-05 | 2.90E-05 | 1.10E-03 | 2.62E-03 | 3.83E-03 |
| 31 | 1 | 3.43E-06 | 3.56E-07 | 1.87E-07 | 3.23E-07 | 3.06E-05 | 1.11E-05 | 3.54E-04 | 4.14E-04 | 8.13E-04 |

**World Logistics Center** **2027** **PM10** **No Mitigation**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 9,974 | 1,215 | 3,703 | 2,869 | 523 | 55 | 445 | 121 | 18,905 | 3,840 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 11,159 | 1,359 | 4,144 | 3,210 | 964 | 102 | 509 | 135 | 21,582 | 9,800 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 4,903 | 597 | 1,820 | 1,410 | 409 | 43 | 222 | 59 | 9,463 | 13,827 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 3,485 | 424 | 1,294 | 1,002 | 177 | 19 | 103 | 1 | 6,505 | 3,851 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 4,526 | 551 | 1,681 | 1,302 | 323 | 34 | 178 | 40 | 8,635 | 5,895 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 5,353 | 652 | 1,988 | 1,540 | 291 | 31 | 163 | 0 | 10,017 | 6,789 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 96 | 12 | 36 | 28 | 9 | 1 | 3 | 0 | 183 | 137 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 198 | 24 | 73 | 57 | 46 | 5 | 12 | 0 | 415 | 212 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 1,162 | 142 | 432 | 334 | 134 | 14 | 50 | 11 | 2,279 | 2,290 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 829 | 101 | 308 | 238 | 66 | 7 | 30 | 4 | 1,583 | 1,388 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 897 | 109 | 333 | 258 | 75 | 8 | 47 | 13 | 1,739 | 2,578 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 3,191 | 389 | 1,185 | 918 | 171 | 18 | 106 | 13 | 5,991 | 4,682 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 3,708 | 452 | 1,377 | 1,067 | 165 | 17 | 103 | 15 | 6,904 | 8,346 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 1,623 | 198 | 603 | 467 | 89 | 9 | 66 | 18 | 3,072 | 1,288 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 2,213 | 270 | 822 | 637 | 121 | 13 | 84 | 20 | 4,178 | 7,338 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 3,822 | 466 | 1,419 | 1,099 | 159 | 17 | 94 | 11 | 7,087 | 3,610 |
| | | | | | | | | | | | | | | | | Total | 75,872 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0463 | 0.0468 | 0.0463 | 0.0463 | 0.0465 | 0.0463 | 0.0463 | 0.0463 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.09E-03 | 1.34E-04 | 4.03E-04 | 3.12E-04 | 5.72E-05 | 6.01E-06 | 4.84E-05 | 1.32E-05 | 2.06E-03 |
| 2 | 1 | 2.72E-03 | 3.34E-04 | 1.01E-03 | 7.82E-04 | 2.36E-04 | 2.47E-05 | 1.24E-04 | 3.29E-05 | 5.26E-03 |
| 3 | 1 | 3.84E-03 | 4.72E-04 | 1.43E-03 | 1.10E-03 | 3.21E-04 | 3.38E-05 | 1.74E-04 | 4.58E-05 | 7.42E-03 |
| 5 | 1 | 1.11E-03 | 1.36E-04 | 4.11E-04 | 3.18E-04 | 5.64E-05 | 5.92E-06 | 3.28E-05 | 4.24E-07 | 2.07E-03 |
| 6 | 1 | 1.66E-03 | 2.04E-04 | 6.15E-04 | 4.77E-04 | 1.19E-04 | 1.25E-05 | 6.51E-05 | 1.45E-05 | 3.16E-03 |
| 8 | 1 | 1.94E-03 | 2.39E-04 | 7.22E-04 | 5.60E-04 | 1.06E-04 | 1.11E-05 | 5.93E-05 | 0.00E+00 | 3.64E-03 |
| 11 | 1 | 3.85E-05 | 4.73E-06 | 1.43E-05 | 1.11E-05 | 3.44E-06 | 3.61E-07 | 1.03E-06 | 0.00E+00 | 7.34E-05 |
| 12 | 1 | 5.43E-05 | 6.67E-06 | 2.02E-05 | 1.56E-05 | 1.27E-05 | 1.33E-06 | 3.16E-06 | 0.00E+00 | 1.14E-04 |
| 14 | 1 | 6.26E-04 | 7.70E-05 | 2.32E-04 | 1.80E-04 | 7.24E-05 | 7.60E-06 | 2.69E-05 | 5.95E-06 | 1.23E-03 |
| 18 | 1 | 3.90E-04 | 4.79E-05 | 1.45E-04 | 1.12E-04 | 3.11E-05 | 3.27E-06 | 1.40E-05 | 2.05E-06 | 7.45E-04 |
| 19 | 1 | 7.12E-04 | 8.76E-05 | 2.65E-04 | 2.05E-04 | 5.98E-05 | 6.28E-06 | 3.70E-05 | 1.00E-05 | 1.38E-03 |
| 21 | 1 | 1.34E-03 | 1.64E-04 | 4.96E-04 | 3.85E-04 | 7.20E-05 | 7.56E-06 | 4.43E-05 | 5.43E-06 | 2.51E-03 |
| 24 | 1 | 2.40E-03 | 2.95E-04 | 8.92E-04 | 6.91E-04 | 1.07E-04 | 1.13E-05 | 6.68E-05 | 9.94E-06 | 4.48E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.65E-04 | 4.49E-05 | 1.35E-04 | 1.05E-04 | 2.01E-05 | 2.11E-06 | 1.48E-05 | 4.00E-06 | 6.91E-04 |
| 30 | 1 | 2.08E-03 | 2.56E-04 | 7.73E-04 | 5.99E-04 | 1.14E-04 | 1.20E-05 | 7.94E-05 | 1.85E-05 | 3.94E-03 |
| 31 | 1 | 1.04E-03 | 1.28E-04 | 3.88E-04 | 3.00E-04 | 4.37E-05 | 4.59E-06 | 2.55E-05 | 2.92E-06 | 1.94E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 17,798 | 3615 | 794 | 161 | 2,397 | 487 | 7,804 | 1585 | 5849 | 8.75 | 0.035 | 0.0010 | 5.6 | 2.92E-02 |
| 2 | A | 731 | 0.45 | 19,915 | 9043 | 1,464 | 665 | 2,739 | 1244 | 8,703 | 3952 | 14904 | 8.69 | 0.035 | 0.0009 | 14.1 | 7.40E-02 |
| 3 | A | 2,352 | 1.46 | 8,750 | 12784 | 621 | 907 | 1,195 | 1747 | 3,761 | 5495 | 20932 | 8.63 | 0.035 | 0.0009 | 19.6 | 1.03E-01 |
| 5 | A | 953 | 0.59 | 6,218 | 3681 | 269 | 159 | 556 | 329 | 86 | 51 | 4221 | 3.27 | 0.035 | 0.0003 | 1.5 | 7.73E-03 |
| 6 | A | 1,099 | 0.68 | 8,078 | 5515 | 491 | 335 | 959 | 655 | 2,552 | 1742 | 8246 | 7.50 | 0.035 | 0.0008 | 6.7 | 3.52E-02 |
| 8 | A | 1,091 | 0.68 | 9,553 | 6474 | 441 | 299 | 880 | 596 | 0 | 0 | 7370 | 3.05 | 0.035 | 0.0003 | 2.4 | 1.26E-02 |
| 11 | A | 1,201 | 0.75 | 172 | 128 | 13 | 10 | 14 | 10 | 0 | 0 | 148 | 3.03 | 0.035 | 0.0003 | 0.0 | 2.51E-04 |
| 12 | A | 824 | 0.51 | 353 | 181 | 70 | 36 | 62 | 32 | 0 | 0 | 248 | 3.86 | 0.035 | 0.0004 | 0.1 | 5.39E-04 |
| 14 | A | 1,618 | 1.01 | 2,074 | 2085 | 203 | 204 | 269 | 270 | 711 | 714 | 3274 | 7.75 | 0.035 | 0.0008 | 2.8 | 1.45E-02 |
| 18 | A | 1,412 | 0.88 | 1,479 | 1297 | 100 | 88 | 161 | 141 | 281 | 247 | 1772 | 6.01 | 0.035 | 0.0006 | 1.1 | 6.04E-03 |
| 19 | A | 2,386 | 1.48 | 1,600 | 2372 | 114 | 169 | 251 | 372 | 813 | 1206 | 4118 | 9.33 | 0.035 | 0.0010 | 4.2 | 2.20E-02 |
| 21 | A | 1,258 | 0.78 | 5,695 | 4450 | 260 | 203 | 570 | 445 | 833 | 651 | 5750 | 5.39 | 0.035 | 0.0006 | 3.3 | 1.75E-02 |
| 24 | A | 1,946 | 1.21 | 6,617 | 7999 | 250 | 302 | 555 | 671 | 987 | 1194 | 10167 | 5.35 | 0.035 | 0.0006 | 5.9 | 3.08E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 2,896 | 1214 | 135 | 57 | 354 | 149 | 1,145 | 480 | 1900 | 8.33 | 0.035 | 0.0009 | 1.7 | 9.03E-03 |
| 30 | A | 2,827 | 1.76 | 3,949 | 6935 | 184 | 322 | 454 | 798 | 1,262 | 2216 | 10271 | 7.54 | 0.035 | 0.0008 | 8.4 | 4.41E-02 |
| 31 | A | 820 | 0.51 | 6,821 | 3474 | 242 | 123 | 504 | 257 | 688 | 351 | 4205 | 4.58 | 0.035 | 0.0005 | 2.1 | 1.09E-02 |

**World Logistics Center** **Without Mitigation**

**Onsite Construction Exhaust Emissions in 2027 - Daily**

| | Onsite Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | **VOC (lbs/day)** | **NOx (lbs/day)** | **CO (lbs/day)** | **SO2 (lbs/day)** | **PM10 exhaust (lbs/day)** | **PM2.5 exhaust (lbs/day)** |
| Maximum Daily Total | 259.3 | 671.5 | 698.7 | 1.5 | 26.6 | 24.5 |
| Concrete Pouring | 2.8 | 25.8 | 41.6 | 0.1 | 1.1 | 1.0 |
| Non-Concrete Pouring | 256.5 | 645.7 | 657.1 | 1.4 | 25.5 | 23.5 |

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |

| **Emission Rates** | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Concrete Pouring | 0.059 | 0.542 | 0.874 | 0.002 | 0.023 | 0.021 |
| Non-Concrete Pouring | 3.235 | 8.143 | 8.287 | 0.018 | 0.322 | 0.296 |
| Total | 3.294 | 8.685 | 9.161 | 0.020 | 0.345 | 0.317 |

**Number of Volume Sources:** 83

**Emissions per Volume Source**

| | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Total | 0.03968195 | 0.10464183 | 0.110375 | 0.000238 | 0.004153057 | 0.003823851 |

**Variable Emission Factors**

| | **VOC** | **NOx** | **CO** | **SO2** | **PM10 exhaust** | **PM2.5 exhaust** |
|---|---|---|---|---|---|---|
| 6am to 4pm | 0.98213146 | 0.93756353 | 0.904557 | 0.893617 | 0.932926829 | 0.933774834 |
| 4pm to Midnight | 0 | 0 | 0 | 0 | 0 | 0 |
| Midnight to 6am | 0.01786854 | 0.06243647 | 0.095443 | 0.106383 | 0.067073171 | 0.066225166 |

**Fugitive Dust**

| | PM10 (lbs/day) | PM2.5 (lbs/day) |
|---|---|---|
| All Sources | 141 | 27.4 |

**Duration of Construction** 10 hours

| **Emissions** | **PM10 (g/sec)** | **PM2.5 (g/sec)** |
|---|---|---|
| All Sources | 1.77816667 | 0.34554444 |

**Size of the Construction Area Source** 737949 m2

| **Area Emissions** | **PM10 (g/m2-sec)** | **PM2.5 (g/m2-sec)** |
|---|---|---|
| AllSources | 2.4096E-06 | 4.6825E-07 |

**World Logistics Center** **Without Mitigation** **2/25/2015**

**Onsite Construction Exhaust Emissions in 2027 - Annual**

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |
| **Construction** | 260 | days/year |

**Onsite Emissions**

| | VOC (tons/year) | NOx (tons/year) | CO (tons/year) | SO2 (tons/year) | PM10 exhaust (tons/year) | PM2.5 exhaust (tons/year) |
|---|---|---|---|---|---|---|
| Annual Total | 8.2 | 54.5 | 62.7 | 0.2 | 2.2 | 2.0 |
| Concrete Pouring | 0.4 | 3.4 | 5.4 | 0.0 | 0.1 | 0.1 |
| Non-Concrete Pouring | 7.8 | 51.1 | 57.3 | 0.2 | 2.0 | 1.9 |

| **Average Emissions** | VOC (g/sec) | NOx (g/sec) | CO (g/sec) | SO2 (g/sec) | PM10 exhaust (g/sec) | PM2.5 exhaust (g/sec) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 6.47E-02 | 5.50E-01 | 8.73E-01 | 0.00E+00 | 2.26E-02 | 2.10E-02 |
| Non-Concrete Pouring | 7.57E-01 | 4.96E+00 | 5.56E+00 | 1.94E-02 | 1.97E-01 | 1.81E-01 |

**Number of Volume Sources:** 83

**Emissions per Volume Source**

| | VOC (g/sec/src) | NOx (g/sec/src) | CO (g/sec/src) | SO2 (g/sec/src) | PM10 exhaust (g/sec/src) | PM2.5 exhaust (g/sec/src) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 7.79E-04 | 6.62E-03 | 1.05E-02 | 0.00E+00 | 2.73E-04 | 2.53E-04 |
| Non Concrete Pouring | 9.12E-03 | 5.97E-02 | 6.70E-02 | 2.34E-04 | 2.37E-03 | 2.19E-03 |
| **Total** | 9.90E-03 | 6.63E-02 | 7.75E-02 | 2.34E-04 | 2.65E-03 | 2.44E-03 |

**Variable Emission Factors - PM10**

| | 6am to 4pm | 4pm to MN | MN to 6am |
|---|---|---|---|
| PM10 | 8.97E-01 | 0.00E+00 | 1.03E-01 |
| Nox | 9.00E-01 | 0.00E+00 | 9.98E-02 |

**Fugitive Dust**

| | PM10 (tons/year) | PM2.5 (tons/year) |
|---|---|---|
| All Sources | 2.88 | 0.74 |

**Duration of Construction** 10 hours

| **Emissions** | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|
| All Sources | 0.08292237 | 0.02130644 |

**Size of the Construction Area Source** 737949 m2

| **Area Emissions** | PM10 (g/m2-sec) | PM2.5 (g/m2-sec) |
|---|---|---|
| AllSources | 1.1237E-07 | 2.8873E-08 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027 Phase 1**
**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.79E-03 | 3.94E-03 |
| Light Logistics | Phase 1 | 3.59E-06 | 9.09E-06 |
| Utilities Service Station | Phase 1 | 2.83E-06 | 8.29E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.08E-06 | 2.28E-06 |
| Convenience Store | Phase 1 | 6.43E-06 | 3.77E-06 |
| Fire Station | Phase 1 | 6.07E-09 | 2.45E-06 |
| Total | | 1.81E-03 | 3.97E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.63E-05 | 2.54E-05 |
| Light Logistics | Phase 1 | 5.28E-07 | 1.43E-07 |
| Utilities Service Station | Phase 1 | 1.73E-06 | 4.12E-07 |
| Gas Station w/Convenience Store | Phase 1 | 3.11E-07 | 1.32E-07 |
| Convenience Store | Phase 1 | 4.78E-07 | 2.09E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 8.93E-05 | 2.63E-05 |

| **Total Onsite Emission** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust | 1.81E-03 | 3.97E-03 | |
| | Idling Emissions | 8.93E-05 | 2.63E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.90E-03 | 4.00E-03 | |
| **Other Onsite Emissions** | | | | |
| | Yard Trucks (LPG) | | 1.03E-03 | |
| | Fork Lifts (LPG) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | Total All Sources (g/sec) | 1.90E-03 | 5.33E-03 | 7.23E-03 |
| | Area (m2) | | | 4.68E+06 |
| | Total Emission Rate (g/m2-sec) | | | 1.54E-09 |

**World Logistics Center** **2027** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.054 | 55 | 330 | 0.21 | 6.08E-01 | 1.34E-03 | 7.04E-06 | |
| | **LDT1** | 15 | 0.139 | 3 | 330 | 0.21 | 8.38E-02 | 1.85E-04 | 9.70E-07 | |
| | **LDT2** | 15 | 0.053 | 3 | 330 | 0.21 | 3.09E-02 | 6.81E-05 | 3.58E-07 | |
| | **MDT** | 15 | 0.051 | 5 | 330 | 0.21 | 5.13E-02 | 1.13E-04 | 5.93E-07 | |
| | **LHDT1** | 15 | 0.112 | 275 | 330 | 0.21 | 6.32E+00 | 1.39E-02 | 7.31E-05 | |
| | **LHDT2** | 15 | 0.120 | 90 | 330 | 0.21 | 2.22E+00 | 4.88E-03 | 2.56E-05 | |
| | **MHDT** | 15 | 0.147 | 1441 | 330 | 0.21 | 4.33E+01 | 9.53E-02 | 5.01E-04 | |
| | **HHDT** | 15 | 0.107 | 4652 | 330 | 0.21 | 1.02E+02 | 2.25E-01 | 1.18E-03 | |
| | | | | | | | | | | 1.79E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.054 | 0 | 175 | 0.11 | 1.37E-03 | 3.02E-06 | 1.59E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 175 | 0.11 | 1.89E-04 | 4.16E-07 | 2.19E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 6.96E-05 | 1.53E-07 | 8.06E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 175 | 0.11 | 1.15E-04 | 2.54E-07 | 1.34E-09 | |
| | **LHDT1** | 15 | 0.112 | 2 | 175 | 0.11 | 2.10E-02 | 4.62E-05 | 2.43E-07 | |
| | **LHDT2** | 15 | 0.120 | 1 | 175 | 0.11 | 7.35E-03 | 1.62E-05 | 8.51E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.45E-02 | 2.08E-04 | 1.09E-06 | |
| | **HHDT** | 15 | 0.107 | 16 | 175 | 0.11 | 1.86E-01 | 4.09E-04 | 2.15E-06 | 3.59E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.054 | 0 | 100 | 0.06 | 1.15E-03 | 2.54E-06 | 1.34E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 100 | 0.06 | 1.59E-04 | 3.50E-07 | 1.84E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 5.86E-05 | 1.29E-07 | 6.78E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 9.72E-05 | 2.14E-07 | 1.13E-09 | |
| | **LHDT1** | 15 | 0.112 | 6 | 100 | 0.06 | 4.00E-02 | 8.80E-05 | 4.63E-07 | |
| | **LHDT2** | 15 | 0.120 | 2 | 100 | 0.06 | 1.40E-02 | 3.09E-05 | 1.62E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.46E-02 | 9.83E-05 | 5.17E-07 | |
| | **HHDT** | 15 | 0.107 | 22 | 100 | 0.06 | 1.45E-01 | 3.19E-04 | 1.68E-06 | 2.83E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 3.34E-04 | 7.36E-07 | 3.87E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 4.60E-05 | 1.01E-07 | 5.33E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 1.70E-05 | 3.74E-08 | 1.96E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 2.82E-05 | 6.20E-08 | 3.26E-10 | |
| | **LHDT1** | 15 | 0.112 | 1 | 50 | 0.03 | 2.80E-03 | 6.17E-06 | 3.24E-08 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 9.83E-04 | 2.16E-06 | 1.14E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.33E-02 | 1.39E-04 | 7.32E-07 | |
| | **HHDT** | 15 | 0.107 | 85 | 50 | 0.03 | 2.85E-01 | 6.27E-04 | 3.30E-06 | 4.08E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 5.54E-04 | 1.22E-06 | 6.41E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 7.63E-05 | 1.68E-07 | 8.84E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.81E-05 | 6.20E-08 | 3.26E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 4.67E-05 | 1.03E-07 | 5.40E-10 | |
| | **LHDT1** | 15 | 0.112 | 1 | 50 | 0.03 | 4.28E-03 | 9.42E-06 | 4.95E-08 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 1.50E-03 | 3.30E-06 | 1.74E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.04E-01 | 2.28E-04 | 1.20E-06 | |
| | **HHDT** | 15 | 0.107 | 134 | 50 | 0.03 | 4.45E-01 | 9.81E-04 | 5.16E-06 | 6.43E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 4.12E-04 | 9.08E-07 | 4.77E-09 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 5.68E-05 | 1.25E-07 | 6.58E-10 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.09E-05 | 4.61E-08 | 2.42E-10 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 3.47E-05 | 7.65E-08 | 4.02E-10 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.07E-09 |
| **Total - All Buildings** | **LDA** | | | 57 | | | 6.12E-01 | 1.35E-03 | 7.08E-06 | |
| | **LDT1** | | | 3 | | | 8.43E-02 | 1.86E-04 | 9.76E-07 | |
| | **LDT2** | | | 3 | | | 3.11E-02 | 6.85E-05 | 3.60E-07 | |
| | **MDT** | | | 5 | | | 5.16E-02 | 1.14E-04 | 5.97E-07 | |
| | **LHDT1** | | | 285 | | | 6.39E+00 | 1.41E-02 | 7.39E-05 | |
| | **LHDT2** | | | 93 | | | 2.24E+00 | 4.93E-03 | 2.59E-05 | |
| | **MHDT** | | | 1488 | | | 4.36E+01 | 9.60E-02 | 5.04E-04 | |
| | **HHDT** | | | 4909 | | | 1.03E+02 | 2.28E-01 | 1.20E-03 | |
| | **Total** | | | 6843 | | | 1.56E+02 | 3.44E-01 | 1.81E-03 | 1.81E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 138 | 5.19E+00 | 1.14E-02 | 6.01E-05 | |
| | **LHDT2** | 0.504 | 5 | 45 | 1.89E+00 | 4.16E-03 | 2.19E-05 | |
| | **MHDT** | 0.001 | 5 | 720 | 8.41E-02 | 1.85E-04 | 9.73E-07 | |
| | **HHDT** | 0.002 | 5 | 2326 | 2.91E-01 | 6.40E-04 | 3.37E-06 | |
| | | | | 3229 | 7.46E+00 | 1.64E-02 | 8.63E-05 | 8.63E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 1 | 3.25E-02 | 7.15E-05 | 3.76E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 1.18E-02 | 2.60E-05 | 1.37E-07 | |
| | **MHDT** | 0.001 | 5 | 3 | 3.46E-04 | 7.63E-07 | 4.01E-09 | |
| | **HHDT** | 0.002 | 5 | 8 | 9.95E-04 | 2.19E-06 | 1.15E-08 | |
| | | | | 12 | 4.56E-02 | 1.01E-04 | 5.28E-07 | 5.28E-07 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 3 | 1.08E-01 | 2.39E-04 | 1.25E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 3.95E-02 | 8.69E-05 | 4.57E-07 | |
| | **MHDT** | 0.001 | 5 | 2 | 2.86E-04 | 6.30E-07 | 3.31E-09 | |
| | **HHDT** | 0.002 | 5 | 11 | 1.36E-03 | 2.99E-06 | 1.57E-08 | |
| | | | | 17 | 1.50E-01 | 3.29E-04 | 1.73E-06 | 1.73E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 1.52E-02 | 3.35E-05 | 1.76E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 5.53E-03 | 1.22E-05 | 6.40E-08 | |
| | **MHDT** | 0.001 | 5 | 7 | 8.11E-04 | 1.79E-06 | 9.39E-09 | |
| | **HHDT** | 0.002 | 5 | 43 | 5.34E-03 | 1.18E-05 | 6.18E-08 | |
| | | | | 50 | 2.69E-02 | 5.92E-05 | 3.11E-07 | 3.11E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 1 | 2.32E-02 | 5.11E-05 | 2.69E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 8.45E-03 | 1.86E-05 | 9.77E-08 | |
| | **MHDT** | 0.001 | 5 | 11 | 1.33E-03 | 2.93E-06 | 1.54E-08 | |
| | **HHDT** | 0.002 | 5 | 67 | 8.35E-03 | 1.84E-05 | 9.67E-08 | |
| | | | | 79 | 4.13E-02 | 9.10E-05 | 4.78E-07 | 4.78E-07 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3388 | 7.72E+00 | 1.70E-02 | 8.93E-05 | 8.93E-05 |

**World Logistics Center** **2027** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 17378 | 330 | 0.21 | 1.77E+02 | 3.90E-01 | 2.05E-03 | |
| | **LDT1** | 15 | 0.051 | 2059 | 330 | 0.21 | 2.15E+01 | 4.74E-02 | 2.49E-04 | |
| | **LDT2** | 15 | 0.050 | 6276 | 330 | 0.21 | 6.40E+01 | 1.41E-01 | 7.40E-04 | |
| | **MDT** | 15 | 0.050 | 4845 | 330 | 0.21 | 4.94E+01 | 1.09E-01 | 5.72E-04 | |
| | **LHDT1** | 15 | 0.087 | 888 | 330 | 0.21 | 1.59E+01 | 3.51E-02 | 1.84E-04 | |
| | **LHDT2** | 15 | 0.100 | 93 | 330 | 0.21 | 1.91E+00 | 4.20E-03 | 2.21E-05 | |
| | **MHDT** | 15 | 0.145 | 329 | 330 | 0.21 | 9.77E+00 | 2.15E-02 | 1.13E-04 | |
| | **HHDT** | 15 | 0.085 | 80 | 330 | 0.21 | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | | | | | | | | | | 3.94E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 74 | 175 | 0.11 | 3.98E-01 | 8.78E-04 | 4.61E-06 | |
| | **LDT1** | 15 | 0.051 | 9 | 175 | 0.11 | 4.85E-02 | 1.07E-04 | 5.61E-07 | |
| | **LDT2** | 15 | 0.050 | 27 | 175 | 0.11 | 1.44E-01 | 3.17E-04 | 1.67E-06 | |
| | **MDT** | 15 | 0.050 | 21 | 175 | 0.11 | 1.11E-01 | 2.45E-04 | 1.29E-06 | |
| | **LHDT1** | 15 | 0.087 | 6 | 175 | 0.11 | 5.28E-02 | 1.16E-04 | 6.11E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.33E-03 | 1.39E-05 | 7.32E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.13E-02 | 4.70E-05 | 2.47E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 175 | 0.11 | 2.52E-03 | 5.55E-06 | 2.92E-08 | 9.09E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 109 | 100 | 0.06 | 3.36E-01 | 7.39E-04 | 3.88E-06 | |
| | **LDT1** | 15 | 0.051 | 13 | 100 | 0.06 | 4.08E-02 | 9.00E-05 | 4.73E-07 | |
| | **LDT2** | 15 | 0.050 | 39 | 100 | 0.06 | 1.21E-01 | 2.67E-04 | 1.40E-06 | |
| | **MDT** | 15 | 0.050 | 30 | 100 | 0.06 | 9.38E-02 | 2.07E-04 | 1.09E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 100 | 0.06 | 1.01E-01 | 2.22E-04 | 1.17E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.21E-02 | 2.66E-05 | 1.40E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.01E-02 | 2.22E-05 | 1.17E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 1.97E-03 | 4.33E-06 | 2.27E-08 | 8.29E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 63 | 50 | 0.03 | 9.72E-02 | 2.14E-04 | 1.12E-06 | |
| | **LDT1** | 15 | 0.051 | 7 | 50 | 0.03 | 1.18E-02 | 2.61E-05 | 1.37E-07 | |
| | **LDT2** | 15 | 0.050 | 23 | 50 | 0.03 | 3.51E-02 | 7.74E-05 | 4.07E-07 | |
| | **MDT** | 15 | 0.050 | 18 | 50 | 0.03 | 2.71E-02 | 5.98E-05 | 3.14E-07 | |
| | **LHDT1** | 15 | 0.087 | 3 | 50 | 0.03 | 7.06E-03 | 1.55E-05 | 8.17E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.46E-04 | 1.86E-06 | 9.79E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.43E-02 | 3.15E-05 | 1.65E-07 | |
| | **HHDT** | 15 | 0.085 | 1 | 50 | 0.03 | 3.87E-03 | 8.52E-06 | 4.48E-08 | 2.28E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 104 | 50 | 0.03 | 1.61E-01 | 3.55E-04 | 1.86E-06 | |
| | **LDT1** | 15 | 0.051 | 12 | 50 | 0.03 | 1.96E-02 | 4.32E-05 | 2.27E-07 | |
| | **LDT2** | 15 | 0.050 | 38 | 50 | 0.03 | 5.83E-02 | 1.28E-04 | 6.74E-07 | |
| | **MDT** | 15 | 0.050 | 29 | 50 | 0.03 | 4.50E-02 | 9.91E-05 | 5.21E-07 | |
| | **LHDT1** | 15 | 0.087 | 4 | 50 | 0.03 | 1.08E-02 | 2.37E-05 | 1.25E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.29E-03 | 2.84E-06 | 1.49E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.34E-02 | 5.15E-05 | 2.71E-07 | |
| | **HHDT** | 15 | 0.085 | 2 | 50 | 0.03 | 6.05E-03 | 1.33E-05 | 7.00E-08 | 3.77E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 78 | 50 | 0.03 | 1.20E-01 | 2.64E-04 | 1.39E-06 | |
| | **LDT1** | 15 | 0.051 | 9 | 50 | 0.03 | 1.46E-02 | 3.21E-05 | 1.69E-07 | |
| | **LDT2** | 15 | 0.050 | 28 | 50 | 0.03 | 4.34E-02 | 9.55E-05 | 5.02E-07 | |
| | **MDT** | 15 | 0.050 | 22 | 50 | 0.03 | 3.35E-02 | 7.38E-05 | 3.88E-07 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-06 |
| **Total - All Buildings** | **LDA** | | | 17806 | | | 1.78E+02 | 3.92E-01 | 2.06E-03 | |
| | **LDT1** | | | 2109 | | | 2.17E+01 | 4.77E-02 | 2.51E-04 | |
| | **LDT2** | | | 6430 | | | 6.44E+01 | 1.42E-01 | 7.45E-04 | |
| | **MDT** | | | 4964 | | | 4.97E+01 | 1.10E-01 | 5.76E-04 | |
| | **LHDT1** | | | 919 | | | 1.61E+01 | 3.54E-02 | 1.86E-04 | |
| | **LHDT2** | | | 96 | | | 1.93E+00 | 4.25E-03 | 2.23E-05 | |
| | **MHDT** | | | 340 | | | 9.84E+00 | 2.17E-02 | 1.14E-04 | |
| | **HHDT** | | | 84 | | | 1.40E+00 | 3.09E-03 | 1.62E-05 | |
| | **Total** | | | 32749 | | | 3.43E+02 | 7.56E-01 | 3.97E-03 | 3.97E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.040 | 5 | 444 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | **LHDT2** | 0.035 | 5 | 47 | 1.35E-01 | 2.97E-04 | 1.56E-06 | |
| | **MHDT** | 0.035 | 5 | 164 | 4.77E-01 | 1.05E-03 | 5.53E-06 | |
| | **HHDT** | 0.035 | 5 | 40 | 1.16E-01 | 2.56E-04 | 1.34E-06 | |
| | | | | 695 | 2.20E+00 | 4.84E-03 | 2.54E-05 | 2.54E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.040 | 5 | 3 | 9.18E-03 | 2.02E-05 | 1.06E-07 | |
| | **LHDT2** | 0.035 | 5 | 0 | 8.43E-04 | 1.86E-06 | 9.76E-09 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.97E-03 | 4.33E-06 | 2.28E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 3.97E-04 | 8.75E-07 | 4.60E-09 | |
| | | | | 4 | 1.24E-02 | 2.73E-05 | 1.43E-07 | 1.43E-07 |
| **Idle at Utility** | **LHDT1** | 0.040 | 5 | 9 | 3.06E-02 | 6.75E-05 | 3.55E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.81E-03 | 6.20E-06 | 3.26E-08 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.63E-03 | 3.58E-06 | 1.88E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 5.42E-04 | 1.19E-06 | 6.27E-09 | |
| | | | | 11 | 3.56E-02 | 7.84E-05 | 4.12E-07 | 4.12E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.040 | 5 | 1 | 4.30E-03 | 9.46E-06 | 4.97E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 3.94E-04 | 8.69E-07 | 4.57E-09 | |
| | **MHDT** | 0.035 | 5 | 2 | 4.61E-03 | 1.01E-05 | 5.33E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 2.13E-03 | 4.70E-06 | 2.47E-08 | |
| | | | | 4 | 1.14E-02 | 2.52E-05 | 1.32E-07 | 1.32E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.040 | 5 | 2 | 6.56E-03 | 1.44E-05 | 7.59E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 6.02E-04 | 1.33E-06 | 6.97E-09 | |
| | **MHDT** | 0.035 | 5 | 3 | 7.54E-03 | 1.66E-05 | 8.73E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 3.34E-03 | 7.35E-06 | 3.86E-08 | |
| | | | | 6 | 1.80E-02 | 3.97E-05 | 2.09E-07 | 2.09E-07 |
| **Idle at Firestation** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 720 | 2.27E+00 | 5.01E-03 | 2.63E-05 | 2.63E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2027

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2027 Phase 2**

With Mitigation:MY2010 T6 and T7 DSL

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 8.50E-04 | 1.87E-03 |
| Light Logistics | Phase 2 | 1.22E-05 | 3.09E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 8.62E-04 | 1.90E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 4.09E-05 | 1.20E-05 |
| Light Logistics | Phase 2 | 1.79E-06 | 4.87E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 4.27E-05 | 1.25E-05 |

**Total Onsite Mobile Emissiona**

| | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust (g/sec) | 8.62E-04 | 1.90E-03 |
| Idling Emissions (g/sec) | 4.27E-05 | 1.25E-05 |
| Total Vehicle Emissions (g/sec) | 9.04E-04 | 1.91E-03 |

**Other Onsite Emissions**

| | | | |
|---|---|---|---|
| Yard Trucks (LPG) (g/sec) | | 2.82E-04 | |
| Forklifts (LPG) (sec) | | 1.49E-04 | |
| Total Other Onsite Emissions (g/sec) | | 4.30E-04 | |
| | | | Total |
| Total All Sources (g/sec) | 9.04E-04 | 2.34E-03 | 3.25E-03 |
| Area (m2) | | | 4.69E+06 |
| Total Emission Rate (g/m2-sec) | | | 6.93E-10 |

**World Logistics Center** **2027** **Phase 2** With Mitigation:MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.054 | 26 | 330 | 0.21 | 2.88E-01 | 6.35E-04 | 3.33E-06 | |
| | **LDT1** | 15 | 0.139 | 1 | 330 | 0.21 | 3.97E-02 | 8.75E-05 | 4.60E-07 | |
| | **LDT2** | 15 | 0.053 | 1 | 330 | 0.21 | 1.46E-02 | 3.22E-05 | 1.69E-07 | |
| | **MDT** | 15 | 0.051 | 2 | 330 | 0.21 | 2.43E-02 | 5.35E-05 | 2.81E-07 | |
| | **LHDT1** | 15 | 0.112 | 130 | 330 | 0.21 | 2.99E+00 | 6.59E-03 | 3.46E-05 | |
| | **LHDT2** | 15 | 0.120 | 43 | 330 | 0.21 | 1.05E+00 | 2.31E-03 | 1.22E-05 | |
| | **MHDT** | 15 | 0.147 | 683 | 330 | 0.21 | 2.05E+01 | 4.52E-02 | 2.37E-04 | |
| | **HHDT** | 15 | 0.107 | 2204 | 330 | 0.21 | 4.85E+01 | 1.07E-01 | 5.61E-04 | |
| | | | | | | | | | | 8.50E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.054 | 1 | 175 | 0.11 | 4.65E-03 | 1.02E-05 | 5.38E-08 | |
| | **LDT1** | 15 | 0.139 | 0 | 175 | 0.11 | 6.41E-04 | 1.41E-06 | 7.42E-09 | |
| | **LDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 2.36E-04 | 5.21E-07 | 2.74E-09 | |
| | **MDT** | 15 | 0.051 | 0 | 175 | 0.11 | 3.92E-04 | 8.63E-07 | 4.54E-09 | |
| | **LHDT1** | 15 | 0.112 | 6 | 175 | 0.11 | 7.12E-02 | 1.57E-04 | 8.24E-07 | |
| | **LHDT2** | 15 | 0.120 | 2 | 175 | 0.11 | 2.50E-02 | 5.50E-05 | 2.89E-07 | |
| | **MHDT** | 15 | 0.147 | 20 | 175 | 0.11 | 3.21E-01 | 7.07E-04 | 3.71E-06 | |
| | **HHDT** | 15 | 0.107 | 54 | 175 | 0.11 | 6.31E-01 | 1.39E-03 | 7.30E-06 | 1.22E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.054 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.054 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.139 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.112 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.120 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 27 | | | 2.93E-01 | 6.45E-04 | 3.39E-06 | |
| | **LDT1** | | | 1 | | | 4.04E-02 | 8.89E-05 | 4.67E-07 | |
| | **LDT2** | | | 1 | | | 1.49E-02 | 3.28E-05 | 1.72E-07 | |
| | **MDT** | | | 2 | | | 2.47E-02 | 5.43E-05 | 2.86E-07 | |
| | **LHDT1** | | | 136 | | | 3.06E+00 | 6.75E-03 | 3.55E-05 | |
| | **LHDT2** | | | 45 | | | 1.07E+00 | 2.37E-03 | 1.24E-05 | |
| | **MHDT** | | | 703 | | | 2.08E+01 | 4.59E-02 | 2.41E-04 | |
| | **HHDT** | | | 2258 | | | 4.91E+01 | 1.08E-01 | 5.68E-04 | |
| | **Total** | | | 3174 | | | 7.45E+01 | 1.64E-01 | 8.62E-04 | 8.62E-04 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 65 | 2.46E+00 | 5.42E-03 | 2.85E-05 | |
| | **LHDT2** | 0.504 | 5 | 21 | 8.95E-01 | 1.97E-03 | 1.04E-05 | |
| | **MHDT** | 0.001 | 5 | 341 | 3.98E-02 | 8.77E-05 | 4.61E-07 | |
| | **HHDT** | 0.002 | 5 | 1102 | 1.38E-01 | 3.03E-04 | 1.59E-06 | |
| | | | | 1530 | 3.53E+00 | 7.78E-03 | 4.09E-05 | 4.09E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 3 | 1.10E-01 | 2.43E-04 | 1.28E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.01E-02 | 8.84E-05 | 4.65E-07 | |
| | **MHDT** | 0.001 | 5 | 10 | 1.18E-03 | 2.59E-06 | 1.36E-08 | |
| | **HHDT** | 0.002 | 5 | 27 | 3.38E-03 | 7.44E-06 | 3.91E-08 | |
| | | | | 41 | 1.55E-01 | 3.41E-04 | 1.79E-06 | 1.79E-06 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 1571 | 3.69E+00 | 8.12E-03 | 4.27E-05 | 4.27E-05 |

**World Logistics Center** **2027** **Phase 2** With Mitigation:MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day**
24 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.050 | 8234 | 330 | 0.21 | 8.38E+01 | 1.85E-01 | 9.70E-04 | |
| | **LDT1** | 15 | 0.051 | 975 | 330 | 0.21 | 1.02E+01 | 2.25E-02 | 1.18E-04 | |
| | **LDT2** | 15 | 0.050 | 2973 | 330 | 0.21 | 3.03E+01 | 6.68E-02 | 3.51E-04 | |
| | **MDT** | 15 | 0.050 | 2296 | 330 | 0.21 | 2.34E+01 | 5.16E-02 | 2.71E-04 | |
| | **LHDT1** | 15 | 0.087 | 421 | 330 | 0.21 | 7.54E+00 | 1.66E-02 | 8.73E-05 | |
| | **LHDT2** | 15 | 0.100 | 44 | 330 | 0.21 | 9.03E-01 | 1.99E-03 | 1.05E-05 | |
| | **MHDT** | 15 | 0.145 | 156 | 330 | 0.21 | 4.63E+00 | 1.02E-02 | 5.36E-05 | |
| | **HHDT** | 15 | 0.085 | 38 | 330 | 0.21 | 6.58E-01 | 1.45E-03 | 7.62E-06 | |
| | | | | | | | | | | 1.87E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.050 | 251 | 175 | 0.11 | 1.35E+00 | 2.98E-03 | 1.57E-05 | |
| | **LDT1** | 15 | 0.051 | 30 | 175 | 0.11 | 1.65E-01 | 3.63E-04 | 1.91E-06 | |
| | **LDT2** | 15 | 0.050 | 91 | 175 | 0.11 | 4.89E-01 | 1.08E-03 | 5.66E-06 | |
| | **MDT** | 15 | 0.050 | 70 | 175 | 0.11 | 3.78E-01 | 8.33E-04 | 4.37E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 175 | 0.11 | 1.79E-01 | 3.95E-04 | 2.07E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 175 | 0.11 | 2.15E-02 | 4.73E-05 | 2.49E-07 | |
| | **MHDT** | 15 | 0.145 | 5 | 175 | 0.11 | 7.25E-02 | 1.60E-04 | 8.39E-07 | |
| | **HHDT** | 15 | 0.085 | 1 | 175 | 0.11 | 8.56E-03 | 1.89E-05 | 9.91E-08 | 3.09E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.050 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 8484 | | | 8.52E+01 | 1.88E-01 | 9.86E-04 | |
| | **LDT1** | | | 1005 | | | 1.04E+01 | 2.28E-02 | 1.20E-04 | |
| | **LDT2** | | | 3064 | | | 3.08E+01 | 6.78E-02 | 3.56E-04 | |
| | **MDT** | | | 2365 | | | 2.38E+01 | 5.24E-02 | 2.75E-04 | |
| | **LHDT1** | | | 440 | | | 7.72E+00 | 1.70E-02 | 8.93E-05 | |
| | **LHDT2** | | | 46 | | | 9.25E-01 | 2.04E-03 | 1.07E-05 | |
| | **MHDT** | | | 160 | | | 4.70E+00 | 1.04E-02 | 5.44E-05 | |
| | **HHDT** | | | 39 | | | 6.67E-01 | 1.47E-03 | 7.72E-06 | |
| | **Total** | | | 15604 | | | 1.64E+02 | 3.62E-01 | 1.90E-03 | 1.90E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.040 | 5 | 210 | 6.95E-01 | 1.53E-03 | 8.05E-06 | |
| | **LHDT2** | 0.035 | 5 | 22 | 6.38E-02 | 1.41E-04 | 7.39E-07 | |
| | **MHDT** | 0.035 | 5 | 78 | 2.26E-01 | 4.98E-04 | 2.62E-06 | |
| | **HHDT** | 0.035 | 5 | 19 | 5.50E-02 | 1.21E-04 | 6.37E-07 | |
| | | | | 329 | 1.04E+00 | 2.29E-03 | 1.20E-05 | 1.20E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.040 | 5 | 9 | 3.12E-02 | 6.86E-05 | 3.61E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.86E-03 | 6.30E-06 | 3.31E-08 | |
| | **MHDT** | 0.035 | 5 | 2 | 6.68E-03 | 1.47E-05 | 7.73E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 1.35E-03 | 2.97E-06 | 1.56E-08 | |
| | | | | 13 | 4.21E-02 | 9.26E-05 | 4.87E-07 | 4.87E-07 |
| **Idle at Utility** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.040 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 343 | 1.08E+00 | 2.38E-03 | 1.25E-05 | 1.25E-05 |

**World Logistics Center Project in 2027**
**Internal Roadway Circulation**

**2027** | **PM10** | Based on PB Traffic Results 10/3/2013
With EMFAC2014 | With Mitigation: MY2010 T6 and T7 DSL
Rev 5

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Entrained Road Dist (g/sec) | Total (g/sec) |
|---|---|---|---|---|
| 1 | 2.63E-03 | 2.24E-03 | 2.92E-02 | 3.41E-02 |
| 2 | 6.68E-03 | 5.80E-03 | 7.40E-02 | 8.65E-02 |
| 3 | 9.30E-03 | 8.16E-03 | 1.03E-01 | 1.21E-01 |
| 5 | 5.72E-04 | 2.20E-03 | 7.05E-03 | 9.82E-03 |
| 6 | 3.10E-03 | 3.44E-03 | 4.47E-02 | 5.12E-02 |
| 8 | 9.28E-04 | 3.89E-03 | 1.45E-02 | 1.93E-02 |
| 11 | 1.77E-05 | 7.93E-05 | 2.51E-04 | 3.48E-04 |
| 12 | 5.58E-05 | 1.33E-04 | 5.39E-04 | 7.28E-04 |
| 14 | 1.30E-03 | 1.37E-03 | 1.45E-02 | 1.71E-02 |
| 18 | 5.20E-04 | 8.09E-04 | 6.04E-03 | 7.37E-03 |
| 19 | 2.01E-03 | 1.53E-03 | 2.52E-02 | 2.88E-02 |
| 21 | 1.47E-03 | 2.69E-03 | 1.91E-02 | 2.32E-02 |
| 24 | 2.46E-03 | 4.75E-03 | 3.59E-02 | 4.31E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 8.00E-04 | 7.48E-04 | 9.03E-03 | 1.06E-02 |
| 30 | 3.87E-03 | 4.25E-03 | 4.41E-02 | 5.23E-02 |
| 31 | 8.18E-04 | 2.04E-03 | 1.10E-02 | 1.39E-02 |
| Total (g/sec) | 3.65E-02 | 4.41E-02 | 4.38E-01 | 5.19E-01 |
| Total (lbs/day) | 6.95E+00 | 8.40E+00 | 8.34E+01 | 9.87E+01 |
| Total VMT (mi/day) | 2.75E+04 | 7.59E+04 | | 1.03E+05 |

| ID | Arterial | From | To | | Estimated Project 2027 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 17,798 | 794 | 2,397 | 7,804 |
| 2 | Street A | Eucalyptus Ave | Street F | | 19,915 | 1,464 | 2,739 | 8,703 |
| 3 | Street E | west of Street A | | | 8,750 | 621 | 1,195 | 3,761 |
| 5 | Street E | Street D | Street A | | 6,218 | 269 | 556 | 86 |
| 6 | Street A | Street F | Street C | | 8,078 | 491 | 959 | 2,552 |
| 8 | Street D | Street E | Cactus Ave | | 9,553 | 441 | 880 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 172 | 13 | 14 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 353 | 70 | 62 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,074 | 203 | 269 | 711 |
| 18 | Street B | Street A | Gilman Springs Rd | | 1,479 | 100 | 161 | 281 |
| 19 | Street F | Street A | Street C | | 1,600 | 114 | 251 | 813 |
| 21 | Street C | Street A | Street F | | 5,695 | 260 | 570 | 833 |
| 24 | Street C | Street F | Gilman Springs Rd | | 6,617 | 250 | 555 | 987 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 2,896 | 135 | 354 | 1,145 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 3,949 | 184 | 454 | 1,262 |
| 31 | Gilman Springs Rd | south of Street C | | | 6,821 | 242 | 504 | 688 |

Traffic volumes provided by Parsons Brinkerhoff; traffic volumes for 2027 interpolated between 2022 and 2035 in accordance with the project's conceptual occupancy schedule

**World Logistics Center** **2027** **PM10** **With Mitigation: MY2010 T6 and T7 DSL**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.78% | 81.43% | 98.44% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 31 | 2 | 2 | 3 | 162 | 54 | 1952 | 7683 | 9889 | 2009 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 35 | 2 | 2 | 3 | 299 | 99 | 2230 | 8568 | 11239 | 5104 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2,352 | 1.461 | 15 | 1 | 1 | 1 | 127 | 42 | 973 | 3702 | 4863 | 7105 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 11 | 1 | 1 | 1 | 55 | 18 | 453 | 85 | 624 | 369 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1,099 | 0.683 | 14 | 1 | 1 | 1 | 100 | 33 | 781 | 2512 | 3443 | 2351 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1,091 | 0.678 | 17 | 1 | 1 | 2 | 90 | 30 | 716 | 0 | 857 | 581 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1,201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 11 | 0 | 15 | 11 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 14 | 5 | 50 | 0 | 70 | 36 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1,618 | 1.005 | 4 | 0 | 0 | 0 | 42 | 14 | 219 | 700 | 978 | 983 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1,412 | 0.877 | 3 | 0 | 0 | 0 | 20 | 7 | 131 | 277 | 438 | 384 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2,386 | 1.482 | 3 | 0 | 0 | 0 | 23 | 8 | 204 | 801 | 1040 | 1541 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1,258 | 0.781 | 10 | 1 | 1 | 1 | 53 | 18 | 464 | 820 | 1367 | 1068 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1,946 | 1.209 | 12 | 1 | 1 | 1 | 51 | 17 | 452 | 972 | 1506 | 1821 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 5 | 0 | 0 | 0 | 28 | 9 | 289 | 1128 | 1459 | 612 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2,827 | 1.756 | 7 | 0 | 0 | 1 | 38 | 12 | 370 | 1242 | 1671 | 2934 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 12 | 1 | 1 | 1 | 49 | 16 | 411 | 678 | 1168 | 595 |
| | | | | | | | | | | | | | | | | Total | 27504 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0490 | 0.0837 | 0.0494 | 0.0481 | 0.1045 | 0.1145 | 0.1457 | 0.1051 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.59E-06 | 3.71E-07 | 1.96E-07 | 3.38E-07 | 3.99E-05 | 1.45E-05 | 6.69E-04 | 1.90E-03 | 2.63E-03 |
| 2 | 1 | 8.98E-06 | 9.28E-07 | 4.90E-07 | 8.46E-07 | 1.64E-04 | 5.97E-05 | 1.71E-03 | 4.73E-03 | 6.68E-03 |
| 3 | 1 | 1.27E-05 | 1.31E-06 | 6.93E-07 | 1.20E-06 | 2.24E-04 | 8.15E-05 | 2.40E-03 | 6.58E-03 | 9.30E-03 |
| 5 | 1 | 3.66E-06 | 3.78E-07 | 2.00E-07 | 3.44E-07 | 3.93E-05 | 1.43E-05 | 4.52E-04 | 6.10E-05 | 5.72E-04 |
| 6 | 1 | 5.48E-06 | 5.66E-07 | 2.99E-07 | 5.16E-07 | 8.28E-05 | 3.01E-05 | 8.99E-04 | 2.09E-03 | 3.10E-03 |
| 8 | 1 | 6.43E-06 | 6.65E-07 | 3.51E-07 | 6.05E-07 | 7.39E-05 | 2.69E-05 | 8.19E-04 | 0.00E+00 | 9.28E-04 |
| 11 | 1 | 1.27E-07 | 1.32E-08 | 6.95E-09 | 1.20E-08 | 2.40E-06 | 8.72E-07 | 1.42E-05 | 0.00E+00 | 1.77E-05 |
| 12 | 1 | 1.79E-07 | 1.85E-08 | 9.79E-09 | 1.69E-08 | 8.82E-06 | 3.21E-06 | 4.36E-05 | 0.00E+00 | 5.58E-05 |
| 14 | 1 | 2.07E-06 | 2.14E-07 | 1.13E-07 | 1.95E-07 | 5.05E-05 | 1.84E-05 | 3.71E-04 | 8.56E-04 | 1.30E-03 |
| 18 | 1 | 1.29E-06 | 1.33E-07 | 7.03E-08 | 1.21E-07 | 2.17E-05 | 7.88E-06 | 1.93E-04 | 2.95E-04 | 5.20E-04 |
| 19 | 1 | 2.36E-06 | 2.43E-07 | 1.29E-07 | 2.22E-07 | 4.17E-05 | 1.52E-05 | 5.11E-04 | 1.44E-03 | 2.01E-03 |
| 21 | 1 | 4.42E-06 | 4.57E-07 | 2.41E-07 | 4.16E-07 | 5.02E-05 | 1.82E-05 | 6.11E-04 | 7.80E-04 | 1.47E-03 |
| 24 | 1 | 7.95E-06 | 8.21E-07 | 4.34E-07 | 7.48E-07 | 7.47E-05 | 2.72E-05 | 9.22E-04 | 1.43E-03 | 2.46E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.21E-06 | 1.25E-07 | 6.58E-08 | 1.14E-07 | 1.40E-05 | 5.10E-06 | 2.04E-04 | 5.75E-04 | 8.00E-04 |
| 30 | 1 | 6.89E-06 | 7.12E-07 | 3.76E-07 | 6.48E-07 | 7.96E-05 | 2.90E-05 | 1.10E-03 | 2.65E-03 | 3.87E-03 |
| 31 | 1 | 3.45E-06 | 3.57E-07 | 1.88E-07 | 3.25E-07 | 3.05E-05 | 1.11E-05 | 3.53E-04 | 4.20E-04 | 8.18E-04 |

**World Logistics Center** **2027** **PM10** **With Mitigation: MY2010 T6 and T7 DSL**
Project in 2027
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 56.04% | 6.82% | 20.81% | 16.12% | 65.84% | 6.95% | 18.57% | 1.56% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28,794 | 17,798 | 794 | 2,397 | 7,804 | 327 | 0.203 | 9,974 | 1,215 | 3,703 | 2,869 | 523 | 55 | 445 | 121 | 18,905 | 3,840 |
| 2 | 32,821 | 19,915 | 1,464 | 2,739 | 8,703 | 731 | 0.454 | 11,159 | 1,359 | 4,144 | 3,210 | 964 | 102 | 509 | 135 | 21,582 | 9,800 |
| 3 | 14,326 | 8,750 | 621 | 1,195 | 3,761 | 2352 | 1.461 | 4,903 | 597 | 1,820 | 1,410 | 409 | 43 | 222 | 59 | 9,463 | 13,827 |
| 5 | 7,130 | 6,218 | 269 | 556 | 86 | 953 | 0.592 | 3,485 | 424 | 1,294 | 1,002 | 177 | 19 | 103 | 1 | 6,505 | 3,851 |
| 6 | 12,079 | 8,078 | 491 | 959 | 2,552 | 1099 | 0.683 | 4,526 | 551 | 1,681 | 1,302 | 323 | 34 | 178 | 40 | 8,635 | 5,895 |
| 8 | 10,874 | 9,553 | 441 | 880 | 0 | 1091 | 0.678 | 5,353 | 652 | 1,988 | 1,540 | 291 | 31 | 163 | 0 | 10,017 | 6,789 |
| 11 | 199 | 172 | 13 | 14 | 0 | 1201 | 0.746 | 96 | 12 | 36 | 28 | 9 | 1 | 3 | 0 | 183 | 137 |
| 12 | 485 | 353 | 70 | 62 | 0 | 824 | 0.512 | 198 | 24 | 73 | 57 | 46 | 5 | 12 | 0 | 415 | 212 |
| 14 | 3,257 | 2,074 | 203 | 269 | 711 | 1618 | 1.005 | 1,162 | 142 | 432 | 334 | 134 | 14 | 50 | 11 | 2,279 | 2,290 |
| 18 | 2,021 | 1,479 | 100 | 161 | 281 | 1412 | 0.877 | 829 | 101 | 308 | 238 | 66 | 7 | 30 | 4 | 1,583 | 1,388 |
| 19 | 2,779 | 1,600 | 114 | 251 | 813 | 2386 | 1.482 | 897 | 109 | 333 | 258 | 75 | 8 | 47 | 13 | 1,739 | 2,578 |
| 21 | 7,358 | 5,695 | 260 | 570 | 833 | 1258 | 0.781 | 3,191 | 389 | 1,185 | 918 | 171 | 18 | 106 | 13 | 5,991 | 4,682 |
| 24 | 8,410 | 6,617 | 250 | 555 | 987 | 1946 | 1.209 | 3,708 | 452 | 1,377 | 1,067 | 165 | 17 | 103 | 15 | 6,904 | 8,346 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 4,531 | 2,896 | 135 | 354 | 1,145 | 675 | 0.419 | 1,623 | 198 | 603 | 467 | 89 | 9 | 66 | 18 | 3,072 | 1,288 |
| 30 | 5,849 | 3,949 | 184 | 454 | 1,262 | 2827 | 1.756 | 2,213 | 270 | 822 | 637 | 121 | 13 | 84 | 20 | 4,178 | 7,338 |
| 31 | 8,255 | 6,821 | 242 | 504 | 688 | 820 | 0.509 | 3,822 | 466 | 1,419 | 1,099 | 159 | 17 | 94 | 11 | 7,087 | 3,610 |
| | | | | | | | | | | | | | | | | Total | 75,872 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0466 | 0.0470 | 0.0466 | 0.0466 | 0.0858 | 0.0985 | 0.1435 | 0.0835 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.09E-03 | 1.34E-04 | 4.05E-04 | 3.14E-04 | 1.05E-04 | 1.28E-05 | 1.50E-04 | 2.38E-05 | 2.24E-03 |
| 2 | 1 | 2.73E-03 | 3.36E-04 | 1.01E-03 | 7.86E-04 | 4.34E-04 | 5.27E-05 | 3.84E-04 | 5.94E-05 | 5.80E-03 |
| 3 | 1 | 3.86E-03 | 4.75E-04 | 1.43E-03 | 1.11E-03 | 5.93E-04 | 7.19E-05 | 5.39E-04 | 8.26E-05 | 8.16E-03 |
| 5 | 1 | 1.11E-03 | 1.37E-04 | 4.13E-04 | 3.20E-04 | 1.04E-04 | 1.26E-05 | 1.02E-04 | 7.66E-07 | 2.20E-03 |
| 6 | 1 | 1.66E-03 | 2.05E-04 | 6.18E-04 | 4.79E-04 | 2.19E-04 | 2.66E-05 | 2.02E-04 | 2.62E-05 | 3.44E-03 |
| 8 | 1 | 1.95E-03 | 2.40E-04 | 7.26E-04 | 5.63E-04 | 1.95E-04 | 2.37E-05 | 1.84E-04 | 0.00E+00 | 3.89E-03 |
| 11 | 1 | 3.87E-05 | 4.76E-06 | 1.44E-05 | 1.11E-05 | 6.34E-06 | 7.69E-07 | 3.20E-06 | 0.00E+00 | 7.93E-05 |
| 12 | 1 | 5.46E-05 | 6.71E-06 | 2.03E-05 | 1.57E-05 | 2.33E-05 | 2.83E-06 | 9.79E-06 | 0.00E+00 | 1.33E-04 |
| 14 | 1 | 6.29E-04 | 7.74E-05 | 2.34E-04 | 1.81E-04 | 1.33E-04 | 1.62E-05 | 8.34E-05 | 1.07E-05 | 1.37E-03 |
| 18 | 1 | 3.92E-04 | 4.82E-05 | 1.45E-04 | 1.13E-04 | 5.73E-05 | 6.95E-06 | 4.34E-05 | 3.71E-06 | 8.09E-04 |
| 19 | 1 | 7.16E-04 | 8.81E-05 | 2.66E-04 | 2.06E-04 | 1.10E-04 | 1.34E-05 | 1.15E-04 | 1.81E-05 | 1.53E-03 |
| 21 | 1 | 1.34E-03 | 1.65E-04 | 4.99E-04 | 3.87E-04 | 1.33E-04 | 1.61E-05 | 1.37E-04 | 9.80E-06 | 2.69E-03 |
| 24 | 1 | 2.42E-03 | 2.97E-04 | 8.97E-04 | 6.95E-04 | 1.98E-04 | 2.40E-05 | 2.07E-04 | 1.80E-05 | 4.75E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 3.67E-04 | 4.51E-05 | 1.36E-04 | 1.06E-04 | 3.71E-05 | 4.49E-06 | 4.58E-05 | 7.22E-06 | 7.48E-04 |
| 30 | 1 | 2.09E-03 | 2.58E-04 | 7.78E-04 | 6.03E-04 | 2.11E-04 | 2.56E-05 | 2.46E-04 | 3.33E-05 | 4.25E-03 |
| 31 | 1 | 1.05E-03 | 1.29E-04 | 3.90E-04 | 3.02E-04 | 8.06E-05 | 9.77E-06 | 7.92E-05 | 5.27E-06 | 2.04E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 17,798 | 3615 | 794 | 161 | 2,397 | 487 | 7,804 | 1585 | 5849 | 8.75 | 0.035 | 0.0010 | 5.6 | 2.92E-02 |
| 2 | A | 731 | 0.45 | 19,915 | 9043 | 1,464 | 665 | 2,739 | 1244 | 8,703 | 3952 | 14904 | 8.69 | 0.035 | 0.0009 | 14.1 | 7.40E-02 |
| 3 | A | 2352 | 1.46 | 8,750 | 12784 | 621 | 907 | 1,195 | 1747 | 3,761 | 5495 | 20932 | 8.63 | 0.035 | 0.0009 | 19.6 | 1.03E-01 |
| 5 | A | 870 | 0.54 | 6,218 | 3361 | 269 | 145 | 556 | 301 | 86 | 46 | 3853 | 3.27 | 0.035 | 0.0003 | 1.3 | 7.05E-03 |
| 6 | A | 1394 | 0.87 | 8,078 | 6995 | 491 | 425 | 959 | 830 | 2,552 | 2210 | 10460 | 7.50 | 0.035 | 0.0008 | 8.5 | 4.47E-02 |
| 8 | A | 1254 | 0.78 | 9,553 | 7442 | 441 | 344 | 880 | 685 | 0 | 0 | 8471 | 3.05 | 0.035 | 0.0003 | 2.8 | 1.45E-02 |
| 11 | A | 1201 | 0.75 | 172 | 128 | 13 | 10 | 14 | 10 | 0 | 0 | 148 | 3.03 | 0.035 | 0.0003 | 0.0 | 2.51E-04 |
| 12 | A | 824 | 0.51 | 353 | 181 | 70 | 36 | 62 | 32 | 0 | 0 | 248 | 3.86 | 0.035 | 0.0004 | 0.1 | 5.39E-04 |
| 14 | A | 1618 | 1.01 | 2,074 | 2085 | 203 | 204 | 269 | 270 | 711 | 714 | 3274 | 7.75 | 0.035 | 0.0008 | 2.8 | 1.45E-02 |
| 18 | A | 1412 | 0.88 | 1,479 | 1297 | 100 | 88 | 161 | 141 | 281 | 247 | 1772 | 6.01 | 0.035 | 0.0006 | 1.1 | 6.04E-03 |
| 19 | A | 2737 | 1.70 | 1,600 | 2721 | 114 | 194 | 251 | 427 | 813 | 1383 | 4724 | 9.33 | 0.035 | 0.0010 | 4.8 | 2.52E-02 |
| 21 | A | 1367 | 0.85 | 5,695 | 4836 | 260 | 221 | 570 | 484 | 833 | 708 | 6248 | 5.39 | 0.035 | 0.0006 | 3.6 | 1.91E-02 |
| 24 | A | 2271 | 1.41 | 6,617 | 9335 | 250 | 353 | 555 | 784 | 987 | 1393 | 11865 | 5.35 | 0.035 | 0.0006 | 6.8 | 3.59E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 2,896 | 1214 | 135 | 57 | 354 | 149 | 1,145 | 480 | 1900 | 8.33 | 0.035 | 0.0009 | 1.7 | 9.03E-03 |
| 30 | A | 2827 | 1.76 | 3,949 | 6935 | 184 | 322 | 454 | 798 | 1,262 | 2216 | 10271 | 7.54 | 0.035 | 0.0008 | 8.4 | 4.41E-02 |
| 31 | A | 830 | 0.52 | 6,821 | 3517 | 242 | 125 | 504 | 260 | 688 | 355 | 4256 | 4.58 | 0.035 | 0.0005 | 2.1 | 1.10E-02 |

**World Logistics Center** **With Mitigation including Tier IV and 5 day work week**

**Onsite Construction Exhaust Emissions in 2027 - Daily**

| | Onsite Emissions (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | **VOC (lbs/day)** | **NOx (lbs/day)** | **CO (lbs/day)** | **SO2 (lbs/day)** | **PM10 exhaust (lbs/day)** | **PM2.5 exhaust (lbs/day)** |
| Maximum Daily Total | 140.6 | 514.0 | 698.7 | 1.5 | 4.2 | 4.2 |
| Concrete Pouring | 1.4 | 26.1 | 41.6 | 0.1 | 0.1 | 0.1 |
| Non-Concrete Pouring | 139.2 | 487.9 | 657.1 | 1.4 | 4.1 | 4.1 |

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |

| **Emission Rates** | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Concrete Pouring | 0.029 | 0.549 | 0.874 | 0.002 | 0.002 | 0.002 |
| Non-Concrete Pouring | 1.755 | 6.153 | 8.287 | 0.018 | 0.052 | 0.052 |
| Total | 1.785 | 6.702 | 9.161 | 0.020 | 0.054 | 0.054 |

**Number of Volume Sources:** 83

**Emissions per Volume Source**

| | **VOC (g/sec)** | **NOx (g/sec)** | **CO (g/sec)** | **SO2 (g/sec)** | **PM10 exhaust (g/sec)** | **PM2.5 exhaust (g/sec)** |
|---|---|---|---|---|---|---|
| Total | 0.02150473 | 0.0807415 | 0.110375 | 0.000238 | 0.000648282 | 0.000648282 |

**Variable Emission Factors**

| | **VOC** | **NOx** | **CO** | **SO2** | **PM10 exhaust** | **PM2.5 exhaust** |
|---|---|---|---|---|---|---|
| 6am to 4pm | 0.9835139 | 0.91814076 | 0.904557 | 0.893617 | 0.9609375 | 0.9609375 |
| 4pm to Midnight | 0 | 0 | 0 | 0 | 0 | 0 |
| Midnight to 6am | 0.0164861 | 0.08185924 | 0.095443 | 0.106383 | 0.0390625 | 0.0390625 |

**Fugitive Dust**

| | PM10 (lbs/day) | PM2.5 (lbs/day) |
|---|---|---|
| All Sources | 131.7 | 23.7 |

**Duration of Construction** 10 hours

| **Emissions** | **PM10 (g/sec)** | **PM2.5 (g/sec)** |
|---|---|---|
| All Sources | 1.66088333 | 0.29888333 |

**Size of the Construction Area Source** 737949 m2

| **Area Emissions** | **PM10 (g/m2-sec)** | **PM2.5 (g/m2-sec)** |
|---|---|---|
| AllSources | 2.2507E-06 | 4.0502E-07 |

**World Logistics Center** **With Mitigation including Tier IV and 5 day work week**

**Onsite Construction Exhaust Emissions in 2027 - Annual**

**Duration of Construction**

| | | |
|---|---|---|
| Concrete Pouring - Midnight to 6am | 6 | hours |
| Non-Concrte Pouring - 6am to 4pm | 10 | hours |
| **Construction** | 260 | days/year |

**Onsite Emissions**

| | VOC (tons/year) | NOx (tons/year) | CO (tons/year) | SO2 (tons/year) | PM10 exhaust (tons/year) | PM2.5 exhaust (tons/year) |
|---|---|---|---|---|---|---|
| Annual Total | 4.8 | 48.4 | 62.7 | 0.1 | 0.4 | 0.4 |
| Concrete Pouring | 0.2 | 3.4 | 5.4 | 0.0 | 0.0 | 0.0 |
| Non-Concrete Pouring | 4.6 | 45.0 | 57.3 | 0.1 | 0.4 | 0.4 |

| **Average Emissions** | VOC (g/sec) | NOx (g/sec) | CO (g/sec) | SO2 (g/sec) | PM10 exhaust (g/sec) | PM2.5 exhaust (g/sec) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 3.23E-02 | 5.50E-01 | 8.73E-01 | 0.00E+00 | 2.91E-03 | 2.91E-03 |
| Non-Concrete Pouring | 4.46E-01 | 4.37E+00 | 5.56E+00 | 9.70E-03 | 3.87E-02 | 3.84E-02 |

**Number of Volume Sources:** 83

**Emissions per Volume Source**

| | VOC (g/sec/src) | NOx (g/sec/src) | CO (g/sec/src) | SO2 (g/sec/src) | PM10 exhaust (g/sec/src) | PM2.5 exhaust (g/sec/src) |
|---|---|---|---|---|---|---|
| Concrete Pouring | 3.90E-04 | 6.62E-03 | 1.05E-02 | 0.00E+00 | 3.51E-05 | 3.51E-05 |
| Non Concrete Pouring | 5.38E-03 | 5.26E-02 | 6.70E-02 | 1.17E-04 | 4.66E-04 | 4.63E-04 |
| **Total** | 5.77E-03 | 5.92E-02 | 7.75E-02 | 1.17E-04 | 5.01E-04 | 4.98E-04 |

**Variable Emission Factors - PM10**

| | 6am to 4pm | 4pm to MN | MN to 6am |
|---|---|---|---|
| PM10 | 9.30E-01 | 0.00E+00 | 6.99E-02 |
| Nox | 8.88E-01 | 0.00E+00 | 1.12E-01 |

**Fugitive Dust**

| | PM10 (tons/year) | PM2.5 (tons/year) |
|---|---|---|
| All Sources | 2.9 | 0.7 |

**Duration of Construction** 10 hours

| **Emissions** | PM10 (g/sec) | PM2.5 (g/sec) |
|---|---|---|
| All Sources | 0.08349822 | 0.02015474 |

**Size of the Construction Area Source** 737949 m2

| **Area Emissions** | PM10 (g/m2-sec) | PM2.5 (g/m2-sec) |
|---|---|---|
| AllSources | 1.1315E-07 | 2.7312E-08 |

**World Logistic Center Year: 2027** **No Mitigation**

**LST Analysis for PM10-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

Location: halfway between Gilman Springs and Eucalyptus (2 houses)

## Existing Residences at Location Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 20.4 | | | |
| 170 | 0.0 | 1.3 | 0.9 | 2.2 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 15.3 | | | |
| 1800 | 0.0 | 5.3 | 0.2 | 5.5 |

**World Logistic Center Year: 2027** **No Mitigation**

**LST Analysis for PM10-Annual**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

Location: halfway between Gilman Springs and Eucalyptus (2 houses)

## Existing Residences at Location Outside Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 2.1 | | | |
| 170 | 0.0 | 0.6 | 0.2 | 0.8 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1 | | | |
| 1800 | 0.0 | 3.3 | 0 | 3.3 |

**World Logistic Center Year: 2027** **No Mitigation**

**LST Analysis for PM2.5-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:
Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:
e is the natural logorithm; and
x is the distance in meters from the fenceline

Location: halfway between Gilman Springs and Eucalyptus (2 houses)

## Existing Residences at Location Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 4 | | | |
| 170 | 0.0 | 0.4 | 0.7 | 1.1 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM2.5 Fugitive Dust Concentration (ug/m3) | 24-hour PM2.5 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM2.5 Off-road Construction Equipment (ug/m3) | 24-hour PM2.5 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 2.9 | | | |
| 1800 | 0.0 | 1.4 | 0.2 | 1.6 |

**World Logistic Center Year: 2027** **With Mitigation**

**LST Analysis for PM10-24 hour**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:

Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:

e is the natural logorithm; and

x is the distance in meters from the fenceline

Location : halfway between Gilman Springs and Eucalyptus (2 houses)

## Existing Residences at Location Outside Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 20.3 | | | |
| 170 | 0.0 | 1.3 | 0.4 | 1.7 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | 24 hr Ave PM10 Fugitive Dust Concentration (ug/m3) | 24-hour PM10 Vehicle Emissions from Internal Roadways (ug/m3) | 24-hour PM10 Off-road Construction Equipment (ug/m3) | 24-hour PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 15.3 | | | |
| 1800 | 0.0 | 5.3 | 0.1 | 5.4 |

**World Logistic Center Year: 2027** **With Mitigation**

**LST Analysis for PM10-Annual**

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate fugitive dust concentrations.

$$C_x = 0.9403\ C_o\ e^{-0.0462\ x}$$

Where: Cx is the predicted fugitive dust cncentration at x meters from the fenceline:

Co is he fugitive dust concentration at the fenceline as estimated by AERMOD:

e is the natural logorithm; and

x is the distance in meters from the fenceline

Location: halfway between Gilman Springs and Eucalyptus (2 houses)

## Existing Residences at Location Outside Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 2.1 | | | |
| 170 | 0.0 | 0.6 | 0.1 | 0.7 |

## Existing Residences at the Center of the Project Along Theodore Street Within Project Boundary

| Distance from fenceline (m) | Annual Ave PM10 Fugitive Dust Concentration (ug/m3) | Annual PM10 Vehicle Emissions from Internal Roadways (ug/m3) | Annual PM10 Off-road Construction Equipment (ug/m3) | Annual PM10 Total (ug/m3) |
|---|---|---|---|---|
| 0 | 1 | | | |
| 1800 | 0.0 | 1.9 | 0 | 1.9 |

# F.6 - Project Development Schedule Emissions for 2035

**Appendix F.6 contains the calculated localized unmitigated and mitigated emissions for project operation during the 2035 project buildout. Emissions are provided for CO, NO2, PM10, and PM2.5.**

**The individual air pollutant AERMOD project files are not provided to reduce paper consumption but are available on a separate CD.**

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour CO emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 1**
**No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Peak Hour CO**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 7.37E-02 | 8.81E-02 |
| Light Logistics | Phase 1 | 1.24E-04 | 2.48E-04 |
| Utilities Service Station | Phase 1 | 8.89E-05 | 2.13E-04 |
| Gas Station w/Convenience Store | Phase 1 | 1.62E-04 | 1.10E-04 |
| Convenience Store | Phase 1 | 1.85E-04 | 1.33E-04 |
| Fire Station | Phase 1 | 5.29E-07 | 1.47E-04 |
| Total | | 7.42E-02 | 8.90E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 2.93E-02 | 3.65E-01 |
| Light Logistics | Phase 1 | 1.24E-04 | 1.57E-03 |
| Utilities Service Station | Phase 1 | 2.91E-04 | 3.89E-03 |
| Gas Station w/Convenience Store | Phase 1 | 2.35E-04 | 2.14E-03 |
| Convenience Store | Phase 1 | 3.33E-04 | 2.78E-03 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 3.03E-02 | 3.75E-01 |

| **Total Onsite Mobile Emissions** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.42E-02 | 8.90E-02 | |
| | Idling Emissions (g/sec) | 3.03E-02 | 3.75E-01 | |
| | Total Vehicle Emissions (g/sec) | 1.04E-01 | 4.64E-01 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 3.54E-02 | |
| | Fork Lifts (LPG) (g/sec) | | 1.32E+00 | |
| | Total Other Onsite Emissions (g/sec) | | 1.36E+00 | |
| | | | | Total |
| | Total Emissions (g/sec) | 1.04E-01 | 1.82E+00 | 1.92E+00 |
| | Area (m2) | | | 4683563 |
| | Emission Rate (g/m2-sec) | | | 4.11E-07 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.965 | 3 | 330 | 0.21 | 6.33E-01 | 1.39E-03 | 1.76E-04 | |
| | **LDT1** | 15 | 1.045 | 0 | 330 | 0.21 | 3.65E-02 | 8.03E-05 | 1.01E-05 | |
| | **LDT2** | 15 | 0.960 | 0 | 330 | 0.21 | 3.25E-02 | 7.15E-05 | 9.02E-06 | |
| | **MDT** | 15 | 1.119 | 0 | 330 | 0.21 | 6.56E-02 | 1.44E-04 | 1.82E-05 | |
| | **LHDT1** | 15 | 1.286 | 34 | 330 | 0.21 | 8.88E+00 | 1.96E-02 | 2.47E-03 | |
| | **LHDT2** | 15 | 1.213 | 11 | 330 | 0.21 | 2.74E+00 | 6.03E-03 | 7.61E-04 | |
| | **MHDT** | 15 | 0.722 | 181 | 330 | 0.21 | 2.68E+01 | 5.91E-02 | 7.45E-03 | |
| | **HHDT** | 15 | 1.898 | 581 | 330 | 0.21 | 2.26E+02 | 4.98E-01 | 6.28E-02 | |
| | | | | | | | | | | 7.37E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.965 | 0 | 175 | 0.11 | 2.11E-03 | 4.66E-06 | 5.87E-07 | |
| | **LDT1** | 15 | 1.045 | 0 | 175 | 0.11 | 1.22E-04 | 2.69E-07 | 3.39E-08 | |
| | **LDT2** | 15 | 0.960 | 0 | 175 | 0.11 | 1.08E-04 | 2.39E-07 | 3.01E-08 | |
| | **MDT** | 15 | 1.119 | 0 | 175 | 0.11 | 2.19E-04 | 4.83E-07 | 6.09E-08 | |
| | **LHDT1** | 15 | 1.286 | 0 | 175 | 0.11 | 2.62E-02 | 5.77E-05 | 7.28E-06 | |
| | **LHDT2** | 15 | 1.213 | 0 | 175 | 0.11 | 8.08E-03 | 1.78E-05 | 2.24E-06 | |
| | **MHDT** | 15 | 0.722 | 1 | 175 | 0.11 | 4.37E-02 | 9.63E-05 | 1.21E-05 | |
| | **HHDT** | 15 | 1.898 | 2 | 175 | 0.11 | 3.66E-01 | 8.07E-04 | 1.02E-04 | 1.24E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.965 | 0 | 100 | 0.06 | 1.87E-03 | 4.12E-06 | 5.19E-07 | |
| | **LDT1** | 15 | 1.045 | 0 | 100 | 0.06 | 1.08E-04 | 2.37E-07 | 2.99E-08 | |
| | **LDT2** | 15 | 0.960 | 0 | 100 | 0.06 | 9.59E-05 | 2.11E-07 | 2.66E-08 | |
| | **MDT** | 15 | 1.119 | 0 | 100 | 0.06 | 1.94E-04 | 4.27E-07 | 5.38E-08 | |
| | **LHDT1** | 15 | 1.286 | 1 | 100 | 0.06 | 4.69E-02 | 1.03E-04 | 1.30E-05 | |
| | **LHDT2** | 15 | 1.213 | 0 | 100 | 0.06 | 1.45E-02 | 3.19E-05 | 4.02E-06 | |
| | **MHDT** | 15 | 0.722 | 1 | 100 | 0.06 | 3.53E-02 | 7.77E-05 | 9.79E-06 | |
| | **HHDT** | 15 | 1.898 | 2 | 100 | 0.06 | 2.21E-01 | 4.87E-04 | 6.15E-05 | 8.89E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.965 | 0 | 50 | 0.03 | 5.05E-04 | 1.11E-06 | 1.40E-07 | |
| | **LDT1** | 15 | 1.045 | 0 | 50 | 0.03 | 2.91E-05 | 6.41E-08 | 8.09E-09 | |
| | **LDT2** | 15 | 0.960 | 0 | 50 | 0.03 | 2.59E-05 | 5.71E-08 | 7.20E-09 | |
| | **MDT** | 15 | 1.119 | 0 | 50 | 0.03 | 5.23E-05 | 1.15E-07 | 1.45E-08 | |
| | **LHDT1** | 15 | 1.286 | 0 | 50 | 0.03 | 1.71E-04 | 3.77E-07 | 4.76E-08 | |
| | **LHDT2** | 15 | 1.213 | 0 | 50 | 0.03 | 5.29E-05 | 1.16E-07 | 1.47E-08 | |
| | **MHDT** | 15 | 0.722 | 2 | 50 | 0.03 | 4.25E-02 | 9.37E-05 | 1.18E-05 | |
| | **HHDT** | 15 | 1.898 | 9 | 50 | 0.03 | 5.40E-01 | 1.19E-03 | 1.50E-04 | 1.62E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.965 | 0 | 50 | 0.03 | 6.28E-04 | 1.38E-06 | 1.75E-07 | |
| | **LDT1** | 15 | 1.045 | 0 | 50 | 0.03 | 3.62E-05 | 7.98E-08 | 1.01E-08 | |
| | **LDT2** | 15 | 0.960 | 0 | 50 | 0.03 | 3.22E-05 | 7.10E-08 | 8.95E-09 | |
| | **MDT** | 15 | 1.119 | 0 | 50 | 0.03 | 6.51E-05 | 1.43E-07 | 1.81E-08 | |
| | **LHDT1** | 15 | 1.286 | 0 | 50 | 0.03 | 7.34E-03 | 1.62E-05 | 2.04E-06 | |
| | **LHDT2** | 15 | 1.213 | 0 | 50 | 0.03 | 2.27E-03 | 4.99E-06 | 6.29E-07 | |
| | **MHDT** | 15 | 0.722 | 1 | 50 | 0.03 | 3.24E-02 | 7.14E-05 | 9.00E-06 | |
| | **HHDT** | 15 | 1.898 | 11 | 50 | 0.03 | 6.22E-01 | 1.37E-03 | 1.73E-04 | 1.85E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.965 | 0 | 50 | 0.03 | 1.57E-03 | 3.46E-06 | 4.36E-07 | |
| | **LDT1** | 15 | 1.045 | 0 | 50 | 0.03 | 9.06E-05 | 1.99E-07 | 2.52E-08 | |
| | **LDT2** | 15 | 0.960 | 0 | 50 | 0.03 | 8.06E-05 | 1.78E-07 | 2.24E-08 | |
| | **MDT** | 15 | 1.119 | 0 | 50 | 0.03 | 1.63E-04 | 3.59E-07 | 4.52E-08 | |
| | **LHDT1** | 15 | 1.286 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 1.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.722 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 1.898 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.29E-07 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 6.39E-01 | 1.41E-03 | 1.78E-04 | |
| | **LDT1** | | | 0 | | | 3.69E-02 | 8.12E-05 | 1.02E-05 | |
| | **LDT2** | | | 0 | | | 3.28E-02 | 7.22E-05 | 9.11E-06 | |
| | **MDT** | | | 0 | | | 6.62E-02 | 1.46E-04 | 1.84E-05 | |
| | **LHDT1** | | | 35 | | | 8.96E+00 | 1.97E-02 | 2.49E-03 | |
| | **LHDT2** | | | 11 | | | 2.76E+00 | 6.09E-03 | 7.68E-04 | |
| | **MHDT** | | | 186 | | | 2.70E+01 | 5.94E-02 | 7.49E-03 | |
| | **HHDT** | | | 604 | | | 2.28E+02 | 5.02E-01 | 6.33E-02 | |
| | **Total** | | | 840 | | | 2.67E+02 | 5.89E-01 | 7.42E-02 | 7.42E-02 |

**Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 17 | 3.69E+01 | 8.13E-02 | 1.03E-02 | |
| | **LHDT2** | 26.300 | 5 | 6 | 1.21E+01 | 2.66E-02 | 3.35E-03 | |
| | **MHDT** | 1.220 | 5 | 91 | 9.21E+00 | 2.03E-02 | 2.56E-03 | |
| | **HHDT** | 1.950 | 5 | 290 | 4.72E+01 | 1.04E-01 | 1.31E-02 | |
| | | | | 403 | 1.05E+02 | 2.32E-01 | 2.93E-02 | 2.93E-02 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 2.05E-01 | 4.52E-04 | 5.70E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.72E-02 | 1.48E-04 | 1.87E-05 | |
| | **MHDT** | 1.220 | 5 | 0 | 2.83E-02 | 6.24E-05 | 7.87E-06 | |
| | **HHDT** | 1.950 | 5 | 1 | 1.44E-01 | 3.18E-04 | 4.01E-05 | |
| | | | | 1 | 4.45E-01 | 9.80E-04 | 1.24E-04 | 1.24E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 6.44E-01 | 1.42E-03 | 1.79E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.11E-01 | 4.64E-04 | 5.85E-05 | |
| | **MHDT** | 1.220 | 5 | 0 | 4.00E-02 | 8.81E-05 | 1.11E-05 | |
| | **HHDT** | 1.950 | 5 | 1 | 1.52E-01 | 3.36E-04 | 4.24E-05 | |
| | | | | 2 | 1.05E+00 | 2.31E-03 | 2.91E-04 | 2.91E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 4.70E-03 | 1.04E-05 | 1.31E-06 | |
| | **LHDT2** | 26.300 | 5 | 0 | 1.54E-03 | 3.39E-06 | 4.27E-07 | |
| | **MHDT** | 1.220 | 5 | 1 | 9.65E-02 | 2.12E-04 | 2.68E-05 | |
| | **HHDT** | 1.950 | 5 | 5 | 7.45E-01 | 1.64E-03 | 2.07E-04 | |
| | | | | 6 | 8.48E-01 | 1.87E-03 | 2.35E-04 | 2.35E-04 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 2.01E-01 | 4.44E-04 | 5.60E-05 | |
| | **LHDT2** | 26.300 | 5 | 0 | 6.59E-02 | 1.45E-04 | 1.83E-05 | |
| | **MHDT** | 1.220 | 5 | 1 | 7.35E-02 | 1.62E-04 | 2.04E-05 | |
| | **HHDT** | 1.950 | 5 | 5 | 8.57E-01 | 1.89E-03 | 2.38E-04 | |
| | | | | 6 | 1.20E+00 | 2.64E-03 | 3.33E-04 | 3.33E-04 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.950 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 1.09E+02 | 2.40E-01 | 3.03E-02 | 3.03E-02 |

**World Logistics Center** 2035 Phase 1 No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.496 | 1004 | 330 | 0.21 | 1.02E+02 | 2.25E-01 | 2.84E-02 | |
| | **LDT1** | 15 | 0.672 | 119 | 330 | 0.21 | 1.64E+01 | 3.61E-02 | 4.56E-03 | |
| | **LDT2** | 15 | 0.642 | 363 | 330 | 0.21 | 4.78E+01 | 1.05E-01 | 1.33E-02 | |
| | **MDT** | 15 | 0.824 | 280 | 330 | 0.21 | 4.73E+01 | 1.04E-01 | 1.31E-02 | |
| | **LHDT1** | 15 | 0.324 | 109 | 330 | 0.21 | 7.23E+00 | 1.59E-02 | 2.01E-03 | |
| | **LHDT2** | 15 | 0.192 | 11 | 330 | 0.21 | 4.48E-01 | 9.86E-04 | 1.24E-04 | |
| | **MHDT** | 15 | 0.374 | 41 | 330 | 0.21 | 3.17E+00 | 6.99E-03 | 8.81E-04 | |
| | **HHDT** | 15 | 45.456 | 10 | 330 | 0.21 | 9.29E+01 | 2.05E-01 | 2.58E-02 | |
| | | | | | | | | | | 8.81E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.496 | 6 | 175 | 0.11 | 3.41E-01 | 7.52E-04 | 9.48E-05 | |
| | **LDT1** | 15 | 0.672 | 1 | 175 | 0.11 | 5.48E-02 | 1.21E-04 | 1.52E-05 | |
| | **LDT2** | 15 | 0.642 | 2 | 175 | 0.11 | 1.60E-01 | 3.52E-04 | 4.43E-05 | |
| | **MDT** | 15 | 0.824 | 2 | 175 | 0.11 | 1.58E-01 | 3.48E-04 | 4.39E-05 | |
| | **LHDT1** | 15 | 0.324 | 1 | 175 | 0.11 | 2.13E-02 | 4.70E-05 | 5.92E-06 | |
| | **LHDT2** | 15 | 0.192 | 0 | 175 | 0.11 | 1.32E-03 | 2.91E-06 | 3.67E-07 | |
| | **MHDT** | 15 | 0.374 | 0 | 175 | 0.11 | 5.17E-03 | 1.14E-05 | 1.44E-06 | |
| | **HHDT** | 15 | 45.456 | 0 | 175 | 0.11 | 1.50E-01 | 3.31E-04 | 4.18E-05 | 2.48E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.496 | 10 | 100 | 0.06 | 3.02E-01 | 6.64E-04 | 8.38E-05 | |
| | **LDT1** | 15 | 0.672 | 1 | 100 | 0.06 | 4.84E-02 | 1.07E-04 | 1.35E-05 | |
| | **LDT2** | 15 | 0.642 | 4 | 100 | 0.06 | 1.41E-01 | 3.11E-04 | 3.92E-05 | |
| | **MDT** | 15 | 0.824 | 3 | 100 | 0.06 | 1.40E-01 | 3.08E-04 | 3.88E-05 | |
| | **LHDT1** | 15 | 0.324 | 2 | 100 | 0.06 | 3.82E-02 | 8.41E-05 | 1.06E-05 | |
| | **LHDT2** | 15 | 0.192 | 0 | 100 | 0.06 | 2.37E-03 | 5.21E-06 | 6.57E-07 | |
| | **MHDT** | 15 | 0.374 | 0 | 100 | 0.06 | 4.17E-03 | 9.19E-06 | 1.16E-06 | |
| | **HHDT** | 15 | 45.456 | 0 | 100 | 0.06 | 9.09E-02 | 2.00E-04 | 2.53E-05 | 2.13E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.496 | 5 | 50 | 0.03 | 8.15E-02 | 1.80E-04 | 2.26E-05 | |
| | **LDT1** | 15 | 0.672 | 1 | 50 | 0.03 | 1.31E-02 | 2.88E-05 | 3.64E-06 | |
| | **LDT2** | 15 | 0.642 | 2 | 50 | 0.03 | 3.81E-02 | 8.40E-05 | 1.06E-05 | |
| | **MDT** | 15 | 0.824 | 1 | 50 | 0.03 | 3.78E-02 | 8.32E-05 | 1.05E-05 | |
| | **LHDT1** | 15 | 0.324 | 0 | 50 | 0.03 | 1.39E-04 | 3.07E-07 | 3.87E-08 | |
| | **LHDT2** | 15 | 0.192 | 0 | 50 | 0.03 | 8.64E-06 | 1.90E-08 | 2.40E-09 | |
| | **MHDT** | 15 | 0.374 | 0 | 50 | 0.03 | 5.03E-03 | 1.11E-05 | 1.40E-06 | |
| | **HHDT** | 15 | 45.456 | 0 | 50 | 0.03 | 2.22E-01 | 4.89E-04 | 6.17E-05 | 1.10E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.496 | 7 | 50 | 0.03 | 1.01E-01 | 2.23E-04 | 2.82E-05 | |
| | **LDT1** | 15 | 0.672 | 1 | 50 | 0.03 | 1.63E-02 | 3.59E-05 | 4.52E-06 | |
| | **LDT2** | 15 | 0.642 | 2 | 50 | 0.03 | 4.74E-02 | 1.04E-04 | 1.32E-05 | |
| | **MDT** | 15 | 0.824 | 2 | 50 | 0.03 | 4.70E-02 | 1.03E-04 | 1.30E-05 | |
| | **LHDT1** | 15 | 0.324 | 1 | 50 | 0.03 | 5.98E-03 | 1.32E-05 | 1.66E-06 | |
| | **LHDT2** | 15 | 0.192 | 0 | 50 | 0.03 | 3.70E-04 | 8.16E-07 | 1.03E-07 | |
| | **MHDT** | 15 | 0.374 | 0 | 50 | 0.03 | 3.83E-03 | 8.44E-06 | 1.06E-06 | |
| | **HHDT** | 15 | 45.456 | 0 | 50 | 0.03 | 2.55E-01 | 5.63E-04 | 7.09E-05 | 1.33E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.496 | 16 | 50 | 0.03 | 2.53E-01 | 5.58E-04 | 7.04E-05 | |
| | **LDT1** | 15 | 0.672 | 2 | 50 | 0.03 | 4.07E-02 | 8.97E-05 | 1.13E-05 | |
| | **LDT2** | 15 | 0.642 | 6 | 50 | 0.03 | 1.19E-01 | 2.61E-04 | 3.29E-05 | |
| | **MDT** | 15 | 0.824 | 5 | 50 | 0.03 | 1.17E-01 | 2.59E-04 | 3.26E-05 | |
| | **LHDT1** | 15 | 0.324 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.192 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.374 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 45.456 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.47E-04 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 1.03E+02 | 2.27E-01 | 2.87E-02 | |
| | **LDT1** | | | 124 | | | 1.66E+01 | 3.65E-02 | 4.60E-03 | |
| | **LDT2** | | | 379 | | | 4.83E+01 | 1.06E-01 | 1.34E-02 | |
| | **MDT** | | | 292 | | | 4.78E+01 | 1.05E-01 | 1.33E-02 | |
| | **LHDT1** | | | 112 | | | 7.29E+00 | 1.61E-02 | 2.03E-03 | |
| | **LHDT2** | | | 12 | | | 4.52E-01 | 9.95E-04 | 1.26E-04 | |
| | **MHDT** | | | 42 | | | 3.19E+00 | 7.03E-03 | 8.86E-04 | |
| | **HHDT** | | | 10 | | | 9.36E+01 | 2.06E-01 | 2.60E-02 | |
| | **Total** | | | 2020 | | | 3.20E+02 | 7.06E-01 | 8.90E-02 | 8.90E-02 |

**Non-Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 128.400 | 5 | 54 | 5.82E+02 | 1.28E+00 | 1.62E-01 | |
| | **LHDT2** | 129.500 | 5 | 6 | 6.15E+01 | 1.35E-01 | 1.71E-02 | |
| | **MHDT** | 323.300 | 5 | 21 | 5.57E+02 | 1.23E+00 | 1.55E-01 | |
| | **HHDT** | 273.105 | 5 | 5 | 1.13E+02 | 2.50E-01 | 3.15E-02 | |
| | | | | 86 | 1.31E+03 | 2.89E+00 | 3.65E-01 | 3.65E-01 |
| **Idle at Light Logistics** | **LHDT1** | 128.400 | 5 | 0 | 3.24E+00 | 7.13E-03 | 8.99E-04 | |
| | **LHDT2** | 129.500 | 5 | 0 | 3.42E-01 | 7.54E-04 | 9.51E-05 | |
| | **MHDT** | 323.300 | 5 | 0 | 1.71E+00 | 3.77E-03 | 4.76E-04 | |
| | **HHDT** | 273.105 | 5 | 0 | 3.46E-01 | 7.63E-04 | 9.62E-05 | |
| | | | | 0 | 5.64E+00 | 1.24E-02 | 1.57E-03 | 1.57E-03 |
| **Idle at Utility** | **LHDT1** | 128.400 | 5 | 1 | 1.01E+01 | 2.24E-02 | 2.82E-03 | |
| | **LHDT2** | 129.500 | 5 | 0 | 1.07E+00 | 2.36E-03 | 2.98E-04 | |
| | **MHDT** | 323.300 | 5 | 0 | 2.42E+00 | 5.33E-03 | 6.72E-04 | |
| | **HHDT** | 273.105 | 5 | 0 | 3.66E-01 | 8.07E-04 | 1.02E-04 | |
| | | | | 1 | 1.40E+01 | 3.08E-02 | 3.89E-03 | 3.89E-03 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 128.400 | 5 | 0 | 7.41E-02 | 1.63E-04 | 2.06E-05 | |
| | **LHDT2** | 129.500 | 5 | 0 | 7.83E-03 | 1.73E-05 | 2.18E-06 | |
| | **MHDT** | 323.300 | 5 | 0 | 5.83E+00 | 1.29E-02 | 1.62E-03 | |
| | **HHDT** | 273.105 | 5 | 0 | 1.79E+00 | 3.94E-03 | 4.97E-04 | |
| | | | | 0 | 7.71E+00 | 1.70E-02 | 2.14E-03 | 2.14E-03 |
| **Idle at Convenience Store** | **LHDT1** | 128.400 | 5 | 0 | 3.18E+00 | 7.00E-03 | 8.82E-04 | |
| | **LHDT2** | 129.500 | 5 | 0 | 3.36E-01 | 7.40E-04 | 9.33E-05 | |
| | **MHDT** | 323.300 | 5 | 0 | 4.44E+00 | 9.79E-03 | 1.23E-03 | |
| | **HHDT** | 273.105 | 5 | 0 | 2.06E+00 | 4.53E-03 | 5.72E-04 | |
| | | | | 1 | 1.00E+01 | 2.21E-02 | 2.78E-03 | 2.78E-03 |
| **Idle at Firestation** | **LHDT1** | 128.400 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 129.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 323.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 273.105 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 1.35E+03 | 2.98E+00 | 3.75E-01 | 3.75E-01 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour CO emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

| | |
|---|---|
| Facility Operations for Warehouses (hr): | 24 |
| Facility operations for All Others (hr): | 24 |

## World Logistics Center

| | | 2035 | Phase 2 | |
|---|---|---|---|---|
| | | | No Mitigation | |
| **Vehicle Running Exhaust Emissions** | | | **Pollutant** | **Peak Hour CO** |

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 5.63E-02 | 6.73E-02 |
| Light Logistics | Phase 2 | 4.21E-04 | 8.41E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 5.67E-02 | 6.82E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.24E-02 | 2.79E-01 |
| Light Logistics | Phase 2 | 4.20E-04 | 5.32E-03 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.28E-02 | 2.84E-01 |

| **Total Onsite Emission** | **Emissions (g/sec)** | **Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust (g/sec) | 5.67E-02 | 6.82E-02 |
| Idling Emissions (g/sec) | 2.28E-02 | 2.84E-01 |
| Total Vehicle Emissions (g/sec) | 7.95E-02 | 3.52E-01 |

**Other Onsite Emission Sources**

| | | | |
|---|---|---|---|
| Yard Trucks (LPG) (g/sec) | | 2.78E-02 | |
| Forklifts (LPG) (g/sec) | | 1.04E+00 | |
| Total Other Onsite Emissions (g/sec) | | 1.06E+00 | |
| | | | Total |
| Total All Sources (g/sec) | 7.95E-02 | 1.42E+00 | 1.50E+00 |
| Area (m2) | | | 5152719 |
| Total Emission Rate (g/m2-sec) | | | 2.90E-07 |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Diesel Vehicle Emissions** Peak Hour CO

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Peak Hour CO Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.965 | 2 | 330 | 0.21 | 4.83E-01 | 1.06E-03 | 1.34E-04 | |
| | LDT1 | 15 | 1.045 | 0 | 330 | 0.21 | 2.79E-02 | 6.14E-05 | 7.74E-06 | |
| | LDT2 | 15 | 0.960 | 0 | 330 | 0.21 | 2.48E-02 | 5.46E-05 | 6.89E-06 | |
| | MDT | 15 | 1.119 | 0 | 330 | 0.21 | 5.01E-02 | 1.10E-04 | 1.39E-05 | |
| | LHDT1 | 15 | 1.286 | 26 | 330 | 0.21 | 6.78E+00 | 1.49E-02 | 1.88E-03 | |
| | LHDT2 | 15 | 1.213 | 8 | 330 | 0.21 | 2.09E+00 | 4.61E-03 | 5.81E-04 | |
| | MHDT | 15 | 0.722 | 138 | 330 | 0.21 | 2.05E+01 | 4.51E-02 | 5.69E-03 | |
| | HHDT | 15 | 1.898 | 444 | 330 | 0.21 | 1.73E+02 | 3.80E-01 | 4.80E-02 | |
| | | | | | | | | | | 5.63E-02 |
| Travel at Light Logistics | LDA | 15 | 0.965 | 0 | 175 | 0.11 | 7.18E-03 | 1.58E-05 | 1.99E-06 | |
| | LDT1 | 15 | 1.045 | 0 | 175 | 0.11 | 4.14E-04 | 9.12E-07 | 1.15E-07 | |
| | LDT2 | 15 | 0.960 | 0 | 175 | 0.11 | 3.68E-04 | 8.11E-07 | 1.02E-07 | |
| | MDT | 15 | 1.119 | 0 | 175 | 0.11 | 7.44E-04 | 1.64E-06 | 2.07E-07 | |
| | LHDT1 | 15 | 1.286 | 1 | 175 | 0.11 | 8.89E-02 | 1.96E-04 | 2.47E-05 | |
| | LHDT2 | 15 | 1.213 | 0 | 175 | 0.11 | 2.74E-02 | 6.04E-05 | 7.62E-06 | |
| | MHDT | 15 | 0.722 | 2 | 175 | 0.11 | 1.48E-01 | 3.27E-04 | 4.12E-05 | |
| | HHDT | 15 | 1.898 | 6 | 175 | 0.11 | 1.24E+00 | 2.74E-03 | 3.45E-04 | 4.21E-04 |
| Travel at Utility | LDA | 15 | 0.965 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 1.045 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.960 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.119 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.286 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.213 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.722 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 1.898 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.965 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 1.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.960 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.119 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.286 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.722 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 1.898 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.965 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 1.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.960 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.119 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.286 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.722 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 1.898 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.965 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 1.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.960 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 1.119 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 1.286 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 1.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.722 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 1.898 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 3 | | | 4.91E-01 | 1.08E-03 | 1.36E-04 | |
| | LDT1 | | | 0 | | | 2.83E-02 | 6.23E-05 | 7.86E-06 | |
| | LDT2 | | | 0 | | | 2.52E-02 | 5.54E-05 | 6.99E-06 | |
| | MDT | | | 0 | | | 5.08E-02 | 1.12E-04 | 1.41E-05 | |
| | LHDT1 | | | 26 | | | 6.87E+00 | 1.51E-02 | 1.91E-03 | |
| | LHDT2 | | | 9 | | | 2.12E+00 | 4.67E-03 | 5.89E-04 | |
| | MHDT | | | 140 | | | 2.06E+01 | 4.55E-02 | 5.73E-03 | |
| | HHDT | | | 450 | | | 1.74E+02 | 3.83E-01 | 4.83E-02 | |
| | Total | | | 628 | | | 2.04E+02 | 4.50E-01 | 5.67E-02 | 5.67E-02 |

**Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 26.300 | 5 | 13 | 2.82E+01 | 6.21E-02 | 7.83E-03 | |
| | **LHDT2** | 26.300 | 5 | 4 | 9.23E+00 | 2.03E-02 | 2.56E-03 | |
| | **MHDT** | 1.220 | 5 | 69 | 7.04E+00 | 1.55E-02 | 1.96E-03 | |
| | **HHDT** | 1.950 | 5 | 222 | 3.61E+01 | 7.94E-02 | 1.00E-02 | |
| | | | | 308 | 8.05E+01 | 1.77E-01 | 2.24E-02 | 2.24E-02 |
| **Idle at Light Logistics** | **LHDT1** | 26.300 | 5 | 0 | 6.97E-01 | 1.54E-03 | 1.94E-04 | |
| | **LHDT2** | 26.300 | 5 | 0 | 2.28E-01 | 5.02E-04 | 6.34E-05 | |
| | **MHDT** | 1.220 | 5 | 1 | 9.62E-02 | 2.12E-04 | 2.67E-05 | |
| | **HHDT** | 1.950 | 5 | 3 | 4.90E-01 | 1.08E-03 | 1.36E-04 | |
| | | | | 4 | 1.51E+00 | 3.33E-03 | 4.20E-04 | 4.20E-04 |
| **Idle at Utility** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.950 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.950 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.950 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 26.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.220 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 1.950 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 313 | 8.20E+01 | 1.81E-01 | 2.28E-02 | 2.28E-02 |

**World Logistics Center** **2035** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour CO**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour CO Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.496 | 767 | 330 | 0.21 | 7.80E+01 | 1.72E-01 | 2.17E-02 | |
| | **LDT1** | 15 | 0.672 | 91 | 330 | 0.21 | 1.25E+01 | 2.76E-02 | 3.48E-03 | |
| | **LDT2** | 15 | 0.642 | 277 | 330 | 0.21 | 3.65E+01 | 8.04E-02 | 1.01E-02 | |
| | **MDT** | 15 | 0.824 | 214 | 330 | 0.21 | 3.61E+01 | 7.96E-02 | 1.00E-02 | |
| | **LHDT1** | 15 | 0.324 | 83 | 330 | 0.21 | 5.52E+00 | 1.22E-02 | 1.53E-03 | |
| | **LHDT2** | 15 | 0.192 | 9 | 330 | 0.21 | 3.42E-01 | 7.54E-04 | 9.51E-05 | |
| | **MHDT** | 15 | 0.374 | 32 | 330 | 0.21 | 2.42E+00 | 5.34E-03 | 6.73E-04 | |
| | **HHDT** | 15 | 45.456 | 8 | 330 | 0.21 | 7.10E+01 | 1.56E-01 | 1.97E-02 | |
| | | | | | | | | | | 6.73E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.496 | 21 | 175 | 0.11 | 1.16E+00 | 2.55E-03 | 3.22E-04 | |
| | **LDT1** | 15 | 0.672 | 3 | 175 | 0.11 | 1.86E-01 | 4.10E-04 | 5.17E-05 | |
| | **LDT2** | 15 | 0.642 | 8 | 175 | 0.11 | 5.42E-01 | 1.19E-03 | 1.51E-04 | |
| | **MDT** | 15 | 0.824 | 6 | 175 | 0.11 | 5.37E-01 | 1.18E-03 | 1.49E-04 | |
| | **LHDT1** | 15 | 0.324 | 2 | 175 | 0.11 | 7.24E-02 | 1.59E-04 | 2.01E-05 | |
| | **LHDT2** | 15 | 0.192 | 0 | 175 | 0.11 | 4.49E-03 | 9.88E-06 | 1.25E-06 | |
| | **MHDT** | 15 | 0.374 | 0 | 175 | 0.11 | 1.76E-02 | 3.87E-05 | 4.88E-06 | |
| | **HHDT** | 15 | 45.456 | 0 | 175 | 0.11 | 5.11E-01 | 1.13E-03 | 1.42E-04 | 8.41E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.496 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.672 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.642 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.824 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.324 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.192 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.374 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 45.456 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.496 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.672 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.642 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.824 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.324 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.192 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.374 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 45.456 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.496 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.672 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.642 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.824 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.324 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.192 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.374 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 45.456 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.496 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.672 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.642 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.824 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.324 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.192 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.374 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 45.456 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 789 | | | 7.92E+01 | 1.74E-01 | 2.20E-02 | |
| | **LDT1** | | | 93 | | | 1.27E+01 | 2.80E-02 | 3.53E-03 | |
| | **LDT2** | | | 285 | | | 3.70E+01 | 8.16E-02 | 1.03E-02 | |
| | **MDT** | | | 220 | | | 3.67E+01 | 8.08E-02 | 1.02E-02 | |
| | **LHDT1** | | | 85 | | | 5.59E+00 | 1.23E-02 | 1.55E-03 | |
| | **LHDT2** | | | 9 | | | 3.47E-01 | 7.64E-04 | 9.63E-05 | |
| | **MHDT** | | | 32 | | | 2.44E+00 | 5.38E-03 | 6.78E-04 | |
| | **HHDT** | | | 8 | | | 7.15E+01 | 1.57E-01 | 1.99E-02 | |
| | **Total** | | | 1521 | | | 2.45E+02 | 5.41E-01 | 6.82E-02 | 6.82E-02 |

**Non-Diesel truck Idling Emissions** **Peak Hour CO Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 128.400 | 5 | 42 | 4.45E+02 | 9.80E-01 | 1.24E-01 | |
| | **LHDT2** | 129.500 | 5 | 4 | 4.70E+01 | 1.04E-01 | 1.31E-02 | |
| | **MHDT** | 323.300 | 5 | 16 | 4.26E+02 | 9.38E-01 | 1.18E-01 | |
| | **HHDT** | 273.105 | 5 | 4 | 8.66E+01 | 1.91E-01 | 2.41E-02 | |
| | | | | 66 | 1.00E+03 | 2.21E+00 | 2.79E-01 | 2.79E-01 |
| **Idle at Light Logistics** | **LHDT1** | 128.400 | 5 | 1 | 1.10E+01 | 2.42E-02 | 3.05E-03 | |
| | **LHDT2** | 129.500 | 5 | 0 | 1.16E+00 | 2.56E-03 | 3.23E-04 | |
| | **MHDT** | 323.300 | 5 | 0 | 5.82E+00 | 1.28E-02 | 1.62E-03 | |
| | **HHDT** | 273.105 | 5 | 0 | 1.18E+00 | 2.59E-03 | 3.27E-04 | |
| | | | | 1 | 1.91E+01 | 4.22E-02 | 5.32E-03 | 5.32E-03 |
| **Idle at Utility** | **LHDT1** | 128.400 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 129.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 323.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 273.105 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 128.400 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 129.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 323.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 273.105 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 128.400 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 129.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 323.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 273.105 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 128.400 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 129.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 323.300 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 273.105 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 67 | 1.02E+03 | 2.25E+00 | 2.84E-01 | 2.84E-01 |

**World Logistics Center** **2035** **CO Pk Hr** Based on PB Traffic Results 10/3/2013
**Project Only Phase 1 and 2 in 2035** With EMFAC2014 NO Mitigaton Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 3.16E-02 | 4.35E-02 | 7.51E-02 |
| 2 | 1.12E-01 | 1.37E-01 | 2.50E-01 |
| 3 | 1.30E-01 | 1.64E-01 | 2.94E-01 |
| 5 | 7.87E-03 | 5.13E-02 | 5.92E-02 |
| 6 | 5.46E-02 | 7.84E-02 | 1.33E-01 |
| 8 | 7.35E-03 | 7.85E-02 | 8.59E-02 |
| 11 | 1.85E-04 | 2.05E-03 | 2.24E-03 |
| 12 | 1.14E-04 | 1.20E-03 | 1.32E-03 |
| 14 | 8.95E-02 | 8.94E-02 | 1.79E-01 |
| 18 | 1.17E-02 | 2.29E-02 | 3.46E-02 |
| 19 | 6.94E-02 | 7.87E-02 | 1.48E-01 |
| 21 | 3.09E-02 | 7.72E-02 | 1.08E-01 |
| 24 | 5.98E-02 | 1.39E-01 | 1.99E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1.86E-02 | 2.57E-02 | 4.43E-02 |
| 30 | 8.41E-02 | 1.31E-01 | 2.15E-01 |
| 31 | 1.66E-02 | 5.10E-02 | 6.77E-02 |
| Total (g/sec) | 7.24E-01 | 1.17E+00 | 1.90E+00 |
| Total (lbs/day) | 1.38E+02 | 2.23E+02 | 3.61E+02 |
| Total VMT (mi/day) | 3.14E+03 | 7.23E+03 | 1.04E+04 |

| ID | Arterial | From | To | | Project Phase 1 and 2 2035 - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,114 | 81 | 162 | 506 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,418 | 167 | 223 | 814 |
| 3 | Street E | west of Street A | | | 538 | 63 | 80 | 292 |
| 5 | Street E | Street D | Street A | | 686 | 47 | 73 | 21 |
| 6 | Street A | Street F | Street C | | 606 | 58 | 83 | 259 |
| 8 | Street D | Street E | Cactus Ave | | 950 | 69 | 105 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 22 | 3 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 19 | 2 | 2 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 339 | 40 | 57 | 302 |
| 18 | Street B | Street A | Gilman Springs Rd | | 160 | 19 | 21 | 40 |
| 19 | Street F | Street A | Street C | | 234 | 26 | 41 | 155 |
| 21 | Street C | Street A | Street F | | 664 | 50 | 79 | 114 |
| 24 | Street C | Street F | Gilman Springs Rd | | 758 | 49 | 74 | 152 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 318 | 22 | 41 | 146 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 414 | 29 | 52 | 155 |
| 31 | Gilman Springs Rd | south of Street C | | | 707 | 42 | 59 | 96 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **CO Pk Hr** **NO Mitigaton**
Project Only Phase 1 and 2 in 2035
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1863 | 1,114 | 81 | 162 | 506 | 327 | 0.203 | 2 | 0 | 0 | 0 | 16 | 5 | 132 | 499 | 655 | 133 |
| 2 | 2622 | 1,418 | 167 | 223 | 814 | 731 | 0.454 | 2 | 0 | 0 | 0 | 34 | 11 | 182 | 802 | 1032 | 469 |
| 3 | 973 | 538 | 63 | 80 | 292 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 65 | 288 | 371 | 542 |
| 5 | 827 | 686 | 47 | 73 | 21 | 953 | 0.592 | 1 | 0 | 0 | 0 | 10 | 3 | 60 | 21 | 94 | 56 |
| 6 | 1006 | 606 | 58 | 83 | 259 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 12 | 4 | 68 | 255 | 340 | 232 |
| 8 | 1124 | 950 | 69 | 105 | 0 | 1091 | 0.678 | 2 | 0 | 0 | 0 | 14 | 5 | 86 | 0 | 106 | 72 |
| 11 | 27 | 22 | 3 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 2 |
| 12 | 23 | 19 | 2 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 14 | 738 | 339 | 40 | 57 | 302 | 1618 | 1.005 | 1 | 0 | 0 | 0 | 8 | 3 | 46 | 298 | 356 | 357 |
| 18 | 240 | 160 | 19 | 21 | 40 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 4 | 1 | 17 | 39 | 62 | 54 |
| 19 | 456 | 234 | 26 | 41 | 155 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 5 | 2 | 33 | 153 | 194 | 287 |
| 21 | 907 | 664 | 50 | 79 | 114 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 10 | 3 | 64 | 112 | 192 | 150 |
| 24 | 1033 | 758 | 49 | 74 | 152 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 10 | 3 | 60 | 150 | 225 | 272 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 527 | 318 | 22 | 41 | 146 | 675 | 0.419 | 1 | 0 | 0 | 0 | 4 | 1 | 33 | 144 | 184 | 77 |
| 30 | 650 | 414 | 29 | 52 | 155 | 2827 | 1.756 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 153 | 204 | 358 |
| 31 | 904 | 707 | 42 | 59 | 96 | 820 | 0.509 | 1 | 0 | 0 | 0 | 9 | 3 | 48 | 95 | 155 | 79 |
| | | | | | | | | | | | | | | | | Total | 3141 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1354 | 0.1752 | 0.1338 | 0.1562 | 0.3331 | 0.2893 | 0.3826 | 1.0052 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.41E-05 | 1.15E-06 | 8.24E-07 | 1.68E-06 | 3.09E-04 | 8.89E-05 | 2.85E-03 | 2.83E-02 | 3.16E-02 |
| 2 | 1 | 4.01E-05 | 3.28E-06 | 2.34E-06 | 4.78E-06 | 1.42E-03 | 4.10E-04 | 8.78E-03 | 1.02E-01 | 1.12E-01 |
| 3 | 1 | 4.90E-05 | 4.01E-06 | 2.86E-06 | 5.84E-06 | 1.73E-03 | 4.97E-04 | 1.01E-02 | 1.17E-01 | 1.30E-01 |
| 5 | 1 | 2.53E-05 | 2.07E-06 | 1.48E-06 | 3.02E-06 | 5.22E-04 | 1.50E-04 | 3.75E-03 | 3.42E-03 | 7.87E-03 |
| 6 | 1 | 2.58E-05 | 2.11E-06 | 1.51E-06 | 3.07E-06 | 7.43E-04 | 2.14E-04 | 4.91E-03 | 4.87E-02 | 5.46E-02 |
| 8 | 1 | 4.01E-05 | 3.28E-06 | 2.34E-06 | 4.78E-06 | 8.78E-04 | 2.53E-04 | 6.17E-03 | 0.00E+00 | 7.35E-03 |
| 11 | 1 | 1.02E-06 | 8.37E-08 | 5.98E-08 | 1.22E-07 | 4.20E-05 | 1.21E-05 | 1.29E-04 | 0.00E+00 | 1.85E-04 |
| 12 | 1 | 6.06E-07 | 4.96E-08 | 3.54E-08 | 7.23E-08 | 1.92E-05 | 5.53E-06 | 8.87E-05 | 0.00E+00 | 1.14E-04 |
| 14 | 1 | 2.12E-05 | 1.74E-06 | 1.24E-06 | 2.53E-06 | 7.55E-04 | 2.17E-04 | 4.97E-03 | 8.35E-02 | 8.95E-02 |
| 18 | 1 | 8.74E-06 | 7.15E-07 | 5.11E-07 | 1.04E-06 | 3.13E-04 | 9.01E-05 | 1.60E-03 | 9.65E-03 | 1.17E-02 |
| 19 | 1 | 2.16E-05 | 1.77E-06 | 1.26E-06 | 2.58E-06 | 7.23E-04 | 2.08E-04 | 5.27E-03 | 6.32E-02 | 6.94E-02 |
| 21 | 1 | 3.23E-05 | 2.65E-06 | 1.89E-06 | 3.85E-06 | 7.34E-04 | 2.11E-04 | 5.35E-03 | 2.45E-02 | 3.09E-02 |
| 24 | 1 | 5.71E-05 | 4.67E-06 | 3.34E-06 | 6.81E-06 | 1.11E-03 | 3.20E-04 | 7.75E-03 | 5.06E-02 | 5.98E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 8.31E-06 | 6.80E-07 | 4.85E-07 | 9.91E-07 | 1.73E-04 | 4.99E-05 | 1.49E-03 | 1.68E-02 | 1.86E-02 |
| 30 | 1 | 4.53E-05 | 3.71E-06 | 2.65E-06 | 5.40E-06 | 9.56E-04 | 2.75E-04 | 7.91E-03 | 7.49E-02 | 8.41E-02 |
| 31 | 1 | 2.24E-05 | 1.84E-06 | 1.31E-06 | 2.68E-06 | 4.02E-04 | 1.16E-04 | 2.60E-03 | 1.35E-02 | 1.66E-02 |

**World Logistics Center** **2035** **CO Pk Hr** **NO Mitigaton**
Project Only Phase 1 and 2 in 2035
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1863 | 1,114 | 81 | 162 | 506 | 327 | 0.203 | 605 | 80 | 240 | 187 | 53 | 6 | 30 | 7 | 1208 | 245 |
| 2 | 2622 | 1,418 | 167 | 223 | 814 | 731 | 0.454 | 770 | 101 | 306 | 238 | 110 | 12 | 41 | 12 | 1590 | 722 |
| 3 | 973 | 538 | 63 | 80 | 292 | 2352 | 1.461 | 292 | 38 | 116 | 90 | 42 | 4 | 15 | 4 | 602 | 879 |
| 5 | 827 | 686 | 47 | 73 | 21 | 953 | 0.592 | 372 | 49 | 148 | 115 | 31 | 3 | 13 | 0 | 733 | 434 |
| 6 | 1006 | 606 | 58 | 83 | 259 | 1099 | 0.683 | 329 | 43 | 131 | 102 | 38 | 4 | 15 | 4 | 666 | 455 |
| 8 | 1124 | 950 | 69 | 105 | 0 | 1091 | 0.678 | 516 | 68 | 205 | 160 | 46 | 5 | 19 | 0 | 1018 | 690 |
| 11 | 27 | 22 | 3 | 2 | 0 | 1201 | 0.746 | 12 | 2 | 5 | 4 | 2 | 0 | 0 | 0 | 25 | 18 |
| 12 | 23 | 19 | 2 | 2 | 0 | 824 | 0.512 | 10 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 21 | 11 |
| 14 | 738 | 339 | 40 | 57 | 302 | 1618 | 1.005 | 184 | 24 | 73 | 57 | 26 | 3 | 11 | 4 | 382 | 384 |
| 18 | 240 | 160 | 19 | 21 | 40 | 1412 | 0.877 | 87 | 11 | 35 | 27 | 13 | 1 | 4 | 1 | 178 | 156 |
| 19 | 456 | 234 | 26 | 41 | 155 | 2386 | 1.482 | 127 | 17 | 50 | 39 | 17 | 2 | 8 | 2 | 262 | 389 |
| 21 | 907 | 664 | 50 | 79 | 114 | 1258 | 0.781 | 360 | 47 | 143 | 112 | 33 | 4 | 15 | 2 | 715 | 559 |
| 24 | 1033 | 758 | 49 | 74 | 152 | 1946 | 1.209 | 411 | 54 | 163 | 127 | 32 | 3 | 14 | 2 | 808 | 977 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 527 | 318 | 22 | 41 | 146 | 675 | 0.419 | 173 | 23 | 69 | 53 | 15 | 2 | 8 | 2 | 343 | 144 |
| 30 | 650 | 414 | 29 | 52 | 155 | 2827 | 1.756 | 225 | 30 | 89 | 70 | 19 | 2 | 10 | 2 | 446 | 784 |
| 31 | 904 | 707 | 42 | 59 | 96 | 820 | 0.509 | 384 | 50 | 152 | 119 | 28 | 3 | 11 | 1 | 749 | 381 |
| | | | | | | | | | | | | | | | | Total | 7228 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.3498 | 0.4623 | 0.4516 | 0.5866 | 0.2726 | 0.1611 | 0.3144 | 38.2070 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.19E-02 | 2.08E-03 | 6.12E-03 | 6.20E-03 | 8.22E-04 | 5.16E-05 | 5.31E-04 | 1.58E-02 | 4.35E-02 |
| 2 | 1 | 3.40E-02 | 5.91E-03 | 1.74E-02 | 1.76E-02 | 3.79E-03 | 2.38E-04 | 1.63E-03 | 5.69E-02 | 1.37E-01 |
| 3 | 1 | 4.15E-02 | 7.21E-03 | 2.13E-02 | 2.15E-02 | 4.60E-03 | 2.88E-04 | 1.88E-03 | 6.56E-02 | 1.64E-01 |
| 5 | 1 | 2.14E-02 | 3.72E-03 | 1.10E-02 | 1.11E-02 | 1.39E-03 | 8.72E-05 | 6.97E-04 | 1.91E-03 | 5.13E-02 |
| 6 | 1 | 2.18E-02 | 3.79E-03 | 1.12E-02 | 1.13E-02 | 1.98E-03 | 1.24E-04 | 9.14E-04 | 2.72E-02 | 7.84E-02 |
| 8 | 1 | 3.40E-02 | 5.90E-03 | 1.74E-02 | 1.76E-02 | 2.34E-03 | 1.47E-04 | 1.15E-03 | 0.00E+00 | 7.85E-02 |
| 11 | 1 | 8.66E-04 | 1.51E-04 | 4.44E-04 | 4.50E-04 | 1.12E-04 | 7.01E-06 | 2.41E-05 | 0.00E+00 | 2.05E-03 |
| 12 | 1 | 5.13E-04 | 8.92E-05 | 2.63E-04 | 2.66E-04 | 5.12E-05 | 3.21E-06 | 1.65E-05 | 0.00E+00 | 1.20E-03 |
| 14 | 1 | 1.80E-02 | 3.12E-03 | 9.22E-03 | 9.33E-03 | 2.01E-03 | 1.26E-04 | 9.24E-04 | 4.67E-02 | 8.94E-02 |
| 18 | 1 | 7.40E-03 | 1.29E-03 | 3.80E-03 | 3.84E-03 | 8.33E-04 | 5.22E-05 | 2.97E-04 | 5.40E-03 | 2.29E-02 |
| 19 | 1 | 1.83E-02 | 3.18E-03 | 9.38E-03 | 9.50E-03 | 1.93E-03 | 1.21E-04 | 9.80E-04 | 3.53E-02 | 7.87E-02 |
| 21 | 1 | 2.74E-02 | 4.76E-03 | 1.40E-02 | 1.42E-02 | 1.95E-03 | 1.22E-04 | 9.96E-04 | 1.37E-02 | 7.72E-02 |
| 24 | 1 | 4.83E-02 | 8.40E-03 | 2.48E-02 | 2.51E-02 | 2.96E-03 | 1.86E-04 | 1.44E-03 | 2.83E-02 | 1.39E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 7.03E-03 | 1.22E-03 | 3.61E-03 | 3.65E-03 | 4.61E-04 | 2.89E-05 | 2.77E-04 | 9.42E-03 | 2.57E-02 |
| 30 | 1 | 3.83E-02 | 6.67E-03 | 1.97E-02 | 1.99E-02 | 2.54E-03 | 1.60E-04 | 1.47E-03 | 4.19E-02 | 1.31E-01 |
| 31 | 1 | 1.90E-02 | 3.30E-03 | 9.74E-03 | 9.87E-03 | 1.07E-03 | 6.70E-05 | 4.85E-04 | 7.52E-03 | 5.10E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Peak Hour Nox emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

| | | | | |
|---|---|---|---|---|
| | | **2035** | **Phase 1** | **No Mitigation** |

**Vehicle Running Exhaust Emissions**

| | | | **Pollutant** | **Peak Hour Nox** |
|---|---|---|---|---|
| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** | |
| High Cube | Phase 1 | 3.38E-01 | 7.16E-03 | |
| Light Logistics | Phase 1 | 5.49E-04 | 1.93E-05 | |
| Utilities Service Station | Phase 1 | 3.50E-04 | 1.79E-05 | |
| Gas Station w/Convenience Store | Phase 1 | 7.70E-04 | 8.96E-06 | |
| Convenience Store | Phase 1 | 8.58E-04 | 1.10E-05 | |
| Fire Station | Phase 1 | 1.91E-08 | 9.66E-06 | |
| Total | | 3.40E-01 | 7.23E-03 | |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.65E-01 | 2.66E-03 |
| Light Logistics | Phase 1 | 5.49E-04 | 1.15E-05 |
| Utilities Service Station | Phase 1 | 8.21E-04 | 2.84E-05 |
| Gas Station w/Convenience Store | Phase 1 | 2.14E-03 | 1.65E-05 |
| Convenience Store | Phase 1 | 2.40E-03 | 2.23E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 1.71E-01 | 2.74E-03 |

| **Total Onsite Mobile Emission** | | **Emissions (g/sec)** | **Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 3.40E-01 | 7.23E-03 | |
| | Idling Emissions (g/sec) | 1.71E-01 | 2.74E-03 | |
| | Total Vehicle Emissions (g/sec) | 5.12E-01 | 9.97E-03 | |
| Other Onsite Emissions | Yard Trucks (LPG) (g/sec) | | 1.77E+00 | |
| | Forklifts (LPG) (g/sec) | | 1.40E-01 | |
| | Total Other Onsite Sources (g/sec) | | 1.91E+00 | |
| | | | | Total |
| | Total All Sources (g/sec) | 5.12E-01 | 1.92E+00 | 2.43E+00 |
| | Area (m2) | | | 4.68E+06 |
| | Emission Rate (g/m2-sec) | | | 5.18E-07 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.027 | 3 | 330 | 0.21 | 1.78E-02 | 3.92E-05 | 4.94E-06 | |
| | **LDT1** | 15 | 0.152 | 0 | 330 | 0.21 | 5.32E-03 | 1.17E-05 | 1.48E-06 | |
| | **LDT2** | 15 | 0.081 | 0 | 330 | 0.21 | 2.74E-03 | 6.03E-06 | 7.60E-07 | |
| | **MDT** | 15 | 0.032 | 0 | 330 | 0.21 | 1.86E-03 | 4.09E-06 | 5.15E-07 | |
| | **LHDT1** | 15 | 0.348 | 34 | 330 | 0.21 | 2.40E+00 | 5.29E-03 | 6.67E-04 | |
| | **LHDT2** | 15 | 0.184 | 11 | 330 | 0.21 | 4.17E-01 | 9.18E-04 | 1.16E-04 | |
| | **MHDT** | 15 | 4.419 | 181 | 330 | 0.21 | 1.64E+02 | 3.62E-01 | 4.56E-02 | |
| | **HHDT** | 15 | 8.815 | 581 | 330 | 0.21 | 1.05E+03 | 2.31E+00 | 2.92E-01 | |
| | | | | | | | | | | 3.38E-01 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.027 | 0 | 175 | 0.11 | 5.95E-05 | 1.31E-07 | 1.65E-08 | |
| | **LDT1** | 15 | 0.152 | 0 | 175 | 0.11 | 1.78E-05 | 3.92E-08 | 4.94E-09 | |
| | **LDT2** | 15 | 0.081 | 0 | 175 | 0.11 | 9.14E-06 | 2.01E-08 | 2.54E-09 | |
| | **MDT** | 15 | 0.032 | 0 | 175 | 0.11 | 6.20E-06 | 1.37E-08 | 1.72E-09 | |
| | **LHDT1** | 15 | 0.348 | 0 | 175 | 0.11 | 7.09E-03 | 1.56E-05 | 1.97E-06 | |
| | **LHDT2** | 15 | 0.184 | 0 | 175 | 0.11 | 1.23E-03 | 2.71E-06 | 3.41E-07 | |
| | **MHDT** | 15 | 4.419 | 1 | 175 | 0.11 | 2.68E-01 | 5.90E-04 | 7.43E-05 | |
| | **HHDT** | 15 | 8.815 | 2 | 175 | 0.11 | 1.70E+00 | 3.75E-03 | 4.73E-04 | 5.49E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.027 | 0 | 100 | 0.06 | 5.26E-05 | 1.16E-07 | 1.46E-08 | |
| | **LDT1** | 15 | 0.152 | 0 | 100 | 0.06 | 1.57E-05 | 3.46E-08 | 4.36E-09 | |
| | **LDT2** | 15 | 0.081 | 0 | 100 | 0.06 | 8.08E-06 | 1.78E-08 | 2.24E-09 | |
| | **MDT** | 15 | 0.032 | 0 | 100 | 0.06 | 5.48E-06 | 1.21E-08 | 1.52E-09 | |
| | **LHDT1** | 15 | 0.348 | 1 | 100 | 0.06 | 1.27E-02 | 2.80E-05 | 3.53E-06 | |
| | **LHDT2** | 15 | 0.184 | 0 | 100 | 0.06 | 2.20E-03 | 4.85E-06 | 6.11E-07 | |
| | **MHDT** | 15 | 4.419 | 1 | 100 | 0.06 | 2.16E-01 | 4.76E-04 | 6.00E-05 | |
| | **HHDT** | 15 | 8.815 | 2 | 100 | 0.06 | 1.03E+00 | 2.26E-03 | 2.85E-04 | 3.50E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.027 | 0 | 50 | 0.03 | 1.42E-05 | 3.13E-08 | 3.95E-09 | |
| | **LDT1** | 15 | 0.152 | 0 | 50 | 0.03 | 4.25E-06 | 9.35E-09 | 1.18E-09 | |
| | **LDT2** | 15 | 0.081 | 0 | 50 | 0.03 | 2.18E-06 | 4.81E-09 | 6.07E-10 | |
| | **MDT** | 15 | 0.032 | 0 | 50 | 0.03 | 1.48E-06 | 3.26E-09 | 4.11E-10 | |
| | **LHDT1** | 15 | 0.348 | 0 | 50 | 0.03 | 4.64E-05 | 1.02E-07 | 1.29E-08 | |
| | **LHDT2** | 15 | 0.184 | 0 | 50 | 0.03 | 8.04E-06 | 1.77E-08 | 2.23E-09 | |
| | **MHDT** | 15 | 4.419 | 2 | 50 | 0.03 | 2.60E-01 | 5.74E-04 | 7.24E-05 | |
| | **HHDT** | 15 | 8.815 | 9 | 50 | 0.03 | 2.51E+00 | 5.53E-03 | 6.97E-04 | 7.70E-04 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.027 | 0 | 50 | 0.03 | 1.77E-05 | 3.89E-08 | 4.91E-09 | |
| | **LDT1** | 15 | 0.152 | 0 | 50 | 0.03 | 5.28E-06 | 1.16E-08 | 1.47E-09 | |
| | **LDT2** | 15 | 0.081 | 0 | 50 | 0.03 | 2.72E-06 | 5.98E-09 | 7.55E-10 | |
| | **MDT** | 15 | 0.032 | 0 | 50 | 0.03 | 1.84E-06 | 4.06E-09 | 5.12E-10 | |
| | **LHDT1** | 15 | 0.348 | 0 | 50 | 0.03 | 1.99E-03 | 4.38E-06 | 5.52E-07 | |
| | **LHDT2** | 15 | 0.184 | 0 | 50 | 0.03 | 3.45E-04 | 7.59E-07 | 9.57E-08 | |
| | **MHDT** | 15 | 4.419 | 1 | 50 | 0.03 | 1.98E-01 | 4.37E-04 | 5.51E-05 | |
| | **HHDT** | 15 | 8.815 | 11 | 50 | 0.03 | 2.89E+00 | 6.36E-03 | 8.02E-04 | 8.58E-04 |
| **Travel at Fire Station** | **LDA** | 15 | 0.027 | 0 | 50 | 0.03 | 4.42E-05 | 9.73E-08 | 1.23E-08 | |
| | **LDT1** | 15 | 0.152 | 0 | 50 | 0.03 | 1.32E-05 | 2.91E-08 | 3.67E-09 | |
| | **LDT2** | 15 | 0.081 | 0 | 50 | 0.03 | 6.79E-06 | 1.50E-08 | 1.89E-09 | |
| | **MDT** | 15 | 0.032 | 0 | 50 | 0.03 | 4.61E-06 | 1.01E-08 | 1.28E-09 | |
| | **LHDT1** | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.91E-08 |
| **Total - All Buildings** | **LDA** | | | 3 | | | 1.80E-02 | 3.96E-05 | 4.99E-06 | |
| | **LDT1** | | | 0 | | | 5.38E-03 | 1.18E-05 | 1.49E-06 | |
| | **LDT2** | | | 0 | | | 2.76E-03 | 6.09E-06 | 7.68E-07 | |
| | **MDT** | | | 0 | | | 1.87E-03 | 4.13E-06 | 5.21E-07 | |
| | **LHDT1** | | | 35 | | | 2.42E+00 | 5.34E-03 | 6.73E-04 | |
| | **LHDT2** | | | 11 | | | 4.20E-01 | 9.26E-04 | 1.17E-04 | |
| | **MHDT** | | | 186 | | | 1.65E+02 | 3.64E-01 | 4.59E-02 | |
| | **HHDT** | | | 604 | | | 1.06E+03 | 2.33E+00 | 2.94E-01 | |
| | **Total** | | | 840 | | | 1.23E+03 | 2.70E+00 | 3.40E-01 | 3.40E-01 |

**Diesel truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.500 | 5 | 17 | 4.84E+01 | 1.07E-01 | 1.34E-02 | |
| | **LHDT2** | 29.600 | 5 | 6 | 1.36E+01 | 2.99E-02 | 3.77E-03 | |
| | **MHDT** | 18.000 | 5 | 91 | 1.36E+02 | 2.99E-01 | 3.78E-02 | |
| | **HHDT** | 16.430 | 5 | 290 | 3.98E+02 | 8.76E-01 | 1.10E-01 | |
| | | | | 403 | 5.96E+02 | 1.31E+00 | 1.65E-01 | 1.65E-01 |
| **Idle at Light Logistics** | **LHDT1** | 34.500 | 5 | 0 | 2.69E-01 | 5.93E-04 | 7.48E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 7.56E-02 | 1.67E-04 | 2.10E-05 | |
| | **MHDT** | 18.000 | 5 | 0 | 4.18E-01 | 9.20E-04 | 1.16E-04 | |
| | **HHDT** | 16.430 | 5 | 1 | 1.22E+00 | 2.68E-03 | 3.38E-04 | |
| | | | | 1 | 1.98E+00 | 4.36E-03 | 5.49E-04 | 5.49E-04 |
| **Idle at Utility** | **LHDT1** | 34.500 | 5 | 0 | 8.44E-01 | 1.86E-03 | 2.34E-04 | |
| | **LHDT2** | 29.600 | 5 | 0 | 2.37E-01 | 5.22E-04 | 6.58E-05 | |
| | **MHDT** | 18.000 | 5 | 0 | 5.90E-01 | 1.30E-03 | 1.64E-04 | |
| | **HHDT** | 16.430 | 5 | 1 | 1.28E+00 | 2.83E-03 | 3.57E-04 | |
| | | | | 2 | 2.96E+00 | 6.51E-03 | 8.21E-04 | 8.21E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 6.17E-03 | 1.36E-05 | 1.71E-06 | |
| | **LHDT2** | 29.600 | 5 | 0 | 1.73E-03 | 3.81E-06 | 4.81E-07 | |
| | **MHDT** | 18.000 | 5 | 1 | 1.42E+00 | 3.14E-03 | 3.95E-04 | |
| | **HHDT** | 16.430 | 5 | 5 | 6.28E+00 | 1.38E-02 | 1.74E-03 | |
| | | | | 6 | 7.71E+00 | 1.70E-02 | 2.14E-03 | 2.14E-03 |
| **Idle at Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 2.64E-01 | 5.82E-04 | 7.34E-05 | |
| | **LHDT2** | 29.600 | 5 | 0 | 7.42E-02 | 1.63E-04 | 2.06E-05 | |
| | **MHDT** | 18.000 | 5 | 1 | 1.08E+00 | 2.39E-03 | 3.01E-04 | |
| | **HHDT** | 16.430 | 5 | 5 | 7.22E+00 | 1.59E-02 | 2.01E-03 | |
| | | | | 6 | 8.64E+00 | 1.90E-02 | 2.40E-03 | 2.40E-03 |
| **Idle at Firestation** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 418 | 6.17E+02 | 1.36E+00 | 1.71E-01 | 1.71E-01 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **Peak Hour Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **Peak Hour Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.031 | 1004 | 330 | 0.21 | 6.32E+00 | 1.39E-02 | 1.75E-03 | |
| | **LDT1** | 15 | 0.045 | 119 | 330 | 0.21 | 1.10E+00 | 2.43E-03 | 3.07E-04 | |
| | **LDT2** | 15 | 0.040 | 363 | 330 | 0.21 | 2.99E+00 | 6.59E-03 | 8.31E-04 | |
| | **MDT** | 15 | 0.063 | 280 | 330 | 0.21 | 3.59E+00 | 7.91E-03 | 9.97E-04 | |
| | **LHDT1** | 15 | 0.111 | 109 | 330 | 0.21 | 2.48E+00 | 5.46E-03 | 6.89E-04 | |
| | **LHDT2** | 15 | 0.053 | 11 | 330 | 0.21 | 1.25E-01 | 2.75E-04 | 3.47E-05 | |
| | **MHDT** | 15 | 0.136 | 41 | 330 | 0.21 | 1.15E+00 | 2.54E-03 | 3.20E-04 | |
| | **HHDT** | 15 | 3.933 | 10 | 330 | 0.21 | 8.03E+00 | 1.77E-02 | 2.23E-03 | |
| | | | | | | | | | | 7.16E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.031 | 6 | 175 | 0.11 | 2.11E-02 | 4.65E-05 | 5.86E-06 | |
| | **LDT1** | 15 | 0.045 | 1 | 175 | 0.11 | 3.69E-03 | 8.13E-06 | 1.03E-06 | |
| | **LDT2** | 15 | 0.040 | 2 | 175 | 0.11 | 9.99E-03 | 2.20E-05 | 2.78E-06 | |
| | **MDT** | 15 | 0.063 | 2 | 175 | 0.11 | 1.20E-02 | 2.64E-05 | 3.33E-06 | |
| | **LHDT1** | 15 | 0.111 | 1 | 175 | 0.11 | 7.32E-03 | 1.61E-05 | 2.03E-06 | |
| | **LHDT2** | 15 | 0.053 | 0 | 175 | 0.11 | 3.68E-04 | 8.11E-07 | 1.02E-07 | |
| | **MHDT** | 15 | 0.136 | 0 | 175 | 0.11 | 1.88E-03 | 4.14E-06 | 5.22E-07 | |
| | **HHDT** | 15 | 3.933 | 0 | 175 | 0.11 | 1.30E-02 | 2.87E-05 | 3.62E-06 | 1.93E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.031 | 10 | 100 | 0.06 | 1.87E-02 | 4.11E-05 | 5.18E-06 | |
| | **LDT1** | 15 | 0.045 | 1 | 100 | 0.06 | 3.26E-03 | 7.18E-06 | 9.06E-07 | |
| | **LDT2** | 15 | 0.040 | 4 | 100 | 0.06 | 8.83E-03 | 1.95E-05 | 2.45E-06 | |
| | **MDT** | 15 | 0.063 | 3 | 100 | 0.06 | 1.06E-02 | 2.34E-05 | 2.95E-06 | |
| | **LHDT1** | 15 | 0.111 | 2 | 100 | 0.06 | 1.31E-02 | 2.89E-05 | 3.64E-06 | |
| | **LHDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 6.60E-04 | 1.45E-06 | 1.83E-07 | |
| | **MHDT** | 15 | 0.136 | 0 | 100 | 0.06 | 1.52E-03 | 3.34E-06 | 4.21E-07 | |
| | **HHDT** | 15 | 3.933 | 0 | 100 | 0.06 | 7.87E-03 | 1.73E-05 | 2.18E-06 | 1.79E-05 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.031 | 5 | 50 | 0.03 | 5.04E-03 | 1.11E-05 | 1.40E-06 | |
| | **LDT1** | 15 | 0.045 | 1 | 50 | 0.03 | 8.81E-04 | 1.94E-06 | 2.45E-07 | |
| | **LDT2** | 15 | 0.040 | 2 | 50 | 0.03 | 2.39E-03 | 5.26E-06 | 6.63E-07 | |
| | **MDT** | 15 | 0.063 | 1 | 50 | 0.03 | 2.87E-03 | 6.31E-06 | 7.96E-07 | |
| | **LHDT1** | 15 | 0.111 | 0 | 50 | 0.03 | 4.79E-05 | 1.05E-07 | 1.33E-08 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 2.41E-06 | 5.31E-09 | 6.69E-10 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 1.83E-03 | 4.03E-06 | 5.08E-07 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 1.92E-02 | 4.23E-05 | 5.34E-06 | 8.96E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.031 | 7 | 50 | 0.03 | 6.27E-03 | 1.38E-05 | 1.74E-06 | |
| | **LDT1** | 15 | 0.045 | 1 | 50 | 0.03 | 1.10E-03 | 2.42E-06 | 3.05E-07 | |
| | **LDT2** | 15 | 0.040 | 2 | 50 | 0.03 | 2.97E-03 | 6.54E-06 | 8.25E-07 | |
| | **MDT** | 15 | 0.063 | 2 | 50 | 0.03 | 3.57E-03 | 7.85E-06 | 9.90E-07 | |
| | **LHDT1** | 15 | 0.111 | 1 | 50 | 0.03 | 2.05E-03 | 4.52E-06 | 5.70E-07 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 1.03E-04 | 2.27E-07 | 2.87E-08 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 1.39E-03 | 3.07E-06 | 3.87E-07 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 2.21E-02 | 4.87E-05 | 6.14E-06 | 1.10E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.031 | 16 | 50 | 0.03 | 1.57E-02 | 3.45E-05 | 4.36E-06 | |
| | **LDT1** | 15 | 0.045 | 2 | 50 | 0.03 | 2.74E-03 | 6.04E-06 | 7.62E-07 | |
| | **LDT2** | 15 | 0.040 | 6 | 50 | 0.03 | 7.42E-03 | 1.64E-05 | 2.06E-06 | |
| | **MDT** | 15 | 0.063 | 5 | 50 | 0.03 | 8.91E-03 | 1.96E-05 | 2.48E-06 | |
| | **LHDT1** | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.66E-06 |
| **Total - All Buildings** | **LDA** | | | 1049 | | | 6.38E+00 | 1.41E-02 | 1.77E-03 | |
| | **LDT1** | | | 124 | | | 1.12E+00 | 2.46E-03 | 3.10E-04 | |
| | **LDT2** | | | 379 | | | 3.02E+00 | 6.66E-03 | 8.39E-04 | |
| | **MDT** | | | 292 | | | 3.63E+00 | 7.99E-03 | 1.01E-03 | |
| | **LHDT1** | | | 112 | | | 2.50E+00 | 5.51E-03 | 6.95E-04 | |
| | **LHDT2** | | | 12 | | | 1.26E-01 | 2.77E-04 | 3.50E-05 | |
| | **MHDT** | | | 42 | | | 1.16E+00 | 2.55E-03 | 3.22E-04 | |
| | **HHDT** | | | 10 | | | 8.10E+00 | 1.78E-02 | 2.25E-03 | |
| | **Total** | | | 2020 | | | 2.60E+01 | 5.73E-02 | 7.23E-03 | 7.23E-03 |

**Non-Diesel Truck Idling Emissions** **Peak Hour Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 54 | 4.35E+00 | 9.58E-03 | 1.21E-03 | |
| | **LHDT2** | 0.840 | 5 | 6 | 3.99E-01 | 8.79E-04 | 1.11E-04 | |
| | **MHDT** | 1.920 | 5 | 21 | 3.31E+00 | 7.29E-03 | 9.19E-04 | |
| | **HHDT** | 3.696 | 5 | 5 | 1.53E+00 | 3.38E-03 | 4.26E-04 | |
| | | | | 86 | 9.59E+00 | 2.11E-02 | 2.66E-03 | 2.66E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 0 | 2.42E-02 | 5.33E-05 | 6.72E-06 | |
| | **LHDT2** | 0.840 | 5 | 0 | 2.22E-03 | 4.89E-06 | 6.17E-07 | |
| | **MHDT** | 1.920 | 5 | 0 | 1.02E-02 | 2.24E-05 | 2.83E-06 | |
| | **HHDT** | 3.696 | 5 | 0 | 4.69E-03 | 1.03E-05 | 1.30E-06 | |
| | | | | 0 | 4.13E-02 | 9.09E-05 | 1.15E-05 | 1.15E-05 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 1 | 7.59E-02 | 1.67E-04 | 2.11E-05 | |
| | **LHDT2** | 0.840 | 5 | 0 | 6.96E-03 | 1.53E-05 | 1.93E-06 | |
| | **MHDT** | 1.920 | 5 | 0 | 1.44E-02 | 3.16E-05 | 3.99E-06 | |
| | **HHDT** | 3.696 | 5 | 0 | 4.96E-03 | 1.09E-05 | 1.38E-06 | |
| | | | | 1 | 1.02E-01 | 2.25E-04 | 2.84E-05 | 2.84E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 5.54E-04 | 1.22E-06 | 1.54E-07 | |
| | **LHDT2** | 0.840 | 5 | 0 | 5.08E-05 | 1.12E-07 | 1.41E-08 | |
| | **MHDT** | 1.920 | 5 | 0 | 3.47E-02 | 7.63E-05 | 9.63E-06 | |
| | **HHDT** | 3.696 | 5 | 0 | 2.42E-02 | 5.33E-05 | 6.73E-06 | |
| | | | | 0 | 5.95E-02 | 1.31E-04 | 1.65E-05 | 1.65E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 2.38E-02 | 5.23E-05 | 6.60E-06 | |
| | **LHDT2** | 0.840 | 5 | 0 | 2.18E-03 | 4.80E-06 | 6.05E-07 | |
| | **MHDT** | 1.920 | 5 | 0 | 2.64E-02 | 5.81E-05 | 7.33E-06 | |
| | **HHDT** | 3.696 | 5 | 0 | 2.79E-02 | 6.14E-05 | 7.74E-06 | |
| | | | | 1 | 8.02E-02 | 1.77E-04 | 2.23E-05 | 2.23E-05 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 3.696 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 88 | 9.88E+00 | 2.18E-02 | 2.74E-03 | 2.74E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Nox emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

With EMFAC2014 **2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 2.58E-01 | 5.47E-03 |
| Light Logistics | Phase 2 | 1.86E-03 | 6.54E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 2.60E-01 | 5.54E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.26E-01 | 3.97E-03 |
| Light Logistics | Phase 2 | 1.87E-03 | 6.52E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.28E-01 | 4.03E-03 |

**Total Onsite Mobile Emissions**

| | | **Diesel Emissions (g/sec)** | **Non-Diesel Emissions (g/sec)** | |
|---|---|---|---|---|
| | Runing Exhaust | 2.60E-01 | 5.54E-03 | |
| | Idling Emissions | 1.28E-01 | 4.03E-03 | |
| | Total Vehicle Emissions (g/sec) | 3.88E-01 | 9.57E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG | | 1.39E+00 | |
| | Forklifts (LPG) | | 1.10E-01 | |
| | Total Other Onsite Emissions (g/sec) | | 1.50E+00 | |
| | Total All Sources (g/sec) | 3.88E-01 | 1.51E+00 | 1.90E+00 |
| | Area (m2) | | | 5152719 |
| | Emission Rate (g/m2-sec) | | | 3.68E-07 |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Diesel Vehicle Emissions** Nox

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Nox Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.027 | 2 | 330 | 0.21 | 1.36E-02 | 3.00E-05 | 3.78E-06 | |
| | LDT1 | 15 | 0.152 | 0 | 330 | 0.21 | 4.06E-03 | 8.95E-06 | 1.13E-06 | |
| | LDT2 | 15 | 0.081 | 0 | 330 | 0.21 | 2.09E-03 | 4.61E-06 | 5.81E-07 | |
| | MDT | 15 | 0.032 | 0 | 330 | 0.21 | 1.42E-03 | 3.12E-06 | 3.94E-07 | |
| | LHDT1 | 15 | 0.348 | 26 | 330 | 0.21 | 1.84E+00 | 4.04E-03 | 5.10E-04 | |
| | LHDT2 | 15 | 0.184 | 8 | 330 | 0.21 | 3.18E-01 | 7.01E-04 | 8.84E-05 | |
| | MHDT | 15 | 4.419 | 138 | 330 | 0.21 | 1.25E+02 | 2.76E-01 | 3.48E-02 | |
| | HHDT | 15 | 8.815 | 444 | 330 | 0.21 | 8.02E+02 | 1.77E+00 | 2.23E-01 | |
| | | | | | | | | | | 2.58E-01 |
| Travel at Light Logistics | LDA | 15 | 0.027 | 0 | 175 | 0.11 | 2.02E-04 | 4.45E-07 | 5.61E-08 | |
| | LDT1 | 15 | 0.152 | 0 | 175 | 0.11 | 6.04E-05 | 1.33E-07 | 1.68E-08 | |
| | LDT2 | 15 | 0.081 | 0 | 175 | 0.11 | 3.10E-05 | 6.84E-08 | 8.62E-09 | |
| | MDT | 15 | 0.032 | 0 | 175 | 0.11 | 2.11E-05 | 4.64E-08 | 5.85E-09 | |
| | LHDT1 | 15 | 0.348 | 1 | 175 | 0.11 | 2.41E-02 | 5.30E-05 | 6.68E-06 | |
| | LHDT2 | 15 | 0.184 | 0 | 175 | 0.11 | 4.17E-03 | 9.19E-06 | 1.16E-06 | |
| | MHDT | 15 | 4.419 | 2 | 175 | 0.11 | 9.09E-01 | 2.00E-03 | 2.52E-04 | |
| | HHDT | 15 | 8.815 | 6 | 175 | 0.11 | 5.78E+00 | 1.27E-02 | 1.60E-03 | 1.86E-03 |
| Travel at Utility | LDA | 15 | 0.027 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.152 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.081 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.032 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.348 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.184 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 4.419 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 8.815 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.027 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.081 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.032 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.027 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.081 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.032 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.027 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.081 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.032 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 3 | | | 1.38E-02 | 3.04E-05 | 3.83E-06 | |
| | LDT1 | | | 0 | | | 4.13E-03 | 9.09E-06 | 1.15E-06 | |
| | LDT2 | | | 0 | | | 2.12E-03 | 4.67E-06 | 5.89E-07 | |
| | MDT | | | 0 | | | 1.44E-03 | 3.17E-06 | 4.00E-07 | |
| | LHDT1 | | | 26 | | | 1.86E+00 | 4.10E-03 | 5.17E-04 | |
| | LHDT2 | | | 9 | | | 3.23E-01 | 7.10E-04 | 8.96E-05 | |
| | MHDT | | | 140 | | | 1.26E+02 | 2.78E-01 | 3.51E-02 | |
| | HHDT | | | 450 | | | 8.08E+02 | 1.78E+00 | 2.24E-01 | |
| | Total | | | 628 | | | 9.37E+02 | 2.06E+00 | 2.60E-01 | 2.60E-01 |

**Diesel truck Idling Emissions** **Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.500 | 5 | 13 | 3.70E+01 | 8.15E-02 | 1.03E-02 | |
| | **LHDT2** | 29.600 | 5 | 4 | 1.04E+01 | 2.29E-02 | 2.88E-03 | |
| | **MHDT** | 18.000 | 5 | 69 | 1.04E+02 | 2.29E-01 | 2.89E-02 | |
| | **HHDT** | 16.430 | 5 | 222 | 3.04E+02 | 6.69E-01 | 8.44E-02 | |
| | | | | 308 | 4.55E+02 | 1.00E+00 | 1.26E-01 | 1.26E-01 |
| **Idle at Light Logistics** | **LHDT1** | 34.500 | 5 | 0 | 9.15E-01 | 2.01E-03 | 2.54E-04 | |
| | **LHDT2** | 29.600 | 5 | 0 | 2.57E-01 | 5.65E-04 | 7.13E-05 | |
| | **MHDT** | 18.000 | 5 | 1 | 1.42E+00 | 3.13E-03 | 3.94E-04 | |
| | **HHDT** | 16.430 | 5 | 3 | 4.13E+00 | 9.09E-03 | 1.15E-03 | |
| | | | | 4 | 6.72E+00 | 1.48E-02 | 1.87E-03 | 1.87E-03 |
| **Idle at Utility** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 34.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.600 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.430 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 313 | 4.62E+02 | 1.02E+00 | 1.28E-01 | 1.28E-01 |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Diesel Vehicle Emissions** Nox

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 hrs/day
1 hrs/day SoCAB

**Onsite Running Exhaust Emissions** Nox Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.031 | 767 | 330 | 0.21 | 4.83E+00 | 1.06E-02 | 1.34E-03 | |
| | LDT1 | 15 | 0.045 | 91 | 330 | 0.21 | 8.44E-01 | 1.86E-03 | 2.34E-04 | |
| | LDT2 | 15 | 0.040 | 277 | 330 | 0.21 | 2.29E+00 | 5.03E-03 | 6.35E-04 | |
| | MDT | 15 | 0.063 | 214 | 330 | 0.21 | 2.74E+00 | 6.04E-03 | 7.62E-04 | |
| | LHDT1 | 15 | 0.111 | 83 | 330 | 0.21 | 1.90E+00 | 4.17E-03 | 5.26E-04 | |
| | LHDT2 | 15 | 0.053 | 9 | 330 | 0.21 | 9.54E-02 | 2.10E-04 | 2.65E-05 | |
| | MHDT | 15 | 0.136 | 32 | 330 | 0.21 | 8.81E-01 | 1.94E-03 | 2.45E-04 | |
| | HHDT | 15 | 3.933 | 8 | 330 | 0.21 | 6.14E+00 | 1.35E-02 | 1.71E-03 | |
| | | | | | | | | | | 5.47E-03 |
| Travel at Light Logistics | LDA | 15 | 0.031 | 21 | 175 | 0.11 | 7.17E-02 | 1.58E-04 | 1.99E-05 | |
| | LDT1 | 15 | 0.045 | 3 | 175 | 0.11 | 1.25E-02 | 2.76E-05 | 3.48E-06 | |
| | LDT2 | 15 | 0.040 | 8 | 175 | 0.11 | 3.39E-02 | 7.47E-05 | 9.43E-06 | |
| | MDT | 15 | 0.063 | 6 | 175 | 0.11 | 4.07E-02 | 8.97E-05 | 1.13E-05 | |
| | LHDT1 | 15 | 0.111 | 2 | 175 | 0.11 | 2.48E-02 | 5.47E-05 | 6.90E-06 | |
| | LHDT2 | 15 | 0.053 | 0 | 175 | 0.11 | 1.25E-03 | 2.75E-06 | 3.47E-07 | |
| | MHDT | 15 | 0.136 | 0 | 175 | 0.11 | 6.38E-03 | 1.41E-05 | 1.77E-06 | |
| | HHDT | 15 | 3.933 | 0 | 175 | 0.11 | 4.42E-02 | 9.74E-05 | 1.23E-05 | 6.54E-05 |
| Travel at Utility | LDA | 15 | 0.031 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.045 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.040 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.063 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.111 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.136 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 3.933 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.031 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.031 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.031 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 789 | | | 4.90E+00 | 1.08E-02 | 1.36E-03 | |
| | LDT1 | | | 93 | | | 8.56E-01 | 1.89E-03 | 2.38E-04 | |
| | LDT2 | | | 285 | | | 2.32E+00 | 5.11E-03 | 6.44E-04 | |
| | MDT | | | 220 | | | 2.78E+00 | 6.13E-03 | 7.73E-04 | |
| | LHDT1 | | | 85 | | | 1.92E+00 | 4.23E-03 | 5.33E-04 | |
| | LHDT2 | | | 9 | | | 9.66E-02 | 2.13E-04 | 2.68E-05 | |
| | MHDT | | | 32 | | | 8.88E-01 | 1.96E-03 | 2.47E-04 | |
| | HHDT | | | 8 | | | 6.18E+00 | 1.36E-02 | 1.72E-03 | |
| | Total | | | 1521 | | | 1.99E+01 | 4.39E-02 | 5.54E-03 | 5.54E-03 |

**Non-Diesel Truck Idling Emissions** **Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 42 | 3.33E+00 | 7.32E-03 | 9.24E-04 | |
| | **LHDT2** | 0.840 | 5 | 4 | 3.05E-01 | 6.72E-04 | 8.47E-05 | |
| | **MHDT** | 1.920 | 5 | 16 | 2.53E+00 | 5.57E-03 | 7.02E-04 | |
| | **HHDT** | 25.616 | 5 | 4 | 8.13E+00 | 1.79E-02 | 2.26E-03 | |
| | | | | 66 | 1.43E+01 | 3.15E-02 | 3.97E-03 | 3.97E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 1 | 8.22E-02 | 1.81E-04 | 2.28E-05 | |
| | **LHDT2** | 0.840 | 5 | 0 | 7.54E-03 | 1.66E-05 | 2.09E-06 | |
| | **MHDT** | 1.920 | 5 | 0 | 3.45E-02 | 7.61E-05 | 9.60E-06 | |
| | **HHDT** | 25.616 | 5 | 0 | 1.10E-01 | 2.43E-04 | 3.07E-05 | |
| | | | | 1 | 2.35E-01 | 5.17E-04 | 6.52E-05 | 6.52E-05 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.840 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 67 | 1.45E+01 | 3.20E-02 | 4.03E-03 | 4.03E-03 |

**World Logistics Center** **2035** **NOx Pk Hr** Based on PB Traffic Results 10/3/2013
**Project Only Phase 1 and 2 in 2035** No Mitigation Rev5
**Internal Roadway Circulation** **With EMFAC2014**

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 8.67E-02 | 3.85E-03 | 9.05E-02 |
| 2 | 3.07E-01 | 1.25E-02 | 3.19E-01 |
| 3 | 3.54E-01 | 1.49E-02 | 3.69E-01 |
| 5 | 2.30E-02 | 4.56E-03 | 2.76E-02 |
| 6 | 1.49E-01 | 7.04E-03 | 1.56E-01 |
| 8 | 2.27E-02 | 7.03E-03 | 2.98E-02 |
| 11 | 5.00E-04 | 1.96E-04 | 6.96E-04 |
| 12 | 3.34E-04 | 1.12E-04 | 4.45E-04 |
| 14 | 2.44E-01 | 8.04E-03 | 2.52E-01 |
| 18 | 3.20E-02 | 2.12E-03 | 3.41E-02 |
| 19 | 1.90E-01 | 7.13E-03 | 1.97E-01 |
| 21 | 8.58E-02 | 6.87E-03 | 9.27E-02 |
| 24 | 1.65E-01 | 1.22E-02 | 1.77E-01 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 5.09E-02 | 2.25E-03 | 5.31E-02 |
| 30 | 2.31E-01 | 1.15E-02 | 2.42E-01 |
| 31 | 4.59E-02 | 4.43E-03 | 5.03E-02 |
| Total (g/sec) | 1.99E+00 | 1.05E-01 | 2.09E+00 |
| Total (lbs/day) | 3.78E+02 | 1.99E+01 | 3.98E+02 |
| Total VMT (mi/day) | 3.14E+03 | 7.23E+03 | 1.04E+04 |

| ID | Arterial | From | To | | Project Phase 1 and 2 2035 - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,114 | 81 | 162 | 506 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,418 | 167 | 223 | 814 |
| 3 | Street E | west of Street A | | | 538 | 63 | 80 | 292 |
| 5 | Street E | Street D | Street A | | 686 | 47 | 73 | 21 |
| 6 | Street A | Street F | Street C | | 606 | 58 | 83 | 259 |
| 8 | Street D | Street E | Cactus Ave | | 950 | 69 | 105 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 22 | 3 | 2 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 19 | 2 | 2 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 339 | 40 | 57 | 302 |
| 18 | Street B | Street A | Gilman Springs Rd | | 160 | 19 | 21 | 40 |
| 19 | Street F | Street A | Street C | | 234 | 26 | 41 | 155 |
| 21 | Street C | Street A | Street F | | 664 | 50 | 79 | 114 |
| 24 | Street C | Street F | Gilman Springs Rd | | 758 | 49 | 74 | 152 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 318 | 22 | 41 | 146 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 414 | 29 | 52 | 155 |
| 31 | Gilman Springs Rd | south of Street C | | | 707 | 42 | 59 | 96 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **NOx Pk Hr** **No Mitigation**
Project Only Phase 1 and 2 in 2035
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1863 | 1,114 | 81 | 162 | 506 | 327 | 0.203 | 2 | 0 | 0 | 0 | 16 | 5 | 132 | 499 | 655 | 133 |
| 2 | 2622 | 1,418 | 167 | 223 | 814 | 731 | 0.454 | 2 | 0 | 0 | 0 | 34 | 11 | 182 | 802 | 1032 | 469 |
| 3 | 973 | 538 | 63 | 80 | 292 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 4 | 65 | 288 | 371 | 542 |
| 5 | 827 | 686 | 47 | 73 | 21 | 953 | 0.592 | 1 | 0 | 0 | 0 | 10 | 3 | 60 | 21 | 94 | 56 |
| 6 | 1006 | 606 | 58 | 83 | 259 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 12 | 4 | 68 | 255 | 340 | 232 |
| 8 | 1124 | 950 | 69 | 105 | 0 | 1091 | 0.678 | 2 | 0 | 0 | 0 | 14 | 5 | 86 | 0 | 106 | 72 |
| 11 | 27 | 22 | 3 | 2 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 2 |
| 12 | 23 | 19 | 2 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 14 | 738 | 339 | 40 | 57 | 302 | 1618 | 1.005 | 1 | 0 | 0 | 0 | 8 | 3 | 46 | 298 | 356 | 357 |
| 18 | 240 | 160 | 19 | 21 | 40 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 4 | 1 | 17 | 39 | 62 | 54 |
| 19 | 456 | 234 | 26 | 41 | 155 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 5 | 2 | 33 | 153 | 194 | 287 |
| 21 | 907 | 664 | 50 | 79 | 114 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 10 | 3 | 64 | 112 | 192 | 150 |
| 24 | 1033 | 758 | 49 | 74 | 152 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 10 | 3 | 60 | 150 | 225 | 272 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 527 | 318 | 22 | 41 | 146 | 675 | 0.419 | 1 | 0 | 0 | 0 | 4 | 1 | 33 | 144 | 184 | 77 |
| 30 | 650 | 414 | 29 | 52 | 155 | 2827 | 1.756 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 153 | 204 | 358 |
| 31 | 904 | 707 | 42 | 59 | 96 | 820 | 0.509 | 1 | 0 | 0 | 0 | 9 | 3 | 48 | 95 | 155 | 79 |
| | | | | | | | | | | | | | | | | Total | 3141 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0993 | 0.0292 | 0.0117 | 0.2934 | 0.1138 | 1.3563 | 2.7096 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.08E-06 | 6.54E-07 | 1.80E-07 | 1.26E-07 | 2.72E-04 | 3.50E-05 | 1.01E-02 | 7.62E-02 | 8.67E-02 |
| 2 | 1 | 3.08E-06 | 1.86E-06 | 5.11E-07 | 3.59E-07 | 1.25E-03 | 1.61E-04 | 3.11E-02 | 2.74E-01 | 3.07E-01 |
| 3 | 1 | 3.76E-06 | 2.27E-06 | 6.24E-07 | 4.39E-07 | 1.52E-03 | 1.96E-04 | 3.59E-02 | 3.16E-01 | 3.54E-01 |
| 5 | 1 | 1.94E-06 | 1.17E-06 | 3.22E-07 | 2.27E-07 | 4.60E-04 | 5.92E-05 | 1.33E-02 | 9.22E-03 | 2.30E-02 |
| 6 | 1 | 1.98E-06 | 1.20E-06 | 3.28E-07 | 2.31E-07 | 6.55E-04 | 8.42E-05 | 1.74E-02 | 1.31E-01 | 1.49E-01 |
| 8 | 1 | 3.08E-06 | 1.86E-06 | 5.11E-07 | 3.59E-07 | 7.73E-04 | 9.94E-05 | 2.19E-02 | 0.00E+00 | 2.27E-02 |
| 11 | 1 | 7.85E-08 | 4.74E-08 | 1.30E-08 | 9.16E-09 | 3.70E-05 | 4.76E-06 | 4.58E-04 | 0.00E+00 | 5.00E-04 |
| 12 | 1 | 4.65E-08 | 2.81E-08 | 7.72E-09 | 5.43E-09 | 1.69E-05 | 2.18E-06 | 3.14E-04 | 0.00E+00 | 3.34E-04 |
| 14 | 1 | 1.63E-06 | 9.85E-07 | 2.70E-07 | 1.90E-07 | 6.65E-04 | 8.55E-05 | 1.76E-02 | 2.25E-01 | 2.44E-01 |
| 18 | 1 | 6.71E-07 | 4.06E-07 | 1.11E-07 | 7.84E-08 | 2.76E-04 | 3.54E-05 | 5.66E-03 | 2.60E-02 | 3.20E-02 |
| 19 | 1 | 1.66E-06 | 1.00E-06 | 2.75E-07 | 1.94E-07 | 6.37E-04 | 8.19E-05 | 1.87E-02 | 1.70E-01 | 1.90E-01 |
| 21 | 1 | 2.48E-06 | 1.50E-06 | 4.12E-07 | 2.90E-07 | 6.46E-04 | 8.31E-05 | 1.90E-02 | 6.61E-02 | 8.58E-02 |
| 24 | 1 | 4.38E-06 | 2.65E-06 | 7.27E-07 | 5.12E-07 | 9.79E-04 | 1.26E-04 | 2.75E-02 | 1.36E-01 | 1.65E-01 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 6.38E-07 | 3.85E-07 | 1.06E-07 | 7.44E-08 | 1.53E-04 | 1.96E-05 | 5.28E-03 | 4.54E-02 | 5.09E-02 |
| 30 | 1 | 3.48E-06 | 2.10E-06 | 5.77E-07 | 4.06E-07 | 8.42E-04 | 1.08E-04 | 2.81E-02 | 2.02E-01 | 2.31E-01 |
| 31 | 1 | 1.72E-06 | 1.04E-06 | 2.86E-07 | 2.01E-07 | 3.54E-04 | 4.55E-05 | 9.23E-03 | 3.63E-02 | 4.59E-02 |

**World Logistics Center** **2035** **NOx Pk Hr** **No Mitigation**
Project Only Phase 1 and 2 in 2035
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1863 | 1,114 | 81 | 162 | 506 | 327 | 0.203 | 605 | 80 | 240 | 187 | 53 | 6 | 30 | 7 | 1208 | 245 |
| 2 | 2622 | 1,418 | 167 | 223 | 814 | 731 | 0.454 | 770 | 101 | 306 | 238 | 110 | 12 | 41 | 12 | 1590 | 722 |
| 3 | 973 | 538 | 63 | 80 | 292 | 2352 | 1.461 | 292 | 38 | 116 | 90 | 42 | 4 | 15 | 4 | 602 | 879 |
| 5 | 827 | 686 | 47 | 73 | 21 | 953 | 0.592 | 372 | 49 | 148 | 115 | 31 | 3 | 13 | 0 | 733 | 434 |
| 6 | 1006 | 606 | 58 | 83 | 259 | 1099 | 0.683 | 329 | 43 | 131 | 102 | 38 | 4 | 15 | 4 | 666 | 455 |
| 8 | 1124 | 950 | 69 | 105 | 0 | 1091 | 0.678 | 516 | 68 | 205 | 160 | 46 | 5 | 19 | 0 | 1018 | 690 |
| 11 | 27 | 22 | 3 | 2 | 0 | 1201 | 0.746 | 12 | 2 | 5 | 4 | 2 | 0 | 0 | 0 | 25 | 18 |
| 12 | 23 | 19 | 2 | 2 | 0 | 824 | 0.512 | 10 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 21 | 11 |
| 14 | 738 | 339 | 40 | 57 | 302 | 1618 | 1.005 | 184 | 24 | 73 | 57 | 26 | 3 | 11 | 4 | 382 | 384 |
| 18 | 240 | 160 | 19 | 21 | 40 | 1412 | 0.877 | 87 | 11 | 35 | 27 | 13 | 1 | 4 | 1 | 178 | 156 |
| 19 | 456 | 234 | 26 | 41 | 155 | 2386 | 1.482 | 127 | 17 | 50 | 39 | 17 | 2 | 8 | 2 | 262 | 389 |
| 21 | 907 | 664 | 50 | 79 | 114 | 1258 | 0.781 | 360 | 47 | 143 | 112 | 33 | 4 | 15 | 2 | 715 | 559 |
| 24 | 1033 | 758 | 49 | 74 | 152 | 1946 | 1.209 | 411 | 54 | 163 | 127 | 32 | 3 | 14 | 2 | 808 | 977 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 527 | 318 | 22 | 41 | 146 | 675 | 0.419 | 173 | 23 | 69 | 53 | 15 | 2 | 8 | 2 | 343 | 144 |
| 30 | 650 | 414 | 29 | 52 | 155 | 2827 | 1.756 | 225 | 30 | 89 | 70 | 19 | 2 | 10 | 2 | 446 | 784 |
| 31 | 904 | 707 | 42 | 59 | 96 | 820 | 0.509 | 384 | 50 | 152 | 119 | 28 | 3 | 11 | 1 | 749 | 381 |
| | | | | | | | | | | | | | | | | Total | 7228 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0310 | 0.0310 | 0.0280 | 0.0441 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.06E-03 | 1.39E-04 | 3.79E-04 | 4.66E-04 | 2.75E-04 | 1.40E-05 | 1.88E-04 | 1.33E-03 | 3.85E-03 |
| 2 | 1 | 3.01E-03 | 3.96E-04 | 1.08E-03 | 1.32E-03 | 1.27E-03 | 6.44E-05 | 5.78E-04 | 4.79E-03 | 1.25E-02 |
| 3 | 1 | 3.67E-03 | 4.83E-04 | 1.32E-03 | 1.62E-03 | 1.54E-03 | 7.82E-05 | 6.67E-04 | 5.52E-03 | 1.49E-02 |
| 5 | 1 | 1.90E-03 | 2.49E-04 | 6.80E-04 | 8.36E-04 | 4.65E-04 | 2.36E-05 | 2.47E-04 | 1.61E-04 | 4.56E-03 |
| 6 | 1 | 1.93E-03 | 2.54E-04 | 6.93E-04 | 8.51E-04 | 6.62E-04 | 3.37E-05 | 3.23E-04 | 2.29E-03 | 7.04E-03 |
| 8 | 1 | 3.01E-03 | 3.95E-04 | 1.08E-03 | 1.32E-03 | 7.82E-04 | 3.97E-05 | 4.06E-04 | 0.00E+00 | 7.03E-03 |
| 11 | 1 | 7.66E-05 | 1.01E-05 | 2.75E-05 | 3.38E-05 | 3.74E-05 | 1.90E-06 | 8.51E-06 | 0.00E+00 | 1.96E-04 |
| 12 | 1 | 4.54E-05 | 5.97E-06 | 1.63E-05 | 2.00E-05 | 1.71E-05 | 8.70E-07 | 5.84E-06 | 0.00E+00 | 1.12E-04 |
| 14 | 1 | 1.59E-03 | 2.09E-04 | 5.71E-04 | 7.01E-04 | 6.73E-04 | 3.42E-05 | 3.27E-04 | 3.93E-03 | 8.04E-03 |
| 18 | 1 | 6.55E-04 | 8.62E-05 | 2.35E-04 | 2.89E-04 | 2.79E-04 | 1.42E-05 | 1.05E-04 | 4.54E-04 | 2.12E-03 |
| 19 | 1 | 1.62E-03 | 2.13E-04 | 5.81E-04 | 7.14E-04 | 6.45E-04 | 3.28E-05 | 3.47E-04 | 2.97E-03 | 7.13E-03 |
| 21 | 1 | 2.42E-03 | 3.19E-04 | 8.69E-04 | 1.07E-03 | 6.54E-04 | 3.32E-05 | 3.52E-04 | 1.15E-03 | 6.87E-03 |
| 24 | 1 | 4.28E-03 | 5.63E-04 | 1.53E-03 | 1.89E-03 | 9.91E-04 | 5.03E-05 | 5.10E-04 | 2.38E-03 | 1.22E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 6.22E-04 | 8.19E-05 | 2.23E-04 | 2.74E-04 | 1.54E-04 | 7.84E-06 | 9.81E-05 | 7.93E-04 | 2.25E-03 |
| 30 | 1 | 3.39E-03 | 4.47E-04 | 1.22E-03 | 1.50E-03 | 8.52E-04 | 4.33E-05 | 5.21E-04 | 3.52E-03 | 1.15E-02 |
| 31 | 1 | 1.68E-03 | 2.21E-04 | 6.03E-04 | 7.41E-04 | 3.58E-04 | 1.82E-05 | 1.71E-04 | 6.33E-04 | 4.43E-03 |

**World Logistics Center** **2035 Phase 1** No Mitigation
**Annual Nox** Emissions Rev 5
With EMFAC2014

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.12E-01 | 4.13E-03 |
| Light Logistics | Phase 1 | 2.09E-04 | 9.13E-06 |
| Utilities Service Station | Phase 1 | 1.53E-04 | 8.31E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.91E-04 | 4.52E-06 |
| Convenience Store | Phase 1 | 4.57E-04 | 7.23E-06 |
| Fire Station | Phase 1 | 3.52E-09 | 1.90E-06 |
| Total | | 1.13E-01 | 4.16E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 5.50E-02 | 2.06E-03 |
| Light Logistics | Phase 1 | 2.13E-04 | 8.54E-06 |
| Utilities Service Station | Phase 1 | 3.34E-04 | 1.64E-05 |
| Gas Station w/Convenience Store | Phase 1 | 8.13E-04 | 2.81E-05 |
| Convenience Store | Phase 1 | 1.28E-03 | 4.41E-05 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 5.77E-02 | 2.15E-03 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.13E-01 | 4.16E-03 | |
| | Idling Emissions (g/sec) | 5.77E-02 | 2.15E-03 | |
| | Total Vehicle Emissions (g/sec) | 1.71E-01 | 6.32E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 5.15E-01 | |
| | Forklifts (g/sec) | | 1.66E-02 | |
| | Total Other Onsite Sources (g/sec) | | 5.32E-01 | |
| | | | | Total |
| | Total All Sources (g//sec) | 1.71E-01 | 5.38E-01 | 7.09E-01 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.51E-07 |

**World Logistics Center** 2035 Phase 1 No Mitigation
**Diesel Vehicle Emissions** Annual Nox

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** Annual Nox Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.027 | 53 | 330 | 0.21 | 2.96E-01 | 6.51E-04 | 3.42E-06 | |
| | LDT1 | 15 | 0.152 | 3 | 330 | 0.21 | 7.98E-02 | 1.76E-04 | 9.24E-07 | |
| | LDT2 | 15 | 0.081 | 3 | 330 | 0.21 | 4.17E-02 | 9.18E-05 | 4.83E-07 | |
| | MDT | 15 | 0.032 | 5 | 330 | 0.21 | 3.16E-02 | 6.96E-05 | 3.66E-07 | |
| | LHDT1 | 15 | 0.348 | 274 | 330 | 0.21 | 1.95E+01 | 4.30E-02 | 2.26E-04 | |
| | LHDT2 | 15 | 0.184 | 93 | 330 | 0.21 | 3.52E+00 | 7.76E-03 | 4.08E-05 | |
| | MHDT | 15 | 4.419 | 1425 | 330 | 0.21 | 1.29E+03 | 2.84E+00 | 1.49E-02 | |
| | HHDT | 15 | 8.815 | 4628 | 330 | 0.21 | 8.36E+03 | 1.84E+01 | 9.68E-02 | |
| | | | | | | | | | | 1.12E-01 |
| Travel at Light Logistics | LDA | 15 | 0.027 | 0 | 175 | 0.11 | 6.66E-04 | 1.47E-06 | 7.71E-09 | |
| | LDT1 | 15 | 0.152 | 0 | 175 | 0.11 | 1.80E-04 | 3.96E-07 | 2.08E-09 | |
| | LDT2 | 15 | 0.081 | 0 | 175 | 0.11 | 9.39E-05 | 2.07E-07 | 1.09E-09 | |
| | MDT | 15 | 0.032 | 0 | 175 | 0.11 | 7.11E-05 | 1.57E-07 | 8.23E-10 | |
| | LHDT1 | 15 | 0.348 | 2 | 175 | 0.11 | 6.48E-02 | 1.43E-04 | 7.50E-07 | |
| | LHDT2 | 15 | 0.184 | 1 | 175 | 0.11 | 1.17E-02 | 2.57E-05 | 1.35E-07 | |
| | MHDT | 15 | 4.419 | 6 | 175 | 0.11 | 2.82E+00 | 6.21E-03 | 3.26E-05 | |
| | HHDT | 15 | 8.815 | 16 | 175 | 0.11 | 1.52E+01 | 3.34E-02 | 1.76E-04 | 2.09E-04 |
| Travel at Utility | LDA | 15 | 0.027 | 0 | 100 | 0.06 | 5.57E-04 | 1.23E-06 | 6.45E-09 | |
| | LDT1 | 15 | 0.152 | 0 | 100 | 0.06 | 1.51E-04 | 3.32E-07 | 1.74E-09 | |
| | LDT2 | 15 | 0.081 | 0 | 100 | 0.06 | 7.86E-05 | 1.73E-07 | 9.10E-10 | |
| | MDT | 15 | 0.032 | 0 | 100 | 0.06 | 5.96E-05 | 1.31E-07 | 6.89E-10 | |
| | LHDT1 | 15 | 0.348 | 6 | 100 | 0.06 | 1.23E-01 | 2.71E-04 | 1.42E-06 | |
| | LHDT2 | 15 | 0.184 | 2 | 100 | 0.06 | 2.21E-02 | 4.88E-05 | 2.56E-07 | |
| | MHDT | 15 | 4.419 | 5 | 100 | 0.06 | 1.32E+00 | 2.92E-03 | 1.53E-05 | |
| | HHDT | 15 | 8.815 | 21 | 100 | 0.06 | 1.18E+01 | 2.59E-02 | 1.36E-04 | 1.53E-04 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.027 | 0 | 50 | 0.03 | 1.62E-04 | 3.58E-07 | 1.88E-09 | |
| | LDT1 | 15 | 0.152 | 0 | 50 | 0.03 | 4.39E-05 | 9.66E-08 | 5.08E-10 | |
| | LDT2 | 15 | 0.081 | 0 | 50 | 0.03 | 2.29E-05 | 5.05E-08 | 2.65E-10 | |
| | MDT | 15 | 0.032 | 0 | 50 | 0.03 | 1.74E-05 | 3.82E-08 | 2.01E-10 | |
| | LHDT1 | 15 | 0.348 | 1 | 50 | 0.03 | 8.66E-03 | 1.91E-05 | 1.00E-07 | |
| | LHDT2 | 15 | 0.184 | 0 | 50 | 0.03 | 1.56E-03 | 3.44E-06 | 1.81E-08 | |
| | MHDT | 15 | 4.419 | 14 | 50 | 0.03 | 1.89E+00 | 4.16E-03 | 2.19E-05 | |
| | HHDT | 15 | 8.815 | 85 | 50 | 0.03 | 2.33E+01 | 5.13E-02 | 2.69E-04 | 2.91E-04 |
| Travel at Convenience Store | LDA | 15 | 0.027 | 0 | 50 | 0.03 | 2.69E-04 | 5.93E-07 | 3.12E-09 | |
| | LDT1 | 15 | 0.152 | 0 | 50 | 0.03 | 7.27E-05 | 1.60E-07 | 8.42E-10 | |
| | LDT2 | 15 | 0.081 | 0 | 50 | 0.03 | 3.80E-05 | 8.37E-08 | 4.40E-10 | |
| | MDT | 15 | 0.032 | 0 | 50 | 0.03 | 2.88E-05 | 6.34E-08 | 3.33E-10 | |
| | LHDT1 | 15 | 0.348 | 1 | 50 | 0.03 | 1.32E-02 | 2.91E-05 | 1.53E-07 | |
| | LHDT2 | 15 | 0.184 | 0 | 50 | 0.03 | 2.38E-03 | 5.25E-06 | 2.76E-08 | |
| | MHDT | 15 | 4.419 | 23 | 50 | 0.03 | 3.09E+00 | 6.81E-03 | 3.58E-05 | |
| | HHDT | 15 | 8.815 | 133 | 50 | 0.03 | 3.64E+01 | 8.02E-02 | 4.21E-04 | 4.57E-04 |
| Travel at Fire Station | LDA | 15 | 0.027 | 0 | 50 | 0.03 | 2.00E-04 | 4.41E-07 | 2.32E-09 | |
| | LDT1 | 15 | 0.152 | 0 | 50 | 0.03 | 5.41E-05 | 1.19E-07 | 6.26E-10 | |
| | LDT2 | 15 | 0.081 | 0 | 50 | 0.03 | 2.83E-05 | 6.23E-08 | 3.27E-10 | |
| | MDT | 15 | 0.032 | 0 | 50 | 0.03 | 2.14E-05 | 4.72E-08 | 2.48E-10 | |
| | LHDT1 | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.52E-09 |
| Total - All Buildings | LDA | | | 54 | | | 2.97E-01 | 6.55E-04 | 3.44E-06 | |
| | LDT1 | | | 3 | | | 8.03E-02 | 1.77E-04 | 9.30E-07 | |
| | LDT2 | | | 3 | | | 4.20E-02 | 9.24E-05 | 4.86E-07 | |
| | MDT | | | 5 | | | 3.18E-02 | 7.00E-05 | 3.68E-07 | |
| | LHDT1 | | | 283 | | | 1.97E+01 | 4.35E-02 | 2.29E-04 | |
| | LHDT2 | | | 96 | | | 3.56E+00 | 7.84E-03 | 4.12E-05 | |
| | MHDT | | | 1472 | | | 1.30E+03 | 2.86E+00 | 1.51E-02 | |
| | HHDT | | | 4883 | | | 8.45E+03 | 1.86E+01 | 9.78E-02 | |
| | Total | | | 6799 | | | 9.77E+03 | 2.15E+01 | 1.13E-01 | 1.13E-01 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.050 | 5 | 137 | 3.89E+02 | 8.56E-01 | 4.50E-03 | |
| | **LHDT2** | 29.500 | 5 | 47 | 1.14E+02 | 2.52E-01 | 1.32E-03 | |
| | **MHDT** | 18.000 | 5 | 713 | 1.07E+03 | 2.35E+00 | 1.24E-02 | |
| | **HHDT** | 16.500 | 5 | 2314 | 3.18E+03 | 7.01E+00 | 3.68E-02 | |
| | | | | 3210 | 4.75E+03 | 1.05E+01 | 5.50E-02 | 5.50E-02 |
| **Idle at Light Logistics** | **LHDT1** | 34.050 | 5 | 1 | 2.43E+00 | 5.35E-03 | 2.81E-05 | |
| | **LHDT2** | 29.500 | 5 | 0 | 7.16E-01 | 1.58E-03 | 8.29E-06 | |
| | **MHDT** | 18.000 | 5 | 3 | 4.40E+00 | 9.70E-03 | 5.10E-05 | |
| | **HHDT** | 16.500 | 5 | 8 | 1.09E+01 | 2.40E-02 | 1.26E-04 | |
| | | | | 12 | 1.84E+01 | 4.06E-02 | 2.13E-04 | 2.13E-04 |
| **Idle at Utility** | **LHDT1** | 34.050 | 5 | 3 | 8.06E+00 | 1.78E-02 | 9.33E-05 | |
| | **LHDT2** | 29.500 | 5 | 1 | 2.38E+00 | 5.23E-03 | 2.75E-05 | |
| | **MHDT** | 18.000 | 5 | 2 | 3.62E+00 | 7.97E-03 | 4.19E-05 | |
| | **HHDT** | 16.500 | 5 | 11 | 1.48E+01 | 3.25E-02 | 1.71E-04 | |
| | | | | 17 | 2.88E+01 | 6.35E-02 | 3.34E-04 | 3.34E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.050 | 5 | 0 | 1.14E+00 | 2.51E-03 | 1.32E-05 | |
| | **LHDT2** | 29.500 | 5 | 0 | 3.35E-01 | 7.38E-04 | 3.88E-06 | |
| | **MHDT** | 18.000 | 5 | 7 | 1.03E+01 | 2.27E-02 | 1.19E-04 | |
| | **HHDT** | 16.500 | 5 | 43 | 5.85E+01 | 1.29E-01 | 6.77E-04 | |
| | | | | 50 | 7.02E+01 | 1.55E-01 | 8.13E-04 | 8.13E-04 |
| **Idle at Convenience Store** | **LHDT1** | 34.050 | 5 | 1 | 1.74E+00 | 3.83E-03 | 2.01E-05 | |
| | **LHDT2** | 29.500 | 5 | 0 | 5.12E-01 | 1.13E-03 | 5.92E-06 | |
| | **MHDT** | 18.000 | 5 | 11 | 1.69E+01 | 3.72E-02 | 1.96E-04 | |
| | **HHDT** | 16.500 | 5 | 66 | 9.14E+01 | 2.01E-01 | 1.06E-03 | |
| | | | | 79 | 1.11E+02 | 2.43E-01 | 1.28E-03 | 1.28E-03 |
| **Idle at Firestation** | **LHDT1** | 34.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 4.98E+03 | 1.10E+01 | 5.77E-02 | 5.77E-02 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.031 | 17546 | 330 | 0.21 | 1.10E+02 | 2.43E-01 | 1.28E-03 | |
| | **LDT1** | 15 | 0.045 | 2058 | 330 | 0.21 | 1.91E+01 | 4.21E-02 | 2.21E-04 | |
| | **LDT2** | 15 | 0.040 | 6111 | 330 | 0.21 | 5.04E+01 | 1.11E-01 | 5.83E-04 | |
| | **MDT** | 15 | 0.063 | 4846 | 330 | 0.21 | 6.21E+01 | 1.37E-01 | 7.19E-04 | |
| | **LHDT1** | 15 | 0.111 | 886 | 330 | 0.21 | 2.02E+01 | 4.45E-02 | 2.34E-04 | |
| | **LHDT2** | 15 | 0.053 | 93 | 330 | 0.21 | 1.02E+00 | 2.25E-03 | 1.18E-05 | |
| | **MHDT** | 15 | 0.136 | 344 | 330 | 0.21 | 9.60E+00 | 2.11E-02 | 1.11E-04 | |
| | **HHDT** | 15 | 3.933 | 104 | 330 | 0.21 | 8.42E+01 | 1.86E-01 | 9.75E-04 | |
| | | | | | | | | | | 4.13E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.031 | 75 | 175 | 0.11 | 2.49E-01 | 5.47E-04 | 2.88E-06 | |
| | **LDT1** | 15 | 0.045 | 9 | 175 | 0.11 | 4.30E-02 | 9.47E-05 | 4.98E-07 | |
| | **LDT2** | 15 | 0.040 | 26 | 175 | 0.11 | 1.13E-01 | 2.50E-04 | 1.31E-06 | |
| | **MDT** | 15 | 0.063 | 21 | 175 | 0.11 | 1.40E-01 | 3.08E-04 | 1.62E-06 | |
| | **LHDT1** | 15 | 0.111 | 6 | 175 | 0.11 | 6.70E-02 | 1.48E-04 | 7.76E-07 | |
| | **LHDT2** | 15 | 0.053 | 1 | 175 | 0.11 | 3.39E-03 | 7.47E-06 | 3.93E-08 | |
| | **MHDT** | 15 | 0.136 | 1 | 175 | 0.11 | 2.10E-02 | 4.62E-05 | 2.43E-07 | |
| | **HHDT** | 15 | 3.933 | 0 | 175 | 0.11 | 1.53E-01 | 3.37E-04 | 1.77E-06 | 9.13E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.031 | 109 | 100 | 0.06 | 2.08E-01 | 4.58E-04 | 2.41E-06 | |
| | **LDT1** | 15 | 0.045 | 13 | 100 | 0.06 | 3.60E-02 | 7.93E-05 | 4.17E-07 | |
| | **LDT2** | 15 | 0.040 | 38 | 100 | 0.06 | 9.50E-02 | 2.09E-04 | 1.10E-06 | |
| | **MDT** | 15 | 0.063 | 30 | 100 | 0.06 | 1.17E-01 | 2.58E-04 | 1.36E-06 | |
| | **LHDT1** | 15 | 0.111 | 18 | 100 | 0.06 | 1.27E-01 | 2.80E-04 | 1.47E-06 | |
| | **LHDT2** | 15 | 0.053 | 2 | 100 | 0.06 | 6.43E-03 | 1.42E-05 | 7.44E-08 | |
| | **MHDT** | 15 | 0.136 | 1 | 100 | 0.06 | 9.84E-03 | 2.17E-05 | 1.14E-07 | |
| | **HHDT** | 15 | 3.933 | 0 | 100 | 0.06 | 1.18E-01 | 2.61E-04 | 1.37E-06 | 8.31E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.031 | 64 | 50 | 0.03 | 6.06E-02 | 1.34E-04 | 7.02E-07 | |
| | **LDT1** | 15 | 0.045 | 7 | 50 | 0.03 | 1.05E-02 | 2.31E-05 | 1.21E-07 | |
| | **LDT2** | 15 | 0.040 | 22 | 50 | 0.03 | 2.77E-02 | 6.10E-05 | 3.20E-07 | |
| | **MDT** | 15 | 0.063 | 18 | 50 | 0.03 | 3.41E-02 | 7.52E-05 | 3.95E-07 | |
| | **LHDT1** | 15 | 0.111 | 3 | 50 | 0.03 | 8.96E-03 | 1.97E-05 | 1.04E-07 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 4.54E-04 | 9.99E-07 | 5.25E-09 | |
| | **MHDT** | 15 | 0.136 | 3 | 50 | 0.03 | 1.40E-02 | 3.09E-05 | 1.63E-07 | |
| | **HHDT** | 15 | 3.933 | 2 | 50 | 0.03 | 2.34E-01 | 5.16E-04 | 2.71E-06 | 4.52E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.031 | 105 | 50 | 0.03 | 1.01E-01 | 2.21E-04 | 1.16E-06 | |
| | **LDT1** | 15 | 0.045 | 12 | 50 | 0.03 | 1.74E-02 | 3.83E-05 | 2.01E-07 | |
| | **LDT2** | 15 | 0.040 | 37 | 50 | 0.03 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **MDT** | 15 | 0.063 | 29 | 50 | 0.03 | 5.66E-02 | 1.25E-04 | 6.55E-07 | |
| | **LHDT1** | 15 | 0.111 | 4 | 50 | 0.03 | 1.37E-02 | 3.01E-05 | 1.58E-07 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 6.92E-04 | 1.53E-06 | 8.01E-09 | |
| | **MHDT** | 15 | 0.136 | 5 | 50 | 0.03 | 2.30E-02 | 5.06E-05 | 2.66E-07 | |
| | **HHDT** | 15 | 3.933 | 3 | 50 | 0.03 | 3.67E-01 | 8.07E-04 | 4.24E-06 | 7.23E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.031 | 78 | 50 | 0.03 | 7.48E-02 | 1.65E-04 | 8.66E-07 | |
| | **LDT1** | 15 | 0.045 | 9 | 50 | 0.03 | 1.29E-02 | 2.85E-05 | 1.50E-07 | |
| | **LDT2** | 15 | 0.040 | 27 | 50 | 0.03 | 3.42E-02 | 7.52E-05 | 3.95E-07 | |
| | **MDT** | 15 | 0.063 | 22 | 50 | 0.03 | 4.21E-02 | 9.28E-05 | 4.87E-07 | |
| | **LHDT1** | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-06 |
| **Total - All Buildings** | **LDA** | | | 17977 | | | 1.11E+02 | 2.45E-01 | 1.29E-03 | |
| | **LDT1** | | | 2108 | | | 1.92E+01 | 4.23E-02 | 2.22E-04 | |
| | **LDT2** | | | 6261 | | | 5.07E+01 | 1.12E-01 | 5.87E-04 | |
| | **MDT** | | | 4965 | | | 6.25E+01 | 1.38E-01 | 7.24E-04 | |
| | **LHDT1** | | | 917 | | | 2.04E+01 | 4.50E-02 | 2.36E-04 | |
| | **LHDT2** | | | 97 | | | 1.03E+00 | 2.28E-03 | 1.20E-05 | |
| | **MHDT** | | | 356 | | | 9.67E+00 | 2.13E-02 | 1.12E-04 | |
| | **HHDT** | | | 110 | | | 8.51E+01 | 1.87E-01 | 9.85E-04 | |
| | **Total** | | | 32791 | | | 3.60E+02 | 7.92E-01 | 4.16E-03 | 4.16E-03 |

**Non-Diesel Truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 443 | 3.54E+01 | 7.81E-02 | 4.10E-04 | |
| | **LHDT2** | 0.850 | 5 | 47 | 3.31E+00 | 7.29E-03 | 3.83E-05 | |
| | **MHDT** | 1.920 | 5 | 172 | 2.75E+01 | 6.07E-02 | 3.19E-04 | |
| | **HHDT** | 25.616 | 5 | 52 | 1.11E+02 | 2.46E-01 | 1.29E-03 | |
| | | | | 714 | 1.78E+02 | 3.92E-01 | 2.06E-03 | 2.06E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 3 | 2.22E-01 | 4.88E-04 | 2.57E-06 | |
| | **LHDT2** | 0.850 | 5 | 0 | 2.07E-02 | 4.56E-05 | 2.39E-07 | |
| | **MHDT** | 1.920 | 5 | 1 | 1.13E-01 | 2.50E-04 | 1.31E-06 | |
| | **HHDT** | 25.616 | 5 | 0 | 3.82E-01 | 8.41E-04 | 4.42E-06 | |
| | | | | 4 | 7.38E-01 | 1.62E-03 | 8.54E-06 | 8.54E-06 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 9 | 7.36E-01 | 1.62E-03 | 8.51E-06 | |
| | **LHDT2** | 0.850 | 5 | 1 | 6.86E-02 | 1.51E-04 | 7.94E-07 | |
| | **MHDT** | 1.920 | 5 | 1 | 9.32E-02 | 2.05E-04 | 1.08E-06 | |
| | **HHDT** | 25.616 | 5 | 0 | 5.17E-01 | 1.14E-03 | 5.99E-06 | |
| | | | | 11 | 1.41E+00 | 3.12E-03 | 1.64E-05 | 1.64E-05 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 1 | 1.04E-01 | 2.29E-04 | 1.20E-06 | |
| | **LHDT2** | 0.850 | 5 | 0 | 9.68E-03 | 2.13E-05 | 1.12E-07 | |
| | **MHDT** | 1.920 | 5 | 2 | 2.66E-01 | 5.86E-04 | 3.08E-06 | |
| | **HHDT** | 25.616 | 5 | 1 | 2.05E+00 | 4.51E-03 | 2.37E-05 | |
| | | | | 4 | 2.43E+00 | 5.35E-03 | 2.81E-05 | 2.81E-05 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 2 | 1.58E-01 | 3.49E-04 | 1.83E-06 | |
| | **LHDT2** | 0.850 | 5 | 0 | 1.48E-02 | 3.26E-05 | 1.71E-07 | |
| | **MHDT** | 1.920 | 5 | 3 | 4.35E-01 | 9.59E-04 | 5.04E-06 | |
| | **HHDT** | 25.616 | 5 | 2 | 3.20E+00 | 7.05E-03 | 3.71E-05 | |
| | | | | 6 | 3.81E+00 | 8.40E-03 | 4.41E-05 | 4.41E-05 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.850 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 1.86E+02 | 4.10E-01 | 2.15E-03 | 2.15E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual Nox emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual Nox**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 8.56E-02 | 3.16E-03 |
| Light Logistics | Phase 2 | 7.10E-04 | 3.10E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 8.63E-02 | 3.19E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 4.20E-02 | 1.57E-03 |
| Light Logistics | Phase 2 | 7.25E-04 | 2.90E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 4.28E-02 | 1.60E-03 |

**Total Onsite Mobile Emissions**

| | | **Diesel Vehicles** | **Non-Diesel Vehicles** | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 8.63E-02 | 3.19E-03 | |
| | Idling Emissions (g/sec) | 4.28E-02 | 1.60E-03 | |
| | Total Vehicle Emissions (g/sec) | 1.29E-01 | 4.79E-03 | |
| **Other Onsite Source Emissions** | Yard Trucks (LPG) (g/sec) | | 1.80E+00 | |
| | Forklifts (g/sec) | | 1.31E-02 | |
| | Total Other Onsite Sources (g/sec) | | 1.81E+00 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.29E-01 | 1.81E+00 | 1.94E+00 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 3.77E-07 |

**World Logistics Center** **2035** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.027 | 41 | 330 | 0.21 | 2.26E-01 | 4.98E-04 | 2.61E-06 | |
| | **LDT1** | 15 | 0.152 | 2 | 330 | 0.21 | 6.10E-02 | 1.34E-04 | 7.06E-07 | |
| | **LDT2** | 15 | 0.081 | 2 | 330 | 0.21 | 3.19E-02 | 7.02E-05 | 3.69E-07 | |
| | **MDT** | 15 | 0.032 | 4 | 330 | 0.21 | 2.41E-02 | 5.32E-05 | 2.79E-07 | |
| | **LHDT1** | 15 | 0.348 | 209 | 330 | 0.21 | 1.49E+01 | 3.29E-02 | 1.73E-04 | |
| | **LHDT2** | 15 | 0.184 | 71 | 330 | 0.21 | 2.69E+00 | 5.93E-03 | 3.11E-05 | |
| | **MHDT** | 15 | 4.419 | 1089 | 330 | 0.21 | 9.87E+02 | 2.17E+00 | 1.14E-02 | |
| | **HHDT** | 15 | 8.815 | 3536 | 330 | 0.21 | 6.39E+03 | 1.41E+01 | 7.40E-02 | |
| | | | | | | | | | | 8.56E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.027 | 1 | 175 | 0.11 | 2.26E-03 | 4.98E-06 | 2.62E-08 | |
| | **LDT1** | 15 | 0.152 | 0 | 175 | 0.11 | 6.11E-04 | 1.35E-06 | 7.07E-09 | |
| | **LDT2** | 15 | 0.081 | 0 | 175 | 0.11 | 3.19E-04 | 7.02E-07 | 3.69E-09 | |
| | **MDT** | 15 | 0.032 | 0 | 175 | 0.11 | 2.42E-04 | 5.32E-07 | 2.80E-09 | |
| | **LHDT1** | 15 | 0.348 | 6 | 175 | 0.11 | 2.20E-01 | 4.85E-04 | 2.55E-06 | |
| | **LHDT2** | 15 | 0.184 | 2 | 175 | 0.11 | 3.97E-02 | 8.74E-05 | 4.59E-07 | |
| | **MHDT** | 15 | 4.419 | 20 | 175 | 0.11 | 9.58E+00 | 2.11E-02 | 1.11E-04 | |
| | **HHDT** | 15 | 8.815 | 54 | 175 | 0.11 | 5.15E+01 | 1.14E-01 | 5.97E-04 | 7.10E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.027 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.152 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.081 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.032 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.348 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.184 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.419 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 8.815 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.027 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.081 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.032 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.027 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.081 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.032 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.027 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.152 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.081 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.032 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.348 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.184 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 4.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 8.815 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 2.28E-01 | 5.03E-04 | 2.64E-06 | |
| | **LDT1** | | | 2 | | | 6.16E-02 | 1.36E-04 | 7.13E-07 | |
| | **LDT2** | | | 2 | | | 3.22E-02 | 7.09E-05 | 3.73E-07 | |
| | **MDT** | | | 4 | | | 2.44E-02 | 5.37E-05 | 2.82E-07 | |
| | **LHDT1** | | | 215 | | | 1.51E+01 | 3.34E-02 | 1.75E-04 | |
| | **LHDT2** | | | 73 | | | 2.73E+00 | 6.01E-03 | 3.16E-05 | |
| | **MHDT** | | | 1109 | | | 9.96E+02 | 2.19E+00 | 1.15E-02 | |
| | **HHDT** | | | 3590 | | | 6.44E+03 | 1.42E+01 | 7.46E-02 | |
| | **Total** | | | 5037 | | | 7.46E+03 | 1.64E+01 | 8.63E-02 | 8.63E-02 |

**Diesel truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 34.050 | 5 | 105 | 2.97E+02 | 6.54E-01 | 3.44E-03 | |
| | **LHDT2** | 29.500 | 5 | 36 | 8.75E+01 | 1.93E-01 | 1.01E-03 | |
| | **MHDT** | 18.000 | 5 | 545 | 8.17E+02 | 1.80E+00 | 9.46E-03 | |
| | **HHDT** | 16.500 | 5 | 1768 | 2.43E+03 | 5.36E+00 | 2.81E-02 | |
| | | | | 2453 | 3.63E+03 | 8.00E+00 | 4.20E-02 | 4.20E-02 |
| **Idle at Light Logistics** | **LHDT1** | 34.050 | 5 | 3 | 8.25E+00 | 1.82E-02 | 9.55E-05 | |
| | **LHDT2** | 29.500 | 5 | 1 | 2.43E+00 | 5.36E-03 | 2.81E-05 | |
| | **MHDT** | 18.000 | 5 | 10 | 1.50E+01 | 3.29E-02 | 1.73E-04 | |
| | **HHDT** | 16.500 | 5 | 27 | 3.70E+01 | 8.15E-02 | 4.28E-04 | |
| | | | | 41 | 6.26E+01 | 1.38E-01 | 7.25E-04 | 7.25E-04 |
| **Idle at Utility** | **LHDT1** | 34.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 34.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 34.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 34.050 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 29.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 18.000 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 16.500 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 3.70E+03 | 8.14E+00 | 4.28E-02 | 4.28E-02 |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Non-Diesel Vehicle Emissions** **Annual Nox**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **Annual Nox Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.031 | 13408 | 330 | 0.21 | 8.43E+01 | 1.86E-01 | 9.76E-04 | |
| | **LDT1** | 15 | 0.045 | 1572 | 330 | 0.21 | 1.46E+01 | 3.21E-02 | 1.69E-04 | |
| | **LDT2** | 15 | 0.040 | 4670 | 330 | 0.21 | 3.85E+01 | 8.48E-02 | 4.46E-04 | |
| | **MDT** | 15 | 0.063 | 3703 | 330 | 0.21 | 4.75E+01 | 1.05E-01 | 5.50E-04 | |
| | **LHDT1** | 15 | 0.111 | 677 | 330 | 0.21 | 1.54E+01 | 3.40E-02 | 1.79E-04 | |
| | **LHDT2** | 15 | 0.053 | 71 | 330 | 0.21 | 7.81E-01 | 1.72E-03 | 9.04E-06 | |
| | **MHDT** | 15 | 0.136 | 263 | 330 | 0.21 | 7.34E+00 | 1.62E-02 | 8.49E-05 | |
| | **HHDT** | 15 | 3.933 | 80 | 330 | 0.21 | 6.44E+01 | 1.42E-01 | 7.45E-04 | |
| | | | | | | | | | | 3.16E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.031 | 253 | 175 | 0.11 | 8.44E-01 | 1.86E-03 | 9.77E-06 | |
| | **LDT1** | 15 | 0.045 | 30 | 175 | 0.11 | 1.46E-01 | 3.22E-04 | 1.69E-06 | |
| | **LDT2** | 15 | 0.040 | 88 | 175 | 0.11 | 3.85E-01 | 8.49E-04 | 4.46E-06 | |
| | **MDT** | 15 | 0.063 | 70 | 175 | 0.11 | 4.75E-01 | 1.05E-03 | 5.50E-06 | |
| | **LHDT1** | 15 | 0.111 | 19 | 175 | 0.11 | 2.28E-01 | 5.01E-04 | 2.63E-06 | |
| | **LHDT2** | 15 | 0.053 | 2 | 175 | 0.11 | 1.15E-02 | 2.54E-05 | 1.33E-07 | |
| | **MHDT** | 15 | 0.136 | 5 | 175 | 0.11 | 7.12E-02 | 1.57E-04 | 8.24E-07 | |
| | **HHDT** | 15 | 3.933 | 1 | 175 | 0.11 | 5.19E-01 | 1.14E-03 | 6.01E-06 | 3.10E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.031 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.045 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.040 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.063 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.111 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.053 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.136 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.933 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.031 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.031 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.031 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.045 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.040 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.111 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.053 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.136 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.933 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 8.52E+01 | 1.88E-01 | 9.86E-04 | |
| | **LDT1** | | | 1602 | | | 1.47E+01 | 3.25E-02 | 1.71E-04 | |
| | **LDT2** | | | 4758 | | | 3.89E+01 | 8.57E-02 | 4.50E-04 | |
| | **MDT** | | | 3773 | | | 4.80E+01 | 1.06E-01 | 5.55E-04 | |
| | **LHDT1** | | | 696 | | | 1.57E+01 | 3.45E-02 | 1.81E-04 | |
| | **LHDT2** | | | 73 | | | 7.93E-01 | 1.75E-03 | 9.18E-06 | |
| | **MHDT** | | | 268 | | | 7.41E+00 | 1.63E-02 | 8.57E-05 | |
| | **HHDT** | | | 81 | | | 6.49E+01 | 1.43E-01 | 7.51E-04 | |
| | **Total** | | | 24913 | | | 2.76E+02 | 6.07E-01 | 3.19E-03 | 3.19E-03 |

**Non-Diesel Truck Idling Emissions** **Annual Nox Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.960 | 5 | 339 | 2.71E+01 | 5.97E-02 | 3.14E-04 | |
| | **LHDT2** | 0.850 | 5 | 36 | 2.53E+00 | 5.57E-03 | 2.93E-05 | |
| | **MHDT** | 1.920 | 5 | 132 | 2.11E+01 | 4.64E-02 | 2.44E-04 | |
| | **HHDT** | 25.616 | 5 | 40 | 8.52E+01 | 1.88E-01 | 9.86E-04 | |
| | | | | 546 | 1.36E+02 | 2.99E-01 | 1.57E-03 | 1.57E-03 |
| **Idle at Light Logistics** | **LHDT1** | 0.960 | 5 | 9 | 7.53E-01 | 1.66E-03 | 8.71E-06 | |
| | **LHDT2** | 0.850 | 5 | 1 | 7.03E-02 | 1.55E-04 | 8.13E-07 | |
| | **MHDT** | 1.920 | 5 | 2 | 3.85E-01 | 8.49E-04 | 4.46E-06 | |
| | **HHDT** | 25.616 | 5 | 1 | 1.30E+00 | 2.85E-03 | 1.50E-05 | |
| | | | | 13 | 2.50E+00 | 5.52E-03 | 2.90E-05 | 2.90E-05 |
| **Idle at Utility** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.850 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.850 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.850 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.960 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.850 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 1.920 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 25.616 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 1.38E+02 | 3.05E-01 | 1.60E-03 | 1.60E-03 |

**World Logistics Center** **2035** **Annual Nox** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and 2 Emissions** **with EMFAC2014** Without Mitigation Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 1 | 5.92E-02 | 2.33E-03 | 6.15E-02 |
| 2 | 1.52E-01 | 6.25E-03 | 1.58E-01 |
| 3 | 1.85E-01 | 7.84E-03 | 1.93E-01 |
| 5 | 7.12E-03 | 1.76E-03 | 8.88E-03 |
| 6 | 7.53E-02 | 3.36E-03 | 7.87E-02 |
| 8 | 9.72E-03 | 2.85E-03 | 1.26E-02 |
| 11 | 1.72E-04 | 7.14E-05 | 2.44E-04 |
| 12 | 1.23E-04 | 3.86E-05 | 1.61E-04 |
| 14 | 3.73E-02 | 1.76E-03 | 3.91E-02 |
| 18 | 1.71E-02 | 1.15E-03 | 1.82E-02 |
| 19 | 7.59E-02 | 2.89E-03 | 7.88E-02 |
| 21 | 4.12E-02 | 2.95E-03 | 4.42E-02 |
| 24 | 7.35E-02 | 5.36E-03 | 7.89E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 2.97E-02 | 1.26E-03 | 3.09E-02 |
| 30 | 1.40E-01 | 6.72E-03 | 1.47E-01 |
| 31 | 2.12E-02 | 2.11E-03 | 2.33E-02 |
| | | | 9.73E-01 |
| | | | 3.38E+01 |

| ID | Arterial | From | To | | 2035 Project Related Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **Annual Nox** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0993 | 0.0292 | 0.0117 | 0.2934 | 0.1138 | 1.3563 | 2.7096 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.29E-07 | 4.40E-07 | 1.21E-07 | 8.51E-08 | 1.24E-04 | 1.59E-05 | 6.53E-03 | 5.25E-02 | 5.92E-02 |
| 2 | 1 | 1.92E-06 | 1.16E-06 | 3.19E-07 | 2.25E-07 | 4.94E-04 | 6.35E-05 | 1.73E-02 | 1.34E-01 | 1.52E-01 |
| 3 | 1 | 2.47E-06 | 1.49E-06 | 4.10E-07 | 2.88E-07 | 6.31E-04 | 8.12E-05 | 2.14E-02 | 1.63E-01 | 1.85E-01 |
| 5 | 1 | 9.27E-07 | 5.60E-07 | 1.54E-07 | 1.08E-07 | 1.48E-04 | 1.90E-05 | 5.67E-03 | 1.28E-03 | 7.12E-03 |
| 6 | 1 | 1.12E-06 | 6.75E-07 | 1.85E-07 | 1.30E-07 | 2.52E-04 | 3.24E-05 | 9.34E-03 | 6.57E-02 | 7.53E-02 |
| 8 | 1 | 1.51E-06 | 9.14E-07 | 2.51E-07 | 1.77E-07 | 2.52E-04 | 3.24E-05 | 9.43E-03 | 0.00E+00 | 9.72E-03 |
| 11 | 1 | 3.72E-08 | 2.25E-08 | 6.17E-09 | 4.34E-09 | 8.74E-06 | 1.12E-06 | 1.62E-04 | 0.00E+00 | 1.72E-04 |
| 12 | 1 | 2.01E-08 | 1.21E-08 | 3.33E-09 | 2.35E-09 | 4.23E-06 | 5.44E-07 | 1.18E-04 | 0.00E+00 | 1.23E-04 |
| 14 | 1 | 5.80E-07 | 3.50E-07 | 9.62E-08 | 6.77E-08 | 1.72E-04 | 2.22E-05 | 4.79E-03 | 3.23E-02 | 3.73E-02 |
| 18 | 1 | 4.65E-07 | 2.81E-07 | 7.72E-08 | 5.43E-08 | 1.09E-04 | 1.40E-05 | 3.24E-03 | 1.37E-02 | 1.71E-02 |
| 19 | 1 | 8.39E-07 | 5.07E-07 | 1.39E-07 | 9.80E-08 | 2.09E-04 | 2.69E-05 | 8.58E-03 | 6.71E-02 | 7.59E-02 |
| 21 | 1 | 1.25E-06 | 7.54E-07 | 2.07E-07 | 1.46E-07 | 2.25E-04 | 2.89E-05 | 8.88E-03 | 3.21E-02 | 4.12E-02 |
| 24 | 1 | 2.33E-06 | 1.41E-06 | 3.87E-07 | 2.72E-07 | 3.39E-04 | 4.36E-05 | 1.33E-02 | 5.99E-02 | 7.35E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.21E-07 | 2.54E-07 | 6.98E-08 | 4.91E-08 | 6.85E-05 | 8.81E-06 | 3.31E-03 | 2.63E-02 | 2.97E-02 |
| 30 | 1 | 2.42E-06 | 1.47E-06 | 4.02E-07 | 2.83E-07 | 3.92E-04 | 5.04E-05 | 1.79E-02 | 1.21E-01 | 1.40E-01 |
| 31 | 1 | 1.00E-06 | 6.06E-07 | 1.66E-07 | 1.17E-07 | 1.35E-04 | 1.74E-05 | 4.86E-03 | 1.62E-02 | 2.12E-02 |

**World Logistics Center** **2035** **Annual Nox** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29,766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 |
| 2 | 35,373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 |
| 3 | 13,861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 |
| 5 | 9,042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 |
| 6 | 12,931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 |
| 8 | 12,826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 |
| 14 | 4,556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 |
| 18 | 3,637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 |
| 19 | 4,963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 |
| 21 | 10,648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 |
| 24 | 12,547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7,915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 |
| 30 | 10,287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 |
| 31 | 12,045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0216 | 0.0310 | 0.0280 | 0.0441 | 0.0913 | 0.0437 | 0.1112 | 3.2164 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.96E-04 | 9.36E-05 | 2.55E-04 | 3.13E-04 | 1.25E-04 | 6.37E-06 | 1.21E-04 | 9.17E-04 | 2.33E-03 |
| 2 | 1 | 1.31E-03 | 2.47E-04 | 6.74E-04 | 8.28E-04 | 4.99E-04 | 2.54E-05 | 3.20E-04 | 2.34E-03 | 6.25E-03 |
| 3 | 1 | 1.68E-03 | 3.17E-04 | 8.64E-04 | 1.06E-03 | 6.39E-04 | 3.24E-05 | 3.97E-04 | 2.85E-03 | 7.84E-03 |
| 5 | 1 | 6.31E-04 | 1.19E-04 | 3.25E-04 | 3.99E-04 | 1.50E-04 | 7.61E-06 | 1.05E-04 | 2.24E-05 | 1.76E-03 |
| 6 | 1 | 7.60E-04 | 1.44E-04 | 3.91E-04 | 4.81E-04 | 2.55E-04 | 1.30E-05 | 1.73E-04 | 1.15E-03 | 3.36E-03 |
| 8 | 1 | 1.03E-03 | 1.94E-04 | 5.30E-04 | 6.51E-04 | 2.55E-04 | 1.30E-05 | 1.75E-04 | 0.00E+00 | 2.85E-03 |
| 11 | 1 | 2.53E-05 | 4.77E-06 | 1.30E-05 | 1.60E-05 | 8.84E-06 | 4.49E-07 | 3.01E-06 | 0.00E+00 | 7.14E-05 |
| 12 | 1 | 1.37E-05 | 2.58E-06 | 7.04E-06 | 8.65E-06 | 4.28E-06 | 2.18E-07 | 2.19E-06 | 0.00E+00 | 3.86E-05 |
| 14 | 1 | 3.94E-04 | 7.44E-05 | 2.03E-04 | 2.49E-04 | 1.74E-04 | 8.86E-06 | 8.89E-05 | 5.65E-04 | 1.76E-03 |
| 18 | 1 | 3.17E-04 | 5.98E-05 | 1.63E-04 | 2.00E-04 | 1.10E-04 | 5.59E-06 | 6.02E-05 | 2.39E-04 | 1.15E-03 |
| 19 | 1 | 5.71E-04 | 1.08E-04 | 2.94E-04 | 3.61E-04 | 2.12E-04 | 1.08E-05 | 1.59E-04 | 1.17E-03 | 2.89E-03 |
| 21 | 1 | 8.49E-04 | 1.60E-04 | 4.37E-04 | 5.37E-04 | 2.28E-04 | 1.16E-05 | 1.65E-04 | 5.60E-04 | 2.95E-03 |
| 24 | 1 | 1.59E-03 | 2.99E-04 | 8.16E-04 | 1.00E-03 | 3.43E-04 | 1.74E-05 | 2.47E-04 | 1.04E-03 | 5.36E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.86E-04 | 5.40E-05 | 1.47E-04 | 1.81E-04 | 6.93E-05 | 3.52E-06 | 6.15E-05 | 4.59E-04 | 1.26E-03 |
| 30 | 1 | 1.65E-03 | 3.11E-04 | 8.49E-04 | 1.04E-03 | 3.97E-04 | 2.01E-05 | 3.33E-04 | 2.12E-03 | 6.72E-03 |
| 31 | 1 | 6.82E-04 | 1.29E-04 | 3.51E-04 | 4.32E-04 | 1.37E-04 | 6.96E-06 | 9.03E-05 | 2.83E-04 | 2.11E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2031

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 7.38E-04 | 1.65E-03 |
| Light Logistics | Phase 1 | 1.49E-06 | 3.80E-06 |
| Utilities Service Station | Phase 1 | 1.18E-06 | 3.45E-06 |
| Gas Station w/Convenience Store | Phase 1 | 1.66E-06 | 9.61E-07 |
| Convenience Store | Phase 1 | 2.62E-06 | 1.58E-06 |
| Fire Station | Phase 1 | 2.10E-09 | 1.02E-06 |
| Total | | 7.45E-04 | 1.66E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.74E-05 | 2.39E-05 |
| Light Logistics | Phase 1 | 5.25E-07 | 1.32E-07 |
| Utilities Service Station | Phase 1 | 1.68E-06 | 3.68E-07 |
| Gas Station w/Convenience Store | Phase 1 | 3.69E-07 | 1.37E-07 |
| Convenience Store | Phase 1 | 5.69E-07 | 0.00E+00 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 9.06E-05 | 2.46E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 7.45E-04 | 1.66E-03 | |
| | Idling Emissions (g/sec) | 9.06E-05 | 2.46E-05 | |
| | Total Vehicle Emissions (g/sec) | 8.35E-04 | 1.68E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 9.30E-04 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Onsite Emissions (g/sec) | | 1.23E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 8.35E-04 | 2.92E-03 | 3.75E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 8.01E-10 |

**World Logistics Center** **2031** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.020 | 53 | 330 | 0.21 | 2.17E-01 | 4.78E-04 | 2.51E-06 | |
| | **LDT1** | 15 | 0.033 | 3 | 330 | 0.21 | 1.72E-02 | 3.80E-05 | 1.99E-07 | |
| | **LDT2** | 15 | 0.025 | 3 | 330 | 0.21 | 1.30E-02 | 2.85E-05 | 1.50E-07 | |
| | **MDT** | 15 | 0.020 | 5 | 330 | 0.21 | 2.04E-02 | 4.49E-05 | 2.36E-07 | |
| | **LHDT1** | 15 | 0.051 | 274 | 330 | 0.21 | 2.84E+00 | 6.25E-03 | 3.28E-05 | |
| | **LHDT2** | 15 | 0.055 | 93 | 330 | 0.21 | 1.04E+00 | 2.30E-03 | 1.21E-05 | |
| | **MHDT** | 15 | 0.063 | 1425 | 330 | 0.21 | 1.85E+01 | 4.08E-02 | 2.14E-04 | |
| | **HHDT** | 15 | 0.043 | 4628 | 330 | 0.21 | 4.11E+01 | 9.05E-02 | 4.75E-04 | |
| | | | | | | | | | | 7.38E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.020 | 0 | 175 | 0.11 | 4.89E-04 | 1.08E-06 | 5.66E-09 | |
| | **LDT1** | 15 | 0.033 | 0 | 175 | 0.11 | 3.88E-05 | 8.55E-08 | 4.49E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 175 | 0.11 | 2.92E-05 | 6.43E-08 | 3.38E-10 | |
| | **MDT** | 15 | 0.020 | 0 | 175 | 0.11 | 4.60E-05 | 1.01E-07 | 5.32E-10 | |
| | **LHDT1** | 15 | 0.051 | 2 | 175 | 0.11 | 9.41E-03 | 2.07E-05 | 1.09E-07 | |
| | **LHDT2** | 15 | 0.055 | 1 | 175 | 0.11 | 3.46E-03 | 7.62E-06 | 4.01E-08 | |
| | **MHDT** | 15 | 0.063 | 6 | 175 | 0.11 | 4.05E-02 | 8.91E-05 | 4.68E-07 | |
| | **HHDT** | 15 | 0.043 | 16 | 175 | 0.11 | 7.45E-02 | 1.64E-04 | 8.63E-07 | 1.49E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.020 | 0 | 100 | 0.06 | 4.09E-04 | 9.01E-07 | 4.74E-09 | |
| | **LDT1** | 15 | 0.033 | 0 | 100 | 0.06 | 3.25E-05 | 7.16E-08 | 3.76E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 100 | 0.06 | 2.44E-05 | 5.38E-08 | 2.83E-10 | |
| | **MDT** | 15 | 0.020 | 0 | 100 | 0.06 | 3.85E-05 | 8.47E-08 | 4.45E-10 | |
| | **LHDT1** | 15 | 0.051 | 6 | 100 | 0.06 | 1.78E-02 | 3.93E-05 | 2.06E-07 | |
| | **LHDT2** | 15 | 0.055 | 2 | 100 | 0.06 | 6.56E-03 | 1.45E-05 | 7.59E-08 | |
| | **MHDT** | 15 | 0.063 | 5 | 100 | 0.06 | 1.90E-02 | 4.18E-05 | 2.20E-07 | |
| | **HHDT** | 15 | 0.043 | 21 | 100 | 0.06 | 5.77E-02 | 1.27E-04 | 6.68E-07 | 1.18E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.020 | 0 | 50 | 0.03 | 1.19E-04 | 2.63E-07 | 1.38E-09 | |
| | **LDT1** | 15 | 0.033 | 0 | 50 | 0.03 | 9.47E-06 | 2.09E-08 | 1.10E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 7.12E-06 | 1.57E-08 | 8.24E-11 | |
| | **MDT** | 15 | 0.020 | 0 | 50 | 0.03 | 1.12E-05 | 2.47E-08 | 1.30E-10 | |
| | **LHDT1** | 15 | 0.051 | 1 | 50 | 0.03 | 1.26E-03 | 2.77E-06 | 1.46E-08 | |
| | **LHDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 4.63E-04 | 1.02E-06 | 5.36E-09 | |
| | **MHDT** | 15 | 0.063 | 14 | 50 | 0.03 | 2.71E-02 | 5.97E-05 | 3.14E-07 | |
| | **HHDT** | 15 | 0.043 | 85 | 50 | 0.03 | 1.14E-01 | 2.52E-04 | 1.32E-06 | 1.66E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.020 | 0 | 50 | 0.03 | 1.98E-04 | 4.35E-07 | 2.29E-09 | |
| | **LDT1** | 15 | 0.033 | 0 | 50 | 0.03 | 1.57E-05 | 3.46E-08 | 1.82E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 1.18E-05 | 2.60E-08 | 1.37E-10 | |
| | **MDT** | 15 | 0.020 | 0 | 50 | 0.03 | 1.86E-05 | 4.09E-08 | 2.15E-10 | |
| | **LHDT1** | 15 | 0.051 | 1 | 50 | 0.03 | 1.92E-03 | 4.23E-06 | 2.22E-08 | |
| | **LHDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 7.07E-04 | 1.56E-06 | 8.18E-09 | |
| | **MHDT** | 15 | 0.063 | 23 | 50 | 0.03 | 4.43E-02 | 9.77E-05 | 5.13E-07 | |
| | **HHDT** | 15 | 0.043 | 133 | 50 | 0.03 | 1.79E-01 | 3.94E-04 | 2.07E-06 | 2.62E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.020 | 0 | 50 | 0.03 | 1.47E-04 | 3.24E-07 | 1.70E-09 | |
| | **LDT1** | 15 | 0.033 | 0 | 50 | 0.03 | 1.17E-05 | 2.57E-08 | 1.35E-10 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 8.78E-06 | 1.93E-08 | 1.02E-10 | |
| | **MDT** | 15 | 0.020 | 0 | 50 | 0.03 | 1.38E-05 | 3.05E-08 | 1.60E-10 | |
| | **LHDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-09 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.18E-01 | 4.81E-04 | 2.53E-06 | |
| | **LDT1** | | | 3 | | | 1.73E-02 | 3.82E-05 | 2.01E-07 | |
| | **LDT2** | | | 3 | | | 1.30E-02 | 2.87E-05 | 1.51E-07 | |
| | **MDT** | | | 5 | | | 2.05E-02 | 4.52E-05 | 2.38E-07 | |
| | **LHDT1** | | | 283 | | | 2.87E+00 | 6.31E-03 | 3.32E-05 | |
| | **LHDT2** | | | 96 | | | 1.05E+00 | 2.32E-03 | 1.22E-05 | |
| | **MHDT** | | | 1472 | | | 1.87E+01 | 4.11E-02 | 2.16E-04 | |
| | **HHDT** | | | 4883 | | | 4.15E+01 | 9.14E-02 | 4.80E-04 | |
| | **Total** | | | 6799 | | | 6.43E+01 | 1.42E-01 | 7.45E-04 | 7.45E-04 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.437 | 5 | 137 | 4.99E+00 | 1.10E-02 | 5.77E-05 | |
| | **LHDT2** | 0.482 | 5 | 47 | 1.87E+00 | 4.12E-03 | 2.16E-05 | |
| | **MHDT** | 0.002 | 5 | 713 | 1.19E-01 | 2.62E-04 | 1.37E-06 | |
| | **HHDT** | 0.003 | 5 | 2314 | 5.78E-01 | 1.27E-03 | 6.70E-06 | |
| | | | | 3210 | 7.55E+00 | 1.66E-02 | 8.74E-05 | 8.74E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.437 | 5 | 1 | 3.12E-02 | 6.87E-05 | 3.61E-07 | |
| | **LHDT2** | 0.482 | 5 | 0 | 1.17E-02 | 2.58E-05 | 1.35E-07 | |
| | **MHDT** | 0.002 | 5 | 3 | 4.89E-04 | 1.08E-06 | 5.66E-09 | |
| | **HHDT** | 0.003 | 5 | 8 | 1.98E-03 | 4.36E-06 | 2.29E-08 | |
| | | | | 12 | 4.54E-02 | 9.99E-05 | 5.25E-07 | 5.25E-07 |
| **Idle at Utility** | **LHDT1** | 0.437 | 5 | 3 | 1.03E-01 | 2.28E-04 | 1.20E-06 | |
| | **LHDT2** | 0.482 | 5 | 1 | 3.88E-02 | 8.55E-05 | 4.49E-07 | |
| | **MHDT** | 0.002 | 5 | 2 | 4.02E-04 | 8.85E-07 | 4.65E-09 | |
| | **HHDT** | 0.003 | 5 | 11 | 2.68E-03 | 5.91E-06 | 3.11E-08 | |
| | | | | 17 | 1.45E-01 | 3.20E-04 | 1.68E-06 | 1.68E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.437 | 5 | 0 | 1.46E-02 | 3.22E-05 | 1.69E-07 | |
| | **LHDT2** | 0.482 | 5 | 0 | 5.48E-03 | 1.21E-05 | 6.34E-08 | |
| | **MHDT** | 0.002 | 5 | 7 | 1.15E-03 | 2.53E-06 | 1.33E-08 | |
| | **HHDT** | 0.003 | 5 | 43 | 1.06E-02 | 2.34E-05 | 1.23E-07 | |
| | | | | 50 | 3.18E-02 | 7.02E-05 | 3.69E-07 | 3.69E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.437 | 5 | 1 | 2.23E-02 | 4.91E-05 | 2.58E-07 | |
| | **LHDT2** | 0.482 | 5 | 0 | 8.36E-03 | 1.84E-05 | 9.67E-08 | |
| | **MHDT** | 0.002 | 5 | 11 | 1.88E-03 | 4.13E-06 | 2.17E-08 | |
| | **HHDT** | 0.003 | 5 | 66 | 1.66E-02 | 3.66E-05 | 1.92E-07 | |
| | | | | 79 | 4.91E-02 | 1.08E-04 | 5.69E-07 | 5.69E-07 |
| **Idle at Firestation** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 7.83E+00 | 1.72E-02 | 9.06E-05 | 9.06E-05 |

**World Logistics Center** **2031** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.021 | 17546 | 330 | 0.21 | 7.41E+01 | 1.63E-01 | 8.58E-04 | |
| | **LDT1** | 15 | 0.021 | 2058 | 330 | 0.21 | 8.86E+00 | 1.95E-02 | 1.03E-04 | |
| | **LDT2** | 15 | 0.021 | 6111 | 330 | 0.21 | 2.59E+01 | 5.70E-02 | 3.00E-04 | |
| | **MDT** | 15 | 0.021 | 4846 | 330 | 0.21 | 2.07E+01 | 4.56E-02 | 2.40E-04 | |
| | **LHDT1** | 15 | 0.038 | 886 | 330 | 0.21 | 6.88E+00 | 1.52E-02 | 7.97E-05 | |
| | **LHDT2** | 15 | 0.043 | 93 | 330 | 0.21 | 8.22E-01 | 1.81E-03 | 9.51E-06 | |
| | **MHDT** | 15 | 0.062 | 344 | 330 | 0.21 | 4.37E+00 | 9.63E-03 | 5.06E-05 | |
| | **HHDT** | 15 | 0.034 | 104 | 330 | 0.21 | 7.27E-01 | 1.60E-03 | 8.41E-06 | |
| | | | | | | | | | | 1.65E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.021 | 75 | 175 | 0.11 | 1.67E-01 | 3.68E-04 | 1.93E-06 | |
| | **LDT1** | 15 | 0.021 | 9 | 175 | 0.11 | 2.00E-02 | 4.39E-05 | 2.31E-07 | |
| | **LDT2** | 15 | 0.021 | 26 | 175 | 0.11 | 5.83E-02 | 1.28E-04 | 6.75E-07 | |
| | **MDT** | 15 | 0.021 | 21 | 175 | 0.11 | 4.67E-02 | 1.03E-04 | 5.40E-07 | |
| | **LHDT1** | 15 | 0.038 | 6 | 175 | 0.11 | 2.28E-02 | 5.03E-05 | 2.64E-07 | |
| | **LHDT2** | 15 | 0.043 | 1 | 175 | 0.11 | 2.73E-03 | 6.00E-06 | 3.15E-08 | |
| | **MHDT** | 15 | 0.062 | 1 | 175 | 0.11 | 9.55E-03 | 2.10E-05 | 1.10E-07 | |
| | **HHDT** | 15 | 0.034 | 0 | 175 | 0.11 | 1.32E-03 | 2.91E-06 | 1.53E-08 | 3.80E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.021 | 109 | 100 | 0.06 | 1.40E-01 | 3.08E-04 | 1.62E-06 | |
| | **LDT1** | 15 | 0.021 | 13 | 100 | 0.06 | 1.67E-02 | 3.68E-05 | 1.93E-07 | |
| | **LDT2** | 15 | 0.021 | 38 | 100 | 0.06 | 4.88E-02 | 1.07E-04 | 5.65E-07 | |
| | **MDT** | 15 | 0.021 | 30 | 100 | 0.06 | 3.91E-02 | 8.60E-05 | 4.52E-07 | |
| | **LHDT1** | 15 | 0.038 | 18 | 100 | 0.06 | 4.33E-02 | 9.54E-05 | 5.01E-07 | |
| | **LHDT2** | 15 | 0.043 | 2 | 100 | 0.06 | 5.17E-03 | 1.14E-05 | 5.98E-08 | |
| | **MHDT** | 15 | 0.062 | 1 | 100 | 0.06 | 4.48E-03 | 9.87E-06 | 5.19E-08 | |
| | **HHDT** | 15 | 0.034 | 0 | 100 | 0.06 | 1.02E-03 | 2.25E-06 | 1.18E-08 | 3.45E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.021 | 64 | 50 | 0.03 | 4.07E-02 | 8.97E-05 | 4.71E-07 | |
| | **LDT1** | 15 | 0.021 | 7 | 50 | 0.03 | 4.87E-03 | 1.07E-05 | 5.63E-08 | |
| | **LDT2** | 15 | 0.021 | 22 | 50 | 0.03 | 1.42E-02 | 3.13E-05 | 1.65E-07 | |
| | **MDT** | 15 | 0.021 | 18 | 50 | 0.03 | 1.14E-02 | 2.51E-05 | 1.32E-07 | |
| | **LHDT1** | 15 | 0.038 | 3 | 50 | 0.03 | 3.05E-03 | 6.73E-06 | 3.53E-08 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 3.64E-04 | 8.03E-07 | 4.22E-09 | |
| | **MHDT** | 15 | 0.062 | 3 | 50 | 0.03 | 6.39E-03 | 1.41E-05 | 7.40E-08 | |
| | **HHDT** | 15 | 0.034 | 2 | 50 | 0.03 | 2.02E-03 | 4.46E-06 | 2.34E-08 | 9.61E-07 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.021 | 105 | 50 | 0.03 | 6.75E-02 | 1.49E-04 | 7.81E-07 | |
| | **LDT1** | 15 | 0.021 | 12 | 50 | 0.03 | 8.07E-03 | 1.78E-05 | 9.34E-08 | |
| | **LDT2** | 15 | 0.021 | 37 | 50 | 0.03 | 2.36E-02 | 5.19E-05 | 2.73E-07 | |
| | **MDT** | 15 | 0.021 | 29 | 50 | 0.03 | 1.89E-02 | 4.16E-05 | 2.18E-07 | |
| | **LHDT1** | 15 | 0.038 | 4 | 50 | 0.03 | 4.66E-03 | 1.03E-05 | 5.40E-08 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 5.56E-04 | 1.23E-06 | 6.44E-09 | |
| | **MHDT** | 15 | 0.062 | 5 | 50 | 0.03 | 1.05E-02 | 2.31E-05 | 1.21E-07 | |
| | **HHDT** | 15 | 0.034 | 3 | 50 | 0.03 | 3.16E-03 | 6.97E-06 | 3.66E-08 | 1.58E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.021 | 78 | 50 | 0.03 | 5.02E-02 | 1.11E-04 | 5.81E-07 | |
| | **LDT1** | 15 | 0.021 | 9 | 50 | 0.03 | 6.00E-03 | 1.32E-05 | 6.95E-08 | |
| | **LDT2** | 15 | 0.021 | 27 | 50 | 0.03 | 1.75E-02 | 3.86E-05 | 2.03E-07 | |
| | **MDT** | 15 | 0.021 | 22 | 50 | 0.03 | 1.40E-02 | 3.09E-05 | 1.63E-07 | |
| | **LHDT1** | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.02E-06 |
| **Total - All Buildings** | **LDA** | | | 17977 | | | 7.46E+01 | 1.64E-01 | 8.63E-04 | |
| | **LDT1** | | | 2108 | | | 8.91E+00 | 1.96E-02 | 1.03E-04 | |
| | **LDT2** | | | 6261 | | | 2.60E+01 | 5.74E-02 | 3.01E-04 | |
| | **MDT** | | | 4965 | | | 2.08E+01 | 4.59E-02 | 2.41E-04 | |
| | **LHDT1** | | | 917 | | | 6.96E+00 | 1.53E-02 | 8.05E-05 | |
| | **LHDT2** | | | 97 | | | 8.30E-01 | 1.83E-03 | 9.61E-06 | |
| | **MHDT** | | | 356 | | | 4.40E+00 | 9.70E-03 | 5.09E-05 | |
| | **HHDT** | | | 110 | | | 7.35E-01 | 1.62E-03 | 8.50E-06 | |
| | **Total** | | | 32791 | | | 1.43E+02 | 3.16E-01 | 1.66E-03 | 1.66E-03 |

**Non-Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.035 | 5 | 443 | 1.28E+00 | 2.82E-03 | 1.48E-05 | |
| | **LHDT2** | 0.035 | 5 | 47 | 1.35E-01 | 2.98E-04 | 1.57E-06 | |
| | **MHDT** | 0.035 | 5 | 172 | 5.01E-01 | 1.10E-03 | 5.80E-06 | |
| | **HHDT** | 0.035 | 5 | 52 | 1.54E-01 | 3.38E-04 | 1.78E-06 | |
| | | | | 714 | 2.07E+00 | 4.56E-03 | 2.39E-05 | 2.39E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.035 | 5 | 3 | 8.00E-03 | 1.76E-05 | 9.26E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 8.47E-04 | 1.87E-06 | 9.80E-09 | |
| | **MHDT** | 0.035 | 5 | 1 | 2.06E-03 | 4.54E-06 | 2.39E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 5.26E-04 | 1.16E-06 | 6.09E-09 | |
| | | | | 4 | 1.14E-02 | 2.52E-05 | 1.32E-07 | 1.32E-07 |
| **Idle at Utility** | **LHDT1** | 0.035 | 5 | 9 | 2.65E-02 | 5.85E-05 | 3.07E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.81E-03 | 6.19E-06 | 3.25E-08 | |
| | **MHDT** | 0.035 | 5 | 1 | 1.69E-03 | 3.73E-06 | 1.96E-08 | |
| | **HHDT** | 0.035 | 5 | 0 | 7.13E-04 | 1.57E-06 | 8.25E-09 | |
| | | | | 11 | 3.18E-02 | 7.00E-05 | 3.68E-07 | 3.68E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.035 | 5 | 1 | 3.75E-03 | 8.25E-06 | 4.33E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 3.96E-04 | 8.73E-07 | 4.59E-09 | |
| | **MHDT** | 0.035 | 5 | 2 | 4.83E-03 | 1.06E-05 | 5.59E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 2.82E-03 | 6.22E-06 | 3.27E-08 | |
| | | | | 4 | 1.18E-02 | 2.60E-05 | 1.37E-07 | 1.37E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.035 | 5 | 2 | 5.72E-03 | 1.26E-05 | 6.62E-08 | |
| | **LHDT2** | 0.035 | 5 | 0 | 6.05E-04 | 1.33E-06 | 7.01E-09 | |
| | **MHDT** | 0.035 | 5 | 3 | 7.91E-03 | 1.74E-05 | 9.16E-08 | |
| | **HHDT** | 0.035 | 5 | 2 | 4.41E-03 | 9.72E-06 | 5.11E-08 | |
| | | | | 6 | 1.86E-02 | 4.11E-05 | 2.16E-07 | 2.16E-07 |
| **Idle at Firestation** | **LHDT1** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.14E+00 | 4.72E-03 | 2.48E-05 | 2.48E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM2.5 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM2.5**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 5.64E-04 | 1.26E-03 |
| Light Logistics | Phase 2 | 5.05E-06 | 1.29E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 5.69E-04 | 1.27E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 6.68E-05 | 1.83E-05 |
| Light Logistics | Phase 2 | 1.78E-06 | 4.50E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 6.86E-05 | 1.88E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 5.69E-04 | 1.27E-03 | |
| | Idling Emissions (g/sec) | 6.86E-05 | 1.88E-05 | |
| | Total Vehicle Emissions (g/sec) | 6.37E-04 | 1.29E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.09E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.40E-04 | |
| | Total Other Onsite Sources (g/sec) | | 6.49E-04 | |
| | | | | Total |
| | Total All Sources (g/sec) | 6.37E-04 | 1.94E-03 | 2.58E-03 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 5.00E-10 |

**World Logistics Center** **2035** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.020 | 41 | 330 | 0.21 | 1.66E-01 | 3.65E-04 | 1.92E-06 | |
| | **LDT1** | 15 | 0.033 | 2 | 330 | 0.21 | 1.32E-02 | 2.90E-05 | 1.52E-07 | |
| | **LDT2** | 15 | 0.025 | 2 | 330 | 0.21 | 9.90E-03 | 2.18E-05 | 1.15E-07 | |
| | **MDT** | 15 | 0.020 | 4 | 330 | 0.21 | 1.56E-02 | 3.43E-05 | 1.80E-07 | |
| | **LHDT1** | 15 | 0.051 | 209 | 330 | 0.21 | 2.17E+00 | 4.77E-03 | 2.51E-05 | |
| | **LHDT2** | 15 | 0.055 | 71 | 330 | 0.21 | 7.97E-01 | 1.76E-03 | 9.23E-06 | |
| | **MHDT** | 15 | 0.063 | 1089 | 330 | 0.21 | 1.42E+01 | 3.12E-02 | 1.64E-04 | |
| | **HHDT** | 15 | 0.043 | 3536 | 330 | 0.21 | 3.14E+01 | 6.91E-02 | 3.63E-04 | |
| | | | | | | | | | | 5.64E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.020 | 1 | 175 | 0.11 | 1.66E-03 | 3.66E-06 | 1.92E-08 | |
| | **LDT1** | 15 | 0.033 | 0 | 175 | 0.11 | 1.32E-04 | 2.90E-07 | 1.53E-09 | |
| | **LDT2** | 15 | 0.025 | 0 | 175 | 0.11 | 9.91E-05 | 2.18E-07 | 1.15E-09 | |
| | **MDT** | 15 | 0.020 | 0 | 175 | 0.11 | 1.56E-04 | 3.44E-07 | 1.81E-09 | |
| | **LHDT1** | 15 | 0.051 | 6 | 175 | 0.11 | 3.19E-02 | 7.03E-05 | 3.70E-07 | |
| | **LHDT2** | 15 | 0.055 | 2 | 175 | 0.11 | 1.18E-02 | 2.59E-05 | 1.36E-07 | |
| | **MHDT** | 15 | 0.063 | 20 | 175 | 0.11 | 1.37E-01 | 3.03E-04 | 1.59E-06 | |
| | **HHDT** | 15 | 0.043 | 54 | 175 | 0.11 | 2.53E-01 | 5.58E-04 | 2.93E-06 | 5.05E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.020 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.033 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.025 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.020 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.051 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.055 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.063 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.043 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.020 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.033 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.020 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.020 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.033 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.020 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.020 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.033 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.025 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.020 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.051 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.055 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.063 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 1.68E-01 | 3.69E-04 | 1.94E-06 | |
| | **LDT1** | | | 2 | | | 1.33E-02 | 2.93E-05 | 1.54E-07 | |
| | **LDT2** | | | 2 | | | 1.00E-02 | 2.20E-05 | 1.16E-07 | |
| | **MDT** | | | 4 | | | 1.57E-02 | 3.47E-05 | 1.82E-07 | |
| | **LHDT1** | | | 215 | | | 2.20E+00 | 4.84E-03 | 2.54E-05 | |
| | **LHDT2** | | | 73 | | | 8.09E-01 | 1.78E-03 | 9.37E-06 | |
| | **MHDT** | | | 1109 | | | 1.43E+01 | 3.15E-02 | 1.65E-04 | |
| | **HHDT** | | | 3590 | | | 3.16E+01 | 6.97E-02 | 3.66E-04 | |
| | **Total** | | | 5037 | | | 4.91E+01 | 1.08E-01 | 5.69E-04 | 5.69E-04 |

**Diesel truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.437 | 5 | 105 | 3.81E+00 | 8.39E-03 | 4.41E-05 | |
| | **LHDT2** | 0.482 | 5 | 36 | 1.43E+00 | 3.15E-03 | 1.65E-05 | |
| | **MHDT** | 0.002 | 5 | 545 | 9.08E-02 | 2.00E-04 | 1.05E-06 | |
| | **HHDT** | 0.003 | 5 | 1768 | 4.42E-01 | 9.74E-04 | 5.12E-06 | |
| | | | | 2453 | 5.77E+00 | 1.27E-02 | 6.68E-05 | 6.68E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.437 | 5 | 3 | 1.06E-01 | 2.33E-04 | 1.23E-06 | |
| | **LHDT2** | 0.482 | 5 | 1 | 3.97E-02 | 8.75E-05 | 4.60E-07 | |
| | **MHDT** | 0.002 | 5 | 10 | 1.66E-03 | 3.66E-06 | 1.92E-08 | |
| | **HHDT** | 0.003 | 5 | 27 | 6.72E-03 | 1.48E-05 | 7.78E-08 | |
| | | | | 41 | 1.54E-01 | 3.39E-04 | 1.78E-06 | 1.78E-06 |
| **Idle at Utility** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.437 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.482 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 5.93E+00 | 1.31E-02 | 6.86E-05 | 6.86E-05 |

**World Logistics Center** **2035** **Phase 2** No Mitigation
**Non-Diesel Vehicle Emissions** **PM2.5**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM2.5 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.021 | 13408 | 330 | 0.21 | 5.66E+01 | 1.25E-01 | 6.55E-04 | |
| | **LDT1** | 15 | 0.021 | 1572 | 330 | 0.21 | 6.77E+00 | 1.49E-02 | 7.83E-05 | |
| | **LDT2** | 15 | 0.021 | 4670 | 330 | 0.21 | 1.98E+01 | 4.36E-02 | 2.29E-04 | |
| | **MDT** | 15 | 0.021 | 3703 | 330 | 0.21 | 1.58E+01 | 3.49E-02 | 1.83E-04 | |
| | **LHDT1** | 15 | 0.038 | 677 | 330 | 0.21 | 5.26E+00 | 1.16E-02 | 6.09E-05 | |
| | **LHDT2** | 15 | 0.043 | 71 | 330 | 0.21 | 6.28E-01 | 1.38E-03 | 7.27E-06 | |
| | **MHDT** | 15 | 0.062 | 263 | 330 | 0.21 | 3.34E+00 | 7.36E-03 | 3.87E-05 | |
| | **HHDT** | 15 | 0.034 | 80 | 330 | 0.21 | 5.56E-01 | 1.22E-03 | 6.43E-06 | |
| | | | | | | | | | | 1.26E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.021 | 253 | 175 | 0.11 | 5.67E-01 | 1.25E-03 | 6.56E-06 | |
| | **LDT1** | 15 | 0.021 | 30 | 175 | 0.11 | 6.77E-02 | 1.49E-04 | 7.84E-07 | |
| | **LDT2** | 15 | 0.021 | 88 | 175 | 0.11 | 1.98E-01 | 4.36E-04 | 2.29E-06 | |
| | **MDT** | 15 | 0.021 | 70 | 175 | 0.11 | 1.58E-01 | 3.49E-04 | 1.83E-06 | |
| | **LHDT1** | 15 | 0.038 | 19 | 175 | 0.11 | 7.75E-02 | 1.71E-04 | 8.98E-07 | |
| | **LHDT2** | 15 | 0.043 | 2 | 175 | 0.11 | 9.25E-03 | 2.04E-05 | 1.07E-07 | |
| | **MHDT** | 15 | 0.062 | 5 | 175 | 0.11 | 3.24E-02 | 7.14E-05 | 3.75E-07 | |
| | **HHDT** | 15 | 0.034 | 1 | 175 | 0.11 | 4.48E-03 | 9.87E-06 | 5.19E-08 | 1.29E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.021 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.021 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.021 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.021 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.038 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.043 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.062 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.034 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.021 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.038 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.043 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.062 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.034 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 5.72E+01 | 1.26E-01 | 6.62E-04 | |
| | **LDT1** | | | 1602 | | | 6.84E+00 | 1.51E-02 | 7.91E-05 | |
| | **LDT2** | | | 4758 | | | 2.00E+01 | 4.40E-02 | 2.31E-04 | |
| | **MDT** | | | 3773 | | | 1.60E+01 | 3.52E-02 | 1.85E-04 | |
| | **LHDT1** | | | 696 | | | 5.34E+00 | 1.18E-02 | 6.18E-05 | |
| | **LHDT2** | | | 73 | | | 6.37E-01 | 1.40E-03 | 7.37E-06 | |
| | **MHDT** | | | 268 | | | 3.37E+00 | 7.43E-03 | 3.90E-05 | |
| | **HHDT** | | | 81 | | | 5.60E-01 | 1.23E-03 | 6.48E-06 | |
| | **Total** | | | 24913 | | | 1.10E+02 | 2.42E-01 | 1.27E-03 | 1.27E-03 |

**Non-Diesel Truck Idling Emissions** **PM2.5 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.035 | 5 | 339 | 9.78E-01 | 2.15E-03 | 1.13E-05 | |
| | **LHDT2** | 0.035 | 5 | 36 | 1.03E-01 | 2.28E-04 | 1.20E-06 | |
| | **MHDT** | 0.035 | 5 | 132 | 3.83E-01 | 8.43E-04 | 4.43E-06 | |
| | **HHDT** | 0.035 | 5 | 40 | 1.17E-01 | 2.59E-04 | 1.36E-06 | |
| | | | | 546 | 1.58E+00 | 3.48E-03 | 1.83E-05 | 1.83E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.035 | 5 | 9 | 2.72E-02 | 5.99E-05 | 3.15E-07 | |
| | **LHDT2** | 0.035 | 5 | 1 | 2.88E-03 | 6.34E-06 | 3.33E-08 | |
| | **MHDT** | 0.035 | 5 | 2 | 7.00E-03 | 1.54E-05 | 8.11E-08 | |
| | **HHDT** | 0.035 | 5 | 1 | 1.79E-03 | 3.93E-06 | 2.07E-08 | |
| | | | | 13 | 3.88E-02 | 8.55E-05 | 4.50E-07 | 4.50E-07 |
| **Idle at Utility** | **LHDT1** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.035 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 1.62E+00 | 3.57E-03 | 1.88E-05 | 1.88E-05 |

**World Logistics Center** **2035** **PM2.5** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and 2 Emissions** **with EMFAC2014** Without Mitigation Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|---|
| 1 | 1.14E-03 | 9.29E-04 | 7.62E-03 | 9.69E-03 |
| 2 | 2.97E-03 | 2.53E-03 | 1.98E-02 | 2.53E-02 |
| 3 | 3.64E-03 | 3.23E-03 | 2.44E-02 | 3.12E-02 |
| 5 | 3.15E-04 | 1.14E-03 | 2.38E-03 | 3.83E-03 |
| 6 | 1.50E-03 | 1.44E-03 | 1.01E-02 | 1.30E-02 |
| 8 | 4.93E-04 | 1.87E-03 | 3.69E-03 | 6.05E-03 |
| 11 | 9.45E-06 | 4.63E-05 | 8.47E-05 | 1.40E-04 |
| 12 | 6.40E-06 | 2.51E-05 | 4.91E-05 | 8.06E-05 |
| 14 | 7.56E-04 | 7.67E-04 | 5.08E-03 | 6.61E-03 |
| 18 | 3.85E-04 | 5.94E-04 | 2.67E-03 | 3.65E-03 |
| 19 | 1.47E-03 | 1.11E-03 | 9.69E-03 | 1.23E-02 |
| 21 | 9.54E-04 | 1.56E-03 | 6.60E-03 | 9.12E-03 |
| 24 | 1.61E-03 | 2.85E-03 | 1.18E-02 | 1.63E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 5.73E-04 | 5.29E-04 | 3.90E-03 | 5.01E-03 |
| 30 | 2.78E-03 | 3.03E-03 | 1.92E-02 | 2.50E-02 |
| 31 | 5.05E-04 | 1.21E-03 | 3.95E-03 | 5.66E-03 |
| | | | Total | 1.73E-01 |

| ID | Arterial | From | To | | 2035 Project Related Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **PM2.5** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0191 | 0.0248 | 0.0222 | 0.0194 | 0.0463 | 0.0509 | 0.0626 | 0.0417 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.34E-06 | 1.10E-07 | 9.19E-08 | 1.41E-07 | 1.96E-05 | 7.13E-06 | 3.01E-04 | 8.08E-04 | 1.14E-03 |
| 2 | 1 | 3.54E-06 | 2.90E-07 | 2.43E-07 | 3.71E-07 | 7.79E-05 | 2.84E-05 | 7.96E-04 | 2.06E-03 | 2.97E-03 |
| 3 | 1 | 4.54E-06 | 3.72E-07 | 3.11E-07 | 4.76E-07 | 9.95E-05 | 3.63E-05 | 9.86E-04 | 2.51E-03 | 3.64E-03 |
| 5 | 1 | 1.70E-06 | 1.40E-07 | 1.17E-07 | 1.79E-07 | 2.33E-05 | 8.52E-06 | 2.61E-04 | 1.97E-05 | 3.15E-04 |
| 6 | 1 | 2.05E-06 | 1.69E-07 | 1.41E-07 | 2.16E-07 | 3.98E-05 | 1.45E-05 | 4.31E-04 | 1.01E-03 | 1.50E-03 |
| 8 | 1 | 2.78E-06 | 2.28E-07 | 1.91E-07 | 2.92E-07 | 3.98E-05 | 1.45E-05 | 4.35E-04 | 0.00E+00 | 4.93E-04 |
| 11 | 1 | 6.83E-08 | 5.61E-09 | 4.69E-09 | 7.17E-09 | 1.38E-06 | 5.03E-07 | 7.49E-06 | 0.00E+00 | 9.45E-06 |
| 12 | 1 | 3.69E-08 | 3.03E-09 | 2.53E-09 | 3.88E-09 | 6.67E-07 | 2.43E-07 | 5.44E-06 | 0.00E+00 | 6.40E-06 |
| 14 | 1 | 1.06E-06 | 8.75E-08 | 7.31E-08 | 1.12E-07 | 2.72E-05 | 9.92E-06 | 2.21E-04 | 4.97E-04 | 7.56E-04 |
| 18 | 1 | 8.55E-07 | 7.02E-08 | 5.87E-08 | 8.98E-08 | 1.72E-05 | 6.26E-06 | 1.50E-04 | 2.11E-04 | 3.85E-04 |
| 19 | 1 | 1.54E-06 | 1.27E-07 | 1.06E-07 | 1.62E-07 | 3.30E-05 | 1.20E-05 | 3.95E-04 | 1.03E-03 | 1.47E-03 |
| 21 | 1 | 2.29E-06 | 1.88E-07 | 1.57E-07 | 2.41E-07 | 3.55E-05 | 1.29E-05 | 4.10E-04 | 4.94E-04 | 9.54E-04 |
| 24 | 1 | 4.28E-06 | 3.52E-07 | 2.94E-07 | 4.50E-07 | 5.35E-05 | 1.95E-05 | 6.13E-04 | 9.20E-04 | 1.61E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 7.73E-07 | 6.35E-08 | 5.30E-08 | 8.12E-08 | 1.08E-05 | 3.94E-06 | 1.53E-04 | 4.04E-04 | 5.73E-04 |
| 30 | 1 | 4.45E-06 | 3.66E-07 | 3.06E-07 | 4.68E-07 | 6.18E-05 | 2.26E-05 | 8.26E-04 | 1.87E-03 | 2.78E-03 |
| 31 | 1 | 1.84E-06 | 1.51E-07 | 1.26E-07 | 1.94E-07 | 2.14E-05 | 7.79E-06 | 2.24E-04 | 2.49E-04 | 5.05E-04 |

**World Logistics Center** **2035** **PM2.5** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29,766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 |
| 2 | 35,373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 |
| 3 | 13,861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 |
| 5 | 9,042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 |
| 6 | 12,931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 |
| 8 | 12,826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 |
| 14 | 4,556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 |
| 18 | 3,637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 |
| 19 | 4,963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 |
| 21 | 10,648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 |
| 24 | 12,547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7,915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 |
| 30 | 10,287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 |
| 31 | 12,045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0189 | 0.0190 | 0.0189 | 0.0189 | 0.0365 | 0.0415 | 0.0605 | 0.0325 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.33E-04 | 5.74E-05 | 1.72E-04 | 1.35E-04 | 5.02E-05 | 6.06E-06 | 6.60E-05 | 9.28E-06 | 9.29E-04 |
| 2 | 1 | 1.14E-03 | 1.52E-04 | 4.55E-04 | 3.56E-04 | 2.00E-04 | 2.41E-05 | 1.74E-04 | 2.37E-05 | 2.53E-03 |
| 3 | 1 | 1.47E-03 | 1.94E-04 | 5.84E-04 | 4.57E-04 | 2.55E-04 | 3.08E-05 | 2.16E-04 | 2.88E-05 | 3.23E-03 |
| 5 | 1 | 5.51E-04 | 7.30E-05 | 2.19E-04 | 1.72E-04 | 5.99E-05 | 7.23E-06 | 5.73E-05 | 2.26E-07 | 1.14E-03 |
| 6 | 1 | 6.64E-04 | 8.80E-05 | 2.64E-04 | 2.07E-04 | 1.02E-04 | 1.23E-05 | 9.44E-05 | 1.16E-05 | 1.44E-03 |
| 8 | 1 | 8.99E-04 | 1.19E-04 | 3.58E-04 | 2.80E-04 | 1.02E-04 | 1.23E-05 | 9.53E-05 | 0.00E+00 | 1.87E-03 |
| 11 | 1 | 2.21E-05 | 2.93E-06 | 8.79E-06 | 6.87E-06 | 3.54E-06 | 4.27E-07 | 1.64E-06 | 0.00E+00 | 4.63E-05 |
| 12 | 1 | 1.19E-05 | 1.58E-06 | 4.75E-06 | 3.72E-06 | 1.71E-06 | 2.07E-07 | 1.19E-06 | 0.00E+00 | 2.51E-05 |
| 14 | 1 | 3.45E-04 | 4.56E-05 | 1.37E-04 | 1.07E-04 | 6.98E-05 | 8.42E-06 | 4.83E-05 | 5.71E-06 | 7.67E-04 |
| 18 | 1 | 2.77E-04 | 3.66E-05 | 1.10E-04 | 8.61E-05 | 4.40E-05 | 5.31E-06 | 3.28E-05 | 2.42E-06 | 5.94E-04 |
| 19 | 1 | 4.99E-04 | 6.61E-05 | 1.98E-04 | 1.55E-04 | 8.47E-05 | 1.02E-05 | 8.66E-05 | 1.18E-05 | 1.11E-03 |
| 21 | 1 | 7.42E-04 | 9.82E-05 | 2.95E-04 | 2.31E-04 | 9.11E-05 | 1.10E-05 | 8.97E-05 | 5.67E-06 | 1.56E-03 |
| 24 | 1 | 1.39E-03 | 1.84E-04 | 5.51E-04 | 4.31E-04 | 1.37E-04 | 1.66E-05 | 1.34E-04 | 1.06E-05 | 2.85E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.50E-04 | 3.31E-05 | 9.94E-05 | 7.78E-05 | 2.77E-05 | 3.34E-06 | 3.35E-05 | 4.64E-06 | 5.29E-04 |
| 30 | 1 | 1.44E-03 | 1.91E-04 | 5.73E-04 | 4.48E-04 | 1.59E-04 | 1.91E-05 | 1.81E-04 | 2.14E-05 | 3.03E-03 |
| 31 | 1 | 5.96E-04 | 7.90E-05 | 2.37E-04 | 1.86E-04 | 5.48E-05 | 6.62E-06 | 4.91E-05 | 2.86E-06 | 1.21E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM2.5 = 0.00054 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 18,000 | 3656 | 886 | 180 | 2,512 | 510 | 8,368 | 1700 | 6047 | 8.98 | 0.035 | 0.0002 | 1.5 | 7.62E-03 |
| 2 | A | 731 | 0.45 | 21,267 | 9657 | 1,578 | 717 | 2,969 | 1348 | 9,559 | 4341 | 16063 | 8.80 | 0.035 | 0.0002 | 3.8 | 1.98E-02 |
| 3 | A | 2352 | 1.46 | 8,478 | 12387 | 627 | 916 | 1,143 | 1670 | 3,613 | 5279 | 20252 | 8.59 | 0.035 | 0.0002 | 4.6 | 2.44E-02 |
| 5 | A | 953 | 0.59 | 7,861 | 4654 | 363 | 215 | 748 | 443 | 70 | 41 | 5353 | 3.23 | 0.035 | 0.0001 | 0.5 | 2.38E-03 |
| 6 | A | 1099 | 0.68 | 8,214 | 5608 | 536 | 366 | 1,069 | 730 | 3,112 | 2125 | 8828 | 8.15 | 0.035 | 0.0002 | 1.9 | 1.01E-02 |
| 8 | A | 1091 | 0.68 | 11,199 | 7590 | 540 | 366 | 1,087 | 737 | 0 | 0 | 8693 | 3.09 | 0.035 | 0.0001 | 0.7 | 3.69E-03 |
| 11 | A | 1201 | 0.75 | 250 | 187 | 17 | 13 | 17 | 13 | 0 | 0 | 212 | 2.92 | 0.035 | 0.0001 | 0.0 | 8.47E-05 |
| 12 | A | 824 | 0.51 | 197 | 101 | 12 | 6 | 18 | 9 | 0 | 0 | 116 | 3.08 | 0.035 | 0.0001 | 0.0 | 4.91E-05 |
| 14 | A | 1618 | 1.01 | 2,894 | 2909 | 249 | 250 | 372 | 374 | 1,041 | 1046 | 4579 | 7.93 | 0.035 | 0.0002 | 1.0 | 5.08E-03 |
| 18 | A | 1412 | 0.88 | 2,662 | 2335 | 180 | 158 | 289 | 253 | 506 | 444 | 3190 | 6.01 | 0.035 | 0.0002 | 0.5 | 2.67E-03 |
| 19 | A | 2386 | 1.48 | 2,842 | 4212 | 205 | 304 | 452 | 670 | 1,464 | 2170 | 7356 | 9.38 | 0.035 | 0.0003 | 1.8 | 9.69E-03 |
| 21 | A | 1258 | 0.78 | 8,013 | 6262 | 418 | 327 | 888 | 694 | 1,329 | 1039 | 8321 | 5.71 | 0.035 | 0.0002 | 1.3 | 6.60E-03 |
| 24 | A | 1946 | 1.21 | 9,679 | 11701 | 407 | 492 | 859 | 1038 | 1,602 | 1937 | 15168 | 5.60 | 0.035 | 0.0001 | 2.2 | 1.18E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 5,033 | 2110 | 237 | 99 | 617 | 259 | 2,028 | 850 | 3319 | 8.40 | 0.035 | 0.0002 | 0.7 | 3.90E-03 |
| 30 | A | 2827 | 1.76 | 6,928 | 12167 | 324 | 569 | 797 | 1400 | 2,238 | 3930 | 18066 | 7.58 | 0.035 | 0.0002 | 3.6 | 1.92E-02 |
| 31 | A | 820 | 0.51 | 9,883 | 5034 | 386 | 197 | 746 | 380 | 1,030 | 525 | 6136 | 4.64 | 0.035 | 0.0001 | 0.8 | 3.95E-03 |

**World Logistics Center** With EMFAC2014 **2035 Phase 1** No Mitigation
**PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.77E-03 | 3.82E-03 |
| Light Logistics | Phase 1 | 3.53E-06 | 8.80E-06 |
| Utilities Service Station | Phase 1 | 2.77E-06 | 8.04E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.03E-06 | 2.23E-06 |
| Convenience Store | Phase 1 | 6.35E-06 | 3.68E-06 |
| Fire Station | Phase 1 | 4.85E-09 | 2.35E-06 |
| Total | | 1.78E-03 | 3.84E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 9.05E-05 | 2.60E-05 |
| Light Logistics | Phase 1 | 5.44E-07 | 1.44E-07 |
| Utilities Service Station | Phase 1 | 1.76E-06 | 4.02E-07 |
| Gas Station w/Convenience Store | Phase 1 | 3.78E-07 | 1.48E-07 |
| Convenience Store | Phase 1 | 5.83E-07 | 2.35E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 9.38E-05 | 2.70E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.78E-03 | 3.84E-03 | |
| | Idling Emissions (g/sec) | 9.38E-05 | 2.70E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.88E-03 | 3.87E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.88E-03 | 5.21E-03 | 7.09E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.51E-09 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.047 | 53 | 330 | 0.21 | 5.12E-01 | 1.13E-03 | 5.93E-06 | |
| | **LDT1** | 15 | 0.061 | 3 | 330 | 0.21 | 3.17E-02 | 6.99E-05 | 3.67E-07 | |
| | **LDT2** | 15 | 0.052 | 3 | 330 | 0.21 | 2.70E-02 | 5.96E-05 | 3.13E-07 | |
| | **MDT** | 15 | 0.048 | 5 | 330 | 0.21 | 4.74E-02 | 1.05E-04 | 5.49E-07 | |
| | **LHDT1** | 15 | 0.103 | 274 | 330 | 0.21 | 5.79E+00 | 1.28E-02 | 6.70E-05 | |
| | **LHDT2** | 15 | 0.115 | 93 | 330 | 0.21 | 2.20E+00 | 4.85E-03 | 2.55E-05 | |
| | **MHDT** | 15 | 0.147 | 1425 | 330 | 0.21 | 4.28E+01 | 9.43E-02 | 4.96E-04 | |
| | **HHDT** | 15 | 0.107 | 4628 | 330 | 0.21 | 1.01E+02 | 2.23E-01 | 1.17E-03 | 1.77E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.047 | 0 | 175 | 0.11 | 1.15E-03 | 2.54E-06 | 1.34E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 175 | 0.11 | 7.15E-05 | 1.57E-07 | 8.27E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 175 | 0.11 | 6.09E-05 | 1.34E-07 | 7.05E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 175 | 0.11 | 1.07E-04 | 2.35E-07 | 1.24E-09 | |
| | **LHDT1** | 15 | 0.103 | 2 | 175 | 0.11 | 1.92E-02 | 4.23E-05 | 2.22E-07 | |
| | **LHDT2** | 15 | 0.115 | 1 | 175 | 0.11 | 7.30E-03 | 1.61E-05 | 8.45E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.36E-02 | 2.06E-04 | 1.08E-06 | |
| | **HHDT** | 15 | 0.107 | 16 | 175 | 0.11 | 1.84E-01 | 4.05E-04 | 2.13E-06 | 3.53E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.047 | 0 | 100 | 0.06 | 9.72E-04 | 2.14E-06 | 1.12E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 6.02E-05 | 1.33E-07 | 6.97E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 100 | 0.06 | 5.13E-05 | 1.13E-07 | 5.94E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 9.00E-05 | 1.98E-07 | 1.04E-09 | |
| | **LHDT1** | 15 | 0.103 | 6 | 100 | 0.06 | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **LHDT2** | 15 | 0.115 | 2 | 100 | 0.06 | 1.39E-02 | 3.07E-05 | 1.61E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | **HHDT** | 15 | 0.107 | 22 | 100 | 0.06 | 1.43E-01 | 3.15E-04 | 1.66E-06 | 2.77E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 2.81E-04 | 6.20E-07 | 3.26E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 1.74E-05 | 3.84E-08 | 2.02E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 1.49E-05 | 3.27E-08 | 1.72E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 2.61E-05 | 5.74E-08 | 3.02E-10 | |
| | **LHDT1** | 15 | 0.103 | 1 | 50 | 0.03 | 2.57E-03 | 5.66E-06 | 2.97E-08 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 9.76E-04 | 2.15E-06 | 1.13E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.26E-02 | 1.38E-04 | 7.25E-07 | |
| | **HHDT** | 15 | 0.107 | 85 | 50 | 0.03 | 2.82E-01 | 6.20E-04 | 3.26E-06 | 4.03E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 4.67E-04 | 1.03E-06 | 5.40E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 2.89E-05 | 6.37E-08 | 3.35E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 2.46E-05 | 5.43E-08 | 2.85E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 4.32E-05 | 9.52E-08 | 5.00E-10 | |
| | **LHDT1** | 15 | 0.103 | 1 | 50 | 0.03 | 3.92E-03 | 8.64E-06 | 4.54E-08 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 1.49E-03 | 3.28E-06 | 1.72E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 15 | 0.107 | 133 | 50 | 0.03 | 4.40E-01 | 9.70E-04 | 5.10E-06 | 6.35E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 3.47E-04 | 7.65E-07 | 4.02E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 2.15E-05 | 4.74E-08 | 2.49E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 1.83E-05 | 4.04E-08 | 2.12E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 3.22E-05 | 7.08E-08 | 3.72E-10 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.85E-09 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 5.15E-01 | 1.14E-03 | 5.97E-06 | |
| | **LDT1** | | | 3 | | | 3.19E-02 | 7.03E-05 | 3.70E-07 | |
| | **LDT2** | | | 3 | | | 2.72E-02 | 5.99E-05 | 3.15E-07 | |
| | **MDT** | | | 5 | | | 4.77E-02 | 1.05E-04 | 5.53E-07 | |
| | **LHDT1** | | | 283 | | | 5.85E+00 | 1.29E-02 | 6.78E-05 | |
| | **LHDT2** | | | 96 | | | 2.22E+00 | 4.90E-03 | 2.57E-05 | |
| | **MHDT** | | | 1472 | | | 4.31E+01 | 9.50E-02 | 4.99E-04 | |
| | **HHDT** | | | 4883 | | | 1.02E+02 | 2.25E-01 | 1.18E-03 | |
| | **Total** | | | 6800 | | | 1.54E+02 | 3.39E-01 | 1.78E-03 | 1.78E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 137 | 5.17E+00 | 1.14E-02 | 5.98E-05 | |
| | **LHDT2** | 0.504 | 5 | 47 | 1.96E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | 0.002 | 5 | 713 | 1.19E-01 | 2.62E-04 | 1.37E-06 | |
| | **HHDT** | 0.003 | 5 | 2314 | 5.78E-01 | 1.27E-03 | 6.70E-06 | |
| | | | | 3210 | 7.82E+00 | 1.72E-02 | 9.05E-05 | 9.05E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 1 | 3.23E-02 | 7.12E-05 | 3.74E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 1.22E-02 | 2.69E-05 | 1.42E-07 | |
| | **MHDT** | 0.002 | 5 | 3 | 4.89E-04 | 1.08E-06 | 5.66E-09 | |
| | **HHDT** | 0.003 | 5 | 8 | 1.98E-03 | 4.36E-06 | 2.29E-08 | |
| | | | | 12 | 4.70E-02 | 1.04E-04 | 5.44E-07 | 5.44E-07 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 3 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.08E-02 | 8.99E-05 | 4.73E-07 | |
| | **MHDT** | 0.002 | 5 | 2 | 4.04E-04 | 8.91E-07 | 4.68E-09 | |
| | **HHDT** | 0.003 | 5 | 11 | 2.70E-03 | 5.95E-06 | 3.13E-08 | |
| | | | | 17 | 1.52E-01 | 3.35E-04 | 1.76E-06 | 1.76E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 1.51E-02 | 3.33E-05 | 1.75E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 5.73E-03 | 1.26E-05 | 6.63E-08 | |
| | **MHDT** | 0.002 | 5 | 7 | 1.15E-03 | 2.53E-06 | 1.33E-08 | |
| | **HHDT** | 0.003 | 5 | 43 | 1.06E-02 | 2.34E-05 | 1.23E-07 | |
| | | | | 50 | 3.26E-02 | 7.19E-05 | 3.78E-07 | 3.78E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 1 | 2.31E-02 | 5.09E-05 | 2.67E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 8.74E-03 | 1.93E-05 | 1.01E-07 | |
| | **MHDT** | 0.002 | 5 | 11 | 1.88E-03 | 4.13E-06 | 2.17E-08 | |
| | **HHDT** | 0.003 | 5 | 66 | 1.66E-02 | 3.66E-05 | 1.92E-07 | |
| | | | | 79 | 5.03E-02 | 1.11E-04 | 5.83E-07 | 5.83E-07 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 8.10E+00 | 1.79E-02 | 9.38E-05 | 9.38E-05 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.048 | 17546 | 330 | 0.21 | 1.72E+02 | 3.79E-01 | 1.99E-03 | |
| | **LDT1** | 15 | 0.048 | 2058 | 330 | 0.21 | 2.04E+01 | 4.48E-02 | 2.36E-04 | |
| | **LDT2** | 15 | 0.048 | 6111 | 330 | 0.21 | 6.00E+01 | 1.32E-01 | 6.94E-04 | |
| | **MDT** | 15 | 0.048 | 4846 | 330 | 0.21 | 4.78E+01 | 1.05E-01 | 5.53E-04 | |
| | **LHDT1** | 15 | 0.087 | 886 | 330 | 0.21 | 1.58E+01 | 3.49E-02 | 1.83E-04 | |
| | **LHDT2** | 15 | 0.100 | 93 | 330 | 0.21 | 1.92E+00 | 4.22E-03 | 2.22E-05 | |
| | **MHDT** | 15 | 0.145 | 344 | 330 | 0.21 | 1.02E+01 | 2.26E-02 | 1.19E-04 | |
| | **HHDT** | 15 | 0.085 | 104 | 330 | 0.21 | 1.82E+00 | 4.02E-03 | 2.11E-05 | |
| | | | | | | | | | | 3.82E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.048 | 75 | 175 | 0.11 | 3.87E-01 | 8.54E-04 | 4.48E-06 | |
| | **LDT1** | 15 | 0.048 | 9 | 175 | 0.11 | 4.58E-02 | 1.01E-04 | 5.31E-07 | |
| | **LDT2** | 15 | 0.048 | 26 | 175 | 0.11 | 1.35E-01 | 2.98E-04 | 1.56E-06 | |
| | **MDT** | 15 | 0.048 | 21 | 175 | 0.11 | 1.08E-01 | 2.37E-04 | 1.25E-06 | |
| | **LHDT1** | 15 | 0.087 | 6 | 175 | 0.11 | 5.25E-02 | 1.16E-04 | 6.08E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.36E-03 | 1.40E-05 | 7.36E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.24E-02 | 4.93E-05 | 2.59E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 175 | 0.11 | 3.31E-03 | 7.30E-06 | 3.83E-08 | 8.80E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.048 | 110 | 100 | 0.06 | 3.26E-01 | 7.19E-04 | 3.78E-06 | |
| | **LDT1** | 15 | 0.048 | 13 | 100 | 0.06 | 3.86E-02 | 8.51E-05 | 4.47E-07 | |
| | **LDT2** | 15 | 0.048 | 38 | 100 | 0.06 | 1.14E-01 | 2.51E-04 | 1.32E-06 | |
| | **MDT** | 15 | 0.048 | 30 | 100 | 0.06 | 9.07E-02 | 2.00E-04 | 1.05E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.06E-02 | 2.33E-05 | 1.22E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 2.58E-03 | 5.69E-06 | 2.99E-08 | 8.04E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.048 | 64 | 50 | 0.03 | 9.45E-02 | 2.08E-04 | 1.09E-06 | |
| | **LDT1** | 15 | 0.048 | 7 | 50 | 0.03 | 1.12E-02 | 2.46E-05 | 1.29E-07 | |
| | **LDT2** | 15 | 0.048 | 22 | 50 | 0.03 | 3.30E-02 | 7.26E-05 | 3.81E-07 | |
| | **MDT** | 15 | 0.048 | 18 | 50 | 0.03 | 2.63E-02 | 5.78E-05 | 3.04E-07 | |
| | **LHDT1** | 15 | 0.087 | 3 | 50 | 0.03 | 7.02E-03 | 1.55E-05 | 8.13E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.51E-04 | 1.87E-06 | 9.85E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.50E-02 | 3.30E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.085 | 2 | 50 | 0.03 | 5.08E-03 | 1.12E-05 | 5.88E-08 | 2.23E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.048 | 105 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.048 | 12 | 50 | 0.03 | 1.85E-02 | 4.08E-05 | 2.15E-07 | |
| | **LDT2** | 15 | 0.048 | 37 | 50 | 0.03 | 5.46E-02 | 1.20E-04 | 6.32E-07 | |
| | **MDT** | 15 | 0.048 | 29 | 50 | 0.03 | 4.35E-02 | 9.59E-05 | 5.04E-07 | |
| | **LHDT1** | 15 | 0.087 | 4 | 50 | 0.03 | 1.07E-02 | 2.36E-05 | 1.24E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.30E-03 | 2.86E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **HHDT** | 15 | 0.085 | 3 | 50 | 0.03 | 7.94E-03 | 1.75E-05 | 9.19E-08 | 3.68E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.048 | 78 | 50 | 0.03 | 1.17E-01 | 2.57E-04 | 1.35E-06 | |
| | **LDT1** | 15 | 0.048 | 9 | 50 | 0.03 | 1.38E-02 | 3.04E-05 | 1.60E-07 | |
| | **LDT2** | 15 | 0.048 | 27 | 50 | 0.03 | 4.07E-02 | 8.96E-05 | 4.71E-07 | |
| | **MDT** | 15 | 0.048 | 22 | 50 | 0.03 | 3.24E-02 | 7.13E-05 | 3.75E-07 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.73E+02 | 3.81E-01 | 2.00E-03 | |
| | **LDT1** | | | 2108 | | | 2.05E+01 | 4.51E-02 | 2.37E-04 | |
| | **LDT2** | | | 6262 | | | 6.04E+01 | 1.33E-01 | 6.99E-04 | |
| | **MDT** | | | 4966 | | | 4.81E+01 | 1.06E-01 | 5.57E-04 | |
| | **LHDT1** | | | 917 | | | 1.60E+01 | 3.52E-02 | 1.85E-04 | |
| | **LHDT2** | | | 97 | | | 1.94E+00 | 4.27E-03 | 2.24E-05 | |
| | **MHDT** | | | 356 | | | 1.03E+01 | 2.27E-02 | 1.19E-04 | |
| | **HHDT** | | | 110 | | | 1.84E+00 | 4.06E-03 | 2.13E-05 | |
| | **Total** | | | 32792 | | | 3.32E+02 | 7.32E-01 | 3.84E-03 | 3.84E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.038 | 5 | 443 | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | **LHDT2** | 0.038 | 5 | 47 | 1.47E-01 | 3.24E-04 | 1.70E-06 | |
| | **MHDT** | 0.038 | 5 | 172 | 5.44E-01 | 1.20E-03 | 6.30E-06 | |
| | **HHDT** | 0.038 | 5 | 52 | 1.67E-01 | 3.68E-04 | 1.93E-06 | |
| | | | | 714 | 2.25E+00 | 4.95E-03 | 2.60E-05 | 2.60E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.038 | 5 | 3 | 8.70E-03 | 1.92E-05 | 1.01E-07 | |
| | **LHDT2** | 0.038 | 5 | 0 | 9.21E-04 | 2.03E-06 | 1.07E-08 | |
| | **MHDT** | 0.038 | 5 | 1 | 2.24E-03 | 4.94E-06 | 2.60E-08 | |
| | **HHDT** | 0.038 | 5 | 0 | 5.72E-04 | 1.26E-06 | 6.62E-09 | |
| | | | | 4 | 1.24E-02 | 2.74E-05 | 1.44E-07 | 1.44E-07 |
| **Idle at Utility** | **LHDT1** | 0.038 | 5 | 9 | 2.90E-02 | 6.39E-05 | 3.36E-07 | |
| | **LHDT2** | 0.038 | 5 | 1 | 3.08E-03 | 6.77E-06 | 3.56E-08 | |
| | **MHDT** | 0.038 | 5 | 1 | 1.85E-03 | 4.08E-06 | 2.15E-08 | |
| | **HHDT** | 0.038 | 5 | 0 | 7.80E-04 | 1.72E-06 | 9.03E-09 | |
| | | | | 11 | 3.47E-02 | 7.65E-05 | 4.02E-07 | 4.02E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.038 | 5 | 1 | 4.07E-03 | 8.96E-06 | 4.71E-08 | |
| | **LHDT2** | 0.038 | 5 | 0 | 4.31E-04 | 9.50E-07 | 4.99E-09 | |
| | **MHDT** | 0.038 | 5 | 2 | 5.26E-03 | 1.16E-05 | 6.08E-08 | |
| | **HHDT** | 0.038 | 5 | 1 | 3.07E-03 | 6.76E-06 | 3.55E-08 | |
| | | | | 4 | 1.28E-02 | 2.83E-05 | 1.48E-07 | 1.48E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.038 | 5 | 2 | 6.21E-03 | 1.37E-05 | 7.19E-08 | |
| | **LHDT2** | 0.038 | 5 | 0 | 6.58E-04 | 1.45E-06 | 7.62E-09 | |
| | **MHDT** | 0.038 | 5 | 3 | 8.60E-03 | 1.90E-05 | 9.96E-08 | |
| | **HHDT** | 0.038 | 5 | 2 | 4.80E-03 | 1.06E-05 | 5.56E-08 | |
| | | | | 6 | 2.03E-02 | 4.47E-05 | 2.35E-07 | 2.35E-07 |
| **Idle at Firestation** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.33E+00 | 5.13E-03 | 2.70E-05 | 2.70E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual PM10 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual PM10**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 2 | 1.35E-03 | 2.92E-03 |
| Light Logistics | Phase 2 | 1.20E-05 | 2.99E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.36E-03 | 2.95E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 2 | 6.92E-05 | 1.98E-05 |
| Light Logistics | Phase 2 | 1.85E-06 | 4.88E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 7.10E-05 | 2.03E-05 |

**Total Onsite Mobile Emissions**

| | | |
|---|---|---|
| Runing Exhaust (g/sec) | 1.36E-03 | 2.95E-03 |
| Idling Emissions (g/sec) | 7.10E-05 | 2.03E-05 |
| Total Vehicle Emissions (g/sec) | 1.43E-03 | 2.97E-03 |
| Forklift (g/sec) | | 2.40E-04 |
| Yard Trucks (g/sec) | | 4.54E-04 |
| Total Emissions (g/sec) | | 5.10E-03 |
| Size of Area Source | 5.15E+06 square Meters | |
| Area Source Emission Rate (g/m2-sec) | | 9.89E-10 |

**World Logistics Center** **2035** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Annual PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Emissions Over Link (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.047 | 41 | 330 | 0.21 | 3.91E-01 | 8.62E-04 | 4.53E-06 | |
| | **LDT1** | 15 | 0.061 | 2 | 330 | 0.21 | 2.43E-02 | 5.34E-05 | 2.81E-07 | |
| | **LDT2** | 15 | 0.052 | 2 | 330 | 0.21 | 2.07E-02 | 4.55E-05 | 2.39E-07 | |
| | **MDT** | 15 | 0.048 | 4 | 330 | 0.21 | 3.63E-02 | 7.99E-05 | 4.20E-07 | |
| | **LHDT1** | 15 | 0.103 | 209 | 330 | 0.21 | 4.43E+00 | 9.75E-03 | 5.12E-05 | |
| | **LHDT2** | 15 | 0.115 | 71 | 330 | 0.21 | 1.68E+00 | 3.70E-03 | 1.95E-05 | |
| | **MHDT** | 15 | 0.147 | 1089 | 330 | 0.21 | 3.27E+01 | 7.21E-02 | 3.79E-04 | |
| | **HHDT** | 15 | 0.107 | 3536 | 330 | 0.21 | 7.73E+01 | 1.70E-01 | 8.95E-04 | 1.35E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.047 | 1 | 175 | 0.11 | 3.92E-03 | 8.63E-06 | 4.53E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 175 | 0.11 | 2.43E-04 | 5.35E-07 | 2.81E-09 | |
| | **LDT2** | 15 | 0.052 | 0 | 175 | 0.11 | 2.07E-04 | 4.56E-07 | 2.39E-09 | |
| | **MDT** | 15 | 0.048 | 0 | 175 | 0.11 | 3.63E-04 | 7.99E-07 | 4.20E-09 | |
| | **LHDT1** | 15 | 0.103 | 6 | 175 | 0.11 | 6.52E-02 | 1.44E-04 | 7.55E-07 | |
| | **LHDT2** | 15 | 0.115 | 2 | 175 | 0.11 | 2.48E-02 | 5.46E-05 | 2.87E-07 | |
| | **MHDT** | 15 | 0.147 | 20 | 175 | 0.11 | 3.18E-01 | 7.00E-04 | 3.68E-06 | |
| | **HHDT** | 15 | 0.107 | 54 | 175 | 0.11 | 6.24E-01 | 1.37E-03 | 7.22E-06 | 1.20E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.047 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 3.95E-01 | 8.71E-04 | 4.58E-06 | |
| | **LDT1** | | | 2 | | | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **LDT2** | | | 2 | | | 2.09E-02 | 4.60E-05 | 2.42E-07 | |
| | **MDT** | | | 4 | | | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **LHDT1** | | | 215 | | | 4.49E+00 | 9.89E-03 | 5.20E-05 | |
| | **LHDT2** | | | 73 | | | 1.71E+00 | 3.76E-03 | 1.98E-05 | |
| | **MHDT** | | | 1109 | | | 3.31E+01 | 7.28E-02 | 3.83E-04 | |
| | **HHDT** | | | 3590 | | | 7.79E+01 | 1.72E-01 | 9.02E-04 | |
| | **Total** | | | 5037 | | | 1.18E+02 | 2.59E-01 | 1.36E-03 | 1.36E-03 |

**Diesel truck Idling Emissions** **Annual PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Total Emissions for All Vehicles (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 105 | 3.95E+00 | 8.70E-03 | 4.57E-05 | |
| | **LHDT2** | 0.504 | 5 | 36 | 1.49E+00 | 3.29E-03 | 1.73E-05 | |
| | **MHDT** | 0.002 | 5 | 545 | 9.08E-02 | 2.00E-04 | 1.05E-06 | |
| | **HHDT** | 0.003 | 5 | 1768 | 4.42E-01 | 9.74E-04 | 5.12E-06 | |
| | | | | 2453 | 5.98E+00 | 1.32E-02 | | 6.92E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 3 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.15E-02 | 9.15E-05 | 4.81E-07 | |
| | **MHDT** | 0.002 | 5 | 10 | 1.66E-03 | 3.66E-06 | 1.92E-08 | |
| | **HHDT** | 0.003 | 5 | 27 | 6.72E-03 | 1.48E-05 | 7.78E-08 | |
| | | | | 41 | 1.60E-01 | 3.52E-04 | 1.85E-06 | 1.85E-06 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **TOTAL** | | | | 2494 | 6.14E+00 | 1.35E-02 | 1.85E-06 | 7.10E-05 |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Non-Diesel Vehicle Emissions** **Annual PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Emissions (grams/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.048 | 13408 | 330 | 0.21 | 1.31E+02 | 2.90E-01 | 1.52E-03 | |
| | **LDT1** | 15 | 0.048 | 1572 | 330 | 0.21 | 1.56E+01 | 3.43E-02 | 1.80E-04 | |
| | **LDT2** | 15 | 0.048 | 4670 | 330 | 0.21 | 4.58E+01 | 1.01E-01 | 5.31E-04 | |
| | **MDT** | 15 | 0.048 | 3703 | 330 | 0.21 | 3.65E+01 | 8.04E-02 | 4.23E-04 | |
| | **LHDT1** | 15 | 0.087 | 677 | 330 | 0.21 | 1.21E+01 | 2.66E-02 | 1.40E-04 | |
| | **LHDT2** | 15 | 0.100 | 71 | 330 | 0.21 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | **MHDT** | 15 | 0.145 | 263 | 330 | 0.21 | 7.83E+00 | 1.72E-02 | 9.06E-05 | |
| | **HHDT** | 15 | 0.085 | 80 | 330 | 0.21 | 1.39E+00 | 3.07E-03 | 1.61E-05 | 2.92E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.048 | 253 | 175 | 0.11 | 1.32E+00 | 2.90E-03 | 1.52E-05 | |
| | **LDT1** | 15 | 0.048 | 30 | 175 | 0.11 | 1.56E-01 | 3.43E-04 | 1.80E-06 | |
| | **LDT2** | 15 | 0.048 | 88 | 175 | 0.11 | 4.59E-01 | 1.01E-03 | 5.31E-06 | |
| | **MDT** | 15 | 0.048 | 70 | 175 | 0.11 | 3.65E-01 | 8.05E-04 | 4.23E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 175 | 0.11 | 1.78E-01 | 3.93E-04 | 2.06E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 175 | 0.11 | 2.16E-02 | 4.76E-05 | 2.50E-07 | |
| | **MHDT** | 15 | 0.145 | 5 | 175 | 0.11 | 7.60E-02 | 1.67E-04 | 8.80E-07 | |
| | **HHDT** | 15 | 0.085 | 1 | 175 | 0.11 | 1.12E-02 | 2.48E-05 | 1.30E-07 | 2.99E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 1.33E+02 | 2.92E-01 | 1.54E-03 | |
| | **LDT1** | | | 1602 | | | 1.57E+01 | 3.46E-02 | 1.82E-04 | |
| | **LDT2** | | | 4758 | | | 4.63E+01 | 1.02E-01 | 5.36E-04 | |
| | **MDT** | | | 3773 | | | 3.69E+01 | 8.12E-02 | 4.27E-04 | |
| | **LHDT1** | | | 696 | | | 1.23E+01 | 2.70E-02 | 1.42E-04 | |
| | **LHDT2** | | | 73 | | | 1.49E+00 | 3.28E-03 | 1.72E-05 | |
| | **MHDT** | | | 268 | | | 7.91E+00 | 1.74E-02 | 9.15E-05 | |
| | **HHDT** | | | 81 | | | 1.41E+00 | 3.10E-03 | 1.63E-05 | |
| | **Total** | | | 24913 | | | 2.55E+02 | 5.61E-01 | 2.95E-03 | 2.95E-03 |

**Non-Diesel Truck Idling Emissions** **Annual PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Emissions (g/sec) | Total Emissions for all Vehicles (g/day) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.038 | 5 | 339 | 1.06E+00 | 2.34E-03 | 1.23E-05 | |
| | **LHDT2** | 0.038 | 5 | 36 | 1.13E-01 | 2.48E-04 | 1.30E-06 | |
| | **MHDT** | 0.038 | 5 | 132 | 4.16E-01 | 9.16E-04 | 4.82E-06 | |
| | **HHDT** | 0.037 | 5 | 40 | 1.24E-01 | 2.73E-04 | 1.44E-06 | |
| | | | | 546 | 1.72E+00 | 3.78E-03 | | 1.98E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.038 | 5 | 9 | 2.95E-02 | 6.50E-05 | 3.42E-07 | |
| | **LHDT2** | 0.038 | 5 | 1 | 3.13E-03 | 6.89E-06 | 3.62E-08 | |
| | **MHDT** | 0.038 | 5 | 2 | 7.61E-03 | 1.68E-05 | 8.81E-08 | |
| | **HHDT** | 0.037 | 5 | 1 | 1.89E-03 | 4.16E-06 | 2.18E-08 | |
| | | | | 13 | 4.22E-02 | 9.29E-05 | | 4.88E-07 |
| **Idle at Utility** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **TOTAL** | | | | 559 | 1.76E+00 | 3.87E-03 | 2.03E-05 | 2.03E-05 |

**World Logistics Center** **2035** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and 2 Emissions** **With EMFAC2014** Without Mitigation Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) | |
|---|---|---|---|---|---|
| 1 | 2.80E-03 | 2.25E-03 | 3.11E-02 | 3.61E-02 | |
| 2 | 7.29E-03 | 6.13E-03 | 8.08E-02 | 9.42E-02 | |
| 3 | 8.92E-03 | 7.83E-03 | 9.93E-02 | 1.16E-01 | |
| 5 | 7.32E-04 | 2.76E-03 | 9.68E-03 | 1.32E-02 | |
| 6 | 3.67E-03 | 3.50E-03 | 4.11E-02 | 4.82E-02 | |
| 8 | 1.14E-03 | 4.52E-03 | 1.50E-02 | 2.07E-02 | |
| 11 | 2.17E-05 | 1.12E-04 | 3.45E-04 | 4.79E-04 | |
| 12 | 1.47E-05 | 6.09E-05 | 2.00E-04 | 2.76E-04 | |
| 14 | 1.85E-03 | 1.86E-03 | 2.07E-02 | 2.44E-02 | |
| 18 | 9.33E-04 | 1.44E-03 | 1.09E-02 | 1.32E-02 | |
| 19 | 3.62E-03 | 2.70E-03 | 3.95E-02 | 4.58E-02 | |
| 21 | 2.31E-03 | 3.79E-03 | 2.69E-02 | 3.30E-02 | |
| 24 | 3.92E-03 | 6.92E-03 | 4.81E-02 | 5.89E-02 | |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| 29 | 1.41E-03 | 1.28E-03 | 1.59E-02 | 1.86E-02 | |
| 30 | 6.82E-03 | 7.36E-03 | 7.80E-02 | 9.22E-02 | |
| 31 | 1.22E-03 | 2.94E-03 | 1.61E-02 | 2.02E-02 | |
| | | | Total | 6.36E-01 | |
| | | | Total | 2.21E+01 | tons/year |
| | | | Total (NonRoad Dust) | 3.55E+00 | tons/year |
| | | | Total (Road Dust) | 1.85E+01 | tons/year |

| ID | Arterial | From | To | | 2035 Project Related Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by Parsons Brikerhoff (2013)

**World Logistics Center** **2035** **PM10** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0461 | 0.0521 | 0.0494 | 0.0465 | 0.0987 | 0.1114 | 0.1457 | 0.1050 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.24E-06 | 2.31E-07 | 2.05E-07 | 3.37E-07 | 4.17E-05 | 1.56E-05 | 7.02E-04 | 2.04E-03 | 2.80E-03 |
| 2 | 1 | 8.55E-06 | 6.10E-07 | 5.40E-07 | 8.89E-07 | 1.66E-04 | 6.21E-05 | 1.85E-03 | 5.20E-03 | 7.29E-03 |
| 3 | 1 | 1.10E-05 | 7.83E-07 | 6.93E-07 | 1.14E-06 | 2.12E-04 | 7.94E-05 | 2.30E-03 | 6.32E-03 | 8.92E-03 |
| 5 | 1 | 4.12E-06 | 2.94E-07 | 2.60E-07 | 4.29E-07 | 4.98E-05 | 1.86E-05 | 6.09E-04 | 4.96E-05 | 7.32E-04 |
| 6 | 1 | 4.96E-06 | 3.54E-07 | 3.14E-07 | 5.16E-07 | 8.48E-05 | 3.17E-05 | 1.00E-03 | 2.54E-03 | 3.67E-03 |
| 8 | 1 | 6.72E-06 | 4.80E-07 | 4.25E-07 | 6.99E-07 | 8.48E-05 | 3.17E-05 | 1.01E-03 | 0.00E+00 | 1.14E-03 |
| 11 | 1 | 1.65E-07 | 1.18E-08 | 1.04E-08 | 1.72E-08 | 2.94E-06 | 1.10E-06 | 1.74E-05 | 0.00E+00 | 2.17E-05 |
| 12 | 1 | 8.92E-08 | 6.37E-09 | 5.64E-09 | 9.28E-09 | 1.42E-06 | 5.33E-07 | 1.27E-05 | 0.00E+00 | 1.47E-05 |
| 14 | 1 | 2.57E-06 | 1.84E-07 | 1.63E-07 | 2.68E-07 | 5.80E-05 | 2.17E-05 | 5.14E-04 | 1.25E-03 | 1.85E-03 |
| 18 | 1 | 2.07E-06 | 1.48E-07 | 1.31E-07 | 2.15E-07 | 3.66E-05 | 1.37E-05 | 3.49E-04 | 5.31E-04 | 9.33E-04 |
| 19 | 1 | 3.73E-06 | 2.66E-07 | 2.36E-07 | 3.88E-07 | 7.04E-05 | 2.63E-05 | 9.21E-04 | 2.60E-03 | 3.62E-03 |
| 21 | 1 | 5.54E-06 | 3.96E-07 | 3.50E-07 | 5.77E-07 | 7.57E-05 | 2.83E-05 | 9.54E-04 | 1.24E-03 | 2.31E-03 |
| 24 | 1 | 1.04E-05 | 7.39E-07 | 6.55E-07 | 1.08E-06 | 1.14E-04 | 4.27E-05 | 1.43E-03 | 2.32E-03 | 3.92E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.87E-06 | 1.33E-07 | 1.18E-07 | 1.94E-07 | 2.30E-05 | 8.62E-06 | 3.56E-04 | 1.02E-03 | 1.41E-03 |
| 30 | 1 | 1.08E-05 | 7.69E-07 | 6.81E-07 | 1.12E-06 | 1.32E-04 | 4.93E-05 | 1.92E-03 | 4.71E-03 | 6.82E-03 |
| 31 | 1 | 4.45E-06 | 3.18E-07 | 2.82E-07 | 4.64E-07 | 4.56E-05 | 1.70E-05 | 5.23E-04 | 6.28E-04 | 1.22E-03 |

**World Logistics Center** **2035** **PM10** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29,766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 |
| 2 | 35,373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 |
| 3 | 13,861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 |
| 5 | 9,042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 |
| 6 | 12,931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 |
| 8 | 12,826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 |
| 14 | 4,556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 |
| 18 | 3,637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 |
| 19 | 4,963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 |
| 21 | 10,648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 |
| 24 | 12,547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7,915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 |
| 30 | 10,287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 |
| 31 | 12,045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0459 | 0.0461 | 0.0460 | 0.0460 | 0.0856 | 0.0986 | 0.1436 | 0.0837 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.05E-03 | 1.39E-04 | 4.19E-04 | 3.27E-04 | 1.18E-04 | 1.44E-05 | 1.57E-04 | 2.39E-05 | 2.25E-03 |
| 2 | 1 | 2.79E-03 | 3.68E-04 | 1.11E-03 | 8.65E-04 | 4.69E-04 | 5.73E-05 | 4.14E-04 | 6.09E-05 | 6.13E-03 |
| 3 | 1 | 3.57E-03 | 4.72E-04 | 1.42E-03 | 1.11E-03 | 5.99E-04 | 7.33E-05 | 5.13E-04 | 7.41E-05 | 7.83E-03 |
| 5 | 1 | 1.34E-03 | 1.77E-04 | 5.34E-04 | 4.17E-04 | 1.41E-04 | 1.72E-05 | 1.36E-04 | 5.82E-07 | 2.76E-03 |
| 6 | 1 | 1.62E-03 | 2.14E-04 | 6.43E-04 | 5.02E-04 | 2.39E-04 | 2.93E-05 | 2.24E-04 | 2.98E-05 | 3.50E-03 |
| 8 | 1 | 2.19E-03 | 2.89E-04 | 8.71E-04 | 6.80E-04 | 2.39E-04 | 2.93E-05 | 2.26E-04 | 0.00E+00 | 4.52E-03 |
| 11 | 1 | 5.38E-05 | 7.10E-06 | 2.14E-05 | 1.67E-05 | 8.29E-06 | 1.01E-06 | 3.89E-06 | 0.00E+00 | 1.12E-04 |
| 12 | 1 | 2.91E-05 | 3.84E-06 | 1.16E-05 | 9.03E-06 | 4.02E-06 | 4.91E-07 | 2.83E-06 | 0.00E+00 | 6.09E-05 |
| 14 | 1 | 8.39E-04 | 1.11E-04 | 3.34E-04 | 2.60E-04 | 1.64E-04 | 2.00E-05 | 1.15E-04 | 1.47E-05 | 1.86E-03 |
| 18 | 1 | 6.74E-04 | 8.89E-05 | 2.68E-04 | 2.09E-04 | 1.03E-04 | 1.26E-05 | 7.78E-05 | 6.23E-06 | 1.44E-03 |
| 19 | 1 | 1.22E-03 | 1.60E-04 | 4.83E-04 | 3.77E-04 | 1.99E-04 | 2.43E-05 | 2.06E-04 | 3.05E-05 | 2.70E-03 |
| 21 | 1 | 1.81E-03 | 2.38E-04 | 7.18E-04 | 5.61E-04 | 2.14E-04 | 2.61E-05 | 2.13E-04 | 1.46E-05 | 3.79E-03 |
| 24 | 1 | 3.38E-03 | 4.46E-04 | 1.34E-03 | 1.05E-03 | 3.22E-04 | 3.93E-05 | 3.19E-04 | 2.72E-05 | 6.92E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 6.09E-04 | 8.04E-05 | 2.42E-04 | 1.89E-04 | 6.50E-05 | 7.95E-06 | 7.94E-05 | 1.19E-05 | 1.28E-03 |
| 30 | 1 | 3.51E-03 | 4.63E-04 | 1.40E-03 | 1.09E-03 | 3.72E-04 | 4.55E-05 | 4.30E-04 | 5.52E-05 | 7.36E-03 |
| 31 | 1 | 1.45E-03 | 1.92E-04 | 5.77E-04 | 4.51E-04 | 1.29E-04 | 1.57E-05 | 1.17E-04 | 7.36E-06 | 2.94E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 18,000 | 3656 | 886 | 180 | 2,512 | 510 | 8,368 | 1700 | 6047 | 8.98 | 0.035 | 0.0010 | 5.9 | 3.11E-02 |
| 2 | A | 731 | 0.45 | 21,267 | 9657 | 1,578 | 717 | 2,969 | 1348 | 9,559 | 4341 | 16063 | 8.80 | 0.035 | 0.0010 | 15.4 | 8.08E-02 |
| 3 | A | 2352 | 1.46 | 8,478 | 12387 | 627 | 916 | 1,143 | 1670 | 3,613 | 5279 | 20252 | 8.59 | 0.035 | 0.0009 | 18.9 | 9.93E-02 |
| 5 | A | 953 | 0.59 | 7,861 | 4654 | 363 | 215 | 748 | 443 | 70 | 41 | 5353 | 3.23 | 0.035 | 0.0003 | 1.8 | 9.68E-03 |
| 6 | A | 1099 | 0.68 | 8,214 | 5608 | 536 | 366 | 1,069 | 730 | 3,112 | 2125 | 8828 | 8.15 | 0.035 | 0.0009 | 7.8 | 4.11E-02 |
| 8 | A | 1091 | 0.68 | 11,199 | 7590 | 540 | 366 | 1,087 | 737 | 0 | 0 | 8693 | 3.09 | 0.035 | 0.0003 | 2.9 | 1.50E-02 |
| 11 | A | 1201 | 0.75 | 250 | 187 | 17 | 13 | 17 | 13 | 0 | 0 | 212 | 2.92 | 0.035 | 0.0003 | 0.1 | 3.45E-04 |
| 12 | A | 824 | 0.51 | 197 | 101 | 12 | 6 | 18 | 9 | 0 | 0 | 116 | 3.08 | 0.035 | 0.0003 | 0.0 | 2.00E-04 |
| 14 | A | 1618 | 1.01 | 2,894 | 2909 | 249 | 250 | 372 | 374 | 1,041 | 1046 | 4579 | 7.93 | 0.035 | 0.0009 | 3.9 | 2.07E-02 |
| 18 | A | 1412 | 0.88 | 2,662 | 2335 | 180 | 158 | 289 | 253 | 506 | 444 | 3190 | 6.01 | 0.035 | 0.0006 | 2.1 | 1.09E-02 |
| 19 | A | 2386 | 1.48 | 2,842 | 4212 | 205 | 304 | 452 | 670 | 1,464 | 2170 | 7356 | 9.38 | 0.035 | 0.0010 | 7.5 | 3.95E-02 |
| 21 | A | 1258 | 0.78 | 8,013 | 6262 | 418 | 327 | 888 | 694 | 1,329 | 1039 | 8321 | 5.71 | 0.035 | 0.0006 | 5.1 | 2.69E-02 |
| 24 | A | 1946 | 1.21 | 9,679 | 11701 | 407 | 492 | 859 | 1038 | 1,602 | 1937 | 15168 | 5.60 | 0.035 | 0.0006 | 9.2 | 4.81E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 5,033 | 2110 | 237 | 99 | 617 | 259 | 2,028 | 850 | 3319 | 8.40 | 0.035 | 0.0009 | 3.0 | 1.59E-02 |
| 30 | A | 2827 | 1.76 | 6,928 | 12167 | 324 | 569 | 797 | 1400 | 2,238 | 3930 | 18066 | 7.58 | 0.035 | 0.0008 | 14.8 | 7.80E-02 |
| 31 | A | 820 | 0.51 | 9,883 | 5034 | 386 | 197 | 746 | 380 | 1,030 | 525 | 6136 | 4.64 | 0.035 | 0.0005 | 3.1 | 1.61E-02 |

**World Logistics Center** With EMFAC2014 **2035 Phase 1** No Mitigation
**PM10** Emissions

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 1** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.77E-03 | 3.82E-03 |
| Light Logistics | Phase 1 | 3.53E-06 | 8.80E-06 |
| Utilities Service Station | Phase 1 | 2.77E-06 | 8.04E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.03E-06 | 2.23E-06 |
| Convenience Store | Phase 1 | 6.35E-06 | 3.68E-06 |
| Fire Station | Phase 1 | 4.85E-09 | 2.35E-06 |
| Total | | 1.78E-03 | 3.84E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 9.05E-05 | 2.60E-05 |
| Light Logistics | Phase 1 | 5.44E-07 | 1.44E-07 |
| Utilities Service Station | Phase 1 | 1.76E-06 | 4.02E-07 |
| Gas Station w/Convenience Store | Phase 1 | 3.78E-07 | 1.48E-07 |
| Convenience Store | Phase 1 | 5.83E-07 | 2.35E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 9.38E-05 | 2.70E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.78E-03 | 3.84E-03 | |
| | Idling Emissions (g/sec) | 9.38E-05 | 2.70E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.88E-03 | 3.87E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources (g/sec) | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.88E-03 | 5.21E-03 | 7.09E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.51E-09 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.047 | 53 | 330 | 0.21 | 5.12E-01 | 1.13E-03 | 5.93E-06 | |
| | **LDT1** | 15 | 0.061 | 3 | 330 | 0.21 | 3.17E-02 | 6.99E-05 | 3.67E-07 | |
| | **LDT2** | 15 | 0.052 | 3 | 330 | 0.21 | 2.70E-02 | 5.96E-05 | 3.13E-07 | |
| | **MDT** | 15 | 0.048 | 5 | 330 | 0.21 | 4.74E-02 | 1.05E-04 | 5.49E-07 | |
| | **LHDT1** | 15 | 0.103 | 274 | 330 | 0.21 | 5.79E+00 | 1.28E-02 | 6.70E-05 | |
| | **LHDT2** | 15 | 0.115 | 93 | 330 | 0.21 | 2.20E+00 | 4.85E-03 | 2.55E-05 | |
| | **MHDT** | 15 | 0.147 | 1425 | 330 | 0.21 | 4.28E+01 | 9.43E-02 | 4.96E-04 | |
| | **HHDT** | 15 | 0.107 | 4628 | 330 | 0.21 | 1.01E+02 | 2.23E-01 | 1.17E-03 | 1.77E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.047 | 0 | 175 | 0.11 | 1.15E-03 | 2.54E-06 | 1.34E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 175 | 0.11 | 7.15E-05 | 1.57E-07 | 8.27E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 175 | 0.11 | 6.09E-05 | 1.34E-07 | 7.05E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 175 | 0.11 | 1.07E-04 | 2.35E-07 | 1.24E-09 | |
| | **LHDT1** | 15 | 0.103 | 2 | 175 | 0.11 | 1.92E-02 | 4.23E-05 | 2.22E-07 | |
| | **LHDT2** | 15 | 0.115 | 1 | 175 | 0.11 | 7.30E-03 | 1.61E-05 | 8.45E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.36E-02 | 2.06E-04 | 1.08E-06 | |
| | **HHDT** | 15 | 0.107 | 16 | 175 | 0.11 | 1.84E-01 | 4.05E-04 | 2.13E-06 | 3.53E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.047 | 0 | 100 | 0.06 | 9.72E-04 | 2.14E-06 | 1.12E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 6.02E-05 | 1.33E-07 | 6.97E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 100 | 0.06 | 5.13E-05 | 1.13E-07 | 5.94E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 9.00E-05 | 1.98E-07 | 1.04E-09 | |
| | **LHDT1** | 15 | 0.103 | 6 | 100 | 0.06 | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **LHDT2** | 15 | 0.115 | 2 | 100 | 0.06 | 1.39E-02 | 3.07E-05 | 1.61E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | **HHDT** | 15 | 0.107 | 22 | 100 | 0.06 | 1.43E-01 | 3.15E-04 | 1.66E-06 | 2.77E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 2.81E-04 | 6.20E-07 | 3.26E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 1.74E-05 | 3.84E-08 | 2.02E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 1.49E-05 | 3.27E-08 | 1.72E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 2.61E-05 | 5.74E-08 | 3.02E-10 | |
| | **LHDT1** | 15 | 0.103 | 1 | 50 | 0.03 | 2.57E-03 | 5.66E-06 | 2.97E-08 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 9.76E-04 | 2.15E-06 | 1.13E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.26E-02 | 1.38E-04 | 7.25E-07 | |
| | **HHDT** | 15 | 0.107 | 85 | 50 | 0.03 | 2.82E-01 | 6.20E-04 | 3.26E-06 | 4.03E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 4.67E-04 | 1.03E-06 | 5.40E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 2.89E-05 | 6.37E-08 | 3.35E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 2.46E-05 | 5.43E-08 | 2.85E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 4.32E-05 | 9.52E-08 | 5.00E-10 | |
| | **LHDT1** | 15 | 0.103 | 1 | 50 | 0.03 | 3.92E-03 | 8.64E-06 | 4.54E-08 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 1.49E-03 | 3.28E-06 | 1.72E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 15 | 0.107 | 133 | 50 | 0.03 | 4.40E-01 | 9.70E-04 | 5.10E-06 | 6.35E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 3.47E-04 | 7.65E-07 | 4.02E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 2.15E-05 | 4.74E-08 | 2.49E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 1.83E-05 | 4.04E-08 | 2.12E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 3.22E-05 | 7.08E-08 | 3.72E-10 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.85E-09 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 5.15E-01 | 1.14E-03 | 5.97E-06 | |
| | **LDT1** | | | 3 | | | 3.19E-02 | 7.03E-05 | 3.70E-07 | |
| | **LDT2** | | | 3 | | | 2.72E-02 | 5.99E-05 | 3.15E-07 | |
| | **MDT** | | | 5 | | | 4.77E-02 | 1.05E-04 | 5.53E-07 | |
| | **LHDT1** | | | 283 | | | 5.85E+00 | 1.29E-02 | 6.78E-05 | |
| | **LHDT2** | | | 96 | | | 2.22E+00 | 4.90E-03 | 2.57E-05 | |
| | **MHDT** | | | 1472 | | | 4.31E+01 | 9.50E-02 | 4.99E-04 | |
| | **HHDT** | | | 4883 | | | 1.02E+02 | 2.25E-01 | 1.18E-03 | |
| | **Total** | | | 6800 | | | 1.54E+02 | 3.39E-01 | 1.78E-03 | 1.78E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 137 | 5.17E+00 | 1.14E-02 | 5.98E-05 | |
| | **LHDT2** | 0.504 | 5 | 47 | 1.96E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | 0.002 | 5 | 713 | 1.19E-01 | 2.62E-04 | 1.37E-06 | |
| | **HHDT** | 0.003 | 5 | 2314 | 5.78E-01 | 1.27E-03 | 6.70E-06 | |
| | | | | 3210 | 7.82E+00 | 1.72E-02 | 9.05E-05 | 9.05E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 1 | 3.23E-02 | 7.12E-05 | 3.74E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 1.22E-02 | 2.69E-05 | 1.42E-07 | |
| | **MHDT** | 0.002 | 5 | 3 | 4.89E-04 | 1.08E-06 | 5.66E-09 | |
| | **HHDT** | 0.003 | 5 | 8 | 1.98E-03 | 4.36E-06 | 2.29E-08 | |
| | | | | 12 | 4.70E-02 | 1.04E-04 | 5.44E-07 | 5.44E-07 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 3 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.08E-02 | 8.99E-05 | 4.73E-07 | |
| | **MHDT** | 0.002 | 5 | 2 | 4.04E-04 | 8.91E-07 | 4.68E-09 | |
| | **HHDT** | 0.003 | 5 | 11 | 2.70E-03 | 5.95E-06 | 3.13E-08 | |
| | | | | 17 | 1.52E-01 | 3.35E-04 | 1.76E-06 | 1.76E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 1.51E-02 | 3.33E-05 | 1.75E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 5.73E-03 | 1.26E-05 | 6.63E-08 | |
| | **MHDT** | 0.002 | 5 | 7 | 1.15E-03 | 2.53E-06 | 1.33E-08 | |
| | **HHDT** | 0.003 | 5 | 43 | 1.06E-02 | 2.34E-05 | 1.23E-07 | |
| | | | | 50 | 3.26E-02 | 7.19E-05 | 3.78E-07 | 3.78E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 1 | 2.31E-02 | 5.09E-05 | 2.67E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 8.74E-03 | 1.93E-05 | 1.01E-07 | |
| | **MHDT** | 0.002 | 5 | 11 | 1.88E-03 | 4.13E-06 | 2.17E-08 | |
| | **HHDT** | 0.003 | 5 | 66 | 1.66E-02 | 3.66E-05 | 1.92E-07 | |
| | | | | 79 | 5.03E-02 | 1.11E-04 | 5.83E-07 | 5.83E-07 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 8.10E+00 | 1.79E-02 | 9.38E-05 | 9.38E-05 |

**World Logistics Center** **2035** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.048 | 17546 | 330 | 0.21 | 1.72E+02 | 3.79E-01 | 1.99E-03 | |
| | **LDT1** | 15 | 0.048 | 2058 | 330 | 0.21 | 2.04E+01 | 4.48E-02 | 2.36E-04 | |
| | **LDT2** | 15 | 0.048 | 6111 | 330 | 0.21 | 6.00E+01 | 1.32E-01 | 6.94E-04 | |
| | **MDT** | 15 | 0.048 | 4846 | 330 | 0.21 | 4.78E+01 | 1.05E-01 | 5.53E-04 | |
| | **LHDT1** | 15 | 0.087 | 886 | 330 | 0.21 | 1.58E+01 | 3.49E-02 | 1.83E-04 | |
| | **LHDT2** | 15 | 0.100 | 93 | 330 | 0.21 | 1.92E+00 | 4.22E-03 | 2.22E-05 | |
| | **MHDT** | 15 | 0.145 | 344 | 330 | 0.21 | 1.02E+01 | 2.26E-02 | 1.19E-04 | |
| | **HHDT** | 15 | 0.085 | 104 | 330 | 0.21 | 1.82E+00 | 4.02E-03 | 2.11E-05 | |
| | | | | | | | | | | 3.82E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.048 | 75 | 175 | 0.11 | 3.87E-01 | 8.54E-04 | 4.48E-06 | |
| | **LDT1** | 15 | 0.048 | 9 | 175 | 0.11 | 4.58E-02 | 1.01E-04 | 5.31E-07 | |
| | **LDT2** | 15 | 0.048 | 26 | 175 | 0.11 | 1.35E-01 | 2.98E-04 | 1.56E-06 | |
| | **MDT** | 15 | 0.048 | 21 | 175 | 0.11 | 1.08E-01 | 2.37E-04 | 1.25E-06 | |
| | **LHDT1** | 15 | 0.087 | 6 | 175 | 0.11 | 5.25E-02 | 1.16E-04 | 6.08E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.36E-03 | 1.40E-05 | 7.36E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.24E-02 | 4.93E-05 | 2.59E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 175 | 0.11 | 3.31E-03 | 7.30E-06 | 3.83E-08 | 8.80E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.048 | 110 | 100 | 0.06 | 3.26E-01 | 7.19E-04 | 3.78E-06 | |
| | **LDT1** | 15 | 0.048 | 13 | 100 | 0.06 | 3.86E-02 | 8.51E-05 | 4.47E-07 | |
| | **LDT2** | 15 | 0.048 | 38 | 100 | 0.06 | 1.14E-01 | 2.51E-04 | 1.32E-06 | |
| | **MDT** | 15 | 0.048 | 30 | 100 | 0.06 | 9.07E-02 | 2.00E-04 | 1.05E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.06E-02 | 2.33E-05 | 1.22E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 2.58E-03 | 5.69E-06 | 2.99E-08 | 8.04E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.048 | 64 | 50 | 0.03 | 9.45E-02 | 2.08E-04 | 1.09E-06 | |
| | **LDT1** | 15 | 0.048 | 7 | 50 | 0.03 | 1.12E-02 | 2.46E-05 | 1.29E-07 | |
| | **LDT2** | 15 | 0.048 | 22 | 50 | 0.03 | 3.30E-02 | 7.26E-05 | 3.81E-07 | |
| | **MDT** | 15 | 0.048 | 18 | 50 | 0.03 | 2.63E-02 | 5.78E-05 | 3.04E-07 | |
| | **LHDT1** | 15 | 0.087 | 3 | 50 | 0.03 | 7.02E-03 | 1.55E-05 | 8.13E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.51E-04 | 1.87E-06 | 9.85E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.50E-02 | 3.30E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.085 | 2 | 50 | 0.03 | 5.08E-03 | 1.12E-05 | 5.88E-08 | 2.23E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.048 | 105 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.048 | 12 | 50 | 0.03 | 1.85E-02 | 4.08E-05 | 2.15E-07 | |
| | **LDT2** | 15 | 0.048 | 37 | 50 | 0.03 | 5.46E-02 | 1.20E-04 | 6.32E-07 | |
| | **MDT** | 15 | 0.048 | 29 | 50 | 0.03 | 4.35E-02 | 9.59E-05 | 5.04E-07 | |
| | **LHDT1** | 15 | 0.087 | 4 | 50 | 0.03 | 1.07E-02 | 2.36E-05 | 1.24E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.30E-03 | 2.86E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **HHDT** | 15 | 0.085 | 3 | 50 | 0.03 | 7.94E-03 | 1.75E-05 | 9.19E-08 | 3.68E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.048 | 78 | 50 | 0.03 | 1.17E-01 | 2.57E-04 | 1.35E-06 | |
| | **LDT1** | 15 | 0.048 | 9 | 50 | 0.03 | 1.38E-02 | 3.04E-05 | 1.60E-07 | |
| | **LDT2** | 15 | 0.048 | 27 | 50 | 0.03 | 4.07E-02 | 8.96E-05 | 4.71E-07 | |
| | **MDT** | 15 | 0.048 | 22 | 50 | 0.03 | 3.24E-02 | 7.13E-05 | 3.75E-07 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.35E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.73E+02 | 3.81E-01 | 2.00E-03 | |
| | **LDT1** | | | 2108 | | | 2.05E+01 | 4.51E-02 | 2.37E-04 | |
| | **LDT2** | | | 6262 | | | 6.04E+01 | 1.33E-01 | 6.99E-04 | |
| | **MDT** | | | 4966 | | | 4.81E+01 | 1.06E-01 | 5.57E-04 | |
| | **LHDT1** | | | 917 | | | 1.60E+01 | 3.52E-02 | 1.85E-04 | |
| | **LHDT2** | | | 97 | | | 1.94E+00 | 4.27E-03 | 2.24E-05 | |
| | **MHDT** | | | 356 | | | 1.03E+01 | 2.27E-02 | 1.19E-04 | |
| | **HHDT** | | | 110 | | | 1.84E+00 | 4.06E-03 | 2.13E-05 | |
| | **Total** | | | 32792 | | | 3.32E+02 | 7.32E-01 | 3.84E-03 | 3.84E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.038 | 5 | 443 | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | **LHDT2** | 0.038 | 5 | 47 | 1.47E-01 | 3.24E-04 | 1.70E-06 | |
| | **MHDT** | 0.038 | 5 | 172 | 5.44E-01 | 1.20E-03 | 6.30E-06 | |
| | **HHDT** | 0.038 | 5 | 52 | 1.67E-01 | 3.68E-04 | 1.93E-06 | |
| | | | | 714 | 2.25E+00 | 4.95E-03 | 2.60E-05 | 2.60E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.038 | 5 | 3 | 8.70E-03 | 1.92E-05 | 1.01E-07 | |
| | **LHDT2** | 0.038 | 5 | 0 | 9.21E-04 | 2.03E-06 | 1.07E-08 | |
| | **MHDT** | 0.038 | 5 | 1 | 2.24E-03 | 4.94E-06 | 2.60E-08 | |
| | **HHDT** | 0.038 | 5 | 0 | 5.72E-04 | 1.26E-06 | 6.62E-09 | |
| | | | | 4 | 1.24E-02 | 2.74E-05 | 1.44E-07 | 1.44E-07 |
| **Idle at Utility** | **LHDT1** | 0.038 | 5 | 9 | 2.90E-02 | 6.39E-05 | 3.36E-07 | |
| | **LHDT2** | 0.038 | 5 | 1 | 3.08E-03 | 6.77E-06 | 3.56E-08 | |
| | **MHDT** | 0.038 | 5 | 1 | 1.85E-03 | 4.08E-06 | 2.15E-08 | |
| | **HHDT** | 0.038 | 5 | 0 | 7.80E-04 | 1.72E-06 | 9.03E-09 | |
| | | | | 11 | 3.47E-02 | 7.65E-05 | 4.02E-07 | 4.02E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.038 | 5 | 1 | 4.07E-03 | 8.96E-06 | 4.71E-08 | |
| | **LHDT2** | 0.038 | 5 | 0 | 4.31E-04 | 9.50E-07 | 4.99E-09 | |
| | **MHDT** | 0.038 | 5 | 2 | 5.26E-03 | 1.16E-05 | 6.08E-08 | |
| | **HHDT** | 0.038 | 5 | 1 | 3.07E-03 | 6.76E-06 | 3.55E-08 | |
| | | | | 4 | 1.28E-02 | 2.83E-05 | 1.48E-07 | 1.48E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.038 | 5 | 2 | 6.21E-03 | 1.37E-05 | 7.19E-08 | |
| | **LHDT2** | 0.038 | 5 | 0 | 6.58E-04 | 1.45E-06 | 7.62E-09 | |
| | **MHDT** | 0.038 | 5 | 3 | 8.60E-03 | 1.90E-05 | 9.96E-08 | |
| | **HHDT** | 0.038 | 5 | 2 | 4.80E-03 | 1.06E-05 | 5.56E-08 | |
| | | | | 6 | 2.03E-02 | 4.47E-05 | 2.35E-07 | 2.35E-07 |
| **Idle at Firestation** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.33E+00 | 5.13E-03 | 2.70E-05 | 2.70E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for Annual PM10 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **Annual PM10**

| Travel to Building | AERMOD Source ID | Diesel Vehicles (g/sec) | Non-Diesel Vehicles (g/sec) |
|---|---|---|---|
| High Cube | Phase 2 | 1.35E-03 | 2.92E-03 |
| Light Logistics | Phase 2 | 1.20E-05 | 2.99E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.36E-03 | 2.95E-03 |

**Vehicle Idling Emission Sources**

| Building | AERMOD Source IDs | Diesel Vehicles Emissions (g/sec) | Non-Diesel Vehicles Emissions (g/sec) |
|---|---|---|---|
| High Cube | Phase 2 | 6.92E-05 | 1.98E-05 |
| Light Logistics | Phase 2 | 1.85E-06 | 4.88E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 7.10E-05 | 2.03E-05 |

**Total Onsite Mobile Emissions**

| | | |
|---|---|---|
| Runing Exhaust (g/sec) | 1.36E-03 | 2.95E-03 |
| Idling Emissions (g/sec) | 7.10E-05 | 2.03E-05 |
| Total Vehicle Emissions (g/sec) | 1.43E-03 | 2.97E-03 |
| Forklift (g/sec) | | 2.40E-04 |
| Yard Trucks (g/sec) | | 4.54E-04 |
| Total Emissions (g/sec) | | 5.10E-03 |
| Size of Area Source | 5.15E+06 square Meters | |
| Area Source Emission Rate (g/m2-sec) | | 9.89E-10 |

**World Logistics Center** **2035** **Phase 2** No Mitigation
**Diesel Vehicle Emissions** **Annual PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Emissions Over Link (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.047 | 41 | 330 | 0.21 | 3.91E-01 | 8.62E-04 | 4.53E-06 | |
| | **LDT1** | 15 | 0.061 | 2 | 330 | 0.21 | 2.43E-02 | 5.34E-05 | 2.81E-07 | |
| | **LDT2** | 15 | 0.052 | 2 | 330 | 0.21 | 2.07E-02 | 4.55E-05 | 2.39E-07 | |
| | **MDT** | 15 | 0.048 | 4 | 330 | 0.21 | 3.63E-02 | 7.99E-05 | 4.20E-07 | |
| | **LHDT1** | 15 | 0.103 | 209 | 330 | 0.21 | 4.43E+00 | 9.75E-03 | 5.12E-05 | |
| | **LHDT2** | 15 | 0.115 | 71 | 330 | 0.21 | 1.68E+00 | 3.70E-03 | 1.95E-05 | |
| | **MHDT** | 15 | 0.147 | 1089 | 330 | 0.21 | 3.27E+01 | 7.21E-02 | 3.79E-04 | |
| | **HHDT** | 15 | 0.107 | 3536 | 330 | 0.21 | 7.73E+01 | 1.70E-01 | 8.95E-04 | 1.35E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.047 | 1 | 175 | 0.11 | 3.92E-03 | 8.63E-06 | 4.53E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 175 | 0.11 | 2.43E-04 | 5.35E-07 | 2.81E-09 | |
| | **LDT2** | 15 | 0.052 | 0 | 175 | 0.11 | 2.07E-04 | 4.56E-07 | 2.39E-09 | |
| | **MDT** | 15 | 0.048 | 0 | 175 | 0.11 | 3.63E-04 | 7.99E-07 | 4.20E-09 | |
| | **LHDT1** | 15 | 0.103 | 6 | 175 | 0.11 | 6.52E-02 | 1.44E-04 | 7.55E-07 | |
| | **LHDT2** | 15 | 0.115 | 2 | 175 | 0.11 | 2.48E-02 | 5.46E-05 | 2.87E-07 | |
| | **MHDT** | 15 | 0.147 | 20 | 175 | 0.11 | 3.18E-01 | 7.00E-04 | 3.68E-06 | |
| | **HHDT** | 15 | 0.107 | 54 | 175 | 0.11 | 6.24E-01 | 1.37E-03 | 7.22E-06 | 1.20E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.047 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 3.95E-01 | 8.71E-04 | 4.58E-06 | |
| | **LDT1** | | | 2 | | | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **LDT2** | | | 2 | | | 2.09E-02 | 4.60E-05 | 2.42E-07 | |
| | **MDT** | | | 4 | | | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **LHDT1** | | | 215 | | | 4.49E+00 | 9.89E-03 | 5.20E-05 | |
| | **LHDT2** | | | 73 | | | 1.71E+00 | 3.76E-03 | 1.98E-05 | |
| | **MHDT** | | | 1109 | | | 3.31E+01 | 7.28E-02 | 3.83E-04 | |
| | **HHDT** | | | 3590 | | | 7.79E+01 | 1.72E-01 | 9.02E-04 | |
| | **Total** | | | 5037 | | | 1.18E+02 | 2.59E-01 | 1.36E-03 | 1.36E-03 |

**Diesel truck Idling Emissions** **Annual PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Total Emissions for All Vehicles (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 105 | 3.95E+00 | 8.70E-03 | 4.57E-05 | |
| | **LHDT2** | 0.504 | 5 | 36 | 1.49E+00 | 3.29E-03 | 1.73E-05 | |
| | **MHDT** | 0.002 | 5 | 545 | 9.08E-02 | 2.00E-04 | 1.05E-06 | |
| | **HHDT** | 0.003 | 5 | 1768 | 4.42E-01 | 9.74E-04 | 5.12E-06 | |
| | | | | 2453 | 5.98E+00 | 1.32E-02 | | 6.92E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 3 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.15E-02 | 9.15E-05 | 4.81E-07 | |
| | **MHDT** | 0.002 | 5 | 10 | 1.66E-03 | 3.66E-06 | 1.92E-08 | |
| | **HHDT** | 0.003 | 5 | 27 | 6.72E-03 | 1.48E-05 | 7.78E-08 | |
| | | | | 41 | 1.60E-01 | 3.52E-04 | 1.85E-06 | 1.85E-06 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **TOTAL** | | | | 2494 | 6.14E+00 | 1.35E-02 | 1.85E-06 | 7.10E-05 |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Non-Diesel Vehicle Emissions** **Annual PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **Annual PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Emissions (grams/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.048 | 13408 | 330 | 0.21 | 1.31E+02 | 2.90E-01 | 1.52E-03 | |
| | **LDT1** | 15 | 0.048 | 1572 | 330 | 0.21 | 1.56E+01 | 3.43E-02 | 1.80E-04 | |
| | **LDT2** | 15 | 0.048 | 4670 | 330 | 0.21 | 4.58E+01 | 1.01E-01 | 5.31E-04 | |
| | **MDT** | 15 | 0.048 | 3703 | 330 | 0.21 | 3.65E+01 | 8.04E-02 | 4.23E-04 | |
| | **LHDT1** | 15 | 0.087 | 677 | 330 | 0.21 | 1.21E+01 | 2.66E-02 | 1.40E-04 | |
| | **LHDT2** | 15 | 0.100 | 71 | 330 | 0.21 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | **MHDT** | 15 | 0.145 | 263 | 330 | 0.21 | 7.83E+00 | 1.72E-02 | 9.06E-05 | |
| | **HHDT** | 15 | 0.085 | 80 | 330 | 0.21 | 1.39E+00 | 3.07E-03 | 1.61E-05 | 2.92E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.048 | 253 | 175 | 0.11 | 1.32E+00 | 2.90E-03 | 1.52E-05 | |
| | **LDT1** | 15 | 0.048 | 30 | 175 | 0.11 | 1.56E-01 | 3.43E-04 | 1.80E-06 | |
| | **LDT2** | 15 | 0.048 | 88 | 175 | 0.11 | 4.59E-01 | 1.01E-03 | 5.31E-06 | |
| | **MDT** | 15 | 0.048 | 70 | 175 | 0.11 | 3.65E-01 | 8.05E-04 | 4.23E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 175 | 0.11 | 1.78E-01 | 3.93E-04 | 2.06E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 175 | 0.11 | 2.16E-02 | 4.76E-05 | 2.50E-07 | |
| | **MHDT** | 15 | 0.145 | 5 | 175 | 0.11 | 7.60E-02 | 1.67E-04 | 8.80E-07 | |
| | **HHDT** | 15 | 0.085 | 1 | 175 | 0.11 | 1.12E-02 | 2.48E-05 | 1.30E-07 | 2.99E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 1.33E+02 | 2.92E-01 | 1.54E-03 | |
| | **LDT1** | | | 1602 | | | 1.57E+01 | 3.46E-02 | 1.82E-04 | |
| | **LDT2** | | | 4758 | | | 4.63E+01 | 1.02E-01 | 5.36E-04 | |
| | **MDT** | | | 3773 | | | 3.69E+01 | 8.12E-02 | 4.27E-04 | |
| | **LHDT1** | | | 696 | | | 1.23E+01 | 2.70E-02 | 1.42E-04 | |
| | **LHDT2** | | | 73 | | | 1.49E+00 | 3.28E-03 | 1.72E-05 | |
| | **MHDT** | | | 268 | | | 7.91E+00 | 1.74E-02 | 9.15E-05 | |
| | **HHDT** | | | 81 | | | 1.41E+00 | 3.10E-03 | 1.63E-05 | |
| | **Total** | | | 24913 | | | 2.55E+02 | 5.61E-01 | 2.95E-03 | 2.95E-03 |

**Non-Diesel Truck Idling Emissions** **Annual PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Emissions (g/sec) | Total Emissions for all Vehicles (g/day) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.038 | 5 | 339 | 1.06E+00 | 2.34E-03 | 1.23E-05 | |
| | **LHDT2** | 0.038 | 5 | 36 | 1.13E-01 | 2.48E-04 | 1.30E-06 | |
| | **MHDT** | 0.038 | 5 | 132 | 4.16E-01 | 9.16E-04 | 4.82E-06 | |
| | **HHDT** | 0.037 | 5 | 40 | 1.24E-01 | 2.73E-04 | 1.44E-06 | |
| | | | | 546 | 1.72E+00 | 3.78E-03 | | 1.98E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.038 | 5 | 9 | 2.95E-02 | 6.50E-05 | 3.42E-07 | |
| | **LHDT2** | 0.038 | 5 | 1 | 3.13E-03 | 6.89E-06 | 3.62E-08 | |
| | **MHDT** | 0.038 | 5 | 2 | 7.61E-03 | 1.68E-05 | 8.81E-08 | |
| | **HHDT** | 0.037 | 5 | 1 | 1.89E-03 | 4.16E-06 | 2.18E-08 | |
| | | | | 13 | 4.22E-02 | 9.29E-05 | | 4.88E-07 |
| **Idle at Utility** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| **TOTAL** | | | | 559 | 1.76E+00 | 3.87E-03 | 2.03E-05 | 2.03E-05 |

**World Logistics Center** **2035** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and 2 Emissions** **With EMFAC2014** Without Mitigation Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) | |
|---|---|---|---|---|---|
| 1 | 2.80E-03 | 2.25E-03 | 3.11E-02 | 3.61E-02 | |
| 2 | 7.29E-03 | 6.13E-03 | 8.08E-02 | 9.42E-02 | |
| 3 | 8.92E-03 | 7.83E-03 | 9.93E-02 | 1.16E-01 | |
| 5 | 7.32E-04 | 2.76E-03 | 9.68E-03 | 1.32E-02 | |
| 6 | 3.67E-03 | 3.50E-03 | 4.11E-02 | 4.82E-02 | |
| 8 | 1.14E-03 | 4.52E-03 | 1.50E-02 | 2.07E-02 | |
| 11 | 2.17E-05 | 1.12E-04 | 3.45E-04 | 4.79E-04 | |
| 12 | 1.47E-05 | 6.09E-05 | 2.00E-04 | 2.76E-04 | |
| 14 | 1.85E-03 | 1.86E-03 | 2.07E-02 | 2.44E-02 | |
| 18 | 9.33E-04 | 1.44E-03 | 1.09E-02 | 1.32E-02 | |
| 19 | 3.62E-03 | 2.70E-03 | 3.95E-02 | 4.58E-02 | |
| 21 | 2.31E-03 | 3.79E-03 | 2.69E-02 | 3.30E-02 | |
| 24 | 3.92E-03 | 6.92E-03 | 4.81E-02 | 5.89E-02 | |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| 29 | 1.41E-03 | 1.28E-03 | 1.59E-02 | 1.86E-02 | |
| 30 | 6.82E-03 | 7.36E-03 | 7.80E-02 | 9.22E-02 | |
| 31 | 1.22E-03 | 2.94E-03 | 1.61E-02 | 2.02E-02 | |
| | | | Total | 6.36E-01 | |
| | | | Total | 2.21E+01 | tons/year |
| | | | Total (NonRoad Dust) | 3.55E+00 | tons/year |
| | | | Total (Road Dust) | 1.85E+01 | tons/year |

| ID | Arterial | From | To | | 2035 Project Related Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by Parsons Brikerhoff (2013)

**World Logistics Center** **2035** **PM10** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0461 | 0.0521 | 0.0494 | 0.0465 | 0.0987 | 0.1114 | 0.1457 | 0.1050 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.24E-06 | 2.31E-07 | 2.05E-07 | 3.37E-07 | 4.17E-05 | 1.56E-05 | 7.02E-04 | 2.04E-03 | 2.80E-03 |
| 2 | 1 | 8.55E-06 | 6.10E-07 | 5.40E-07 | 8.89E-07 | 1.66E-04 | 6.21E-05 | 1.85E-03 | 5.20E-03 | 7.29E-03 |
| 3 | 1 | 1.10E-05 | 7.83E-07 | 6.93E-07 | 1.14E-06 | 2.12E-04 | 7.94E-05 | 2.30E-03 | 6.32E-03 | 8.92E-03 |
| 5 | 1 | 4.12E-06 | 2.94E-07 | 2.60E-07 | 4.29E-07 | 4.98E-05 | 1.86E-05 | 6.09E-04 | 4.96E-05 | 7.32E-04 |
| 6 | 1 | 4.96E-06 | 3.54E-07 | 3.14E-07 | 5.16E-07 | 8.48E-05 | 3.17E-05 | 1.00E-03 | 2.54E-03 | 3.67E-03 |
| 8 | 1 | 6.72E-06 | 4.80E-07 | 4.25E-07 | 6.99E-07 | 8.48E-05 | 3.17E-05 | 1.01E-03 | 0.00E+00 | 1.14E-03 |
| 11 | 1 | 1.65E-07 | 1.18E-08 | 1.04E-08 | 1.72E-08 | 2.94E-06 | 1.10E-06 | 1.74E-05 | 0.00E+00 | 2.17E-05 |
| 12 | 1 | 8.92E-08 | 6.37E-09 | 5.64E-09 | 9.28E-09 | 1.42E-06 | 5.33E-07 | 1.27E-05 | 0.00E+00 | 1.47E-05 |
| 14 | 1 | 2.57E-06 | 1.84E-07 | 1.63E-07 | 2.68E-07 | 5.80E-05 | 2.17E-05 | 5.14E-04 | 1.25E-03 | 1.85E-03 |
| 18 | 1 | 2.07E-06 | 1.48E-07 | 1.31E-07 | 2.15E-07 | 3.66E-05 | 1.37E-05 | 3.49E-04 | 5.31E-04 | 9.33E-04 |
| 19 | 1 | 3.73E-06 | 2.66E-07 | 2.36E-07 | 3.88E-07 | 7.04E-05 | 2.63E-05 | 9.21E-04 | 2.60E-03 | 3.62E-03 |
| 21 | 1 | 5.54E-06 | 3.96E-07 | 3.50E-07 | 5.77E-07 | 7.57E-05 | 2.83E-05 | 9.54E-04 | 1.24E-03 | 2.31E-03 |
| 24 | 1 | 1.04E-05 | 7.39E-07 | 6.55E-07 | 1.08E-06 | 1.14E-04 | 4.27E-05 | 1.43E-03 | 2.32E-03 | 3.92E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.87E-06 | 1.33E-07 | 1.18E-07 | 1.94E-07 | 2.30E-05 | 8.62E-06 | 3.56E-04 | 1.02E-03 | 1.41E-03 |
| 30 | 1 | 1.08E-05 | 7.69E-07 | 6.81E-07 | 1.12E-06 | 1.32E-04 | 4.93E-05 | 1.92E-03 | 4.71E-03 | 6.82E-03 |
| 31 | 1 | 4.45E-06 | 3.18E-07 | 2.82E-07 | 4.64E-07 | 4.56E-05 | 1.70E-05 | 5.23E-04 | 6.28E-04 | 1.22E-03 |

**World Logistics Center** **2035** **PM10** **Without Mitigation**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29,766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 |
| 2 | 35,373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 |
| 3 | 13,861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 |
| 5 | 9,042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 |
| 6 | 12,931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 |
| 8 | 12,826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 |
| 14 | 4,556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 |
| 18 | 3,637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 |
| 19 | 4,963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 |
| 21 | 10,648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 |
| 24 | 12,547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7,915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 |
| 30 | 10,287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 |
| 31 | 12,045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0459 | 0.0461 | 0.0460 | 0.0460 | 0.0856 | 0.0986 | 0.1436 | 0.0837 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.05E-03 | 1.39E-04 | 4.19E-04 | 3.27E-04 | 1.18E-04 | 1.44E-05 | 1.57E-04 | 2.39E-05 | 2.25E-03 |
| 2 | 1 | 2.79E-03 | 3.68E-04 | 1.11E-03 | 8.65E-04 | 4.69E-04 | 5.73E-05 | 4.14E-04 | 6.09E-05 | 6.13E-03 |
| 3 | 1 | 3.57E-03 | 4.72E-04 | 1.42E-03 | 1.11E-03 | 5.99E-04 | 7.33E-05 | 5.13E-04 | 7.41E-05 | 7.83E-03 |
| 5 | 1 | 1.34E-03 | 1.77E-04 | 5.34E-04 | 4.17E-04 | 1.41E-04 | 1.72E-05 | 1.36E-04 | 5.82E-07 | 2.76E-03 |
| 6 | 1 | 1.62E-03 | 2.14E-04 | 6.43E-04 | 5.02E-04 | 2.39E-04 | 2.93E-05 | 2.24E-04 | 2.98E-05 | 3.50E-03 |
| 8 | 1 | 2.19E-03 | 2.89E-04 | 8.71E-04 | 6.80E-04 | 2.39E-04 | 2.93E-05 | 2.26E-04 | 0.00E+00 | 4.52E-03 |
| 11 | 1 | 5.38E-05 | 7.10E-06 | 2.14E-05 | 1.67E-05 | 8.29E-06 | 1.01E-06 | 3.89E-06 | 0.00E+00 | 1.12E-04 |
| 12 | 1 | 2.91E-05 | 3.84E-06 | 1.16E-05 | 9.03E-06 | 4.02E-06 | 4.91E-07 | 2.83E-06 | 0.00E+00 | 6.09E-05 |
| 14 | 1 | 8.39E-04 | 1.11E-04 | 3.34E-04 | 2.60E-04 | 1.64E-04 | 2.00E-05 | 1.15E-04 | 1.47E-05 | 1.86E-03 |
| 18 | 1 | 6.74E-04 | 8.89E-05 | 2.68E-04 | 2.09E-04 | 1.03E-04 | 1.26E-05 | 7.78E-05 | 6.23E-06 | 1.44E-03 |
| 19 | 1 | 1.22E-03 | 1.60E-04 | 4.83E-04 | 3.77E-04 | 1.99E-04 | 2.43E-05 | 2.06E-04 | 3.05E-05 | 2.70E-03 |
| 21 | 1 | 1.81E-03 | 2.38E-04 | 7.18E-04 | 5.61E-04 | 2.14E-04 | 2.61E-05 | 2.13E-04 | 1.46E-05 | 3.79E-03 |
| 24 | 1 | 3.38E-03 | 4.46E-04 | 1.34E-03 | 1.05E-03 | 3.22E-04 | 3.93E-05 | 3.19E-04 | 2.72E-05 | 6.92E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 6.09E-04 | 8.04E-05 | 2.42E-04 | 1.89E-04 | 6.50E-05 | 7.95E-06 | 7.94E-05 | 1.19E-05 | 1.28E-03 |
| 30 | 1 | 3.51E-03 | 4.63E-04 | 1.40E-03 | 1.09E-03 | 3.72E-04 | 4.55E-05 | 4.30E-04 | 5.52E-05 | 7.36E-03 |
| 31 | 1 | 1.45E-03 | 1.92E-04 | 5.77E-04 | 4.51E-04 | 1.29E-04 | 1.57E-05 | 1.17E-04 | 7.36E-06 | 2.94E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 18,000 | 3656 | 886 | 180 | 2,512 | 510 | 8,368 | 1700 | 6047 | 8.98 | 0.035 | 0.0010 | 5.9 | 3.11E-02 |
| 2 | A | 731 | 0.45 | 21,267 | 9657 | 1,578 | 717 | 2,969 | 1348 | 9,559 | 4341 | 16063 | 8.80 | 0.035 | 0.0010 | 15.4 | 8.08E-02 |
| 3 | A | 2352 | 1.46 | 8,478 | 12387 | 627 | 916 | 1,143 | 1670 | 3,613 | 5279 | 20252 | 8.59 | 0.035 | 0.0009 | 18.9 | 9.93E-02 |
| 5 | A | 953 | 0.59 | 7,861 | 4654 | 363 | 215 | 748 | 443 | 70 | 41 | 5353 | 3.23 | 0.035 | 0.0003 | 1.8 | 9.68E-03 |
| 6 | A | 1099 | 0.68 | 8,214 | 5608 | 536 | 366 | 1,069 | 730 | 3,112 | 2125 | 8828 | 8.15 | 0.035 | 0.0009 | 7.8 | 4.11E-02 |
| 8 | A | 1091 | 0.68 | 11,199 | 7590 | 540 | 366 | 1,087 | 737 | 0 | 0 | 8693 | 3.09 | 0.035 | 0.0003 | 2.9 | 1.50E-02 |
| 11 | A | 1201 | 0.75 | 250 | 187 | 17 | 13 | 17 | 13 | 0 | 0 | 212 | 2.92 | 0.035 | 0.0003 | 0.1 | 3.45E-04 |
| 12 | A | 824 | 0.51 | 197 | 101 | 12 | 6 | 18 | 9 | 0 | 0 | 116 | 3.08 | 0.035 | 0.0003 | 0.0 | 2.00E-04 |
| 14 | A | 1618 | 1.01 | 2,894 | 2909 | 249 | 250 | 372 | 374 | 1,041 | 1046 | 4579 | 7.93 | 0.035 | 0.0009 | 3.9 | 2.07E-02 |
| 18 | A | 1412 | 0.88 | 2,662 | 2335 | 180 | 158 | 289 | 253 | 506 | 444 | 3190 | 6.01 | 0.035 | 0.0006 | 2.1 | 1.09E-02 |
| 19 | A | 2386 | 1.48 | 2,842 | 4212 | 205 | 304 | 452 | 670 | 1,464 | 2170 | 7356 | 9.38 | 0.035 | 0.0010 | 7.5 | 3.95E-02 |
| 21 | A | 1258 | 0.78 | 8,013 | 6262 | 418 | 327 | 888 | 694 | 1,329 | 1039 | 8321 | 5.71 | 0.035 | 0.0006 | 5.1 | 2.69E-02 |
| 24 | A | 1946 | 1.21 | 9,679 | 11701 | 407 | 492 | 859 | 1038 | 1,602 | 1937 | 15168 | 5.60 | 0.035 | 0.0006 | 9.2 | 4.81E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 5,033 | 2110 | 237 | 99 | 617 | 259 | 2,028 | 850 | 3319 | 8.40 | 0.035 | 0.0009 | 3.0 | 1.59E-02 |
| 30 | A | 2827 | 1.76 | 6,928 | 12167 | 324 | 569 | 797 | 1400 | 2,238 | 3930 | 18066 | 7.58 | 0.035 | 0.0008 | 14.8 | 7.80E-02 |
| 31 | A | 820 | 0.51 | 9,883 | 5034 | 386 | 197 | 746 | 380 | 1,030 | 525 | 6136 | 4.64 | 0.035 | 0.0005 | 3.1 | 1.61E-02 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 1**

**With Mitigation: MY2010 T6 and T7 DSL**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 1.77E-03 | 3.82E-03 |
| Light Logistics | Phase 1 | 3.54E-06 | 8.80E-06 |
| Utilities Service Station | Phase 1 | 2.77E-06 | 8.04E-06 |
| Gas Station w/Convenience Store | Phase 1 | 4.04E-06 | 2.23E-06 |
| Convenience Store | Phase 1 | 6.36E-06 | 3.68E-06 |
| Fire Station | Phase 1 | 4.85E-09 | 2.36E-06 |
| Total | | 1.79E-03 | 3.84E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.67E-05 | 2.60E-05 |
| Light Logistics | Phase 1 | 5.31E-07 | 1.44E-07 |
| Utilities Service Station | Phase 1 | 1.74E-06 | 4.02E-07 |
| Gas Station w/Convenience Store | Phase 1 | 3.12E-07 | 1.49E-07 |
| Convenience Store | Phase 1 | 4.79E-07 | 2.35E-07 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 8.98E-05 | 2.70E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.79E-03 | 3.84E-03 | |
| | Idling Emissions (g/sec) | 8.98E-05 | 2.70E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.87E-03 | 3.87E-03 | 5.75E-03 |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 1.03E-03 | |
| | Forklifts (LPG) (g/sec) | | 3.05E-04 | |
| | Total Other Onsite Sources | | 1.34E-03 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.87E-03 | 5.21E-03 | 7.08E-03 |
| | Size of Area Source (m2) | | | 4683563 |
| | **Area Emission Rate (g/m2-sec)** | | | 1.51E-09 |

**World Logistics Center** **2035** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.047 | 53 | 330 | 0.21 | 5.12E-01 | 1.13E-03 | 5.93E-06 | |
| | **LDT1** | 15 | 0.061 | 3 | 330 | 0.21 | 3.17E-02 | 6.99E-05 | 3.67E-07 | |
| | **LDT2** | 15 | 0.052 | 3 | 330 | 0.21 | 2.70E-02 | 5.96E-05 | 3.13E-07 | |
| | **MDT** | 15 | 0.048 | 5 | 330 | 0.21 | 4.74E-02 | 1.05E-04 | 5.49E-07 | |
| | **LHDT1** | 15 | 0.103 | 274 | 330 | 0.21 | 5.79E+00 | 1.28E-02 | 6.70E-05 | |
| | **LHDT2** | 15 | 0.115 | 93 | 330 | 0.21 | 2.20E+00 | 4.85E-03 | 2.55E-05 | |
| | **MHDT** | 15 | 0.147 | 1425 | 330 | 0.21 | 4.28E+01 | 9.43E-02 | 4.96E-04 | |
| | **HHDT** | 15 | 0.107 | 4628 | 330 | 0.21 | 1.01E+02 | 2.23E-01 | 1.17E-03 | |
| | | | | | | | | | | 1.77E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.047 | 0 | 175 | 0.11 | 1.15E-03 | 2.54E-06 | 1.34E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 175 | 0.11 | 7.15E-05 | 1.57E-07 | 8.27E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 175 | 0.11 | 6.09E-05 | 1.34E-07 | 7.05E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 175 | 0.11 | 1.07E-04 | 2.35E-07 | 1.24E-09 | |
| | **LHDT1** | 15 | 0.103 | 2 | 175 | 0.11 | 1.92E-02 | 4.23E-05 | 2.22E-07 | |
| | **LHDT2** | 15 | 0.115 | 1 | 175 | 0.11 | 7.30E-03 | 1.61E-05 | 8.45E-08 | |
| | **MHDT** | 15 | 0.147 | 6 | 175 | 0.11 | 9.35E-02 | 2.06E-04 | 1.08E-06 | |
| | **HHDT** | 15 | 0.107 | 16 | 175 | 0.11 | 1.84E-01 | 4.05E-04 | 2.13E-06 | 3.54E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.047 | 0 | 100 | 0.06 | 9.72E-04 | 2.14E-06 | 1.12E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 6.02E-05 | 1.33E-07 | 6.97E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 100 | 0.06 | 5.13E-05 | 1.13E-07 | 5.94E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 9.00E-05 | 1.98E-07 | 1.04E-09 | |
| | **LHDT1** | 15 | 0.103 | 6 | 100 | 0.06 | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **LHDT2** | 15 | 0.115 | 2 | 100 | 0.06 | 1.39E-02 | 3.07E-05 | 1.61E-07 | |
| | **MHDT** | 15 | 0.147 | 5 | 100 | 0.06 | 4.42E-02 | 9.73E-05 | 5.11E-07 | |
| | **HHDT** | 15 | 0.107 | 22 | 100 | 0.06 | 1.43E-01 | 3.16E-04 | 1.66E-06 | 2.77E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 2.81E-04 | 6.20E-07 | 3.26E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 1.74E-05 | 3.84E-08 | 2.02E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 1.49E-05 | 3.27E-08 | 1.72E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 2.61E-05 | 5.74E-08 | 3.02E-10 | |
| | **LHDT1** | 15 | 0.103 | 1 | 50 | 0.03 | 2.57E-03 | 5.66E-06 | 2.97E-08 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 9.76E-04 | 2.15E-06 | 1.13E-08 | |
| | **MHDT** | 15 | 0.147 | 14 | 50 | 0.03 | 6.26E-02 | 1.38E-04 | 7.25E-07 | |
| | **HHDT** | 15 | 0.107 | 85 | 50 | 0.03 | 2.82E-01 | 6.22E-04 | 3.27E-06 | 4.04E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 4.67E-04 | 1.03E-06 | 5.40E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 2.89E-05 | 6.37E-08 | 3.35E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 2.46E-05 | 5.43E-08 | 2.85E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 4.32E-05 | 9.52E-08 | 5.00E-10 | |
| | **LHDT1** | 15 | 0.103 | 1 | 50 | 0.03 | 3.92E-03 | 8.64E-06 | 4.54E-08 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 1.49E-03 | 3.28E-06 | 1.72E-08 | |
| | **MHDT** | 15 | 0.147 | 23 | 50 | 0.03 | 1.03E-01 | 2.26E-04 | 1.19E-06 | |
| | **HHDT** | 15 | 0.107 | 133 | 50 | 0.03 | 4.41E-01 | 9.72E-04 | 5.11E-06 | 6.36E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 3.47E-04 | 7.65E-07 | 4.02E-09 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 2.15E-05 | 4.74E-08 | 2.49E-10 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 1.83E-05 | 4.04E-08 | 2.12E-10 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 3.22E-05 | 7.08E-08 | 3.72E-10 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.85E-09 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 5.15E-01 | 1.14E-03 | 5.97E-06 | |
| | **LDT1** | | | 3 | | | 3.19E-02 | 7.03E-05 | 3.70E-07 | |
| | **LDT2** | | | 3 | | | 2.72E-02 | 5.99E-05 | 3.15E-07 | |
| | **MDT** | | | 5 | | | 4.77E-02 | 1.05E-04 | 5.53E-07 | |
| | **LHDT1** | | | 283 | | | 5.85E+00 | 1.29E-02 | 6.78E-05 | |
| | **LHDT2** | | | 96 | | | 2.22E+00 | 4.90E-03 | 2.57E-05 | |
| | **MHDT** | | | 1472 | | | 4.31E+01 | 9.50E-02 | 4.99E-04 | |
| | **HHDT** | | | 4883 | | | 1.02E+02 | 2.26E-01 | 1.19E-03 | |
| | **Total** | | | 6800 | | | 1.54E+02 | 3.40E-01 | 1.79E-03 | 1.79E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 137 | 5.17E+00 | 1.14E-02 | 5.98E-05 | |
| | **LHDT2** | 0.504 | 5 | 47 | 1.96E+00 | 4.31E-03 | 2.26E-05 | |
| | **MHDT** | 0.001 | 5 | 713 | 8.05E-02 | 1.77E-04 | 9.32E-07 | |
| | **HHDT** | 0.001 | 5 | 2314 | 2.89E-01 | 6.36E-04 | 3.34E-06 | |
| | | | | 3210 | 7.49E+00 | 1.65E-02 | 8.67E-05 | 8.67E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 1 | 3.23E-02 | 7.12E-05 | 3.74E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 1.22E-02 | 2.69E-05 | 1.42E-07 | |
| | **MHDT** | 0.001 | 5 | 3 | 3.32E-04 | 7.30E-07 | 3.84E-09 | |
| | **HHDT** | 0.001 | 5 | 8 | 9.88E-04 | 2.18E-06 | 1.14E-08 | |
| | | | | 12 | 4.59E-02 | 1.01E-04 | 5.31E-07 | 5.31E-07 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 3 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.08E-02 | 8.99E-05 | 4.73E-07 | |
| | **MHDT** | 0.001 | 5 | 2 | 2.74E-04 | 6.04E-07 | 3.17E-09 | |
| | **HHDT** | 0.001 | 5 | 11 | 1.35E-03 | 2.97E-06 | 1.56E-08 | |
| | | | | 17 | 1.50E-01 | 3.31E-04 | 1.74E-06 | 1.74E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 1.51E-02 | 3.33E-05 | 1.75E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 5.73E-03 | 1.26E-05 | 6.63E-08 | |
| | **MHDT** | 0.001 | 5 | 7 | 7.77E-04 | 1.71E-06 | 8.99E-09 | |
| | **HHDT** | 0.001 | 5 | 43 | 5.30E-03 | 1.17E-05 | 6.14E-08 | |
| | | | | 50 | 2.69E-02 | 5.93E-05 | 3.12E-07 | 3.12E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 1 | 2.31E-02 | 5.09E-05 | 2.67E-07 | |
| | **LHDT2** | 0.504 | 5 | 0 | 8.74E-03 | 1.93E-05 | 1.01E-07 | |
| | **MHDT** | 0.001 | 5 | 11 | 1.27E-03 | 2.80E-06 | 1.47E-08 | |
| | **HHDT** | 0.001 | 5 | 66 | 8.29E-03 | 1.83E-05 | 9.60E-08 | |
| | | | | 79 | 4.14E-02 | 9.12E-05 | 4.79E-07 | 4.79E-07 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3368 | 7.76E+00 | 1.71E-02 | 8.98E-05 | 8.98E-05 |

**World Logistics Center** **2035** **Phase 1** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year** SoCAB

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.048 | 17546 | 330 | 0.21 | 1.72E+02 | 3.79E-01 | 1.99E-03 | |
| | **LDT1** | 15 | 0.048 | 2058 | 330 | 0.21 | 2.04E+01 | 4.48E-02 | 2.36E-04 | |
| | **LDT2** | 15 | 0.048 | 6111 | 330 | 0.21 | 6.00E+01 | 1.32E-01 | 6.94E-04 | |
| | **MDT** | 15 | 0.048 | 4846 | 330 | 0.21 | 4.78E+01 | 1.05E-01 | 5.53E-04 | |
| | **LHDT1** | 15 | 0.087 | 886 | 330 | 0.21 | 1.58E+01 | 3.49E-02 | 1.83E-04 | |
| | **LHDT2** | 15 | 0.100 | 93 | 330 | 0.21 | 1.92E+00 | 4.22E-03 | 2.22E-05 | |
| | **MHDT** | 15 | 0.145 | 344 | 330 | 0.21 | 1.02E+01 | 2.26E-02 | 1.19E-04 | |
| | **HHDT** | 15 | 0.085 | 104 | 330 | 0.21 | 1.82E+00 | 4.02E-03 | 2.11E-05 | |
| | | | | | | | | | | 3.82E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.048 | 75 | 175 | 0.11 | 3.88E-01 | 8.54E-04 | 4.49E-06 | |
| | **LDT1** | 15 | 0.048 | 9 | 175 | 0.11 | 4.59E-02 | 1.01E-04 | 5.31E-07 | |
| | **LDT2** | 15 | 0.048 | 26 | 175 | 0.11 | 1.35E-01 | 2.98E-04 | 1.56E-06 | |
| | **MDT** | 15 | 0.048 | 21 | 175 | 0.11 | 1.08E-01 | 2.37E-04 | 1.25E-06 | |
| | **LHDT1** | 15 | 0.087 | 6 | 175 | 0.11 | 5.25E-02 | 1.16E-04 | 6.08E-07 | |
| | **LHDT2** | 15 | 0.100 | 1 | 175 | 0.11 | 6.36E-03 | 1.40E-05 | 7.36E-08 | |
| | **MHDT** | 15 | 0.145 | 1 | 175 | 0.11 | 2.24E-02 | 4.93E-05 | 2.59E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 175 | 0.11 | 3.31E-03 | 7.30E-06 | 3.83E-08 | 8.80E-06 |
| **Travel at Utility** | **LDA** | 15 | 0.048 | 110 | 100 | 0.06 | 3.26E-01 | 7.19E-04 | 3.78E-06 | |
| | **LDT1** | 15 | 0.048 | 13 | 100 | 0.06 | 3.86E-02 | 8.51E-05 | 4.47E-07 | |
| | **LDT2** | 15 | 0.048 | 38 | 100 | 0.06 | 1.14E-01 | 2.51E-04 | 1.32E-06 | |
| | **MDT** | 15 | 0.048 | 30 | 100 | 0.06 | 9.07E-02 | 2.00E-04 | 1.05E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 100 | 0.06 | 1.00E-01 | 2.21E-04 | 1.16E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 100 | 0.06 | 1.21E-02 | 2.67E-05 | 1.40E-07 | |
| | **MHDT** | 15 | 0.145 | 1 | 100 | 0.06 | 1.06E-02 | 2.33E-05 | 1.22E-07 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 2.58E-03 | 5.69E-06 | 2.99E-08 | 8.04E-06 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.048 | 64 | 50 | 0.03 | 9.45E-02 | 2.08E-04 | 1.09E-06 | |
| | **LDT1** | 15 | 0.048 | 7 | 50 | 0.03 | 1.12E-02 | 2.46E-05 | 1.29E-07 | |
| | **LDT2** | 15 | 0.048 | 22 | 50 | 0.03 | 3.30E-02 | 7.26E-05 | 3.81E-07 | |
| | **MDT** | 15 | 0.048 | 18 | 50 | 0.03 | 2.63E-02 | 5.78E-05 | 3.04E-07 | |
| | **LHDT1** | 15 | 0.087 | 3 | 50 | 0.03 | 7.02E-03 | 1.55E-05 | 8.13E-08 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 8.51E-04 | 1.87E-06 | 9.85E-09 | |
| | **MHDT** | 15 | 0.145 | 3 | 50 | 0.03 | 1.50E-02 | 3.30E-05 | 1.73E-07 | |
| | **HHDT** | 15 | 0.085 | 2 | 50 | 0.03 | 5.08E-03 | 1.12E-05 | 5.88E-08 | 2.23E-06 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.048 | 105 | 50 | 0.03 | 1.57E-01 | 3.45E-04 | 1.81E-06 | |
| | **LDT1** | 15 | 0.048 | 12 | 50 | 0.03 | 1.85E-02 | 4.08E-05 | 2.15E-07 | |
| | **LDT2** | 15 | 0.048 | 37 | 50 | 0.03 | 5.46E-02 | 1.20E-04 | 6.32E-07 | |
| | **MDT** | 15 | 0.048 | 29 | 50 | 0.03 | 4.35E-02 | 9.59E-05 | 5.04E-07 | |
| | **LHDT1** | 15 | 0.087 | 4 | 50 | 0.03 | 1.07E-02 | 2.36E-05 | 1.24E-07 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 1.30E-03 | 2.86E-06 | 1.50E-08 | |
| | **MHDT** | 15 | 0.145 | 5 | 50 | 0.03 | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **HHDT** | 15 | 0.085 | 3 | 50 | 0.03 | 7.94E-03 | 1.75E-05 | 9.19E-08 | 3.68E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.048 | 78 | 50 | 0.03 | 1.17E-01 | 2.57E-04 | 1.35E-06 | |
| | **LDT1** | 15 | 0.048 | 9 | 50 | 0.03 | 1.38E-02 | 3.04E-05 | 1.60E-07 | |
| | **LDT2** | 15 | 0.048 | 27 | 50 | 0.03 | 4.07E-02 | 8.96E-05 | 4.71E-07 | |
| | **MDT** | 15 | 0.048 | 22 | 50 | 0.03 | 3.24E-02 | 7.13E-05 | 3.75E-07 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-06 |
| **Total - All Buildings** | **LDA** | | | 17978 | | | 1.73E+02 | 3.81E-01 | 2.00E-03 | |
| | **LDT1** | | | 2108 | | | 2.05E+01 | 4.51E-02 | 2.37E-04 | |
| | **LDT2** | | | 6262 | | | 6.04E+01 | 1.33E-01 | 6.99E-04 | |
| | **MDT** | | | 4966 | | | 4.81E+01 | 1.06E-01 | 5.57E-04 | |
| | **LHDT1** | | | 917 | | | 1.60E+01 | 3.52E-02 | 1.85E-04 | |
| | **LHDT2** | | | 97 | | | 1.94E+00 | 4.27E-03 | 2.24E-05 | |
| | **MHDT** | | | 356 | | | 1.03E+01 | 2.27E-02 | 1.19E-04 | |
| | **HHDT** | | | 110 | | | 1.84E+00 | 4.06E-03 | 2.13E-05 | |
| | **Total** | | | 32792 | | | 3.32E+02 | 7.32E-01 | 3.84E-03 | 3.84E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.038 | 5 | 443 | 1.39E+00 | 3.06E-03 | 1.61E-05 | |
| | **LHDT2** | 0.038 | 5 | 47 | 1.47E-01 | 3.24E-04 | 1.71E-06 | |
| | **MHDT** | 0.038 | 5 | 172 | 5.45E-01 | 1.20E-03 | 6.30E-06 | |
| | **HHDT** | 0.038 | 5 | 52 | 1.67E-01 | 3.68E-04 | 1.93E-06 | |
| | | | | 714 | 2.25E+00 | 4.96E-03 | 2.60E-05 | 2.60E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.038 | 5 | 3 | 8.70E-03 | 1.92E-05 | 1.01E-07 | |
| | **LHDT2** | 0.038 | 5 | 0 | 9.22E-04 | 2.03E-06 | 1.07E-08 | |
| | **MHDT** | 0.038 | 5 | 1 | 2.24E-03 | 4.94E-06 | 2.60E-08 | |
| | **HHDT** | 0.038 | 5 | 0 | 5.72E-04 | 1.26E-06 | 6.62E-09 | |
| | | | | 4 | 1.24E-02 | 2.74E-05 | 1.44E-07 | 1.44E-07 |
| **Idle at Utility** | **LHDT1** | 0.038 | 5 | 9 | 2.90E-02 | 6.40E-05 | 3.36E-07 | |
| | **LHDT2** | 0.038 | 5 | 1 | 3.08E-03 | 6.78E-06 | 3.56E-08 | |
| | **MHDT** | 0.038 | 5 | 1 | 1.85E-03 | 4.08E-06 | 2.15E-08 | |
| | **HHDT** | 0.038 | 5 | 0 | 7.80E-04 | 1.72E-06 | 9.03E-09 | |
| | | | | 11 | 3.48E-02 | 7.65E-05 | 4.02E-07 | 4.02E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.038 | 5 | 1 | 4.07E-03 | 8.97E-06 | 4.71E-08 | |
| | **LHDT2** | 0.038 | 5 | 0 | 4.31E-04 | 9.50E-07 | 4.99E-09 | |
| | **MHDT** | 0.038 | 5 | 2 | 5.26E-03 | 1.16E-05 | 6.08E-08 | |
| | **HHDT** | 0.038 | 5 | 1 | 3.07E-03 | 6.77E-06 | 3.56E-08 | |
| | | | | 4 | 1.28E-02 | 2.83E-05 | 1.49E-07 | 1.49E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.038 | 5 | 2 | 6.22E-03 | 1.37E-05 | 7.19E-08 | |
| | **LHDT2** | 0.038 | 5 | 0 | 6.58E-04 | 1.45E-06 | 7.62E-09 | |
| | **MHDT** | 0.038 | 5 | 3 | 8.60E-03 | 1.90E-05 | 9.96E-08 | |
| | **HHDT** | 0.038 | 5 | 2 | 4.80E-03 | 1.06E-05 | 5.56E-08 | |
| | | | | 6 | 2.03E-02 | 4.47E-05 | 2.35E-07 | 2.35E-07 |
| **Idle at Firestation** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 740 | 2.33E+00 | 5.13E-03 | 2.70E-05 | 2.70E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for PM10 emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**

**Vehicle Running Exhaust Emissions** **Pollutant** **PM10**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 1.35E-03 | 2.92E-03 |
| Light Logistics | Phase 2 | 1.20E-05 | 2.99E-05 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 1.36E-03 | 2.95E-03 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 6.63E-05 | 1.99E-05 |
| Light Logistics | Phase 2 | 1.80E-06 | 4.88E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 6.81E-05 | 2.03E-05 |

**Total Onsite Mobile Emissions**

| | | | | |
|---|---|---|---|---|
| | Runing Exhaust (g/sec) | 1.36E-03 | 2.95E-03 | |
| | Idling Emissions (g/sec) | 6.81E-05 | 2.03E-05 | |
| | Total Vehicle Emissions (g/sec) | 1.43E-03 | 2.97E-03 | |
| **Other Onsite Emissions** | Yard Trucks (LPG) (g/sec) | | 4.54E-04 | |
| | Forklifts (LPG) (g/sec) | | 2.40E-04 | |
| | Total Other Onsite Sources (g/sec) | | 6.94E-04 | |
| | | | | Total |
| | Total All Sources (g/sec) | 1.43E-03 | 3.66E-03 | 5.09E-03 |
| | Size of Area Source (m2) | | | 5152719 |
| | **Area Emission Rate (g/m2-sec)** | | | 9.89E-10 |

**World Logistics Center** **2035** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.047 | 41 | 330 | 0.21 | 3.91E-01 | 8.62E-04 | 4.53E-06 | |
| | **LDT1** | 15 | 0.061 | 2 | 330 | 0.21 | 2.43E-02 | 5.34E-05 | 2.81E-07 | |
| | **LDT2** | 15 | 0.052 | 2 | 330 | 0.21 | 2.07E-02 | 4.55E-05 | 2.39E-07 | |
| | **MDT** | 15 | 0.048 | 4 | 330 | 0.21 | 3.63E-02 | 7.99E-05 | 4.20E-07 | |
| | **LHDT1** | 15 | 0.103 | 209 | 330 | 0.21 | 4.43E+00 | 9.75E-03 | 5.12E-05 | |
| | **LHDT2** | 15 | 0.115 | 71 | 330 | 0.21 | 1.68E+00 | 3.70E-03 | 1.95E-05 | |
| | **MHDT** | 15 | 0.147 | 1089 | 330 | 0.21 | 3.27E+01 | 7.21E-02 | 3.79E-04 | |
| | **HHDT** | 15 | 0.107 | 3536 | 330 | 0.21 | 7.75E+01 | 1.71E-01 | 8.97E-04 | |
| | | | | | | | | | | 1.35E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.047 | 1 | 175 | 0.11 | 3.92E-03 | 8.63E-06 | 4.53E-08 | |
| | **LDT1** | 15 | 0.061 | 0 | 175 | 0.11 | 2.43E-04 | 5.35E-07 | 2.81E-09 | |
| | **LDT2** | 15 | 0.052 | 0 | 175 | 0.11 | 2.07E-04 | 4.56E-07 | 2.39E-09 | |
| | **MDT** | 15 | 0.048 | 0 | 175 | 0.11 | 3.63E-04 | 7.99E-07 | 4.20E-09 | |
| | **LHDT1** | 15 | 0.103 | 6 | 175 | 0.11 | 6.52E-02 | 1.44E-04 | 7.55E-07 | |
| | **LHDT2** | 15 | 0.115 | 2 | 175 | 0.11 | 2.48E-02 | 5.46E-05 | 2.87E-07 | |
| | **MHDT** | 15 | 0.147 | 20 | 175 | 0.11 | 3.18E-01 | 7.00E-04 | 3.68E-06 | |
| | **HHDT** | 15 | 0.107 | 54 | 175 | 0.11 | 6.25E-01 | 1.38E-03 | 7.23E-06 | 1.20E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.047 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.047 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.061 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.052 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.103 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.115 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.147 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.107 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 41 | | | 3.95E-01 | 8.71E-04 | 4.58E-06 | |
| | **LDT1** | | | 2 | | | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **LDT2** | | | 2 | | | 2.09E-02 | 4.60E-05 | 2.42E-07 | |
| | **MDT** | | | 4 | | | 3.66E-02 | 8.07E-05 | 4.24E-07 | |
| | **LHDT1** | | | 215 | | | 4.49E+00 | 9.89E-03 | 5.20E-05 | |
| | **LHDT2** | | | 73 | | | 1.71E+00 | 3.76E-03 | 1.98E-05 | |
| | **MHDT** | | | 1109 | | | 3.30E+01 | 7.28E-02 | 3.82E-04 | |
| | **HHDT** | | | 3590 | | | 7.81E+01 | 1.72E-01 | 9.04E-04 | |
| | **Total** | | | 5037 | | | 1.18E+02 | 2.59E-01 | 1.36E-03 | 1.36E-03 |

**Diesel truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.453 | 5 | 105 | 3.95E+00 | 8.70E-03 | 4.57E-05 | |
| | **LHDT2** | 0.504 | 5 | 36 | 1.49E+00 | 3.29E-03 | 1.73E-05 | |
| | **MHDT** | 0.001 | 5 | 545 | 6.15E-02 | 1.36E-04 | 7.12E-07 | |
| | **HHDT** | 0.001 | 5 | 1768 | 2.21E-01 | 4.86E-04 | 2.55E-06 | |
| | | | | 2453 | 5.73E+00 | 1.26E-02 | 6.63E-05 | 6.63E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.453 | 5 | 3 | 1.10E-01 | 2.42E-04 | 1.27E-06 | |
| | **LHDT2** | 0.504 | 5 | 1 | 4.15E-02 | 9.15E-05 | 4.81E-07 | |
| | **MHDT** | 0.001 | 5 | 10 | 1.13E-03 | 2.48E-06 | 1.30E-08 | |
| | **HHDT** | 0.001 | 5 | 27 | 3.36E-03 | 7.39E-06 | 3.88E-08 | |
| | | | | 41 | 1.56E-01 | 3.43E-04 | 1.80E-06 | 1.80E-06 |
| **Idle at Utility** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.453 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.504 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2494 | 5.88E+00 | 1.30E-02 | 6.81E-05 | 6.81E-05 |

**World Logistics Center** **2035** **Phase 2** With Mitigation: MY2010 T6 and T7 DSL
**Non-Diesel Vehicle Emissions** **PM10**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**
(light industry) 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **PM10 Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.048 | 13408 | 330 | 0.21 | 1.31E+02 | 2.90E-01 | 1.52E-03 | |
| | **LDT1** | 15 | 0.048 | 1572 | 330 | 0.21 | 1.56E+01 | 3.43E-02 | 1.80E-04 | |
| | **LDT2** | 15 | 0.048 | 4670 | 330 | 0.21 | 4.58E+01 | 1.01E-01 | 5.31E-04 | |
| | **MDT** | 15 | 0.048 | 3703 | 330 | 0.21 | 3.65E+01 | 8.04E-02 | 4.23E-04 | |
| | **LHDT1** | 15 | 0.087 | 677 | 330 | 0.21 | 1.21E+01 | 2.66E-02 | 1.40E-04 | |
| | **LHDT2** | 15 | 0.100 | 71 | 330 | 0.21 | 1.47E+00 | 3.23E-03 | 1.70E-05 | |
| | **MHDT** | 15 | 0.145 | 263 | 330 | 0.21 | 7.83E+00 | 1.72E-02 | 9.06E-05 | |
| | **HHDT** | 15 | 0.085 | 80 | 330 | 0.21 | 1.39E+00 | 3.07E-03 | 1.61E-05 | |
| | | | | | | | | | | 2.92E-03 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.048 | 253 | 175 | 0.11 | 1.32E+00 | 2.90E-03 | 1.52E-05 | |
| | **LDT1** | 15 | 0.048 | 30 | 175 | 0.11 | 1.56E-01 | 3.43E-04 | 1.80E-06 | |
| | **LDT2** | 15 | 0.048 | 88 | 175 | 0.11 | 4.59E-01 | 1.01E-03 | 5.31E-06 | |
| | **MDT** | 15 | 0.048 | 70 | 175 | 0.11 | 3.65E-01 | 8.05E-04 | 4.23E-06 | |
| | **LHDT1** | 15 | 0.087 | 19 | 175 | 0.11 | 1.78E-01 | 3.93E-04 | 2.06E-06 | |
| | **LHDT2** | 15 | 0.100 | 2 | 175 | 0.11 | 2.16E-02 | 4.76E-05 | 2.50E-07 | |
| | **MHDT** | 15 | 0.145 | 5 | 175 | 0.11 | 7.60E-02 | 1.67E-04 | 8.80E-07 | |
| | **HHDT** | 15 | 0.085 | 1 | 175 | 0.11 | 1.12E-02 | 2.48E-05 | 1.30E-07 | 2.99E-05 |
| **Travel at Utility** | **LDA** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.048 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.087 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.100 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.145 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.085 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 13661 | | | 1.33E+02 | 2.93E-01 | 1.54E-03 | |
| | **LDT1** | | | 1602 | | | 1.57E+01 | 3.46E-02 | 1.82E-04 | |
| | **LDT2** | | | 4758 | | | 4.63E+01 | 1.02E-01 | 5.36E-04 | |
| | **MDT** | | | 3773 | | | 3.69E+01 | 8.12E-02 | 4.27E-04 | |
| | **LHDT1** | | | 696 | | | 1.23E+01 | 2.70E-02 | 1.42E-04 | |
| | **LHDT2** | | | 73 | | | 1.49E+00 | 3.28E-03 | 1.72E-05 | |
| | **MHDT** | | | 268 | | | 7.91E+00 | 1.74E-02 | 9.15E-05 | |
| | **HHDT** | | | 81 | | | 1.41E+00 | 3.10E-03 | 1.63E-05 | |
| | **Total** | | | 24913 | | | 2.55E+02 | 5.61E-01 | 2.95E-03 | 2.95E-03 |

**Non-Diesel Truck Idling Emissions** **PM10 Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.038 | 5 | 339 | 1.06E+00 | 2.34E-03 | 1.23E-05 | |
| | **LHDT2** | 0.038 | 5 | 36 | 1.13E-01 | 2.48E-04 | 1.30E-06 | |
| | **MHDT** | 0.038 | 5 | 132 | 4.16E-01 | 9.17E-04 | 4.82E-06 | |
| | **HHDT** | 0.037 | 5 | 40 | 1.24E-01 | 2.73E-04 | 1.44E-06 | |
| | | | | 546 | 1.72E+00 | 3.78E-03 | 1.99E-05 | 1.99E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.038 | 5 | 9 | 2.95E-02 | 6.51E-05 | 3.42E-07 | |
| | **LHDT2** | 0.038 | 5 | 1 | 3.13E-03 | 6.89E-06 | 3.62E-08 | |
| | **MHDT** | 0.038 | 5 | 2 | 7.62E-03 | 1.68E-05 | 8.81E-08 | |
| | **HHDT** | 0.037 | 5 | 1 | 1.89E-03 | 4.16E-06 | 2.18E-08 | |
| | | | | 13 | 4.22E-02 | 9.29E-05 | 4.88E-07 | 4.88E-07 |
| **Idle at Utility** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.038 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 559 | 1.76E+00 | 3.87E-03 | 2.03E-05 | 2.03E-05 |

**World Logistics Center** **2035** **PM10** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and 2 Emissions** **With EMFAC2014** With Mitigation: MY2010 T6 and T7 DSL Rev 5
**Internal Roadway Circulation**

| Roadway Segment | Diesel Emissions (g/sec) | Non-Diesel Emissions (g/sec) | Entrained Dust (g/sec) | Total Emissions (g/sec) | |
|---|---|---|---|---|---|
| 1 | 2.79E-03 | 2.25E-03 | 3.11E-02 | 3.61E-02 | |
| 2 | 7.28E-03 | 6.13E-03 | 8.08E-02 | 9.42E-02 | |
| 3 | 8.91E-03 | 7.83E-03 | 9.93E-02 | 1.16E-01 | |
| 5 | 7.32E-04 | 2.76E-03 | 9.68E-03 | 1.32E-02 | |
| 6 | 3.67E-03 | 3.50E-03 | 4.11E-02 | 4.82E-02 | |
| 8 | 1.14E-03 | 4.52E-03 | 1.50E-02 | 2.07E-02 | |
| 11 | 2.17E-05 | 1.12E-04 | 3.45E-04 | 4.79E-04 | |
| 12 | 1.47E-05 | 6.09E-05 | 2.00E-04 | 2.76E-04 | |
| 14 | 1.85E-03 | 1.86E-03 | 2.07E-02 | 2.44E-02 | |
| 18 | 9.32E-04 | 1.44E-03 | 1.09E-02 | 1.32E-02 | |
| 19 | 3.62E-03 | 2.70E-03 | 3.95E-02 | 4.58E-02 | |
| 21 | 2.31E-03 | 3.79E-03 | 2.69E-02 | 3.30E-02 | |
| 24 | 3.91E-03 | 6.92E-03 | 4.81E-02 | 5.89E-02 | |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| 29 | 1.41E-03 | 1.28E-03 | 1.59E-02 | 1.86E-02 | |
| 30 | 6.54E-03 | 7.06E-03 | 7.48E-02 | 8.84E-02 | |
| 31 | 1.22E-03 | 2.94E-03 | 1.61E-02 | 2.02E-02 | |
| | | | Total | 6.32E-01 | |
| | | | Total | 2.19E+01 | tons/year |
| | | | Total (non Road Dust) | 3.53E+00 | tons/year |
| | | | Total Road Dust | 1.84E+01 | tons/year |

| ID | Arterial | From | To | | 2035 Project Related Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by Parsons Brikerhoff (2013)

**World Logistics Center** **2035** **PM10** **With Mitigation: MY2010 T6 and T7 DSL**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2711 | 1.684 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0461 | 0.0521 | 0.0493 | 0.0465 | 0.0987 | 0.1114 | 0.1457 | 0.1048 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.24E-06 | 2.31E-07 | 2.05E-07 | 3.37E-07 | 4.17E-05 | 1.56E-05 | 7.02E-04 | 2.03E-03 | 2.79E-03 |
| 2 | 1 | 8.55E-06 | 6.10E-07 | 5.40E-07 | 8.89E-07 | 1.66E-04 | 6.21E-05 | 1.85E-03 | 5.19E-03 | 7.28E-03 |
| 3 | 1 | 1.10E-05 | 7.83E-07 | 6.93E-07 | 1.14E-06 | 2.12E-04 | 7.94E-05 | 2.30E-03 | 6.31E-03 | 8.91E-03 |
| 5 | 1 | 4.12E-06 | 2.94E-07 | 2.60E-07 | 4.29E-07 | 4.98E-05 | 1.86E-05 | 6.09E-04 | 4.95E-05 | 7.32E-04 |
| 6 | 1 | 4.96E-06 | 3.54E-07 | 3.14E-07 | 5.16E-07 | 8.48E-05 | 3.17E-05 | 1.00E-03 | 2.54E-03 | 3.67E-03 |
| 8 | 1 | 6.72E-06 | 4.80E-07 | 4.25E-07 | 6.99E-07 | 8.48E-05 | 3.17E-05 | 1.01E-03 | 0.00E+00 | 1.14E-03 |
| 11 | 1 | 1.65E-07 | 1.18E-08 | 1.04E-08 | 1.72E-08 | 2.94E-06 | 1.10E-06 | 1.74E-05 | 0.00E+00 | 2.17E-05 |
| 12 | 1 | 8.92E-08 | 6.37E-09 | 5.64E-09 | 9.29E-09 | 1.42E-06 | 5.33E-07 | 1.27E-05 | 0.00E+00 | 1.47E-05 |
| 14 | 1 | 2.57E-06 | 1.84E-07 | 1.63E-07 | 2.68E-07 | 5.80E-05 | 2.17E-05 | 5.14E-04 | 1.25E-03 | 1.85E-03 |
| 18 | 1 | 2.07E-06 | 1.48E-07 | 1.31E-07 | 2.15E-07 | 3.66E-05 | 1.37E-05 | 3.49E-04 | 5.31E-04 | 9.32E-04 |
| 19 | 1 | 3.73E-06 | 2.66E-07 | 2.36E-07 | 3.88E-07 | 7.04E-05 | 2.63E-05 | 9.21E-04 | 2.59E-03 | 3.62E-03 |
| 21 | 1 | 5.54E-06 | 3.96E-07 | 3.50E-07 | 5.77E-07 | 7.57E-05 | 2.83E-05 | 9.54E-04 | 1.24E-03 | 2.31E-03 |
| 24 | 1 | 1.04E-05 | 7.39E-07 | 6.55E-07 | 1.08E-06 | 1.14E-04 | 4.27E-05 | 1.43E-03 | 2.31E-03 | 3.91E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 1.87E-06 | 1.33E-07 | 1.18E-07 | 1.94E-07 | 2.30E-05 | 8.62E-06 | 3.56E-04 | 1.02E-03 | 1.41E-03 |
| 30 | 1 | 1.03E-05 | 7.37E-07 | 6.53E-07 | 1.07E-06 | 1.26E-04 | 4.73E-05 | 1.85E-03 | 4.51E-03 | 6.54E-03 |
| 31 | 1 | 4.46E-06 | 3.18E-07 | 2.82E-07 | 4.64E-07 | 4.56E-05 | 1.70E-05 | 5.22E-04 | 6.27E-04 | 1.22E-03 |

**World Logistics Center** **2035** **PM10** **With Mitigation: MY2010 T6 and T7 DSL**
Project-ONLY Emissions
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle FleetTrips - Non-Diesel**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 54.27% | 7.14% | 21.57% | 16.81% | 65.98% | 7.00% | 18.46% | 1.45% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29,766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 9769 | 1286 | 3882 | 3026 | 585 | 62 | 464 | 121 | 19195 |
| 2 | 35,373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 11542 | 1519 | 4587 | 3576 | 1041 | 111 | 548 | 139 | 23062 |
| 3 | 13,861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 4601 | 606 | 1829 | 1425 | 414 | 44 | 211 | 52 | 9182 |
| 5 | 9,042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 4266 | 561 | 1696 | 1322 | 240 | 25 | 138 | 1 | 8249 |
| 6 | 12,931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 4458 | 587 | 1772 | 1381 | 354 | 38 | 197 | 45 | 8831 |
| 8 | 12,826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 6078 | 800 | 2415 | 1883 | 356 | 38 | 201 | 0 | 11771 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 136 | 18 | 54 | 42 | 11 | 1 | 3 | 0 | 265 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 107 | 14 | 42 | 33 | 8 | 1 | 3 | 0 | 209 |
| 14 | 4,556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 1571 | 207 | 624 | 487 | 164 | 17 | 69 | 15 | 3154 |
| 18 | 3,637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 1445 | 190 | 574 | 448 | 119 | 13 | 53 | 7 | 2849 |
| 19 | 4,963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 1542 | 203 | 613 | 478 | 135 | 14 | 83 | 21 | 3091 |
| 21 | 10,648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 4349 | 572 | 1728 | 1347 | 276 | 29 | 164 | 19 | 8485 |
| 24 | 12,547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 5253 | 691 | 2088 | 1627 | 269 | 29 | 159 | 23 | 10138 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7,915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 2732 | 359 | 1086 | 846 | 156 | 17 | 114 | 29 | 5339 |
| 30 | 10,287 | 6,928 | 324 | 797 | 2,238 | 2711 | 1.684 | 3760 | 495 | 1494 | 1165 | 214 | 23 | 147 | 32 | 7330 |
| 31 | 12,045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 5364 | 706 | 2132 | 1662 | 255 | 27 | 138 | 15 | 10297 |

**Vehicle Fleet Emissions - Non-Diesel**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0459 | 0.0461 | 0.0459 | 0.0460 | 0.0856 | 0.0986 | 0.1436 | 0.0837 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.05E-03 | 1.39E-04 | 4.19E-04 | 3.27E-04 | 1.18E-04 | 1.44E-05 | 1.57E-04 | 2.39E-05 | 2.25E-03 |
| 2 | 1 | 2.79E-03 | 3.68E-04 | 1.11E-03 | 8.65E-04 | 4.69E-04 | 5.73E-05 | 4.14E-04 | 6.09E-05 | 6.13E-03 |
| 3 | 1 | 3.57E-03 | 4.72E-04 | 1.42E-03 | 1.11E-03 | 5.99E-04 | 7.33E-05 | 5.13E-04 | 7.41E-05 | 7.83E-03 |
| 5 | 1 | 1.34E-03 | 1.77E-04 | 5.34E-04 | 4.17E-04 | 1.41E-04 | 1.72E-05 | 1.36E-04 | 5.82E-07 | 2.76E-03 |
| 6 | 1 | 1.62E-03 | 2.14E-04 | 6.43E-04 | 5.02E-04 | 2.39E-04 | 2.93E-05 | 2.24E-04 | 2.98E-05 | 3.50E-03 |
| 8 | 1 | 2.19E-03 | 2.89E-04 | 8.71E-04 | 6.80E-04 | 2.39E-04 | 2.93E-05 | 2.26E-04 | 0.00E+00 | 4.52E-03 |
| 11 | 1 | 5.38E-05 | 7.10E-06 | 2.14E-05 | 1.67E-05 | 8.29E-06 | 1.01E-06 | 3.89E-06 | 0.00E+00 | 1.12E-04 |
| 12 | 1 | 2.91E-05 | 3.84E-06 | 1.16E-05 | 9.03E-06 | 4.02E-06 | 4.91E-07 | 2.83E-06 | 0.00E+00 | 6.09E-05 |
| 14 | 1 | 8.39E-04 | 1.11E-04 | 3.34E-04 | 2.61E-04 | 1.64E-04 | 2.00E-05 | 1.15E-04 | 1.47E-05 | 1.86E-03 |
| 18 | 1 | 6.74E-04 | 8.89E-05 | 2.68E-04 | 2.09E-04 | 1.03E-04 | 1.26E-05 | 7.78E-05 | 6.23E-06 | 1.44E-03 |
| 19 | 1 | 1.22E-03 | 1.60E-04 | 4.83E-04 | 3.77E-04 | 1.99E-04 | 2.43E-05 | 2.06E-04 | 3.05E-05 | 2.70E-03 |
| 21 | 1 | 1.81E-03 | 2.38E-04 | 7.18E-04 | 5.61E-04 | 2.14E-04 | 2.61E-05 | 2.13E-04 | 1.46E-05 | 3.79E-03 |
| 24 | 1 | 3.38E-03 | 4.46E-04 | 1.34E-03 | 1.05E-03 | 3.22E-04 | 3.93E-05 | 3.19E-04 | 2.72E-05 | 6.92E-03 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 6.09E-04 | 8.04E-05 | 2.42E-04 | 1.89E-04 | 6.50E-05 | 7.95E-06 | 7.94E-05 | 1.19E-05 | 1.28E-03 |
| 30 | 1 | 3.37E-03 | 4.44E-04 | 1.34E-03 | 1.04E-03 | 3.57E-04 | 4.36E-05 | 4.12E-04 | 5.29E-05 | 7.06E-03 |
| 31 | 1 | 1.45E-03 | 1.92E-04 | 5.77E-04 | 4.51E-04 | 1.29E-04 | 1.57E-05 | 1.17E-04 | 7.36E-06 | 2.94E-03 |

**World Logistics Center**

**Entrained Road Dust**

**Calculation Parameters - Median Vehicle Weight**

| Vehicle Class | Averaged Weight Tons |
|---|---|
| Pass, LHDT,MDT | 2.13 |
| LHDT | 5.63 |
| MHDT | 11.75 |
| HHDT | 23.25 |

**Calculation Parameters - Silt Loading**

| | Road Type | Silt Loading (g/m2) |
|---|---|---|
| Freeway | F | 0.022 |
| Arterial, Major Collector | A | 0.035 |
| Minor Collector | M | 0.32 |

Particle Size Multiplier for PM10 = 0.0022 lb/VMT

| Roadway Segment | Road Type | Segment Length (m) | Segment Length (mi) | Pass (trips/Day) | Daily Pass VMT | LHDT (trips/day) | Daily LHDT VMT | MHDT (trips/day) | Daily MHDT VMT | HHDT (trips/day) | Daily HHDT VMT | Daily Total VMT | Average Vehicle W (tons) | Silt Loading (g/m2) | Emission Factor (lb/VMT) | Entrained Dust (lb/day) | Emissions (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 327 | 0.20 | 18,000 | 3656 | 886 | 180 | 2,512 | 510 | 8,368 | 1700 | 6047 | 8.98 | 0.035 | 0.0010 | 5.9 | 3.11E-02 |
| 2 | A | 731 | 0.45 | 21,267 | 9657 | 1,578 | 717 | 2,969 | 1348 | 9,559 | 4341 | 16063 | 8.80 | 0.035 | 0.0010 | 15.4 | 8.08E-02 |
| 3 | A | 2352 | 1.46 | 8,478 | 12387 | 627 | 916 | 1,143 | 1670 | 3,613 | 5279 | 20252 | 8.59 | 0.035 | 0.0009 | 18.9 | 9.93E-02 |
| 5 | A | 953 | 0.59 | 7,861 | 4654 | 363 | 215 | 748 | 443 | 70 | 41 | 5353 | 3.23 | 0.035 | 0.0003 | 1.8 | 9.68E-03 |
| 6 | A | 1099 | 0.68 | 8,214 | 5608 | 536 | 366 | 1,069 | 730 | 3,112 | 2125 | 8828 | 8.15 | 0.035 | 0.0009 | 7.8 | 4.11E-02 |
| 8 | A | 1091 | 0.68 | 11,199 | 7590 | 540 | 366 | 1,087 | 737 | 0 | 0 | 8693 | 3.09 | 0.035 | 0.0003 | 2.9 | 1.50E-02 |
| 11 | A | 1201 | 0.75 | 250 | 187 | 17 | 13 | 17 | 13 | 0 | 0 | 212 | 2.92 | 0.035 | 0.0003 | 0.1 | 3.45E-04 |
| 12 | A | 824 | 0.51 | 197 | 101 | 12 | 6 | 18 | 9 | 0 | 0 | 116 | 3.08 | 0.035 | 0.0003 | 0.0 | 2.00E-04 |
| 14 | A | 1618 | 1.01 | 2,894 | 2909 | 249 | 250 | 372 | 374 | 1,041 | 1046 | 4579 | 7.93 | 0.035 | 0.0009 | 3.9 | 2.07E-02 |
| 18 | A | 1412 | 0.88 | 2,662 | 2335 | 180 | 158 | 289 | 253 | 506 | 444 | 3190 | 6.01 | 0.035 | 0.0006 | 2.1 | 1.09E-02 |
| 19 | A | 2386 | 1.48 | 2,842 | 4212 | 205 | 304 | 452 | 670 | 1,464 | 2170 | 7356 | 9.38 | 0.035 | 0.0010 | 7.5 | 3.95E-02 |
| 21 | A | 1258 | 0.78 | 8,013 | 6262 | 418 | 327 | 888 | 694 | 1,329 | 1039 | 8321 | 5.71 | 0.035 | 0.0006 | 5.1 | 2.69E-02 |
| 24 | A | 1946 | 1.21 | 9,679 | 11701 | 407 | 492 | 859 | 1038 | 1,602 | 1937 | 15168 | 5.60 | 0.035 | 0.0006 | 9.2 | 4.81E-02 |
| 26 | A | 342 | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.035 | 0.0000 | 0.0 | 0.00E+00 |
| 29 | A | 675 | 0.42 | 5,033 | 2110 | 237 | 99 | 617 | 259 | 2,028 | 850 | 3319 | 8.40 | 0.035 | 0.0009 | 3.0 | 1.59E-02 |
| 30 | A | 2711 | 1.68 | 6,928 | 11667 | 324 | 546 | 797 | 1342 | 2,238 | 3769 | 17324 | 7.58 | 0.035 | 0.0008 | 14.2 | 7.48E-02 |
| 31 | A | 820 | 0.51 | 9,883 | 5034 | 386 | 197 | 746 | 380 | 1,030 | 525 | 6136 | 4.64 | 0.035 | 0.0005 | 3.1 | 1.61E-02 |

# Appendix G: Health Risk Assessment Spreadsheets

G.1 - 2015 to 2030 Project Construction Diesel PM Emissions
G.2 - Project Operational Diesel PM Emissions
G.3 - Project Construction and Operational AERMOD Model Output
G.4 - Project Operational, Construction Diesel PM and Cancer Risk Summary (Without Mitigation)
G.5 - Project Operational, Construction Diesel PM and Cancer Risk Summary (with Project Mitigation)
G.6 - Relative Toxicity of Diesel PM and Gasoline Emissions
G.7 - Project-Related TOG Emissions and Acute Non-cancer Hazard Index Summary
G.8 - 1,000-Foot Buffer Analysis
G.9 - Assessment of Mortality and Morbidity

Note: All AERMOD input and output files are available digitally by contacting the City of Moreno Valley. They are not included herein to save paper resources.

# G.1 - 2015 to 2030 Project Construction Diesel PM Emissions

**Appendix G-1 contains the calculated annual unmitigated and mitigated diesel particulate matter emissions for project construction during the time period of 2015 to 2030**

## WLC Construction DPM Emissions

No Mitigation

2/24/2015 summary from Cwilson

**Emissions - 10 hour work day for non-concrete pour construction (6am to 4pm)**
**Emissions - 6 hour work day for concrete pour construction (MN to 6am)**

| Year/Constrution Activity | Total Emissions (t/yr) | Number of Volume Sources | Number of Construction Days (days/year) | Construction Hours (hrs/day) | Average Construction Emission Rate (g/sec/vol src) | Total (g/sec) | Variable Emission Factors 6am to 4pm | 4pm to MN | MN to 6am |
|---|---|---|---|---|---|---|---|---|---|
| 2015 Non Concrete Pouring | 4.522 | 96 | 260 | 10 | 4.57E-03 | 4.57E-03 | 1.00E+00 | 0.00E+00 | 0.00E+00 |
| 2015 Concrete Pouring | 0.000 | 96 | 260 | 6 | 0.00E+00 | | | | |
| 2016 Non Concrete Pouring | 4.248 | 96 | 260 | 10 | 4.29E-03 | 5.34E-03 | 8.03E-01 | 0.00E+00 | 1.97E-01 |
| 2016 Concrete Pouring | 0.624 | 96 | 260 | 6 | 1.05E-03 | | | | |
| 2017 Non Concrete Pouring | 5.697 | 132 | 260 | 10 | 4.19E-03 | 4.95E-03 | 8.46E-01 | 0.00E+00 | 1.54E-01 |
| 2017 Concrete Pouring | 0.624 | 132 | 260 | 6 | 7.65E-04 | | | | |
| 2018 Non Concrete Pouring | 4.248 | 132 | 260 | 10 | 3.12E-03 | 3.89E-03 | 8.03E-01 | 0.00E+00 | 1.97E-01 |
| 2018 Concrete Pouring | 0.624 | 132 | 260 | 6 | 7.65E-04 | | | | |
| 2019 Non Concrete Pouring | 7.315 | 203 | 260 | 10 | 3.50E-03 | 3.99E-03 | 8.75E-01 | 0.00E+00 | 1.25E-01 |
| 2019 Concrete Pouring | 0.624 | 203 | 260 | 6 | 4.97E-04 | | | | |
| 2020 Non Concrete Pouring | 4.983 | 203 | 260 | 10 | 2.38E-03 | 2.88E-03 | 8.27E-01 | 0.00E+00 | 1.73E-01 |
| 2020 Concrete Pouring | 0.624 | 203 | 260 | 6 | 4.97E-04 | | | | |
| 2021 Non Concrete Pouring | 5.329 | 81 | 260 | 10 | 6.38E-03 | 7.63E-03 | 8.37E-01 | 0.00E+00 | 1.63E-01 |
| 2021 Concrete Pouring | 0.624 | 81 | 260 | 6 | 1.25E-03 | | | | |
| 2022 Non Concrete Pouring | 4.558 | 89 | 260 | 10 | 4.97E-03 | 6.10E-03 | 8.14E-01 | 0.00E+00 | 1.86E-01 |
| 2022 Concrete Pouring | 0.624 | 89 | 260 | 6 | 1.13E-03 | | | | |
| 2023 Non Concrete Pouring | 5.046 | 89 | 260 | 10 | 5.50E-03 | 6.63E-03 | 8.29E-01 | 0.00E+00 | 1.71E-01 |
| 2023 Concrete Pouring | 0.624 | 89 | 260 | 6 | 1.13E-03 | | | | |
| 2024 Non Concrete Pouring | 4.731 | 82 | 260 | 10 | 5.60E-03 | 6.83E-03 | 8.20E-01 | 0.00E+00 | 1.80E-01 |
| 2024 Concrete Pouring | 0.624 | 82 | 260 | 6 | 1.23E-03 | | | | |
| 2025 Non Concrete Pouring | 4.898 | 142 | 260 | 10 | 3.35E-03 | 4.06E-03 | 8.25E-01 | 0.00E+00 | 1.75E-01 |
| 2025 Concrete Pouring | 0.624 | 142 | 260 | 6 | 7.11E-04 | | | | |
| 2026 Non Concrete Pouring | 4.248 | 142 | 260 | 10 | 2.90E-03 | 3.61E-03 | 8.03E-01 | 0.00E+00 | 1.97E-01 |
| 2026 Concrete Pouring | 0.624 | 142 | 260 | 6 | 7.11E-04 | | | | |
| 2027 Non Concrete Pouring | 2.036 | 83 | 260 | 10 | 2.38E-03 | 2.65E-03 | 8.99E-01 | 0.00E+00 | 1.01E-01 |
| 2027 Concrete Pouring | 0.137 | 83 | 260 | 6 | 2.67E-04 | | | | |
| 2028 Non Concrete Pouring | 1.739 | 108 | 260 | 10 | 1.56E-03 | 1.77E-03 | 8.84E-01 | 0.00E+00 | 1.16E-01 |
| 2028 Conrete Pouring | 0.137 | 108 | 260 | 6 | 2.05E-04 | | | | |
| 2029 Non Concrete Pouring | 1.037 | 108 | 260 | 10 | 9.31E-04 | 1.14E-03 | 8.19E-01 | 0.00E+00 | 1.81E-01 |
| 2029 Concrete Pouring | 0.137 | 108 | 260 | 6 | 2.05E-04 | | | | |
| 2030 Non Concrete Pouring | 1.273 | 50 | 260 | 10 | 2.47E-03 | 2.91E-03 | 8.48E-01 | 0.00E+00 | 1.52E-01 |
| 2030 Concrete Pouring | 0.137 | 50 | 260 | 6 | 4.44E-04 | | | | |

## WLC Construction DPM Emissions

With Mitigation including Tier 4 and 5 day work week

Based on 2/19/2015 results from Cwilson

**Mitigated Emissions - 10 hour work day for non-concrete pour construction (6am to 4pm)**
**Mitigated Emissions - 6 hour work day for concrete pour construction (MN to 6am)**

| Year | Total Emissions (t/yr) | Number of Volume Sources | Number of Construction Days (days/year) | Construction Construction (hrs/day) | Average Construction Emission Rate (g/sec/vol src) | Total (g/sec/vol src) | Variable Emission Factors 6am to 4pm | 4pm to MN | MN to 6am |
|---|---|---|---|---|---|---|---|---|---|
| 2015 Non Concrete Pouring | 0.324 | 96 | 260 | 10 | 3.27E-04 | 3.27E-04 | 1.00E+00 | 0.00E+00 | 0.00E+00 |
| 2015 Concrete Pouring | 0.000 | 96 | 260 | 6 | 0.00E+00 | | | | |
| 2016 Non Concrete Pouring | 0.416 | 96 | 260 | 10 | 4.20E-04 | 4.51E-04 | 9.33E-01 | 0.00E+00 | 6.73E-02 |
| 2016 Concrete Pouring | 0.018 | 96 | 260 | 6 | 3.03E-05 | | | | |
| 2017 Non Concrete Pouring | 0.474 | 132 | 260 | 10 | 3.48E-04 | 3.70E-04 | 9.40E-01 | 0.00E+00 | 5.95E-02 |
| 2017 Concrete Pouring | 0.018 | 132 | 260 | 6 | 2.20E-05 | | | | |
| 2018 Non Concrete Pouring | 0.416 | 132 | 260 | 10 | 3.06E-04 | 3.28E-04 | 9.33E-01 | 0.00E+00 | 6.73E-02 |
| 2018 Concrete Pouring | 0.018 | 132 | 260 | 6 | 2.20E-05 | | | | |
| 2019 Non Concrete Pouring | 0.562 | 203 | 260 | 10 | 2.69E-04 | 2.83E-04 | 9.49E-01 | 0.00E+00 | 5.07E-02 |
| 2019 Concrete Pouring | 0.018 | 203 | 260 | 6 | 1.43E-05 | | | | |
| 2020 Non Concrete Pouring | 0.438 | 203 | 260 | 10 | 2.09E-04 | 2.24E-04 | 9.36E-01 | 0.00E+00 | 6.41E-02 |
| 2020 Concrete Pouring | 0.018 | 203 | 260 | 6 | 1.43E-05 | | | | |
| 2021 Non Concrete Pouring | 0.469 | 81 | 260 | 10 | 5.62E-04 | 5.98E-04 | 9.40E-01 | 0.00E+00 | 6.01E-02 |
| 2021 Concrete Pouring | 0.018 | 81 | 260 | 6 | 3.59E-05 | | | | |
| 2022 Non Concrete Pouring | 0.441 | 89 | 260 | 10 | 4.81E-04 | 5.13E-04 | 9.36E-01 | 0.00E+00 | 6.37E-02 |
| 2022 Concrete Pouring | 0.018 | 89 | 260 | 6 | 3.27E-05 | | | | |
| 2023 Non Concrete Pouring | 0.468 | 89 | 260 | 10 | 5.10E-04 | 5.43E-04 | 9.40E-01 | 0.00E+00 | 6.02E-02 |
| 2023 Concrete Pouring | 0.018 | 89 | 260 | 6 | 3.27E-05 | | | | |
| 2024 Non Concrete Pouring | 0.450 | 82 | 260 | 10 | 5.32E-04 | 5.68E-04 | 9.38E-01 | 0.00E+00 | 6.25E-02 |
| 2024 Concrete Pouring | 0.018 | 82 | 260 | 6 | 3.55E-05 | | | | |
| 2025 Non Concrete Pouring | 0.468 | 142 | 260 | 10 | 3.20E-04 | 3.40E-04 | 9.40E-01 | 0.00E+00 | 6.02E-02 |
| 2025 Concrete Pouring | 0.018 | 142 | 260 | 6 | 2.05E-05 | | | | |
| 2026 Non Concrete Pouring | 0.416 | 142 | 260 | 10 | 2.84E-04 | 3.05E-04 | 9.33E-01 | 0.00E+00 | 6.73E-02 |
| 2026 Concrete Pouring | 0.018 | 142 | 260 | 6 | 2.05E-05 | | | | |
| 2027 Non Concrete Pouring | 0.417 | 83 | 260 | 10 | 4.87E-04 | 5.22E-04 | 9.33E-01 | 0.00E+00 | 6.71E-02 |
| 2027 Concrete Pouring | 0.018 | 83 | 260 | 6 | 3.51E-05 | | | | |
| 2028 Non Concrete Pouring | 0.399 | 108 | 260 | 10 | 3.58E-04 | 3.85E-04 | 9.30E-01 | 0.00E+00 | 6.99E-02 |
| 2028 Conrete Pouring | 0.018 | 108 | 260 | 6 | 2.69E-05 | | | | |
| 2029 Non Concrete Pouring | 0.342 | 108 | 260 | 10 | 3.07E-04 | 3.34E-04 | 9.19E-01 | 0.00E+00 | 8.06E-02 |
| 2029 Concrete Pouring | 0.018 | 108 | 260 | 6 | 2.69E-05 | | | | |
| 2030 Non Concrete Pouring | 0.379 | 50 | 260 | 10 | 7.35E-04 | 7.94E-04 | 9.27E-01 | 0.00E+00 | 7.33E-02 |
| 2030 Concrete Pouring | 0.018 | 50 | 260 | 6 | 5.82E-05 | | | | |

# G.2 - Project Operational Diesel PM Emissions

**Appendix G-2 contains the calculated annual unmitigated and mitigated diesel particulate matter emissions for project operation during the years 2022 and 2035 and includes emissions for onsite area sources, onsite roadways, local surface streets, freeways, and freeways to ports.**

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for DPM emissions
c) Emissions calculated for 2022

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2022** **Phase 1** No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **DPM**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 3.32E-04 |
| Light Logistics | Phase 1 | 6.58E-07 |
| Utilities Service Station | Phase 1 | 5.95E-07 |
| Gas Station w/Convenience Store | Phase 1 | 8.07E-07 |
| Convenience Store | Phase 1 | 1.27E-06 |
| Fire Station | Phase 1 | 3.33E-09 |
| | | |
| Total | | 3.35E-04 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 1.76E-04 |
| Light Logistics | Phase 1 | 9.74E-07 |
| Utilities Service Station | Phase 1 | 2.89E-06 |
| Gas Station w/Convenience Store | Phase 1 | 1.15E-06 |
| Convenience Store | Phase 1 | 1.79E-06 |
| Fire Station | Phase 1 | 0.00E+00 |
| | | |
| Total | | 1.82E-04 |

**Total Onsite Emission**

| | **Emissions (g/sec)** |
|---|---|
| Runing Exhaust | 3.35E-04 |
| Idling Emissions | 1.82E-04 |
| Total Vehicle Emissions | 5.17E-04 |
| | |
| Area (m2) | 4.68E+06 |
| | |
| Emission Rate (g/m2-sec) | 1.10E-10 |

**World Logistics Center** **2022** **Phase 1** No Mitigation
**Diesel Vehicle Emissions** **DPM**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **DPM Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.025 | 53 | 330 | 0.21 | 2.70E-01 | 5.94E-04 | 3.12E-06 | |
| | **LDT1** | 15 | 0.210 | 3 | 330 | 0.21 | 1.10E-01 | 2.43E-04 | 1.27E-06 | |
| | **LDT2** | 15 | 0.009 | 3 | 330 | 0.21 | 4.81E-03 | 1.06E-05 | 5.57E-08 | |
| | **MDT** | 15 | 0.011 | 5 | 330 | 0.21 | 1.11E-02 | 2.45E-05 | 1.29E-07 | |
| | **LHDT1** | 15 | 0.035 | 274 | 330 | 0.21 | 1.94E+00 | 4.27E-03 | 2.25E-05 | |
| | **LHDT2** | 15 | 0.026 | 93 | 330 | 0.21 | 5.04E-01 | 1.11E-03 | 5.83E-06 | |
| | **MHDT** | 15 | 0.009 | 1425 | 330 | 0.21 | 2.60E+00 | 5.72E-03 | 3.00E-05 | |
| | **HHDT** | 15 | 0.024 | 4628 | 330 | 0.21 | 2.32E+01 | 5.12E-02 | 2.69E-04 | |
| | | | | | | | | | | 3.32E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.025 | 0 | 175 | 0.11 | 6.07E-04 | 1.34E-06 | 7.03E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 175 | 0.11 | 2.48E-04 | 5.46E-07 | 2.87E-09 | |
| | **LDT2** | 15 | 0.009 | 0 | 175 | 0.11 | 1.08E-05 | 2.39E-08 | 1.25E-10 | |
| | **MDT** | 15 | 0.011 | 0 | 175 | 0.11 | 2.51E-05 | 5.52E-08 | 2.90E-10 | |
| | **LHDT1** | 15 | 0.035 | 2 | 175 | 0.11 | 6.44E-03 | 1.42E-05 | 7.45E-08 | |
| | **LHDT2** | 15 | 0.026 | 1 | 175 | 0.11 | 1.67E-03 | 3.68E-06 | 1.93E-08 | |
| | **MHDT** | 15 | 0.009 | 6 | 175 | 0.11 | 5.67E-03 | 1.25E-05 | 6.56E-08 | |
| | **HHDT** | 15 | 0.024 | 16 | 175 | 0.11 | 4.22E-02 | 9.29E-05 | 4.88E-07 | 6.58E-07 |
| **Travel at Utility** | **LDA** | 15 | 0.025 | 0 | 100 | 0.06 | 5.09E-04 | 1.12E-06 | 5.89E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 100 | 0.06 | 2.08E-04 | 4.57E-07 | 2.40E-09 | |
| | **LDT2** | 15 | 0.009 | 0 | 100 | 0.06 | 9.07E-06 | 2.00E-08 | 1.05E-10 | |
| | **MDT** | 15 | 0.011 | 0 | 100 | 0.06 | 2.10E-05 | 4.62E-08 | 2.43E-10 | |
| | **LHDT1** | 15 | 0.035 | 6 | 100 | 0.06 | 1.22E-02 | 2.69E-05 | 1.41E-07 | |
| | **LHDT2** | 15 | 0.026 | 2 | 100 | 0.06 | 3.17E-03 | 6.98E-06 | 3.67E-08 | |
| | **MHDT** | 15 | 0.009 | 5 | 100 | 0.06 | 2.66E-03 | 5.86E-06 | 3.08E-08 | |
| | **HHDT** | 15 | 0.024 | 21 | 100 | 0.06 | 3.26E-02 | 7.19E-05 | 3.78E-07 | 5.95E-07 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.025 | 0 | 50 | 0.03 | 1.48E-04 | 3.26E-07 | 1.71E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 50 | 0.03 | 6.05E-05 | 1.33E-07 | 7.00E-10 | |
| | **LDT2** | 15 | 0.009 | 0 | 50 | 0.03 | 2.64E-06 | 5.82E-09 | 3.06E-11 | |
| | **MDT** | 15 | 0.011 | 0 | 50 | 0.03 | 6.12E-06 | 1.35E-08 | 7.08E-11 | |
| | **LHDT1** | 15 | 0.035 | 1 | 50 | 0.03 | 8.60E-04 | 1.90E-06 | 9.96E-09 | |
| | **LHDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 2.23E-04 | 4.92E-07 | 2.59E-09 | |
| | **MHDT** | 15 | 0.009 | 14 | 50 | 0.03 | 3.80E-03 | 8.36E-06 | 4.39E-08 | |
| | **HHDT** | 15 | 0.024 | 85 | 50 | 0.03 | 6.46E-02 | 1.42E-04 | 7.48E-07 | 8.07E-07 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.025 | 0 | 50 | 0.03 | 2.46E-04 | 5.41E-07 | 2.84E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 50 | 0.03 | 1.00E-04 | 2.21E-07 | 1.16E-09 | |
| | **LDT2** | 15 | 0.009 | 0 | 50 | 0.03 | 4.38E-06 | 9.65E-09 | 5.07E-11 | |
| | **MDT** | 15 | 0.011 | 0 | 50 | 0.03 | 1.01E-05 | 2.23E-08 | 1.17E-10 | |
| | **LHDT1** | 15 | 0.035 | 1 | 50 | 0.03 | 1.31E-03 | 2.89E-06 | 1.52E-08 | |
| | **LHDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 3.41E-04 | 7.51E-07 | 3.95E-09 | |
| | **MHDT** | 15 | 0.009 | 23 | 50 | 0.03 | 6.21E-03 | 1.37E-05 | 7.19E-08 | |
| | **HHDT** | 15 | 0.024 | 133 | 50 | 0.03 | 1.01E-01 | 2.23E-04 | 1.17E-06 | 1.27E-06 |
| **Travel at Fire Station** | **LDA** | 15 | 0.025 | 0 | 50 | 0.03 | 1.90E-04 | 4.19E-07 | 2.20E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 50 | 0.03 | 8.60E-05 | 1.89E-07 | 9.96E-10 | |
| | **LDT2** | 15 | 0.009 | 0 | 50 | 0.03 | 3.70E-06 | 8.16E-09 | 4.29E-11 | |
| | **MDT** | 15 | 0.011 | 0 | 50 | 0.03 | 7.67E-06 | 1.69E-08 | 8.88E-11 | |
| | **LHDT1** | 15 | 0.035 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.009 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.024 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.33E-09 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.71E-01 | 5.98E-04 | 3.14E-06 | |
| | **LDT1** | | | 3 | | | 1.11E-01 | 2.44E-04 | 1.28E-06 | |
| | **LDT2** | | | 3 | | | 4.84E-03 | 1.07E-05 | 5.60E-08 | |
| | **MDT** | | | 5 | | | 1.12E-02 | 2.47E-05 | 1.30E-07 | |
| | **LHDT1** | | | 283 | | | 1.96E+00 | 4.32E-03 | 2.27E-05 | |
| | **LHDT2** | | | 96 | | | 5.09E-01 | 1.12E-03 | 5.89E-06 | |
| | **MHDT** | | | 1472 | | | 2.61E+00 | 5.76E-03 | 3.03E-05 | |
| | **HHDT** | | | 4883 | | | 2.35E+01 | 5.17E-02 | 2.72E-04 | |
| | **Total** | | | 6800 | | | 2.89E+01 | 6.38E-02 | 3.35E-04 | 3.35E-04 |

**Diesel truck Idling Emissions** **DPM Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.734 | 5 | 137 | 8.37E+00 | 1.84E-02 | 9.69E-05 | |
| | **LHDT2** | 0.725 | 5 | 47 | 2.81E+00 | 6.20E-03 | 3.26E-05 | |
| | **MHDT** | 0.013 | 5 | 713 | 7.78E-01 | 1.71E-03 | 9.00E-06 | |
| | **HHDT** | 0.017 | 5 | 2314 | 3.20E+00 | 7.05E-03 | 3.70E-05 | |
| | | | | 3210 | 1.52E+01 | 3.34E-02 | 1.76E-04 | 1.76E-04 |
| **Idle at Light Logistics** | **LHDT1** | 0.734 | 5 | 1 | 5.24E-02 | 1.15E-04 | 6.06E-07 | |
| | **LHDT2** | 0.725 | 5 | 0 | 1.76E-02 | 3.88E-05 | 2.04E-07 | |
| | **MHDT** | 0.013 | 5 | 3 | 3.20E-03 | 7.06E-06 | 3.71E-08 | |
| | **HHDT** | 0.017 | 5 | 8 | 1.10E-02 | 2.41E-05 | 1.27E-07 | |
| | | | | 12 | 8.41E-02 | 1.85E-04 | 9.74E-07 | 9.74E-07 |
| **Idle at Utility** | **LHDT1** | 0.734 | 5 | 3 | 1.74E-01 | 3.83E-04 | 2.01E-06 | |
| | **LHDT2** | 0.725 | 5 | 1 | 5.84E-02 | 1.29E-04 | 6.76E-07 | |
| | **MHDT** | 0.013 | 5 | 2 | 2.63E-03 | 5.80E-06 | 3.05E-08 | |
| | **HHDT** | 0.017 | 5 | 11 | 1.48E-02 | 3.27E-05 | 1.72E-07 | |
| | | | | 17 | 2.50E-01 | 5.50E-04 | 2.89E-06 | 2.89E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.734 | 5 | 0 | 2.45E-02 | 5.40E-05 | 2.84E-07 | |
| | **LHDT2** | 0.725 | 5 | 0 | 8.24E-03 | 1.81E-05 | 9.53E-08 | |
| | **MHDT** | 0.013 | 5 | 7 | 7.51E-03 | 1.65E-05 | 8.69E-08 | |
| | **HHDT** | 0.017 | 5 | 43 | 5.88E-02 | 1.30E-04 | 6.81E-07 | |
| | | | | 50 | 9.91E-02 | 2.18E-04 | 1.15E-06 | 1.15E-06 |
| **Idle at Convenience Store** | **LHDT1** | 0.734 | 5 | 1 | 3.74E-02 | 8.24E-05 | 4.33E-07 | |
| | **LHDT2** | 0.725 | 5 | 0 | 1.26E-02 | 2.77E-05 | 1.46E-07 | |
| | **MHDT** | 0.013 | 5 | 11 | 1.23E-02 | 2.71E-05 | 1.42E-07 | |
| | **HHDT** | 0.017 | 5 | 66 | 9.19E-02 | 2.03E-04 | 1.06E-06 | |
| | | | | 79 | 1.54E-01 | 3.40E-04 | 1.79E-06 | 1.79E-06 |
| **Idle at Firestation** | **LHDT1** | 0.734 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.725 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.013 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.017 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 1.58E+01 | 3.47E-02 | 1.82E-04 | 1.82E-04 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/3/2013

**Project Only Phase 1 2022** Rev 5 No Mitigation

**Internal Roadway Circulation**

**with EMFAC 2014**

| Roadway Segment | Diesel Emissions (g/sec) |
|---|---|
| 1 | 3.54E-04 |
| 2 | 8.70E-04 |
| 3 | 1.44E-03 |
| 5 | 3.28E-05 |
| 6 | 3.33E-04 |
| 8 | 4.39E-05 |
| 11 | 9.10E-07 |
| 12 | 8.91E-06 |
| 14 | 8.45E-05 |
| 18 | 0.00E+00 |
| 19 | 2.37E-08 |
| 21 | 4.92E-05 |
| 24 | 7.71E-05 |
| 26 | 0.00E+00 |
| 29 | 4.80E-06 |
| 30 | 2.01E-05 |
| 31 | 3.83E-05 |
| | |
| Total (g/sec) | 3.36E-03 |
| Total (lbs/day) | 6.39E-01 |
| | |
| Total VMT (mi/day) | 1.79E+04 |

**World Logistics Center** **2022**

**Vehicle Fleet Mix**

**Vehicle VMT for SoCAB as per EMFAC2011 @ All Speeds**

| **GAS Vehicle Class** | **VMT (mils/day)** |
|---|---|
| LDA-GAS | 203,834,625 |
| LDT1-GAS | 24,148,511 |
| LDT2-GAS | 73,608,549 |
| MDT-GAS | 56,830,183 |
| LHDT1-GAS | 13,343,229 |
| LHDT2-GAS | 1,398,344 |
| MHDT-GAS | 1,227,001 |
| HHDT-GAS | 231,606 |
| Subtotal | 374622048 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 649,368.24 |
| LDT1-DSL | 34,560.09 |
| LDT2-DSL | 33,483.13 |
| MDT-DSL | 58,019.45 |
| LHDT1-DSL | 4,131,147.14 |
| LHDT2-DSL | 1,351,476.33 |
| MHDT-DSL | 5,376,141.72 |
| HHDT-DSL | 13,501,381.84 |
| Subtotal | 25135578 |
| | |
| Grand Total | 399757626 |

| **Vehicle Class** | | **VMT-GAS** | **VMT-DSL** | **VMT-Total** | **% VMT-Total** | **%GAS** | **%DSL** |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 203834625 | 649368 | 204483993 | 56.93% | 99.7% | 0.32% |
| LDT1 | | 24148511 | 34560 | 24183071 | 6.73% | 99.9% | 0.14% |
| LDT2 | | 73608549 | 33483 | 73642032 | 20.50% | 100.0% | 0.05% |
| MDT | | 56830183 | 58019 | 56888202 | 15.84% | 99.9% | 0.10% |
| Subtotal | | 358421868 | 775431 | 359197299 | 100.00% | 99.8% | 0.22% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 13343229 | 4131147 | 17474376 | 86.40% | 76.4% | 23.64% |
| LHDT2 | | 1398344 | 1351476 | 2749820 | 13.60% | 50.9% | 49.15% |
| Subtotal | | 14741573 | 5482623 | 20224196 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1227001 | 5376142 | 6603143 | 100% | 18.6% | 81.42% |
| HHDT | Heavy Heavy Truck | 231606 | 13501382 | 13732988 | 100% | 1.7% | 98.31% |

| ID | Arterial | From | To | | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 17,546 | 680 | 2,253 | 7,100 |
| 2 | Street A | Eucalyptus Ave | Street F | | 18,224 | 1,321 | 2,451 | 7,634 |
| 3 | Street E | west of Street A | | | 9,089 | 613 | 1,261 | 3,945 |
| 5 | Street E | Street D | Street A | | 4,165 | 151 | 317 | 106 |
| 6 | Street A | Street F | Street C | | 7,907 | 434 | 821 | 1,851 |
| 8 | Street D | Street E | Cactus Ave | | 7,495 | 318 | 621 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 74 | 8 | 10 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 548 | 142 | 117 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 1,049 | 146 | 140 | 298 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 48 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,797 | 62 | 172 | 214 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,790 | 54 | 176 | 219 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 225 | 8 | 26 | 42 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 225 | 8 | 26 | 42 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,993 | 62 | 202 | 261 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **No Mitigation**
Project Only Phase 1 2022
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27579 | 17,546 | 680 | 2,253 | 7,100 | 327 | 0.203 | 32 | 2 | 2 | 3 | 139 | 45 | 1834 | 6980 | 9037 | 1836 |
| 2 | 29630 | 18,224 | 1,321 | 2,451 | 7,634 | 731 | 0.454 | 33 | 2 | 2 | 3 | 270 | 88 | 1996 | 7505 | 9898 | 4495 |
| 3 | 14908 | 9,089 | 613 | 1,261 | 3,945 | 2352 | 1.461 | 16 | 1 | 1 | 1 | 125 | 41 | 1027 | 3878 | 5091 | 7438 |
| 5 | 4739 | 4,165 | 151 | 317 | 106 | 953 | 0.592 | 8 | 0 | 0 | 1 | 31 | 10 | 258 | 104 | 412 | 244 |
| 6 | 11013 | 7,907 | 434 | 821 | 1,851 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 89 | 29 | 668 | 1820 | 2623 | 1791 |
| 8 | 8434 | 7,495 | 318 | 621 | 0 | 1091 | 0.678 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 412 |
| 11 | 92 | 74 | 8 | 10 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 0 | 10 | 8 |
| 12 | 807 | 548 | 142 | 117 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 29 | 9 | 95 | 0 | 135 | 69 |
| 14 | 1633 | 1,049 | 146 | 140 | 298 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 30 | 10 | 114 | 293 | 449 | 451 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 48 | 48 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 3245 | 2,797 | 62 | 172 | 214 | 1258 | 0.781 | 5 | 0 | 0 | 0 | 13 | 4 | 140 | 210 | 373 | 292 |
| 24 | 3239 | 2,790 | 54 | 176 | 219 | 1946 | 1.209 | 5 | 0 | 0 | 0 | 11 | 4 | 143 | 215 | 379 | 458 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 301 | 225 | 8 | 26 | 42 | 675 | 0.419 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 27 |
| 30 | 301 | 225 | 8 | 26 | 42 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 114 |
| 31 | 3518 | 2,993 | 62 | 202 | 261 | 820 | 0.509 | 5 | 0 | 0 | 0 | 13 | 4 | 164 | 257 | 444 | 226 |
| | | | | | | | | | | | | | | | | Total | 17862 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0052 | 0.0144 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0059 | 0.0144 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0048 | 0.0133 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.76E-07 | 3.55E-07 | 1.92E-08 | 3.73E-08 | 7.35E-06 | 1.89E-06 | 3.02E-05 | 3.13E-04 | 3.54E-04 |
| 2 | 1 | 1.80E-06 | 8.24E-07 | 4.46E-08 | 8.66E-08 | 3.19E-05 | 8.21E-06 | 7.34E-05 | 7.53E-04 | 8.70E-04 |
| 3 | 1 | 2.89E-06 | 1.32E-06 | 7.16E-08 | 1.39E-07 | 4.76E-05 | 1.23E-05 | 1.22E-04 | 1.25E-03 | 1.44E-03 |
| 5 | 1 | 5.37E-07 | 2.45E-07 | 1.33E-08 | 2.58E-08 | 4.76E-06 | 1.22E-06 | 1.24E-05 | 1.36E-05 | 3.28E-05 |
| 6 | 1 | 1.17E-06 | 5.37E-07 | 2.91E-08 | 5.65E-08 | 1.58E-05 | 4.06E-06 | 3.70E-05 | 2.75E-04 | 3.33E-04 |
| 8 | 1 | 1.11E-06 | 5.06E-07 | 2.74E-08 | 5.32E-08 | 1.15E-05 | 2.95E-06 | 2.78E-05 | 0.00E+00 | 4.39E-05 |
| 11 | 1 | 1.20E-08 | 5.50E-09 | 2.98E-10 | 5.78E-10 | 3.17E-07 | 8.17E-08 | 4.92E-07 | 0.00E+00 | 9.10E-07 |
| 12 | 1 | 6.10E-08 | 2.79E-08 | 1.51E-09 | 2.94E-09 | 3.87E-06 | 9.95E-07 | 3.95E-06 | 0.00E+00 | 8.91E-06 |
| 14 | 1 | 2.29E-07 | 1.05E-07 | 5.69E-09 | 1.10E-08 | 7.81E-06 | 2.01E-06 | 9.28E-06 | 6.51E-05 | 8.45E-05 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.55E-08 | 7.08E-09 | 3.84E-10 | 7.45E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-08 |
| 21 | 1 | 4.76E-07 | 2.18E-07 | 1.18E-08 | 2.29E-08 | 2.58E-06 | 6.63E-07 | 8.87E-06 | 3.63E-05 | 4.92E-05 |
| 24 | 1 | 7.34E-07 | 3.36E-07 | 1.82E-08 | 3.53E-08 | 3.47E-06 | 8.94E-07 | 1.40E-05 | 5.75E-05 | 7.71E-05 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.05E-08 | 9.39E-09 | 5.09E-10 | 9.88E-10 | 1.78E-07 | 4.59E-08 | 7.19E-07 | 3.83E-06 | 4.80E-06 |
| 30 | 1 | 8.60E-08 | 3.93E-08 | 2.13E-09 | 4.14E-09 | 7.47E-07 | 1.92E-07 | 3.01E-06 | 1.60E-05 | 2.01E-05 |
| 31 | 1 | 3.32E-07 | 1.52E-07 | 8.22E-09 | 1.60E-08 | 1.68E-06 | 4.32E-07 | 6.79E-06 | 2.89E-05 | 3.83E-05 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/1/2013
**Project Only Phase 1 2022** **No Mitigation** **With EMFAC2014**
**Surface Street Segments**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| 9 | 5.27E-05 |
| 10 | 2.06E-06 |
| 13 | 1.47E-05 |
| 32 | 8.90E-06 |
| 33 | 3.94E-06 |
| 35 | 4.26E-05 |
| 36 | 1.34E-05 |
| 37 | 1.11E-05 |
| 38 | 1.13E-05 |
| 42 | 3.46E-04 |
| 43 | 1.26E-05 |
| 46 | 1.12E-05 |
| 47 | 4.98E-07 |
| 48 | 3.56E-06 |
| 50 | 1.60E-05 |
| 51 | 0.00E+00 |
| 52 | 2.83E-05 |
| 53 | 1.58E-06 |
| 54 | 0.00E+00 |
| 55 | 3.56E-07 |
| 56 | 0.00E+00 |
| 57 | 2.00E-06 |
| 58 | 4.60E-08 |
| 59 | 1.98E-05 |
| 60 | 6.79E-06 |
| 61 | 1.25E-06 |
| 62 | 0.00E+00 |
| 65 | 3.62E-06 |

| | |
|---|---|
| 66 | 4.15E-06 |
| 67 | 0.00E+00 |
| 68 | 1.47E-10 |
| 69 | 2.67E-06 |
| 70 | 3.89E-06 |
| 71 | 0.00E+00 |
| 72 | 0.00E+00 |
| 73 | 1.64E-05 |
| 74 | 1.25E-06 |
| 75 | 9.36E-07 |
| 76 | 3.40E-07 |
| 77 | 8.44E-07 |
| 80 | 3.60E-07 |
| 81 | 0.00E+00 |
| 82 | 8.87E-06 |
| 83 | 1.30E-06 |
| 85 | 0.00E+00 |
| 86 | 1.16E-05 |
| 87 | 3.56E-08 |
| 88 | 7.18E-08 |
| 95 | 2.89E-06 |
| 96 | 1.32E-06 |
| 97 | 4.34E-07 |
| 98 | 3.38E-07 |
| 99 | 2.64E-07 |
| 100 | 1.01E-06 |
| 101 | 3.42E-06 |
| 102 | 6.01E-11 |
| 103 | 2.86E-06 |
| 104 | 2.04E-06 |
| 105 | 0.00E+00 |
| 106 | 7.89E-08 |
| 107 | 2.04E-06 |
| 108 | 8.43E-08 |

| | |
|---|---|
| 109 | 2.97E-07 |
| 110 | 3.15E-06 |
| 111 | 0.00E+00 |
| 112 | 6.84E-06 |
| 113 | 1.79E-06 |
| 114 | 3.65E-06 |
| 115 | 4.51E-06 |
| 116 | 8.87E-07 |
| 117 | 2.04E-09 |
| 118 | 4.53E-06 |
| 119 | 6.84E-08 |
| 120 | 1.46E-05 |
| 121 | 3.96E-06 |
| 122 | 9.43E-06 |
| 123 | 2.32E-09 |
| 124 | 3.94E-06 |
| 125 | 1.69E-10 |
| 126 | 3.58E-06 |
| 127 | 2.14E-05 |
| 128 | 1.60E-10 |
| 129 | 3.62E-06 |
| 130 | 1.07E-07 |
| 131 | 6.42E-10 |
| 133 | 1.17E-07 |
| 134 | 6.77E-07 |
| 135 | 3.71E-06 |
| 136 | 1.40E-07 |
| 137 | 1.64E-10 |
| 138 | 4.17E-07 |
| 139 | 1.17E-06 |
| 140 | 9.22E-07 |
| 141 | 1.89E-06 |
| 142 | 2.06E-07 |
| 143 | 1.35E-06 |

| | |
|---|---|
| 144 | 5.62E-07 |
| 145 | 6.49E-07 |
| 146 | 3.73E-08 |
| 147 | 9.57E-07 |
| 148 | 7.98E-06 |
| 149 | 1.21E-06 |
| 150 | 0.00E+00 |
| 151 | 1.32E-06 |
| 152 | 1.98E-05 |
| 153 | 1.56E-06 |
| 154 | 0.00E+00 |
| 155 | 3.15E-06 |
| 156 | 1.69E-06 |
| 157 | 3.94E-06 |
| 158 | 3.42E-06 |
| 159 | 5.42E-07 |
| 160 | 0.00E+00 |
| 161 | 3.71E-06 |
| 162 | 1.24E-05 |
| 163 | 2.40E-06 |
| 164 | 6.60E-08 |
| 165 | 4.05E-05 |
| 168 | 5.80E-06 |
| 169 | 0.00E+00 |
| 170 | 0.00E+00 |
| 171 | 4.96E-06 |
| 172 | 1.10E-05 |
| 173 | 0.00E+00 |
| 174 | 0.00E+00 |
| 177 | 6.50E-05 |
| 178 | 6.52E-05 |
| 179 | 1.49E-04 |
| 180 | 4.50E-06 |
| 181 | 0.00E+00 |

| | |
|---|---|
| 182 | 0.00E+00 |
| 183 | 0.00E+00 |
| 184 | 0.00E+00 |
| 185 | 0.00E+00 |
| 186 | 0.00E+00 |
| 190 | 1.91E-04 |
| 191 | 1.25E-04 |
| 192 | 2.07E-05 |
| 194 | 1.24E-06 |
| 195 | 2.12E-06 |
| 196 | 6.30E-06 |
| 198 | 0.00E+00 |
| 199 | 2.66E-07 |
| 200 | 1.37E-05 |
| 205 | 3.33E-06 |
| 206 | 0.00E+00 |
| 207 | 5.79E-06 |
| 215 | 5.54E-09 |
| 216 | 6.72E-06 |
| 217 | 2.91E-06 |
| 218 | 1.42E-06 |
| 219 | 3.68E-07 |
| 221 | 2.72E-09 |
| 223 | 9.67E-10 |
| 225 | 0.00E+00 |
| 226 | 1.99E-06 |
| 227 | 0.00E+00 |
| 229 | 2.09E-09 |
| 230 | 7.30E-09 |
| 231 | 1.95E-06 |
| 232 | 1.79E-05 |
| 233 | 1.18E-06 |
| 236 | 2.82E-07 |
| 237 | 1.63E-05 |

| | |
|---|---|
| 238 | 4.04E-06 |
| 239 | 1.14E-05 |
| 240 | 0.00E+00 |
| 241 | 0.00E+00 |
| 242 | 8.03E-06 |
| 243 | 6.01E-08 |
| 244 | 2.02E-07 |
| 245 | 5.02E-07 |
| 246 | 7.45E-07 |
| 247 | 5.86E-07 |
| 250 | 0.00E+00 |
| 252 | 1.99E-05 |
| 254 | 8.78E-11 |
| 256 | 1.08E-06 |
| 258 | 0.00E+00 |
| 260 | 2.13E-05 |
| 261 | 7.25E-06 |
| 262 | 9.62E-06 |
| 263 | 2.27E-06 |
| 264 | 0.00E+00 |
| 265 | 9.98E-07 |
| 266 | 4.26E-06 |
| 267 | 1.12E-06 |
| 268 | 2.41E-06 |
| 269 | 6.43E-05 |
| 270 | 1.94E-07 |
| 271 | 9.84E-06 |
| 272 | 0.00E+00 |
| 273 | 2.21E-07 |
| 274 | 3.34E-05 |
| 275 | 2.50E-06 |
| 276 | 4.56E-06 |
| 277 | 1.46E-07 |
| 278 | 0.00E+00 |

| | |
|---|---|
| 279 | 1.14E-06 |
| 280 | 5.34E-06 |
| 281 | 2.89E-07 |
| 282 | 2.62E-06 |
| 283 | 6.28E-06 |
| 284 | 1.39E-05 |
| 285 | 5.15E-06 |
| 286 | 9.51E-07 |
| 287 | 5.88E-06 |
| 288 | 3.28E-07 |
| 289 | 4.90E-06 |
| 290 | 1.01E-05 |
| 294 | 1.19E-07 |
| 301 | 1.55E-06 |
| 302 | 1.54E-06 |
| 303 | 3.77E-05 |
| 304 | 7.52E-07 |
| 306 | 2.37E-05 |
| 307 | 0.00E+00 |
| 324 | 4.51E-07 |
| 325 | 3.10E-05 |
| 326 | 1.21E-06 |
| 327 | 3.03E-06 |
| 340 | 0.00E+00 |
| 351 | 0.00E+00 |
| 358 | 0.00E+00 |
| 359 | 6.25E-08 |
| 360 | 4.90E-06 |
| 361 | 5.83E-06 |
| 362 | 6.26E-08 |
| 363 | 5.34E-05 |
| 364 | 3.25E-06 |
| 365 | 1.53E-05 |
| 366 | 2.50E-06 |

| | |
|---|---|
| 367 | 0.00E+00 |
| 375 | 0.00E+00 |
| 376 | 0.00E+00 |
| 377 | 0.00E+00 |
| 378 | 0.00E+00 |
| 379 | 0.00E+00 |
| 380 | 0.00E+00 |
| 381 | 0.00E+00 |
| 386 | 2.53E-07 |
| 387 | 4.64E-05 |
| 388 | 0.00E+00 |
| 389 | 5.05E-08 |
| 390 | 3.67E-06 |
| 392 | 2.43E-06 |
| 393 | 6.46E-06 |
| 394 | 1.96E-05 |
| 396 | 2.58E-05 |
| 397 | 1.11E-05 |
| 398 | 5.86E-06 |
| 399 | 1.49E-06 |
| 400 | 1.98E-06 |
| 401 | 1.39E-07 |
| 402 | 0.00E+00 |
| 404 | 0.00E+00 |
| 405 | 8.63E-07 |
| 406 | 3.58E-07 |
| 407 | 0.00E+00 |
| 408 | 1.46E-07 |
| 409 | 4.46E-07 |
| 410 | 5.45E-07 |
| 411 | 1.93E-09 |
| 412 | 0.00E+00 |
| 413 | 9.94E-07 |
| 414 | 9.27E-10 |

| | |
|---|---|
| 415 | 6.94E-06 |
| 416 | 0.00E+00 |
| 417 | 0.00E+00 |
| 419 | 0.00E+00 |
| 420 | 0.00E+00 |
| 421 | 0.00E+00 |
| 424 | 2.33E-05 |
| 425 | 0.00E+00 |
| 426 | 0.00E+00 |
| 427 | 7.81E-07 |
| 428 | 0.00E+00 |
| 429 | 0.00E+00 |
| 430 | 9.26E-07 |
| 431 | 0.00E+00 |
| 432 | 0.00E+00 |
| 433 | 9.05E-07 |
| 434 | 4.47E-09 |
| 435 | 0.00E+00 |
| 436 | 0.00E+00 |
| 441 | 0.00E+00 |
| 442 | 3.21E-07 |
| 443 | 2.10E-07 |
| 444 | 0.00E+00 |
| 452 | 0.00E+00 |
| 453 | 0.00E+00 |
| 454 | 0.00E+00 |
| 455 | 0.00E+00 |
| 458 | 0.00E+00 |
| 464 | 0.00E+00 |
| 477 | 0.00E+00 |
| 478 | 0.00E+00 |
| 479 | 0.00E+00 |
| 480 | 0.00E+00 |
| 481 | 0.00E+00 |

| | |
|---|---|
| 482 | 0.00E+00 |
| 483 | 0.00E+00 |
| 484 | 0.00E+00 |
| 485 | 0.00E+00 |
| 488 | 0.00E+00 |
| 494 | 0.00E+00 |
| 498 | 0.00E+00 |
| 499 | 1.97E-05 |
| 500 | 1.18E-05 |
| 502 | 0.00E+00 |
| 503 | 0.00E+00 |
| 504 | 1.03E-06 |

| | |
|---|---|
| Total (g/sec) | 2.26E-03 |
| Total (lb/day) | 4.30E-01 |
| | |
| VMT (mi/day) | 15943 |

# TRAFFIC VOLUMES

| ID | Segment | From | To | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 4,976 | 198 | 482 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 647 | 29 | 41 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 620 | 13 | 38 | 298 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1,576 | 69 | 92 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 481 | 16 | 29 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 187 | 12 | 31 | 450 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1,116 | 62 | 173 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 478 | 39 | 151 | 382 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 2,191 | 129 | 349 | 4 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,607 | 93 | 285 | 449 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 125 | 5 | 5 | 39 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 176 | 8 | 8 | 116 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 85 | 4 | 3 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 239 | 6 | 13 | 27 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 7,495 | 318 | 621 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 0 | 0 | 0 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 4,474 | 164 | 464 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 434 | 30 | 16 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 42 | 3 | 1 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,122 | 59 | 173 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 83 | 3 | 3 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 0 | 0 | 0 | 186 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 738 | 20 | 64 | 289 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 37 | 5 | 5 | 92 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | |
| 65 | Alessandro Blvd | Nason St | Oliver St | 317 | 8 | 16 | 32 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 401 | 13 | 27 | 32 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 907 | 34 | 57 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 1,333 | 51 | 86 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 4,386 | 161 | 462 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 388 | 7 | 7 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 140 | 4 | 7 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 32 | 1 | 4 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 525 | 10 | 10 | 7 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 693 | 15 | 17 | 8 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,058 | 28 | 53 | 177 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 504 | 14 | 26 | 88 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,379 | 47 | 110 | 251 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 15 | 0 | 1 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 26 | 1 | 1 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 480 | 12 | 37 | 33 |
| 96 | N California Ave | W 6th St | E 8th St | 404 | 9 | 19 | 15 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 57 | 2 | 5 | 6 |
| 98 | N California Ave | W 6th St | I-10 | 38 | 2 | 13 | 11 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 141 | 1 | 4 | 3 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 196 | 5 | 13 | 27 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 563 | 13 | 36 | 65 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 1 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 511 | 12 | 30 | 59 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 113 | 2 | 8 | 34 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 12 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 142 | 3 | 12 | 34 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 0 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 29 | 2 | 7 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 121 | 3 | 9 | 27 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 133 | 5 | 17 | 55 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 12 | 2 | 7 | 14 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 20 | 2 | 8 | 31 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 130 | 3 | 10 | 35 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 8 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 13 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 140 | 4 | 11 | 39 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 28 | 0 | 2 | 0 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 88 | 5 | 15 | 126 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 121 | Alessandro Blvd | Heacock St | Indian St | 146 | 4 | 10 | 31 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 58 | 3 | 10 | 101 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 12 | 0 | 0 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 170 | 5 | 12 | 31 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 188 | 5 | 11 | 29 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 39 | 3 | 10 | 188 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 207 | 5 | 12 | 27 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 49 | 2 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 4 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 59 | 2 | 2 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 36 | 2 | 3 | 5 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 275 | 8 | 16 | 32 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 67 | 2 | 2 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 10 | 1 | 4 | 10 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 168 | 4 | 12 | 12 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 12 | 1 | 2 | 12 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 167 | 3 | 9 | 10 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 13 | 1 | 3 | 4 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 177 | 5 | 14 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 181 | 5 | 15 | 0 |
| 145 | Cactus Ave | Graham St | Heacock St | 208 | 6 | 17 | 0 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 24 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 243 | 8 | 20 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 54 | 2 | 8 | 92 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 307 | 10 | 25 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 340 | 11 | 28 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 28 | 2 | 9 | 184 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 437 | 15 | 30 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,147 | 36 | 77 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 607 | 17 | 44 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,334 | 51 | 86 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 194 | 5 | 15 | 18 |
| 159 | Beaumont Ave | E 6th St | I-10 | 317 | 5 | 15 | 17 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 583 | 31 | 104 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 162 | Iris Ave | Kitching St | Lasselle St | 1,351 | 77 | 259 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 712 | 44 | 152 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 15 | 1 | 3 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 4,320 | 157 | 459 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 648 | 40 | 143 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,787 | 71 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,632 | 67 | 189 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,600 | 98 | 324 | 382 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 328 | 15 | 39 | 63 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,943 | 115 | 364 | 446 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 115 | 4 | 5 | 3 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2,924 | 54 | 187 | 185 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 2,523 | 47 | 171 | 152 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 401 | 7 | 16 | 34 |
| 194 | Crescent Ave | West of Alessandro Rd | | 329 | 20 | 63 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 592 | 31 | 95 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 921 | 50 | 158 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 0 | 0 | 0 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 152 | 6 | 10 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,122 | 59 | 173 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 221 | 12 | 41 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 221 | 12 | 41 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 10 | 0 | 0 | 0 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 197 | 4 | 11 | 20 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 317 | 7 | 19 | 30 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 60 | 1 | 4 | 9 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 11 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 5 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 13 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 36 | 1 | 4 | 9 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 9 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 35 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 66 | 1 | 3 | 6 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 520 | 12 | 45 | 73 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 47 | 1 | 4 | 9 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 13 | 0 | 2 | 2 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 404 | 11 | 45 | 74 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 185 | 4 | 17 | 20 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 197 | 6 | 26 | 51 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 201 | 6 | 26 | 50 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 16 | 1 | 2 | 6 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 8 | 0 | 2 | 8 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 46 | 1 | 7 | 18 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 27 | 1 | 6 | 18 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 190 | 6 | 22 | 41 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 546 | 12 | 46 | 74 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 1 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 205 | 3 | 4 | 6 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 761 | 16 | 51 | 83 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 98 | 4 | 13 | 40 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 209 | 7 | 27 | 72 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 781 | 18 | 57 | 95 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 421 | 11 | 37 | 60 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,049 | 26 | 90 | 147 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 163 | 6 | 26 | 43 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 724 | 17 | 54 | 89 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 448 | 15 | 65 | 169 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 9 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 457 | 16 | 66 | 171 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 7 | 0 | 2 | 2 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 472 | 16 | 69 | 174 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 27 | 3 | 10 | 45 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 463 | 17 | 69 | 185 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 141 | 5 | 19 | 46 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 558 | 19 | 81 | 211 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 16 | 0 | 2 | 7 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 298 | 10 | 41 | 100 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 79 | 8 | 30 | 103 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,139 | 36 | 78 | 244 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 366 | 13 | 33 | 151 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 766 | 24 | 56 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 682 | 22 | 49 | 126 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 206 | 7 | 18 | 8 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 721 | 23 | 52 | 103 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 422 | 16 | 33 | 213 |
| 294 | Via Del Lago | South of Iris Ave | | 55 | 2 | 2 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 397 | 10 | 37 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 411 | 10 | 35 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 23 | 1 | 5 | 182 |
| 304 | Iris Ave | Indian St | Perris Blvd | 28 | 7 | 18 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 503 | 22 | 87 | 180 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 936 | 47 | 165 | 180 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 25 | 0 | 1 | 1 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 1,181 | 20 | 76 | 91 |
| 326 | Ramona Expy | Sanderson Ave | State St | 71 | 1 | 2 | 2 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 1,073 | 19 | 73 | 87 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 15 | 1 | 1 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 2,520 | 47 | 170 | 151 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 34 | 0 | 1 | 1 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 1,855 | 36 | 130 | 93 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,297 | 21 | 80 | 95 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 37 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,316 | 25 | 92 | 50 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 1,103 | 21 | 58 | 58 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 556 | 13 | 35 | 55 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 7 | 0 | 2 | 10 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ram | Mid County Pkwy | 3rd St | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | | | | |
| 377 | Mid County Pkwy WB Off-Ran | Mid County Pkwy | 3rd St | | | | |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | | | | |
| 379 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | 3rd St | | | | |
| 380 | Mid County Pkwy EB On-Ram | 3rd St | Mid County Pkwy | | | | |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | | | | |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 2 | 0 | 1 | 2 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 701 | 29 | 109 | 104 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 16 | 0 | 1 | 2 |
| 390 | Ramona Expy | Webster Ave | Indian St | 286 | 11 | 34 | 13 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 189 | 14 | 64 | 25 |
| 393 | Indian St | Ramona Expy | Morgan St | 34 | 6 | 48 | 44 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 668 | 27 | 106 | 91 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 1,162 | 39 | 139 | 40 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 1,136 | 34 | 124 | 12 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,378 | 62 | 181 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 183 | 4 | 8 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 386 | 9 | 14 | 1 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 1 | 1 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 147 | 6 | 4 | 3 |
| 406 | Ironwood Ave | East of Thedore St | | 76 | 8 | 5 | 4 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 1 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 103 | 4 | 7 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 198 | 6 | 8 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 4 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 72 | 2 | 7 | 8 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 998 | 32 | 109 | 27 |
| 416 | Mid County Pkwy WB On-Ram | Mid County Pkwy | Perris Blvd | 388 | 17 | 65 | 10 |
| 417 | Mid County Pkwy WB Off-Ran | Perris Blvd | Mid County Pkwy | 6 | 0 | 0 | 2 |
| 419 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | Perris Blvd | 451 | 13 | 50 | 12 |
| 420 | Mid County Pkwy EB On-Ram | Perris Blvd | Mid County Pkwy | 0 | 0 | 0 | 2 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 110 | 5 | 14 | 202 |
| 425 | Mid County Pkwy WB On-Ram | West of Evan | | 121 | 1 | 5 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 426 | Mid County Pkwy WB Off-Ran | East of Evan | | 0 | 0 | 0 | 1 |
| 427 | Day St | south of Alessandro Blvd | | 4 | 1 | 5 | 7 |
| 428 | Mid County Pkwy EB Off-Ram | West of Evan | | 41 | 0 | 1 | 2 |
| 429 | Mid County Pkwy EB On-Ram | East of Evan | | 1 | 0 | 0 | 0 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 366 | 8 | 23 | 50 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | |
| 433 | Evans Rd | Rider St | Orange Ave | 185 | 3 | 5 | 1 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 17 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 61 | 1 | 2 | 0 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 45 | 1 | 2 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | |
| 453 | Evans Rd | North of San Jancito Ave | | | | | |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | |
| 455 | Evans Rd | South of San Jancito Ave | | | | | |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | |
| 477 | Ellis Ave | West of Evan Rd | | | | | |
| 478 | Evans Rd | North of Ellis Ave | | | | | |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | |
| 482 | Ellis Ave | East of SR-215 | | | | | |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | |
| 488 | Nason St | North of Iris Ave | | 0 | 0 | 0 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 340 | 13 | 25 | 208 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 358 | 14 | 26 | 208 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | |
| 504 | Krameria Ave | west of Perris Blvd | | 151 | 13 | 56 | 0 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **No Mitigation**
Project Only Phase 1 2022
Surface Street Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5656 | 4,976 | 198 | 482 | 0 | 1820 | 1.131 | 9 | 0 | 0 | 1 | 40 | 13 | 392 | 0 | 457 | 517 |
| 10 | 717 | 647 | 29 | 41 | 0 | 826 | 0.513 | 1 | 0 | 0 | 0 | 6 | 2 | 33 | 0 | 43 | 22 |
| 13 | 969 | 620 | 13 | 38 | 298 | 345 | 0.214 | 1 | 0 | 0 | 0 | 3 | 1 | 31 | 293 | 329 | 70 |
| 32 | 1737 | 1,576 | 69 | 92 | 0 | 1551 | 0.964 | 3 | 0 | 0 | 0 | 14 | 5 | 75 | 0 | 97 | 93 |
| 33 | 526 | 481 | 16 | 29 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 36 |
| 35 | 680 | 187 | 12 | 31 | 450 | 801 | 0.498 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 442 | 471 | 235 |
| 36 | 1351 | 1,116 | 62 | 173 | 0 | 1627 | 1.011 | 2 | 0 | 0 | 0 | 13 | 4 | 141 | 0 | 160 | 162 |
| 37 | 1050 | 478 | 39 | 151 | 382 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 123 | 376 | 510 | 69 |
| 38 | 2673 | 2,191 | 129 | 349 | 4 | 659 | 0.409 | 4 | 0 | 0 | 0 | 26 | 9 | 284 | 4 | 328 | 134 |
| 42 | 2434 | 1,607 | 93 | 285 | 449 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 19 | 6 | 232 | 441 | 702 | 2328 |
| 43 | 174 | 125 | 5 | 5 | 39 | 2598 | 1.614 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 38 | 44 | 71 |
| 46 | 308 | 176 | 8 | 8 | 116 | 806 | 0.501 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 114 | 123 | 62 |
| 47 | 92 | 85 | 4 | 3 | 0 | 1995 | 1.239 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 5 |
| 48 | 285 | 239 | 6 | 13 | 27 | 795 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 19 |
| 50 | 8434 | 7,495 | 318 | 621 | 0 | 479 | 0.298 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 181 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5102 | 4,474 | 164 | 464 | 0 | 1269 | 0.788 | 8 | 0 | 0 | 1 | 33 | 11 | 378 | 0 | 432 | 340 |
| 53 | 480 | 434 | 30 | 16 | 0 | 795 | 0.494 | 1 | 0 | 0 | 0 | 6 | 2 | 13 | 0 | 22 | 11 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 46 | 42 | 3 | 1 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1354 | 1,122 | 59 | 173 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 24 |
| 58 | 89 | 83 | 3 | 3 | 0 | 172 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 |
| 59 | 186 | 0 | 0 | 0 | 186 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 183 | 89 |
| 60 | 1111 | 738 | 20 | 64 | 289 | 159 | 0.099 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 284 | 343 | 34 |
| 61 | 139 | 37 | 5 | 5 | 92 | 97 | 0.060 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 90 | 96 | 6 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 373 | 317 | 8 | 16 | 32 | 795 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 23 |
| 66 | 473 | 401 | 13 | 27 | 32 | 812 | 0.504 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 31 | 58 | 29 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 998 | 907 | 34 | 57 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 7 | 2 | 46 | 0 | 58 | 29 |
| 70 | 1470 | 1,333 | 51 | 86 | 0 | 795 | 0.494 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5009 | 4,386 | 161 | 462 | 0 | 742 | 0.461 | 8 | 0 | 0 | 1 | 33 | 11 | 376 | 0 | 429 | 198 |
| 74 | 403 | 388 | 7 | 7 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 9 | 9 |
| 75 | 156 | 140 | 4 | 7 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 | 12 | 6 |
| 76 | 37 | 32 | 1 | 4 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 4 |
| 77 | 552 | 525 | 10 | 10 | 7 | 438 | 0.272 | 1 | 0 | 0 | 0 | 2 | 1 | 8 | 7 | 19 | 5 |
| 80 | 733 | 693 | 15 | 17 | 8 | 138 | 0.086 | 1 | 0 | 0 | 0 | 3 | 1 | 14 | 8 | 27 | 2 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1316 | 1,058 | 28 | 53 | 177 | 322 | 0.200 | 2 | 0 | 0 | 0 | 6 | 2 | 43 | 174 | 227 | 45 |
| 83 | 632 | 504 | 14 | 26 | 88 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 87 | 113 | 7 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1787 | 1,379 | 47 | 110 | 251 | 284 | 0.176 | 2 | 0 | 0 | 0 | 10 | 3 | 90 | 247 | 352 | 62 |
| 87 | 16 | 15 | 0 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 88 | 28 | 26 | 1 | 1 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 95 | 562 | 480 | 12 | 37 | 33 | 439 | 0.273 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 32 | 67 | 18 |
| 96 | 447 | 404 | 9 | 19 | 15 | 399 | 0.248 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 15 | 34 | 8 |
| 97 | 70 | 57 | 2 | 5 | 6 | 389 | 0.242 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 11 | 3 |
| 98 | 64 | 38 | 2 | 13 | 11 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 22 | 2 |
| 99 | 149 | 141 | 1 | 4 | 3 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 241 | 196 | 5 | 13 | 27 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 5 |
| 101 | 677 | 563 | 13 | 36 | 65 | 313 | 0.194 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 64 | 98 | 19 |
| 102 | 1 | 1 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 612 | 511 | 12 | 30 | 59 | 291 | 0.181 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 58 | 87 | 16 |
| 104 | 157 | 113 | 2 | 8 | 34 | 404 | 0.251 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 33 | 41 | 10 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 13 | 12 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 107 | 191 | 142 | 3 | 12 | 34 | 388 | 0.241 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 33 | 44 | 11 |
| 108 | 14 | 12 | 0 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 109 | 38 | 29 | 2 | 7 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 3 |
| 110 | 160 | 121 | 3 | 9 | 27 | 756 | 0.470 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 | 35 | 16 |
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 210 | 133 | 5 | 17 | 55 | 817 | 0.508 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 54 | 70 | 35 |
| 113 | 35 | 12 | 2 | 7 | 14 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 | 20 | 10 |
| 114 | 61 | 20 | 2 | 8 | 31 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 38 | 18 |
| 115 | 178 | 130 | 3 | 10 | 35 | 851 | 0.529 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 34 | 44 | 23 |
| 116 | 9 | 1 | 0 | 0 | 8 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 4 |
| 117 | 13 | 13 | 0 | 0 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 194 | 140 | 4 | 11 | 39 | 765 | 0.475 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 38 | 49 | 23 |
| 119 | 30 | 28 | 0 | 2 | 0 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 120 | 234 | 88 | 5 | 15 | 126 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 124 | 138 | 70 |
| 121 | 191 | 146 | 4 | 10 | 31 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 30 | 40 | 21 |
| 122 | 172 | 58 | 3 | 10 | 101 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 99 | 108 | 53 |
| 123 | 12 | 12 | 0 | 0 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 218 | 170 | 5 | 12 | 31 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 30 | 42 | 21 |
| 125 | 1 | 1 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 233 | 188 | 5 | 11 | 29 | 774 | 0.481 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 29 | 39 | 19 |
| 127 | 240 | 39 | 3 | 10 | 188 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 185 | 194 | 99 |
| 128 | 1 | 1 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 251 | 207 | 5 | 12 | 27 | 823 | 0.511 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 27 | 38 | 19 |
| 130 | 52 | 49 | 2 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 131 | 4 | 4 | 0 | 0 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 63 | 59 | 2 | 2 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 134 | 46 | 36 | 2 | 3 | 5 | 760 | 0.472 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 4 |
| 135 | 331 | 275 | 8 | 16 | 32 | 816 | 0.507 | 0 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 24 |
| 136 | 71 | 67 | 2 | 2 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 137 | 1 | 1 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 25 | 10 | 1 | 4 | 10 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 13 | 2 |
| 139 | 196 | 168 | 4 | 12 | 12 | 504 | 0.313 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 12 | 23 | 7 |
| 140 | 27 | 12 | 1 | 2 | 12 | 527 | 0.327 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 14 | 4 |
| 141 | 189 | 167 | 3 | 9 | 10 | 1001 | 0.622 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 10 | 18 | 11 |
| 142 | 21 | 13 | 1 | 3 | 4 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 1 |
| 143 | 204 | 177 | 5 | 14 | 8 | 845 | 0.525 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 8 | 21 | 11 |
| 144 | 201 | 181 | 5 | 15 | 0 | 783 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 | 7 |
| 145 | 231 | 208 | 6 | 17 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 | 16 | 8 |
| 146 | 25 | 24 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 147 | 271 | 243 | 8 | 20 | 0 | 798 | 0.496 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 19 | 9 |
| 148 | 156 | 54 | 2 | 8 | 92 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 90 | 98 | 44 |
| 149 | 342 | 307 | 10 | 25 | 0 | 808 | 0.502 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 0 | 24 | 12 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 379 | 340 | 11 | 28 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 2 | 1 | 23 | 0 | 27 | 13 |
| 152 | 223 | 28 | 2 | 9 | 184 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 181 | 189 | 92 |
| 153 | 482 | 437 | 15 | 30 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 15 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1260 | 1,147 | 36 | 77 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 7 | 2 | 63 | 0 | 75 | 36 |
| 156 | 668 | 607 | 17 | 44 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 42 | 20 |
| 157 | 1471 | 1,334 | 51 | 86 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 158 | 232 | 194 | 5 | 15 | 18 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 18 | 32 | 20 |
| 159 | 354 | 317 | 5 | 15 | 17 | 170 | 0.106 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 17 | 31 | 3 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 718 | 583 | 31 | 104 | 0 | 784 | 0.487 | 1 | 0 | 0 | 0 | 6 | 2 | 85 | 0 | 94 | 46 |
| 162 | 1687 | 1,351 | 77 | 259 | 0 | 1052 | 0.654 | 2 | 0 | 0 | 0 | 16 | 5 | 211 | 0 | 235 | 153 |
| 163 | 908 | 712 | 44 | 152 | 0 | 350 | 0.217 | 1 | 0 | 0 | 0 | 9 | 3 | 124 | 0 | 137 | 30 |
| 164 | 19 | 15 | 1 | 3 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 165 | 4936 | 4,320 | 157 | 459 | 0 | 1541 | 0.957 | 8 | 0 | 0 | 1 | 32 | 10 | 374 | 0 | 426 | 407 |
| 168 | 831 | 648 | 40 | 143 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 8 | 3 | 116 | 0 | 129 | 61 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3050 | 2,787 | 71 | 192 | 0 | 522 | 0.324 | 5 | 0 | 0 | 0 | 15 | 5 | 156 | 0 | 182 | 59 |
| 172 | 2888 | 2,632 | 67 | 189 | 0 | 993 | 0.617 | 5 | 0 | 0 | 0 | 14 | 4 | 154 | 0 | 178 | 110 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2404 | 1,600 | 98 | 324 | 382 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 20 | 7 | 264 | 376 | 669 | 462 |
| 178 | 445 | 328 | 15 | 39 | 63 | 7132 | 4.430 | 1 | 0 | 0 | 0 | 3 | 1 | 32 | 62 | 98 | 436 |
| 179 | 2868 | 1,943 | 115 | 364 | 446 | 2189 | 1.360 | 4 | 0 | 0 | 0 | 23 | 8 | 296 | 438 | 770 | 1047 |
| 180 | 127 | 115 | 4 | 5 | 3 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 | 8 | 35 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 3350 | 2,924 | 54 | 187 | 185 | 6368 | 3.956 | 5 | 0 | 0 | 0 | 11 | 4 | 152 | 182 | 355 | 1405 |
| 191 | 2893 | 2,523 | 47 | 171 | 152 | 4906 | 3.048 | 5 | 0 | 0 | 0 | 10 | 3 | 139 | 149 | 307 | 935 |
| 192 | 458 | 401 | 7 | 16 | 34 | 4358 | 2.707 | 1 | 0 | 0 | 0 | 1 | 0 | 13 | 33 | 49 | 133 |
| 194 | 412 | 329 | 20 | 63 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 | 57 | 13 |
| 195 | 718 | 592 | 31 | 95 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 6 | 2 | 77 | 0 | 87 | 21 |
| 196 | 1129 | 921 | 50 | 158 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 10 | 3 | 129 | 0 | 144 | 64 |
| 198 | 0 | 0 | 0 | 0 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 168 | 152 | 6 | 10 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 10 | 2 |
| 200 | 1354 | 1,122 | 59 | 173 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 139 |
| 205 | 274 | 221 | 12 | 41 | 0 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 35 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 274 | 221 | 12 | 41 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 60 |
| 215 | 10 | 10 | 0 | 0 | 0 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 232 | 197 | 4 | 11 | 20 | 2000 | 1.242 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 20 | 30 | 37 |
| 217 | 373 | 317 | 7 | 19 | 30 | 663 | 0.412 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | 29 | 48 | 20 |
| 218 | 74 | 60 | 1 | 4 | 9 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 13 | 9 |
| 219 | 12 | 11 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 5 | 5 | 0 | 0 | 0 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 13 | 13 | 0 | 0 | 0 | 359 | 0.223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 50 | 36 | 1 | 4 | 9 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 13 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 9 | 9 | 0 | 0 | 0 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 35 | 35 | 0 | 0 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 76 | 66 | 1 | 3 | 6 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 11 |
| 232 | 650 | 520 | 12 | 45 | 73 | 1719 | 1.068 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 72 | 113 | 120 |
| 233 | 61 | 47 | 1 | 4 | 9 | 976 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 8 |
| 236 | 17 | 13 | 0 | 2 | 2 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 2 |
| 237 | 534 | 404 | 11 | 45 | 74 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 113 | 109 |
| 238 | 226 | 185 | 4 | 17 | 20 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 20 | 35 | 24 |
| 239 | 280 | 197 | 6 | 26 | 51 | 1385 | 0.860 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 50 | 73 | 63 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 283 | 201 | 6 | 26 | 50 | 989 | 0.614 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 49 | 72 | 44 |
| 243 | 25 | 16 | 1 | 2 | 6 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | 0 |
| 244 | 18 | 8 | 0 | 2 | 8 | 173 | 0.107 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 10 | 1 |
| 245 | 72 | 46 | 1 | 7 | 18 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 | 24 | 3 |
| 246 | 52 | 27 | 1 | 6 | 18 | 273 | 0.170 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 18 | 23 | 4 |
| 247 | 259 | 190 | 6 | 22 | 41 | 87 | 0.054 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 40 | 60 | 3 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 678 | 546 | 12 | 46 | 74 | 1588 | 0.986 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 115 | 113 |
| 254 | 1 | 1 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 218 | 205 | 3 | 4 | 6 | 943 | 0.586 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 6 | 10 | 6 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 911 | 761 | 16 | 51 | 83 | 1783 | 1.108 | 1 | 0 | 0 | 0 | 3 | 1 | 42 | 82 | 129 | 143 |
| 261 | 155 | 98 | 4 | 13 | 40 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 39 | 51 | 38 |
| 262 | 315 | 209 | 7 | 27 | 72 | 860 | 0.534 | 0 | 0 | 0 | 0 | 1 | 0 | 22 | 71 | 95 | 51 |
| 263 | 951 | 781 | 18 | 57 | 95 | 141 | 0.088 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 93 | 146 | 13 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 529 | 421 | 11 | 37 | 60 | 98 | 0.061 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 59 | 93 | 6 |
| 266 | 1312 | 1,049 | 26 | 90 | 147 | 171 | 0.106 | 2 | 0 | 0 | 0 | 5 | 2 | 73 | 145 | 227 | 24 |
| 267 | 238 | 163 | 6 | 26 | 43 | 156 | 0.097 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 42 | 65 | 6 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 268 | 884 | 724 | 17 | 54 | 89 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 44 | 87 | 138 | 14 |
| 269 | 697 | 448 | 15 | 65 | 169 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 3 | 1 | 53 | 166 | 224 | 341 |
| 270 | 12 | 9 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 271 | 710 | 457 | 16 | 66 | 171 | 370 | 0.230 | 1 | 0 | 0 | 0 | 3 | 1 | 54 | 168 | 227 | 52 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 11 | 7 | 0 | 2 | 2 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 274 | 731 | 472 | 16 | 69 | 174 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 171 | 233 | 178 |
| 275 | 85 | 27 | 3 | 10 | 45 | 377 | 0.234 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 44 | 53 | 12 |
| 276 | 734 | 463 | 17 | 69 | 185 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 182 | 244 | 24 |
| 277 | 4 | 3 | 0 | 0 | 1 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 211 | 141 | 5 | 19 | 46 | 157 | 0.098 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 45 | 62 | 6 |
| 280 | 869 | 558 | 19 | 81 | 211 | 163 | 0.101 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 207 | 280 | 28 |
| 281 | 25 | 16 | 0 | 2 | 7 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 1 |
| 282 | 449 | 298 | 10 | 41 | 100 | 167 | 0.104 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 98 | 135 | 14 |
| 283 | 220 | 79 | 8 | 30 | 103 | 405 | 0.252 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 101 | 128 | 32 |
| 284 | 1497 | 1,139 | 36 | 78 | 244 | 365 | 0.227 | 2 | 0 | 0 | 0 | 7 | 2 | 64 | 240 | 316 | 72 |
| 285 | 563 | 366 | 13 | 33 | 151 | 230 | 0.143 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 148 | 180 | 26 |
| 286 | 854 | 766 | 24 | 56 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 8 | 62 | 8 |
| 287 | 879 | 682 | 22 | 49 | 126 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 40 | 124 | 171 | 31 |
| 288 | 239 | 206 | 7 | 18 | 8 | 152 | 0.094 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 8 | 25 | 2 |
| 289 | 899 | 721 | 23 | 52 | 103 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 42 | 101 | 151 | 27 |
| 290 | 684 | 422 | 16 | 33 | 213 | 328 | 0.204 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 209 | 242 | 49 |
| 294 | 59 | 55 | 2 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 301 | 444 | 397 | 10 | 37 | 0 | 774 | 0.481 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 0 | 34 | 16 |
| 302 | 456 | 411 | 10 | 35 | 0 | 796 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 0 | 32 | 16 |
| 303 | 211 | 23 | 1 | 5 | 182 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 179 | 183 | 172 |
| 304 | 53 | 28 | 7 | 18 | 0 | 729 | 0.453 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 17 | 8 |
| 306 | 792 | 503 | 22 | 87 | 180 | 818 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 71 | 177 | 255 | 130 |
| 307 | 1328 | 936 | 47 | 165 | 180 | 0 | 0.000 | 2 | 0 | 0 | 0 | 10 | 3 | 134 | 177 | 326 | 0 |
| 324 | 27 | 25 | 0 | 1 | 1 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 |
| 325 | 1368 | 1,181 | 20 | 76 | 91 | 2224 | 1.382 | 2 | 0 | 0 | 0 | 4 | 1 | 62 | 89 | 159 | 220 |
| 326 | 76 | 71 | 1 | 2 | 2 | 3506 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 9 |
| 327 | 1252 | 1,073 | 19 | 73 | 87 | 227 | 0.141 | 2 | 0 | 0 | 0 | 4 | 1 | 59 | 86 | 152 | 21 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 17 | 15 | 1 | 1 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 358 | 2888 | 2,520 | 47 | 170 | 151 | 0 | 0.000 | 5 | 0 | 0 | 0 | 10 | 3 | 138 | 148 | 305 | 0 |
| 359 | 36 | 34 | 0 | 1 | 1 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 360 | 2114 | 1,855 | 36 | 130 | 93 | 247 | 0.153 | 3 | 0 | 0 | 0 | 7 | 2 | 106 | 91 | 211 | 32 |
| 361 | 1493 | 1,297 | 21 | 80 | 95 | 337 | 0.209 | 2 | 0 | 0 | 0 | 4 | 1 | 65 | 93 | 167 | 35 |
| 362 | 39 | 37 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 1483 | 1,316 | 25 | 92 | 50 | 4495 | 2.792 | 2 | 0 | 0 | 0 | 5 | 2 | 75 | 49 | 134 | 373 |
| 364 | 1240 | 1,103 | 21 | 58 | 58 | 286 | 0.178 | 2 | 0 | 0 | 0 | 4 | 1 | 47 | 57 | 112 | 20 |
| 365 | 659 | 556 | 13 | 35 | 55 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 54 | 87 | 87 |
| 366 | 19 | 7 | 0 | 2 | 10 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 11 | 12 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 5 | 2 | 0 | 1 | 2 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 387 | 943 | 701 | 29 | 109 | 104 | 2761 | 1.715 | 1 | 0 | 0 | 0 | 6 | 2 | 89 | 102 | 200 | 344 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 19 | 16 | 0 | 1 | 2 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 |
| 390 | 344 | 286 | 11 | 34 | 13 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 13 | 44 | 33 |
| 392 | 292 | 189 | 14 | 64 | 25 | 436 | 0.271 | 0 | 0 | 0 | 0 | 3 | 1 | 52 | 25 | 81 | 22 |
| 393 | 132 | 34 | 6 | 48 | 44 | 934 | 0.580 | 0 | 0 | 0 | 0 | 1 | 0 | 39 | 43 | 84 | 49 |
| 394 | 892 | 668 | 27 | 106 | 91 | 1292 | 0.803 | 1 | 0 | 0 | 0 | 6 | 2 | 86 | 89 | 185 | 148 |
| 396 | 1380 | 1,162 | 39 | 139 | 40 | 2366 | 1.470 | 2 | 0 | 0 | 0 | 8 | 3 | 113 | 39 | 166 | 243 |
| 397 | 1306 | 1,136 | 34 | 124 | 12 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 101 | 12 | 124 | 123 |
| 398 | 2621 | 2,378 | 62 | 181 | 0 | 560 | 0.348 | 4 | 0 | 0 | 0 | 13 | 4 | 147 | 0 | 169 | 59 |
| 399 | 195 | 183 | 4 | 8 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 17 |
| 400 | 410 | 386 | 9 | 14 | 1 | 1704 | 1.059 | 1 | 0 | 0 | 0 | 2 | 1 | 11 | 1 | 16 | 17 |
| 401 | 3 | 1 | 0 | 1 | 1 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 160 | 147 | 6 | 4 | 3 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 8 | 5 |
| 406 | 93 | 76 | 8 | 5 | 4 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 4 | 10 | 3 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 5 | 0 | 0 | 1 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 409 | 114 | 103 | 4 | 7 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 5 |
| 410 | 212 | 198 | 6 | 8 | 0 | 884 | 0.549 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 | 5 |
| 411 | 4 | 4 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 89 | 72 | 2 | 7 | 8 | 678 | 0.421 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 14 | 6 |
| 414 | 5 | 5 | 0 | 0 | 0 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 1166 | 998 | 32 | 109 | 27 | 855 | 0.531 | 2 | 0 | 0 | 0 | 7 | 2 | 89 | 27 | 126 | 67 |
| 416 | 0 | 0 | 0 | 0 | 0 | 284 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 0 | 0 | 0 | 0 | 0 | 343 | 0.213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 0 | 0 | 0 | 0 | 0 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 331 | 110 | 5 | 14 | 202 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 199 | 212 | 109 |
| 425 | 0 | 0 | 0 | 0 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 0 | 0 | 0 | 0 | 0 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 17 | 4 | 1 | 5 | 7 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 11 | 5 |
| 428 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 0 | 0 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 447 | 366 | 8 | 23 | 50 | 114 | 0.071 | 1 | 0 | 0 | 0 | 2 | 1 | 19 | 49 | 71 | 5 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 194 | 185 | 3 | 5 | 1 | 1802 | 1.119 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 6 | 7 |
| 434 | 17 | 17 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 64 | 61 | 1 | 2 | 0 | 2365 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| 443 | 48 | 45 | 1 | 2 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 586 | 340 | 13 | 25 | 208 | 660 | 0.410 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 204 | 229 | 94 |
| 500 | 606 | 358 | 14 | 26 | 208 | 395 | 0.245 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 204 | 230 | 56 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 220 | 151 | 13 | 56 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 3 | 1 | 46 | 0 | 49 | 11 |
| | | | | | | | | | | | | | | | | Total | 15943 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |

Segment Speed Group 2

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0052 | 0.0144 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0059 | 0.0162 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0048 | 0.0133 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0059 | 0.0162 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0056 | 0.0152 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0050 | 0.0137 |

**Segment Emissions**

| Street Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 1 | 1.23E-06 | 5.60E-07 | 3.02E-08 | 5.89E-08 | 1.19E-05 | 3.07E-06 | 3.58E-05 | 0.00E+00 | | 5.27E-05 |
| 10 | 6 | 6.58E-08 | 3.02E-08 | 1.63E-09 | 3.19E-09 | 6.20E-07 | 1.61E-07 | 1.18E-06 | 0.00E+00 | | 2.06E-06 |
| 13 | 1 | 2.90E-08 | 1.32E-08 | 7.12E-10 | 1.39E-09 | 1.48E-07 | 3.82E-08 | 5.35E-07 | 1.39E-05 | | 1.47E-05 |
| 32 | 6 | 3.01E-07 | 1.38E-07 | 7.46E-09 | 1.46E-08 | 2.77E-06 | 7.19E-07 | 4.95E-06 | 0.00E+00 | | 8.90E-06 |
| 33 | 5 | 1.56E-07 | 6.94E-08 | 3.61E-09 | 7.11E-09 | 1.06E-06 | 2.74E-07 | 2.37E-06 | 0.00E+00 | | 3.94E-06 |
| 35 | 3 | 1.76E-08 | 8.11E-09 | 4.27E-10 | 8.40E-10 | 2.49E-07 | 6.46E-08 | 8.62E-07 | 4.14E-05 | | 4.26E-05 |
| 36 | 3 | 2.13E-07 | 9.83E-08 | 5.18E-09 | 1.02E-08 | 2.61E-06 | 6.78E-07 | 9.77E-06 | 0.00E+00 | | 1.34E-05 |
| 37 | 3 | 1.23E-08 | 5.66E-09 | 2.98E-10 | 5.87E-10 | 2.21E-07 | 5.74E-08 | 1.15E-06 | 9.61E-06 | | 1.11E-05 |
| 38 | 3 | 1.70E-07 | 7.81E-08 | 4.12E-09 | 8.09E-09 | 2.20E-06 | 5.71E-07 | 7.98E-06 | 3.03E-07 | | 1.13E-05 |
| 42 | 3 | 1.01E-06 | 4.64E-07 | 2.45E-08 | 4.81E-08 | 1.29E-05 | 3.34E-06 | 5.28E-05 | 2.75E-04 | | 3.46E-04 |
| 43 | 3 | 3.82E-08 | 1.76E-08 | 9.26E-10 | 1.82E-09 | 3.36E-07 | 8.73E-08 | 4.51E-07 | 1.16E-05 | | 1.26E-05 |
| 46 | 3 | 1.67E-08 | 7.68E-09 | 4.04E-10 | 7.95E-10 | 1.67E-07 | 4.33E-08 | 2.24E-07 | 1.07E-05 | | 1.12E-05 |
| 47 | 3 | 1.99E-08 | 9.18E-09 | 4.83E-10 | 9.50E-10 | 2.07E-07 | 5.36E-08 | 2.08E-07 | 0.00E+00 | | 4.98E-07 |
| 48 | 1 | 2.57E-08 | 1.17E-08 | 6.33E-10 | 1.24E-09 | 1.58E-07 | 4.07E-08 | 4.22E-07 | 2.90E-06 | | 3.56E-06 |
| 50 | 6 | 4.42E-07 | 2.03E-07 | 1.10E-08 | 2.14E-08 | 3.94E-06 | 1.02E-06 | 1.03E-05 | 0.00E+00 | | 1.60E-05 |
| 51 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 52 | 6 | 6.99E-07 | 3.21E-07 | 1.73E-08 | 3.39E-08 | 5.39E-06 | 1.40E-06 | 2.04E-05 | 0.00E+00 | | 2.83E-05 |
| 53 | 1 | 4.67E-08 | 2.13E-08 | 1.15E-09 | 2.24E-09 | 7.88E-07 | 2.03E-07 | 5.19E-07 | 0.00E+00 | | 1.58E-06 |
| 54 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 55 | 1 | 1.16E-08 | 5.30E-09 | 2.86E-10 | 5.58E-10 | 2.02E-07 | 5.22E-08 | 8.33E-08 | 0.00E+00 | | 3.56E-07 |
| 56 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 57 | 3 | 3.24E-08 | 1.49E-08 | 7.87E-10 | 1.55E-09 | 3.76E-07 | 9.75E-08 | 1.48E-06 | 0.00E+00 | | 2.00E-06 |
| 58 | 5 | 2.30E-09 | 1.03E-09 | 5.35E-11 | 1.05E-10 | 1.70E-08 | 4.40E-09 | 2.11E-08 | 0.00E+00 | | 4.60E-08 |
| 59 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-05 | | 1.98E-05 |
| 60 | 5 | 1.89E-08 | 8.44E-09 | 4.40E-10 | 8.64E-10 | 1.05E-07 | 2.71E-08 | 4.15E-07 | 6.22E-06 | | 6.79E-06 |
| 61 | 5 | 5.79E-10 | 2.58E-10 | 1.34E-11 | 2.64E-11 | 1.60E-08 | 4.13E-09 | 1.98E-08 | 1.21E-06 | | 1.25E-06 |
| 62 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 65 | 6 | 3.10E-08 | 1.42E-08 | 7.70E-10 | 1.50E-09 | 1.65E-07 | 4.27E-08 | 4.41E-07 | 2.92E-06 | | 3.62E-06 |
| 66 | 6 | 4.01E-08 | 1.84E-08 | 9.94E-10 | 1.94E-09 | 2.73E-07 | 7.09E-08 | 7.61E-07 | 2.98E-06 | | 4.15E-06 |
| 67 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 68 | 3 | 9.57E-11 | 4.40E-11 | 2.32E-12 | 4.56E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.47E-10 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | 6 | 9.15E-08 | 4.20E-08 | 2.27E-09 | 4.43E-09 | 7.21E-07 | 1.87E-07 | 1.62E-06 | 0.00E+00 | | 2.67E-06 |
| 70 | 6 | 1.31E-07 | 5.99E-08 | 3.24E-09 | 6.32E-09 | 1.05E-06 | 2.72E-07 | 2.37E-06 | 0.00E+00 | | 3.89E-06 |
| 71 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 72 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 73 | 6 | 4.01E-07 | 1.84E-07 | 9.94E-09 | 1.94E-08 | 3.09E-06 | 8.03E-07 | 1.19E-05 | 0.00E+00 | | 1.64E-05 |
| 74 | 1 | 8.27E-08 | 3.77E-08 | 2.03E-09 | 3.97E-09 | 3.64E-07 | 9.38E-08 | 4.49E-07 | 2.13E-07 | | 1.25E-06 |
| 75 | 5 | 1.82E-08 | 8.11E-09 | 4.22E-10 | 8.30E-10 | 1.06E-07 | 2.74E-08 | 2.30E-07 | 5.45E-07 | | 9.36E-07 |
| 76 | 5 | 8.24E-09 | 3.68E-09 | 1.91E-10 | 3.76E-10 | 5.27E-08 | 1.36E-08 | 2.61E-07 | 0.00E+00 | | 3.40E-07 |
| 77 | 8 | 4.53E-08 | 2.01E-08 | 9.93E-10 | 1.98E-09 | 1.45E-07 | 3.73E-08 | 1.79E-07 | 4.15E-07 | | 8.44E-07 |
| 80 | 8 | 1.88E-08 | 8.35E-09 | 4.13E-10 | 8.23E-10 | 6.84E-08 | 1.76E-08 | 9.57E-08 | 1.49E-07 | | 3.60E-07 |
| 81 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 82 | 5 | 5.49E-08 | 2.45E-08 | 1.28E-09 | 2.51E-09 | 2.98E-07 | 7.68E-08 | 6.97E-07 | 7.71E-06 | | 8.87E-06 |
| 83 | 8 | 9.43E-09 | 4.18E-09 | 2.07E-10 | 4.12E-10 | 4.39E-08 | 1.13E-08 | 1.01E-07 | 1.13E-06 | | 1.30E-06 |
| 85 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 86 | 5 | 6.31E-08 | 2.82E-08 | 1.47E-09 | 2.88E-09 | 4.41E-07 | 1.14E-07 | 1.28E-06 | 9.64E-06 | | 1.16E-05 |
| 87 | 5 | 1.93E-09 | 8.64E-10 | 4.50E-11 | 8.84E-11 | 0.00E+00 | 0.00E+00 | 3.27E-08 | 0.00E+00 | | 3.56E-08 |
| 88 | 5 | 3.39E-09 | 1.51E-09 | 7.88E-11 | 1.55E-10 | 2.67E-08 | 6.90E-09 | 3.30E-08 | 0.00E+00 | | 7.18E-08 |
| 95 | 1 | 2.85E-08 | 1.30E-08 | 7.02E-10 | 1.37E-09 | 1.74E-07 | 4.49E-08 | 6.63E-07 | 1.96E-06 | | 2.89E-06 |
| 96 | 8 | 3.18E-08 | 1.41E-08 | 6.96E-10 | 1.39E-09 | 1.19E-07 | 3.06E-08 | 3.09E-07 | 8.10E-07 | | 1.32E-06 |
| 97 | 8 | 4.37E-09 | 1.93E-09 | 9.58E-11 | 1.91E-10 | 2.57E-08 | 6.63E-09 | 7.94E-08 | 3.16E-07 | | 4.34E-07 |
| 98 | 8 | 1.20E-09 | 5.31E-10 | 2.63E-11 | 5.23E-11 | 1.06E-08 | 2.73E-09 | 8.49E-08 | 2.38E-07 | | 3.38E-07 |
| 99 | 8 | 1.13E-08 | 4.98E-09 | 2.47E-10 | 4.91E-10 | 1.34E-08 | 3.45E-09 | 6.61E-08 | 1.64E-07 | | 2.64E-07 |
| 100 | 5 | 7.17E-09 | 3.20E-09 | 1.67E-10 | 3.28E-10 | 3.75E-08 | 9.67E-09 | 1.20E-07 | 8.29E-07 | | 1.01E-06 |
| 101 | 5 | 2.84E-08 | 1.27E-08 | 6.60E-10 | 1.30E-09 | 1.34E-07 | 3.47E-08 | 4.60E-07 | 2.75E-06 | | 3.42E-06 |
| 102 | 5 | 3.97E-11 | 1.77E-11 | 9.21E-13 | 1.81E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 6.01E-11 |
| 103 | 5 | 2.40E-08 | 1.07E-08 | 5.57E-10 | 1.10E-09 | 1.15E-07 | 2.98E-08 | 3.56E-07 | 2.32E-06 | | 2.86E-06 |
| 104 | 5 | 7.36E-09 | 3.29E-09 | 1.71E-10 | 3.36E-10 | 2.67E-08 | 6.89E-09 | 1.32E-07 | 1.86E-06 | | 2.04E-06 |
| 105 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 106 | 5 | 3.49E-09 | 1.56E-09 | 8.10E-11 | 1.59E-10 | 0.00E+00 | 0.00E+00 | 7.36E-08 | 0.00E+00 | | 7.89E-08 |
| 107 | 5 | 8.88E-09 | 3.96E-09 | 2.06E-10 | 4.06E-10 | 3.84E-08 | 9.92E-09 | 1.90E-07 | 1.78E-06 | | 2.04E-06 |
| 108 | 5 | 1.93E-09 | 8.61E-10 | 4.48E-11 | 8.81E-11 | 0.00E+00 | 0.00E+00 | 8.14E-08 | 0.00E+00 | | 8.43E-08 |
| 109 | 8 | 4.50E-09 | 1.99E-09 | 9.86E-11 | 1.96E-10 | 5.20E-08 | 1.34E-08 | 2.25E-07 | 0.00E+00 | | 2.97E-07 |
| 110 | 1 | 1.24E-08 | 5.65E-09 | 3.05E-10 | 5.95E-10 | 7.49E-08 | 1.93E-08 | 2.78E-07 | 2.76E-06 | | 3.15E-06 |
| 111 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 112 | 1 | 1.47E-08 | 6.72E-09 | 3.62E-10 | 7.07E-10 | 1.35E-07 | 3.48E-08 | 5.67E-07 | 6.08E-06 | | 6.84E-06 |
| 113 | 8 | 1.87E-09 | 8.28E-10 | 4.10E-11 | 8.16E-11 | 5.23E-08 | 1.35E-08 | 2.26E-07 | 1.50E-06 | | 1.79E-06 |
| 114 | 5 | 2.55E-09 | 1.14E-09 | 5.93E-11 | 1.17E-10 | 5.23E-08 | 1.35E-08 | 2.58E-07 | 3.32E-06 | | 3.65E-06 |
| 115 | 1 | 1.50E-08 | 6.84E-09 | 3.68E-10 | 7.20E-10 | 8.43E-08 | 2.18E-08 | 3.47E-07 | 4.03E-06 | | 4.51E-06 |
| 116 | 5 | 1.32E-10 | 5.89E-11 | 3.07E-12 | 6.03E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.86E-07 | | 8.87E-07 |
| 117 | 1 | 1.33E-09 | 6.08E-10 | 3.28E-11 | 6.40E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.04E-09 |
| 118 | 1 | 1.45E-08 | 6.62E-09 | 3.57E-10 | 6.97E-10 | 1.01E-07 | 2.61E-08 | 3.43E-07 | 4.04E-06 | | 4.53E-06 |
| 119 | 1 | 2.97E-09 | 1.35E-09 | 7.29E-11 | 1.42E-10 | 0.00E+00 | 0.00E+00 | 6.38E-08 | 0.00E+00 | | 6.84E-08 |
| 120 | 5 | 1.15E-08 | 5.15E-09 | 2.68E-10 | 5.28E-10 | 1.34E-07 | 3.47E-08 | 4.98E-07 | 1.39E-05 | | 1.46E-05 |
| 121 | 1 | 1.63E-08 | 7.45E-09 | 4.01E-10 | 7.84E-10 | 1.09E-07 | 2.81E-08 | 3.37E-07 | 3.46E-06 | | 3.96E-06 |
| 122 | 6 | 5.59E-09 | 2.56E-09 | 1.38E-10 | 2.71E-10 | 6.07E-08 | 1.58E-08 | 2.71E-07 | 9.07E-06 | | 9.43E-06 |
| 123 | 5 | 1.53E-09 | 6.83E-10 | 3.56E-11 | 6.99E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.32E-09 |
| 124 | 1 | 1.84E-08 | 8.41E-09 | 4.53E-10 | 8.85E-10 | 1.32E-07 | 3.41E-08 | 3.92E-07 | 3.36E-06 | | 3.94E-06 |
| 125 | 1 | 1.11E-10 | 5.05E-11 | 2.72E-12 | 5.31E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.69E-10 |
| 126 | 1 | 1.97E-08 | 8.99E-09 | 4.85E-10 | 9.47E-10 | 1.28E-07 | 3.30E-08 | 3.47E-07 | 3.04E-06 | | 3.58E-06 |
| 127 | 5 | 5.19E-09 | 2.32E-09 | 1.21E-10 | 2.37E-10 | 8.17E-08 | 2.11E-08 | 3.37E-07 | 2.10E-05 | | 2.14E-05 |
| 128 | 1 | 1.05E-10 | 4.78E-11 | 2.58E-12 | 5.03E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.60E-10 |
| 129 | 1 | 2.31E-08 | 1.05E-08 | 5.67E-10 | 1.11E-09 | 1.36E-07 | 3.51E-08 | 4.03E-07 | 3.01E-06 | | 3.62E-06 |
| 130 | 1 | 5.31E-09 | 2.42E-09 | 1.31E-10 | 2.55E-10 | 5.28E-08 | 1.36E-08 | 3.27E-08 | 0.00E+00 | | 1.07E-07 |
| 131 | 1 | 4.20E-10 | 1.92E-10 | 1.03E-11 | 2.02E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 6.42E-10 |
| 133 | 6 | 5.84E-09 | 2.68E-09 | 1.45E-10 | 2.83E-10 | 4.16E-08 | 1.08E-08 | 5.58E-08 | 0.00E+00 | | 1.17E-07 |
| 134 | 5 | 4.41E-09 | 1.97E-09 | 1.02E-10 | 2.02E-10 | 5.02E-08 | 1.30E-08 | 9.31E-08 | 5.14E-07 | | 6.77E-07 |
| 135 | 6 | 2.76E-08 | 1.27E-08 | 6.85E-10 | 1.34E-09 | 1.69E-07 | 4.39E-08 | 4.53E-07 | 3.00E-06 | | 3.71E-06 |
| 136 | 1 | 7.13E-09 | 3.26E-09 | 1.75E-10 | 3.43E-10 | 5.19E-08 | 1.34E-08 | 6.42E-08 | 0.00E+00 | | 1.40E-07 |
| 137 | 1 | 1.07E-10 | 4.88E-11 | 2.63E-12 | 5.14E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.64E-10 |
| 138 | 5 | 4.30E-10 | 1.92E-10 | 1.00E-11 | 1.97E-11 | 8.82E-09 | 2.28E-09 | 4.36E-08 | 3.61E-07 | | 4.17E-07 |
| 139 | 5 | 1.36E-08 | 6.09E-09 | 3.17E-10 | 6.24E-10 | 6.66E-08 | 1.72E-08 | 2.47E-07 | 8.18E-07 | | 1.17E-06 |
| 140 | 5 | 1.02E-09 | 4.55E-10 | 2.37E-11 | 4.66E-11 | 1.74E-08 | 4.49E-09 | 4.30E-08 | 8.56E-07 | | 9.22E-07 |
| 141 | 5 | 2.69E-08 | 1.20E-08 | 6.26E-10 | 1.23E-09 | 9.92E-08 | 2.56E-08 | 3.68E-07 | 1.35E-06 | | 1.89E-06 |
| 142 | 5 | 6.10E-10 | 2.72E-10 | 1.42E-11 | 2.79E-11 | 9.61E-09 | 2.48E-09 | 3.56E-08 | 1.57E-07 | | 2.06E-07 |
| 143 | 6 | 1.84E-08 | 8.45E-09 | 4.57E-10 | 8.92E-10 | 1.09E-07 | 2.84E-08 | 4.11E-07 | 7.76E-07 | | 1.35E-06 |
| 144 | 6 | 1.75E-08 | 8.01E-09 | 4.33E-10 | 8.45E-10 | 1.01E-07 | 2.63E-08 | 4.08E-07 | 0.00E+00 | | 5.62E-07 |
| 145 | 6 | 2.02E-08 | 9.25E-09 | 5.00E-10 | 9.76E-10 | 1.22E-07 | 3.17E-08 | 4.64E-07 | 0.00E+00 | | 6.49E-07 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 146 | 1 | 2.65E-09 | 1.21E-09 | 6.50E-11 | 1.27E-10 | 0.00E+00 | 0.00E+00 | 3.32E-08 | 0.00E+00 | | 3.73E-08 |
| 147 | 1 | 2.63E-08 | 1.20E-08 | 6.46E-10 | 1.26E-09 | 2.11E-07 | 5.44E-08 | 6.51E-07 | 0.00E+00 | | 9.57E-07 |
| 148 | 6 | 4.86E-09 | 2.23E-09 | 1.21E-10 | 2.35E-10 | 3.78E-08 | 9.83E-09 | 2.03E-07 | 7.72E-06 | | 7.98E-06 |
| 149 | 1 | 3.36E-08 | 1.53E-08 | 8.26E-10 | 1.61E-09 | 2.67E-07 | 6.89E-08 | 8.24E-07 | 0.00E+00 | | 1.21E-06 |
| 150 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 151 | 5 | 4.31E-08 | 1.93E-08 | 1.00E-09 | 1.97E-09 | 2.86E-07 | 7.38E-08 | 8.99E-07 | 0.00E+00 | | 1.32E-06 |
| 152 | 5 | 3.53E-09 | 1.58E-09 | 8.20E-11 | 1.61E-10 | 5.17E-08 | 1.33E-08 | 2.87E-07 | 1.95E-05 | | 1.98E-05 |
| 153 | 5 | 5.62E-08 | 2.51E-08 | 1.31E-09 | 2.57E-09 | 3.95E-07 | 1.02E-07 | 9.77E-07 | 0.00E+00 | | 1.56E-06 |
| 154 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 155 | 6 | 1.10E-07 | 5.02E-08 | 2.71E-09 | 5.30E-09 | 7.22E-07 | 1.87E-07 | 2.07E-06 | 0.00E+00 | | 3.15E-06 |
| 156 | 6 | 5.77E-08 | 2.65E-08 | 1.43E-09 | 2.79E-09 | 3.39E-07 | 8.81E-08 | 1.18E-06 | 0.00E+00 | | 1.69E-06 |
| 157 | 6 | 1.32E-07 | 6.06E-08 | 3.28E-09 | 6.40E-09 | 1.06E-06 | 2.76E-07 | 2.40E-06 | 0.00E+00 | | 3.94E-06 |
| 158 | 1 | 2.73E-08 | 1.25E-08 | 6.71E-10 | 1.31E-09 | 1.72E-07 | 4.43E-08 | 6.36E-07 | 2.53E-06 | | 3.42E-06 |
| 159 | 1 | 7.30E-09 | 3.33E-09 | 1.79E-10 | 3.51E-10 | 2.81E-08 | 7.24E-09 | 1.04E-07 | 3.91E-07 | | 5.42E-07 |
| 160 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 161 | 6 | 5.63E-08 | 2.58E-08 | 1.40E-09 | 2.73E-09 | 6.29E-07 | 1.63E-07 | 2.83E-06 | 0.00E+00 | | 3.71E-06 |
| 162 | 6 | 1.75E-07 | 8.03E-08 | 4.34E-09 | 8.48E-09 | 2.10E-06 | 5.44E-07 | 9.46E-06 | 0.00E+00 | | 1.24E-05 |
| 163 | 6 | 3.07E-08 | 1.41E-08 | 7.61E-10 | 1.49E-09 | 3.99E-07 | 1.03E-07 | 1.85E-06 | 0.00E+00 | | 2.40E-06 |
| 164 | 6 | 8.74E-10 | 4.01E-10 | 2.17E-11 | 4.23E-11 | 1.22E-08 | 3.18E-09 | 4.92E-08 | 0.00E+00 | | 6.60E-08 |
| 165 | 5 | 1.07E-06 | 4.79E-07 | 2.49E-08 | 4.90E-08 | 7.99E-06 | 2.06E-06 | 2.89E-05 | 0.00E+00 | | 4.05E-05 |
| 168 | 5 | 7.92E-08 | 3.53E-08 | 1.84E-09 | 3.62E-09 | 1.00E-06 | 2.58E-07 | 4.42E-06 | 0.00E+00 | | 5.80E-06 |
| 169 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 170 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 171 | 6 | 1.79E-07 | 8.22E-08 | 4.44E-09 | 8.68E-09 | 9.59E-07 | 2.49E-07 | 3.48E-06 | 0.00E+00 | | 4.96E-06 |
| 172 | 1 | 3.54E-07 | 1.62E-07 | 8.70E-09 | 1.70E-08 | 2.20E-06 | 5.67E-07 | 7.66E-06 | 0.00E+00 | | 1.10E-05 |
| 173 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 174 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 177 | 3 | 2.09E-07 | 9.61E-08 | 5.06E-09 | 9.95E-09 | 2.82E-06 | 7.31E-07 | 1.25E-05 | 4.87E-05 | | 6.50E-05 |
| 178 | 3 | 2.75E-07 | 1.27E-07 | 6.67E-09 | 1.31E-08 | 2.77E-06 | 7.19E-07 | 9.65E-06 | 5.16E-05 | | 6.52E-05 |
| 179 | 3 | 5.00E-07 | 2.30E-07 | 1.21E-08 | 2.38E-08 | 6.52E-06 | 1.69E-06 | 2.77E-05 | 1.12E-04 | | 1.49E-04 |
| 180 | 3 | 9.09E-08 | 4.19E-08 | 2.20E-09 | 4.33E-09 | 6.96E-07 | 1.81E-07 | 1.17E-06 | 2.32E-06 | | 4.50E-06 |
| 181 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 182 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 183 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 184 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 185 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 186 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 190 | 3 | 2.19E-06 | 1.01E-06 | 5.31E-08 | 1.04E-07 | 8.90E-06 | 2.31E-06 | 4.13E-05 | 1.35E-04 | | 1.91E-04 |
| 191 | 3 | 1.46E-06 | 6.70E-07 | 3.53E-08 | 6.94E-08 | 5.97E-06 | 1.55E-06 | 2.91E-05 | 8.56E-05 | | 1.25E-04 |
| 192 | 3 | 2.05E-07 | 9.46E-08 | 4.98E-09 | 9.79E-09 | 7.90E-07 | 2.05E-07 | 2.42E-06 | 1.70E-05 | | 2.07E-05 |
| 194 | 8 | 2.30E-08 | 1.02E-08 | 5.04E-10 | 1.00E-09 | 2.35E-07 | 6.05E-08 | 9.13E-07 | 0.00E+00 | | 1.24E-06 |
| 195 | 8 | 4.63E-08 | 2.05E-08 | 1.02E-09 | 2.02E-09 | 4.06E-07 | 1.05E-07 | 1.54E-06 | 0.00E+00 | | 2.12E-06 |
| 196 | 8 | 1.30E-07 | 5.75E-08 | 2.85E-09 | 5.67E-09 | 1.18E-06 | 3.05E-07 | 4.62E-06 | 0.00E+00 | | 6.30E-06 |
| 198 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 199 | 8 | 1.13E-08 | 5.01E-09 | 2.48E-10 | 4.94E-10 | 7.49E-08 | 1.93E-08 | 1.54E-07 | 0.00E+00 | | 2.66E-07 |
| 200 | 1 | 2.13E-07 | 9.73E-08 | 5.24E-09 | 1.02E-08 | 2.73E-06 | 7.06E-07 | 9.91E-06 | 0.00E+00 | | 1.37E-05 |
| 205 | 1 | 4.49E-08 | 2.05E-08 | 1.10E-09 | 2.16E-09 | 5.95E-07 | 1.54E-07 | 2.51E-06 | 0.00E+00 | | 3.33E-06 |
| 206 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 207 | 1 | 7.82E-08 | 3.57E-08 | 1.92E-09 | 3.75E-09 | 1.03E-06 | 2.67E-07 | 4.37E-06 | 0.00E+00 | | 5.79E-06 |
| 215 | 6 | 3.62E-09 | 1.66E-09 | 8.97E-11 | 1.75E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 5.54E-09 |
| 216 | 1 | 5.34E-08 | 2.44E-08 | 1.31E-09 | 2.56E-09 | 2.64E-07 | 6.82E-08 | 8.98E-07 | 5.41E-06 | | 6.72E-06 |
| 217 | 6 | 2.59E-08 | 1.19E-08 | 6.42E-10 | 1.25E-09 | 1.20E-07 | 3.12E-08 | 4.37E-07 | 2.28E-06 | | 2.91E-06 |
| 218 | 3 | 8.23E-09 | 3.79E-09 | 2.00E-10 | 3.92E-10 | 3.02E-08 | 7.84E-09 | 1.62E-07 | 1.21E-06 | | 1.42E-06 |
| 219 | 1 | 3.98E-09 | 1.82E-09 | 9.79E-11 | 1.91E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.62E-07 | | 3.68E-07 |
| 221 | 1 | 1.78E-09 | 8.10E-10 | 4.37E-11 | 8.53E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.72E-09 |
| 223 | 1 | 6.32E-10 | 2.88E-10 | 1.55E-11 | 3.04E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 9.67E-10 |
| 225 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 226 | 3 | 6.95E-09 | 3.20E-09 | 1.69E-10 | 3.32E-10 | 4.25E-08 | 1.10E-08 | 2.28E-07 | 1.70E-06 | | 1.99E-06 |
| 227 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 229 | 1 | 1.37E-09 | 6.24E-10 | 3.36E-11 | 6.57E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.09E-09 |
| 230 | 1 | 4.77E-09 | 2.18E-09 | 1.17E-10 | 2.29E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 7.30E-09 |
| 231 | 1 | 1.76E-08 | 8.03E-09 | 4.32E-10 | 8.45E-10 | 6.50E-08 | 1.68E-08 | 2.41E-07 | 1.60E-06 | | 1.95E-06 |
| 232 | 3 | 1.05E-07 | 4.84E-08 | 2.55E-09 | 5.01E-09 | 5.34E-07 | 1.39E-07 | 2.68E-06 | 1.44E-05 | | 1.79E-05 |
| 233 | 3 | 5.39E-09 | 2.48E-09 | 1.31E-10 | 2.57E-10 | 2.53E-08 | 6.56E-09 | 1.35E-07 | 1.01E-06 | | 1.18E-06 |
| 236 | 1 | 1.40E-09 | 6.38E-10 | 3.44E-11 | 6.71E-11 | 0.00E+00 | 0.00E+00 | 6.48E-08 | 2.15E-07 | | 2.82E-07 |
| 237 | 3 | 7.39E-08 | 3.40E-08 | 1.79E-09 | 3.52E-09 | 4.43E-07 | 1.15E-07 | 2.43E-06 | 1.32E-05 | | 1.63E-05 |
| 238 | 1 | 2.81E-08 | 1.28E-08 | 6.90E-10 | 1.35E-09 | 1.48E-07 | 3.82E-08 | 7.77E-07 | 3.03E-06 | | 4.04E-06 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 239 | 1 | 3.70E-08 | 1.69E-08 | 9.08E-10 | 1.77E-09 | 2.74E-07 | 7.08E-08 | 1.47E-06 | 9.56E-06 | | 1.14E-05 |
| 240 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 241 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 242 | 5 | 3.20E-08 | 1.43E-08 | 7.45E-10 | 1.46E-09 | 1.96E-07 | 5.06E-08 | 1.05E-06 | 6.69E-06 | | 8.03E-06 |
| 243 | 5 | 1.65E-10 | 7.37E-11 | 3.84E-12 | 7.54E-12 | 2.11E-09 | 5.45E-10 | 5.22E-09 | 5.20E-08 | | 6.01E-08 |
| 244 | 5 | 2.23E-10 | 9.96E-11 | 5.18E-12 | 1.02E-11 | 0.00E+00 | 0.00E+00 | 1.41E-08 | 1.87E-07 | | 2.02E-07 |
| 245 | 5 | 1.34E-09 | 5.99E-10 | 3.12E-11 | 6.13E-11 | 5.98E-09 | 1.54E-09 | 5.17E-08 | 4.41E-07 | | 5.02E-07 |
| 246 | 5 | 1.19E-09 | 5.30E-10 | 2.76E-11 | 5.43E-11 | 9.02E-09 | 2.33E-09 | 6.69E-08 | 6.65E-07 | | 7.45E-07 |
| 247 | 5 | 2.66E-09 | 1.19E-09 | 6.19E-11 | 1.22E-10 | 1.72E-08 | 4.45E-09 | 7.81E-08 | 4.83E-07 | | 5.86E-07 |
| 250 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 252 | 1 | 1.17E-07 | 5.36E-08 | 2.89E-09 | 5.64E-09 | 6.29E-07 | 1.62E-07 | 2.98E-06 | 1.59E-05 | | 1.99E-05 |
| 254 | 1 | 5.74E-11 | 2.62E-11 | 1.41E-12 | 2.76E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 8.78E-11 |
| 256 | 1 | 2.62E-08 | 1.19E-08 | 6.44E-10 | 1.26E-09 | 9.34E-08 | 2.41E-08 | 1.54E-07 | 7.65E-07 | | 1.08E-06 |
| 258 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 260 | 6 | 1.67E-07 | 7.67E-08 | 4.14E-09 | 8.09E-09 | 7.39E-07 | 1.92E-07 | 3.16E-06 | 1.70E-05 | | 2.13E-05 |
| 261 | 8 | 2.28E-08 | 1.01E-08 | 5.00E-10 | 9.95E-10 | 1.56E-07 | 4.03E-08 | 6.27E-07 | 6.39E-06 | | 7.25E-06 |
| 262 | 5 | 2.90E-08 | 1.29E-08 | 6.73E-10 | 1.32E-09 | 1.99E-07 | 5.13E-08 | 9.48E-07 | 8.38E-06 | | 9.62E-06 |
| 263 | 5 | 1.78E-08 | 7.92E-09 | 4.12E-10 | 8.11E-10 | 8.38E-08 | 2.16E-08 | 3.28E-07 | 1.81E-06 | | 2.27E-06 |
| 264 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 265 | 5 | 6.65E-09 | 2.97E-09 | 1.55E-10 | 3.04E-10 | 3.56E-08 | 9.19E-09 | 1.48E-07 | 7.96E-07 | | 9.98E-07 |
| 266 | 5 | 2.89E-08 | 1.29E-08 | 6.72E-10 | 1.32E-09 | 1.47E-07 | 3.79E-08 | 6.28E-07 | 3.40E-06 | | 4.26E-06 |
| 267 | 5 | 4.10E-09 | 1.83E-09 | 9.53E-11 | 1.87E-10 | 3.09E-08 | 7.98E-09 | 1.66E-07 | 9.08E-07 | | 1.12E-06 |
| 268 | 5 | 1.86E-08 | 8.28E-09 | 4.31E-10 | 8.48E-10 | 8.93E-08 | 2.30E-08 | 3.50E-07 | 1.91E-06 | | 2.41E-06 |
| 269 | 1 | 1.49E-07 | 6.78E-08 | 3.65E-09 | 7.14E-09 | 1.21E-06 | 3.13E-07 | 6.50E-06 | 5.60E-05 | | 6.43E-05 |
| 270 | 1 | 7.56E-10 | 3.45E-10 | 1.86E-11 | 3.63E-11 | 0.00E+00 | 0.00E+00 | 2.53E-08 | 1.68E-07 | | 1.94E-07 |
| 271 | 1 | 2.29E-08 | 1.05E-08 | 5.63E-10 | 1.10E-09 | 1.96E-07 | 5.05E-08 | 9.97E-07 | 8.56E-06 | | 9.84E-06 |
| 272 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 273 | 5 | 7.05E-10 | 3.15E-10 | 1.64E-11 | 3.22E-11 | 0.00E+00 | 0.00E+00 | 5.10E-08 | 1.69E-07 | | 2.21E-07 |
| 274 | 1 | 7.87E-08 | 3.59E-08 | 1.93E-09 | 3.78E-09 | 6.51E-07 | 1.68E-07 | 3.47E-06 | 2.90E-05 | | 3.34E-05 |
| 275 | 5 | 1.64E-09 | 7.32E-10 | 3.81E-11 | 7.50E-11 | 3.74E-08 | 9.64E-09 | 1.54E-07 | 2.30E-06 | | 2.50E-06 |
| 276 | 1 | 9.97E-09 | 4.55E-09 | 2.45E-10 | 4.79E-10 | 8.93E-08 | 2.30E-08 | 4.48E-07 | 3.98E-06 | | 4.56E-06 |
| 277 | 5 | 5.19E-10 | 2.32E-10 | 1.21E-11 | 2.37E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-07 | | 1.46E-07 |
| 278 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 279 | 5 | 3.57E-09 | 1.59E-09 | 8.29E-11 | 1.63E-10 | 2.59E-08 | 6.69E-09 | 1.22E-07 | 9.77E-07 | | 1.14E-06 |
| 280 | 5 | 1.47E-08 | 6.55E-09 | 3.41E-10 | 6.70E-10 | 1.02E-07 | 2.64E-08 | 5.39E-07 | 4.65E-06 | | 5.34E-06 |
| 281 | 5 | 7.22E-10 | 3.22E-10 | 1.68E-11 | 3.30E-11 | 0.00E+00 | 0.00E+00 | 2.29E-08 | 2.65E-07 | | 2.89E-07 |
| 282 | 5 | 8.02E-09 | 3.58E-09 | 1.86E-10 | 3.67E-10 | 5.52E-08 | 1.42E-08 | 2.79E-07 | 2.26E-06 | | 2.62E-06 |
| 283 | 5 | 5.16E-09 | 2.30E-09 | 1.20E-10 | 2.36E-10 | 1.07E-07 | 2.76E-08 | 4.96E-07 | 5.64E-06 | | 6.28E-06 |
| 284 | 5 | 6.70E-08 | 2.99E-08 | 1.56E-09 | 3.06E-09 | 4.34E-07 | 1.12E-07 | 1.16E-06 | 1.20E-05 | | 1.39E-05 |
| 285 | 5 | 1.36E-08 | 6.06E-09 | 3.15E-10 | 6.20E-10 | 9.88E-08 | 2.55E-08 | 3.10E-07 | 4.70E-06 | | 5.15E-06 |
| 286 | 5 | 2.58E-08 | 1.15E-08 | 6.00E-10 | 1.18E-09 | 1.66E-07 | 4.28E-08 | 4.78E-07 | 2.26E-07 | | 9.51E-07 |
| 287 | 5 | 3.21E-08 | 1.43E-08 | 7.46E-10 | 1.47E-09 | 2.12E-07 | 5.48E-08 | 5.84E-07 | 4.98E-06 | | 5.88E-06 |
| 288 | 5 | 5.05E-09 | 2.25E-09 | 1.17E-10 | 2.31E-10 | 3.51E-08 | 9.07E-09 | 1.12E-07 | 1.65E-07 | | 3.28E-07 |
| 289 | 5 | 3.31E-08 | 1.48E-08 | 7.70E-10 | 1.51E-09 | 2.17E-07 | 5.59E-08 | 6.05E-07 | 3.97E-06 | | 4.90E-06 |
| 290 | 5 | 2.23E-08 | 9.96E-09 | 5.18E-10 | 1.02E-09 | 1.73E-07 | 4.47E-08 | 4.42E-07 | 9.45E-06 | | 1.01E-05 |
| 294 | 3 | 5.33E-09 | 2.45E-09 | 1.29E-10 | 2.54E-10 | 4.27E-08 | 1.11E-08 | 5.72E-08 | 0.00E+00 | | 1.19E-07 |
| 301 | 1 | 4.16E-08 | 1.90E-08 | 1.02E-09 | 2.00E-09 | 2.56E-07 | 6.60E-08 | 1.17E-06 | 0.00E+00 | | 1.55E-06 |
| 302 | 1 | 4.43E-08 | 2.02E-08 | 1.09E-09 | 2.13E-09 | 2.63E-07 | 6.78E-08 | 1.14E-06 | 0.00E+00 | | 1.54E-06 |
| 303 | 1 | 4.72E-09 | 2.15E-09 | 1.16E-10 | 2.27E-10 | 5.00E-08 | 1.29E-08 | 3.09E-07 | 3.73E-05 | | 3.77E-05 |
| 304 | 1 | 2.77E-09 | 1.26E-09 | 6.80E-11 | 1.33E-10 | 1.69E-07 | 4.35E-08 | 5.36E-07 | 0.00E+00 | | 7.52E-07 |
| 306 | 1 | 5.57E-08 | 2.54E-08 | 1.37E-09 | 2.68E-09 | 5.94E-07 | 1.53E-07 | 2.90E-06 | 1.99E-05 | | 2.37E-05 |
| 307 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 324 | 3 | 8.60E-09 | 3.96E-09 | 2.08E-10 | 4.10E-10 | 0.00E+00 | 0.00E+00 | 1.02E-07 | 3.36E-07 | | 4.51E-07 |
| 325 | 3 | 3.09E-07 | 1.42E-07 | 7.49E-09 | 1.47E-08 | 1.15E-06 | 2.99E-07 | 5.87E-06 | 2.32E-05 | | 3.10E-05 |
| 326 | 3 | 2.93E-08 | 1.35E-08 | 7.10E-10 | 1.40E-09 | 9.08E-08 | 2.36E-08 | 2.43E-07 | 8.05E-07 | | 1.21E-06 |
| 327 | 3 | 2.86E-08 | 1.32E-08 | 6.94E-10 | 1.37E-09 | 1.12E-07 | 2.90E-08 | 5.75E-07 | 2.27E-06 | | 3.03E-06 |
| 340 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 351 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 358 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 359 | 5 | 1.86E-09 | 8.29E-10 | 4.32E-11 | 8.49E-11 | 0.00E+00 | 0.00E+00 | 1.38E-08 | 4.59E-08 | | 6.25E-08 |
| 360 | 5 | 7.39E-08 | 3.30E-08 | 1.72E-09 | 3.38E-09 | 2.94E-07 | 7.58E-08 | 1.31E-06 | 3.11E-06 | | 4.90E-06 |
| 361 | 5 | 7.05E-08 | 3.15E-08 | 1.64E-09 | 3.22E-09 | 2.34E-07 | 6.03E-08 | 1.10E-06 | 4.33E-06 | | 5.83E-06 |
| 362 | 5 | 2.02E-09 | 9.00E-10 | 4.68E-11 | 9.21E-11 | 0.00E+00 | 0.00E+00 | 1.38E-08 | 4.57E-08 | | 6.26E-08 |
| 363 | 5 | 9.54E-07 | 4.26E-07 | 2.22E-08 | 4.36E-08 | 3.71E-06 | 9.58E-07 | 1.69E-05 | 3.04E-05 | | 5.34E-05 |
| 364 | 5 | 5.08E-08 | 2.27E-08 | 1.18E-09 | 2.32E-09 | 1.98E-07 | 5.12E-08 | 6.77E-07 | 2.24E-06 | | 3.25E-06 |
| 365 | 1 | 1.21E-07 | 5.51E-08 | 2.97E-09 | 5.79E-09 | 6.88E-07 | 1.77E-07 | 2.29E-06 | 1.19E-05 | | 1.53E-05 |
| 366 | 1 | 1.65E-09 | 7.54E-10 | 4.06E-11 | 7.93E-11 | 0.00E+00 | 0.00E+00 | 1.42E-07 | 2.36E-06 | | 2.50E-06 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 375 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 376 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 377 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 378 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 379 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 380 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 381 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 386 | 1 | 2.19E-10 | 1.00E-10 | 5.39E-12 | 1.05E-11 | 0.00E+00 | 0.00E+00 | 3.31E-08 | 2.19E-07 | | 2.53E-07 |
| 387 | 6 | 2.38E-07 | 1.09E-07 | 5.91E-09 | 1.15E-08 | 2.07E-06 | 5.38E-07 | 1.04E-05 | 3.30E-05 | | 4.64E-05 |
| 388 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 389 | 3 | 3.55E-10 | 1.64E-10 | 8.62E-12 | 1.69E-11 | 0.00E+00 | 0.00E+00 | 6.56E-09 | 4.34E-08 | | 5.05E-08 |
| 390 | 3 | 4.00E-08 | 1.84E-08 | 9.70E-10 | 1.91E-09 | 3.39E-07 | 8.79E-08 | 1.40E-06 | 1.78E-06 | | 3.67E-06 |
| 392 | 3 | 9.69E-09 | 4.46E-09 | 2.35E-10 | 4.62E-10 | 1.58E-07 | 4.10E-08 | 9.68E-07 | 1.25E-06 | | 2.43E-06 |
| 393 | 3 | 3.73E-09 | 1.72E-09 | 9.05E-11 | 1.78E-10 | 1.45E-07 | 3.77E-08 | 1.56E-06 | 4.72E-06 | | 6.46E-06 |
| 394 | 6 | 1.06E-07 | 4.88E-08 | 2.64E-09 | 5.15E-09 | 9.03E-07 | 2.34E-07 | 4.75E-06 | 1.35E-05 | | 1.96E-05 |
| 396 | 6 | 3.39E-07 | 1.55E-07 | 8.40E-09 | 1.64E-08 | 2.39E-06 | 6.20E-07 | 1.14E-05 | 1.09E-05 | | 2.58E-05 |
| 397 | 3 | 2.12E-07 | 9.76E-08 | 5.14E-09 | 1.01E-08 | 1.40E-06 | 3.63E-07 | 6.83E-06 | 2.19E-06 | | 1.11E-05 |
| 398 | 1 | 1.80E-07 | 8.23E-08 | 4.43E-09 | 8.66E-09 | 1.15E-06 | 2.96E-07 | 4.14E-06 | 0.00E+00 | | 5.86E-06 |
| 399 | 3 | 7.29E-08 | 3.36E-08 | 1.77E-09 | 3.48E-09 | 3.51E-07 | 9.11E-08 | 9.41E-07 | 0.00E+00 | | 1.49E-06 |
| 400 | 1 | 8.91E-08 | 4.07E-08 | 2.19E-09 | 4.28E-09 | 5.07E-07 | 1.31E-07 | 9.74E-07 | 2.31E-07 | | 1.98E-06 |
| 401 | 5 | 1.27E-10 | 5.68E-11 | 2.96E-12 | 5.82E-12 | 0.00E+00 | 0.00E+00 | 3.22E-08 | 1.07E-07 | | 1.39E-07 |
| 402 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 404 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 405 | 5 | 2.39E-08 | 1.07E-08 | 5.56E-10 | 1.09E-09 | 2.00E-07 | 5.16E-08 | 1.65E-07 | 4.10E-07 | | 8.63E-07 |
| 406 | 3 | 3.53E-09 | 1.62E-09 | 8.56E-11 | 1.68E-10 | 8.18E-08 | 2.12E-08 | 6.85E-08 | 1.81E-07 | | 3.58E-07 |
| 407 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 408 | 1 | 7.26E-10 | 3.31E-10 | 1.78E-11 | 3.49E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-07 | | 1.46E-07 |
| 409 | 3 | 1.38E-08 | 6.34E-09 | 3.34E-10 | 6.56E-10 | 1.18E-07 | 3.06E-08 | 2.76E-07 | 0.00E+00 | | 4.46E-07 |
| 410 | 1 | 2.37E-08 | 1.08E-08 | 5.83E-10 | 1.14E-09 | 1.75E-07 | 4.52E-08 | 2.89E-07 | 0.00E+00 | | 5.45E-07 |
| 411 | 1 | 1.26E-09 | 5.77E-10 | 3.11E-11 | 6.07E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.93E-09 |
| 412 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 413 | 1 | 6.61E-09 | 3.02E-09 | 1.63E-10 | 3.18E-10 | 4.48E-08 | 1.16E-08 | 1.94E-07 | 7.34E-07 | | 9.94E-07 |
| 414 | 1 | 6.06E-10 | 2.77E-10 | 1.49E-11 | 2.91E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 9.27E-10 |
| 415 | 6 | 1.05E-07 | 4.82E-08 | 2.61E-09 | 5.09E-09 | 7.08E-07 | 1.84E-07 | 3.23E-06 | 2.65E-06 | | 6.94E-06 |
| 416 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 417 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 419 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 420 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 421 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 424 | 5 | 1.47E-08 | 6.55E-09 | 3.41E-10 | 6.71E-10 | 1.37E-07 | 3.53E-08 | 4.73E-07 | 2.26E-05 | | 2.33E-05 |
| 425 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 426 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 427 | 8 | 5.15E-10 | 2.28E-10 | 1.13E-11 | 2.25E-11 | 2.16E-08 | 5.57E-09 | 1.33E-07 | 6.19E-07 | | 7.81E-07 |
| 428 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 429 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 430 | 5 | 6.73E-09 | 3.00E-09 | 1.56E-10 | 3.07E-10 | 3.01E-08 | 7.77E-09 | 1.07E-07 | 7.71E-07 | | 9.26E-07 |
| 431 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 432 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 433 | 1 | 4.52E-08 | 2.06E-08 | 1.11E-09 | 2.17E-09 | 1.79E-07 | 4.61E-08 | 3.68E-07 | 2.44E-07 | | 9.05E-07 |
| 434 | 1 | 2.92E-09 | 1.33E-09 | 7.18E-11 | 1.40E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 4.47E-09 |
| 435 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 436 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 441 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 442 | 1 | 1.95E-08 | 8.92E-09 | 4.80E-10 | 9.38E-10 | 7.81E-08 | 2.02E-08 | 1.93E-07 | 0.00E+00 | | 3.21E-07 |
| 443 | 1 | 9.68E-09 | 4.42E-09 | 2.38E-10 | 4.65E-10 | 5.25E-08 | 1.35E-08 | 1.30E-07 | 0.00E+00 | | 2.10E-07 |
| 444 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 452 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 453 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 454 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 455 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 458 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 464 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 477 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 478 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 479 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 480 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 481 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 482 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 483 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 484 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 485 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 488 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 494 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 498 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 499 | 5 | 3.62E-08 | 1.61E-08 | 8.41E-10 | 1.65E-09 | 2.83E-07 | 7.31E-08 | 6.73E-07 | 1.86E-05 | | 1.97E-05 |
| 500 | 5 | 2.28E-08 | 1.02E-08 | 5.30E-10 | 1.04E-09 | 1.83E-07 | 4.71E-08 | 4.19E-07 | 1.11E-05 | | 1.18E-05 |
| 502 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 503 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 504 | 5 | 8.76E-09 | 3.91E-09 | 2.04E-10 | 4.00E-10 | 1.55E-07 | 3.99E-08 | 8.23E-07 | 0.00E+00 | | 1.03E-06 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/3/2013
**Project Only Phase 1 in 2022** No Mitigation
**Freeway Circulation** **with EMFAC2014**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| FRWY1 | 2.97E-04 |
| FRWY2 | 4.11E-04 |
| FRWY3 | 3.34E-04 |
| FRWY4 | 3.63E-04 |
| FRWY5 | 2.85E-04 |
| FRWY6 | 4.22E-04 |
| FRWY7 | 3.38E-04 |
| FRWY8 | 3.19E-04 |
| FRWY9 | 3.96E-04 |
| FRWY10 | 3.70E-04 |
| FRWY11 | 1.91E-04 |
| FRWY12 | 5.16E-04 |
| FRWY13 | 3.94E-04 |
| FRWY14 | 5.87E-04 |
| FRWY15 | 3.88E-04 |
| FRWY16 | 6.59E-04 |
| FRWY17 | 7.94E-04 |
| FRWY18 | 6.30E-04 |
| FRWY19 | 2.37E-04 |
| FRWY20 | 2.27E-04 |
| FRWY21 | 9.19E-04 |
| FRWY22 | 5.40E-04 |
| FRWY23 | 5.49E-04 |
| FRWY24 | 1.23E-03 |
| FRWY25 | 7.33E-04 |
| FRWY26 | 5.43E-04 |
| FRWY27 | 6.73E-04 |
| FRWY28 | 9.33E-04 |

| | |
|---|---|
| FRWY29 | 9.39E-04 |
| FRWY30 | 9.17E-04 |
| FRWY31 | 2.08E-03 |
| FRWY32 | 6.84E-04 |
| FRWY33 | 1.37E-03 |
| FRWY34 | 1.21E-03 |
| FRWY35 | 1.17E-04 |
| FRWY36 | 8.13E-04 |
| FRWY37 | 3.28E-04 |
| FRWY294 | 4.00E-05 |
| FRWY295 | 1.43E-05 |
| FRWY296 | 2.48E-05 |
| FRWY297 | 2.06E-05 |
| FRWY299 | 2.26E-05 |
| FRWY75 | 3.58E-04 |
| FRWY76 | 3.23E-04 |
| FRWY77 | 5.81E-05 |
| FRWY78 | 1.82E-04 |
| FRWY79 | 2.28E-04 |
| FRWY80 | 2.31E-04 |
| FRWY81 | 3.47E-04 |
| FRWY82 | 2.36E-04 |
| FRWY83 | 2.59E-04 |
| FRWY84 | 1.70E-04 |
| FRWY85 | 3.36E-04 |
| FRWY86 | 1.01E-04 |
| FRWY87 | 1.79E-04 |
| FRWY101 | 1.16E-04 |
| FRWY102 | 5.97E-05 |
| FRWY103 | 1.14E-04 |
| FRWY104 | 1.96E-04 |
| FRWY105 | 6.08E-05 |
| FRWY106 | 7.86E-05 |
| FRWY107 | 9.53E-05 |
| FRWY108 | 2.44E-04 |

| | | | |
|---|---|---|---|
| FRWY109 | 9.26E-05 | | |
| FRWY110 | 1.49E-04 | | |
| FRWY111 | 4.13E-04 | | |
| FRWY112 | 7.37E-05 | | |
| FRWY113 | 1.57E-04 | | |
| FRWY114 | 1.73E-04 | | |
| FRWY129 | 1.11E-04 | | |
| FRWY130 | 1.00E-04 | | |
| FRWY131 | 8.27E-05 | | |
| FRWY132 | 3.36E-05 | | |
| FRWY133 | 1.33E-04 | | |
| FRWY167 | 4.56E-05 | | |
| FRWY168 | 3.76E-05 | | |
| FRWY169 | 2.01E-04 | | |
| FRWY171 | 9.49E-05 | | |
| FRWY172 | 1.56E-04 | | |
| FRWY173 | 1.33E-04 | | |
| FRWY174 | 6.05E-05 | | |
| FRWY175 | 9.23E-05 | | |
| FRWY176 | 8.29E-05 | | |
| FRWY134 | 8.06E-05 | | |
| FRWY135 | 9.50E-05 | | |
| FRWY136 | 5.65E-05 | | |
| FRWY137 | 7.57E-05 | | |
| FRWY138 | 1.21E-04 | | |
| FRWY139 | 9.35E-05 | | |
| FRWY140 | 7.43E-05 | | |
| FRWY141 | 6.24E-05 | | |
| FRWY142 | 3.94E-05 | | |
| FRWY143 | 7.82E-05 | | |
| FRWY144 | 1.05E-04 | EMFAC201 | 2014/2011 |
| Total (g/sec) | 3.01E-02 | 1.40E-01 | 2.15E-01 |
| Total (lbs/day) | 5.74E+00 | | |
| Total VMT | 1.91E+05 | | |

| ID | Arterial | From | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 530 | 50 | 150 | 1,580 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 450 | 50 | 150 | 1,600 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 470 | 60 | 160 | 1,610 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 510 | 60 | 170 | 1,640 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 550 | 60 | 180 | 1,670 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 580 | 60 | 180 | 1,690 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 610 | 60 | 190 | 1,710 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 630 | 60 | 190 | 1,730 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 680 | 70 | 210 | 1,840 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 700 | 70 | 220 | 1,850 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 730 | 70 | 230 | 1,870 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,080 | 90 | 290 | 2,090 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,160 | 90 | 310 | 2,170 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,190 | 100 | 330 | 2,230 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,190 | 100 | 330 | 2,240 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,280 | 100 | 330 | 2,250 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 1,490 | 110 | 350 | 2,300 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 1,690 | 110 | 370 | 2,320 |
| FRWY19 | SR60 | Market St to Main St | 1,840 | 120 | 400 | 2,400 |
| FRWY20 | SR60 | Main St to SR-91 | 2,220 | 150 | 480 | 2,690 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 3,970 | 230 | 790 | 4,140 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 4,030 | 240 | 830 | 4,220 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 4,080 | 240 | 850 | 4,260 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 4,480 | 260 | 910 | 4,400 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 5,070 | 280 | 970 | 4,510 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 5,390 | 280 | 960 | 4,460 |
| FRWY27 | SR60 | I-215 to Day St | 6,600 | 330 | 1,120 | 5,130 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 6,370 | 340 | 1,150 | 5,130 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 6,570 | 350 | 1,190 | 5,170 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY30 | SR60 | Heacock St to Perris Blvd | 7,480 | 380 | 1,240 | 5,300 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 8,670 | 430 | 1,340 | 5,490 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 9,240 | 450 | 1,360 | 5,490 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 11,580 | 460 | 1,560 | 6,340 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,500 | 470 | 1,560 | 6,490 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 3,360 | 120 | 380 | 850 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 3,040 | 120 | 320 | 740 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 3,010 | 110 | 300 | 720 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 127 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 127 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 127 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 127 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 127 |
| FRWY75 | SR91 | I-15 to McKinley St | 730 | 50 | 190 | 1,090 |
| FRWY76 | SR91 | McKinley St to Pierce St | 850 | 50 | 210 | 1,120 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 850 | 50 | 210 | 1,120 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 920 | 60 | 220 | 1,140 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,020 | 60 | 230 | 1,150 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,120 | 60 | 240 | 1,170 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,210 | 60 | 250 | 1,190 |
| FRWY82 | SR91 | Adam St to Madison St | 1,270 | 70 | 260 | 1,210 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,300 | 70 | 270 | 1,220 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,360 | 70 | 270 | 1,230 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,340 | 70 | 270 | 1,220 |
| FRWY86 | SR91 | 14th St to University Ave | 1,330 | 60 | 240 | 1,110 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,370 | 60 | 240 | 1,120 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 1,660 | 60 | 190 | 590 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 1,200 | 50 | 160 | 570 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 1,200 | 50 | 160 | 570 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 900 | 40 | 140 | 550 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 730 | 40 | 130 | 540 |
| FRWY106 | I-10 | 22nd St to S 8th St | 670 | 40 | 130 | 540 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 550 | 30 | 120 | 520 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY108 | I-10 | S Hargrave St to Field Rd | 470 | 30 | 110 | 510 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 450 | 30 | 90 | 490 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 410 | 30 | 90 | 490 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 400 | 30 | 90 | 490 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 400 | 30 | 80 | 490 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 340 | 20 | 70 | 430 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 340 | 20 | 70 | 430 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 910 | 20 | 90 | 210 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,080 | 20 | 100 | 220 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,220 | 30 | 110 | 230 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,270 | 30 | 110 | 240 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,290 | 30 | 120 | 240 |
| FRWY167 | I-215 | Redlands Ave to D St | 840 | 20 | 90 | 270 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 1,020 | 30 | 110 | 360 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 990 | 30 | 100 | 360 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 580 | 20 | 60 | 410 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 590 | 20 | 80 | 480 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 710 | 20 | 80 | 490 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 700 | 20 | 90 | 490 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 1,060 | 40 | 110 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 1,100 | 40 | 120 | 550 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 580 | 30 | 90 | 470 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 570 | 30 | 80 | 450 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 560 | 30 | 80 | 440 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 490 | 20 | 60 | 410 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 460 | 20 | 60 | 400 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 570 | 20 | 70 | 390 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 620 | 30 | 90 | 400 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 610 | 30 | 70 | 370 |
| FRWY142 | SR-215 | Mill St to 2rd St | 600 | 30 | 70 | 360 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 590 | 20 | 70 | 330 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 540 | 20 | 50 | 290 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **No Mitigation**
Project Only Phase 1 in 2022
Freeway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2310 | 530 | 50 | 150 | 1,580 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1553 | 1690 | 1653 |
| FRWY2 | 2250 | 450 | 50 | 150 | 1,600 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1573 | 1710 | 2287 |
| FRWY3 | 2300 | 470 | 60 | 160 | 1,610 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 12 | 4 | 130 | 1583 | 1730 | 1867 |
| FRWY4 | 2380 | 510 | 60 | 170 | 1,640 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 12 | 4 | 138 | 1612 | 1768 | 2029 |
| FRWY5 | 2460 | 550 | 60 | 180 | 1,670 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1642 | 1806 | 1595 |
| FRWY6 | 2510 | 580 | 60 | 180 | 1,690 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1661 | 1826 | 2367 |
| FRWY7 | 2570 | 610 | 60 | 190 | 1,710 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1681 | 1853 | 1900 |
| FRWY8 | 2610 | 630 | 60 | 190 | 1,730 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1701 | 1873 | 1788 |
| FRWY9 | 2800 | 680 | 70 | 210 | 1,840 | 1792 | 1.113 | 1 | 0 | 0 | 0 | 14 | 5 | 171 | 1809 | 2000 | 2227 |
| FRWY10 | 2840 | 700 | 70 | 220 | 1,850 | 1665 | 1.034 | 1 | 0 | 0 | 0 | 14 | 5 | 179 | 1819 | 2018 | 2088 |
| FRWY11 | 2900 | 730 | 70 | 230 | 1,870 | 849 | 0.527 | 1 | 0 | 0 | 0 | 14 | 5 | 187 | 1838 | 2046 | 1079 |
| FRWY12 | 3550 | 1,080 | 90 | 290 | 2,090 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 18 | 6 | 236 | 2055 | 2318 | 3310 |
| FRWY13 | 3730 | 1,160 | 90 | 310 | 2,170 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 18 | 6 | 252 | 2133 | 2413 | 2531 |
| FRWY14 | 3850 | 1,190 | 100 | 330 | 2,230 | 2444 | 1.518 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2192 | 2491 | 3782 |
| FRWY15 | 3860 | 1,190 | 100 | 330 | 2,240 | 1608 | 0.999 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2202 | 2501 | 2498 |
| FRWY16 | 3960 | 1,280 | 100 | 330 | 2,250 | 2722 | 1.691 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2212 | 2511 | 4245 |
| FRWY17 | 4250 | 1,490 | 110 | 350 | 2,300 | 3198 | 1.987 | 3 | 0 | 0 | 0 | 22 | 7 | 285 | 2261 | 2579 | 5124 |
| FRWY18 | 4490 | 1,690 | 110 | 370 | 2,320 | 2509 | 1.559 | 3 | 0 | 0 | 0 | 22 | 7 | 301 | 2281 | 2616 | 4077 |
| FRWY19 | 4760 | 1,840 | 120 | 400 | 2,400 | 910 | 0.565 | 3 | 0 | 0 | 0 | 25 | 8 | 326 | 2360 | 2722 | 1539 |
| FRWY20 | 5540 | 2,220 | 150 | 480 | 2,690 | 774 | 0.481 | 4 | 0 | 0 | 0 | 31 | 10 | 391 | 2645 | 3081 | 1481 |
| FRWY21 | 9130 | 3,970 | 230 | 790 | 4,140 | 1798 | 1.117 | 7 | 0 | 0 | 1 | 47 | 15 | 643 | 4070 | 4784 | 5344 |
| FRWY22 | 9320 | 4,030 | 240 | 830 | 4,220 | 1035 | 0.643 | 7 | 0 | 0 | 1 | 49 | 16 | 676 | 4149 | 4898 | 3149 |
| FRWY23 | 9430 | 4,080 | 240 | 850 | 4,260 | 1042 | 0.647 | 7 | 0 | 0 | 1 | 49 | 16 | 692 | 4188 | 4954 | 3207 |
| FRWY24 | 10050 | 4,480 | 260 | 910 | 4,400 | 2260 | 1.404 | 8 | 0 | 0 | 1 | 53 | 17 | 741 | 4326 | 5147 | 7226 |
| FRWY25 | 10830 | 5,070 | 280 | 970 | 4,510 | 1305 | 0.811 | 9 | 0 | 0 | 1 | 57 | 19 | 790 | 4434 | 5311 | 4305 |
| FRWY26 | 11090 | 5,390 | 280 | 960 | 4,460 | 977 | 0.607 | 10 | 1 | 1 | 1 | 57 | 19 | 782 | 4385 | 5254 | 3189 |
| FRWY27 | 13180 | 6,600 | 330 | 1,120 | 5,130 | 1186 | 0.737 | 12 | 1 | 1 | 1 | 67 | 22 | 912 | 5043 | 6059 | 4464 |
| FRWY28 | 12990 | 6,370 | 340 | 1,150 | 5,130 | 1642 | 1.020 | 12 | 1 | 1 | 1 | 69 | 23 | 936 | 5043 | 6086 | 6208 |
| FRWY29 | 13280 | 6,570 | 350 | 1,190 | 5,170 | 1636 | 1.016 | 12 | 1 | 1 | 1 | 71 | 23 | 969 | 5083 | 6161 | 6261 |
| FRWY30 | 14400 | 7,480 | 380 | 1,240 | 5,300 | 1555 | 0.966 | 14 | 1 | 1 | 1 | 78 | 25 | 1010 | 5211 | 6339 | 6124 |
| FRWY31 | 15930 | 8,670 | 430 | 1,340 | 5,490 | 3384 | 2.102 | 16 | 1 | 1 | 1 | 88 | 29 | 1091 | 5397 | 6624 | 13924 |
| FRWY32 | 16540 | 9,240 | 450 | 1,360 | 5,490 | 1112 | 0.691 | 17 | 1 | 1 | 1 | 92 | 30 | 1107 | 5397 | 6647 | 4591 |
| FRWY33 | 19940 | 11,580 | 460 | 1,560 | 6,340 | 1935 | 1.202 | 21 | 1 | 1 | 2 | 94 | 31 | 1270 | 6233 | 7653 | 9199 |
| FRWY34 | 21020 | 12,500 | 470 | 1,560 | 6,490 | 1675 | 1.041 | 23 | 1 | 1 | 2 | 96 | 31 | 1270 | 6381 | 7805 | 8121 |
| FRWY35 | 4710 | 3,360 | 120 | 380 | 850 | 1143 | 0.710 | 6 | 0 | 0 | 1 | 25 | 8 | 309 | 836 | 1185 | 841 |
| FRWY36 | 4220 | 3,040 | 120 | 320 | 740 | 9120 | 5.665 | 5 | 0 | 0 | 0 | 25 | 8 | 261 | 728 | 1027 | 5819 |
| FRWY37 | 4140 | 3,010 | 110 | 300 | 720 | 3802 | 2.362 | 5 | 0 | 0 | 0 | 22 | 7 | 244 | 708 | 988 | 2335 |
| FRWY294 | 127 | 0 | 0 | 0 | 127 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 227 |
| FRWY295 | 127 | 0 | 0 | 0 | 127 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| FRWY296 | 127 | 0 | 0 | 0 | 127 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 140 |
| FRWY297 | 127 | 0 | 0 | 0 | 127 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| FRWY299 | 127 | 0 | 0 | 0 | 127 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 128 |
| FRWY75 | 2060 | 730 | 50 | 190 | 1,090 | 2861 | 1.777 | 1 | 0 | 0 | 0 | 10 | 3 | 155 | 1072 | 1241 | 2206 |
| FRWY76 | 2230 | 850 | 50 | 210 | 1,120 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 1999 |
| FRWY77 | 2230 | 850 | 50 | 210 | 1,120 | 450 | 0.280 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 360 |
| FRWY78 | 2340 | 920 | 60 | 220 | 1,140 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 12 | 4 | 179 | 1121 | 1318 | 1133 |
| FRWY79 | 2460 | 1,020 | 60 | 230 | 1,150 | 1713 | 1.064 | 2 | 0 | 0 | 0 | 12 | 4 | 187 | 1131 | 1336 | 1422 |
| FRWY80 | 2590 | 1,120 | 60 | 240 | 1,170 | 1703 | 1.058 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1150 | 1364 | 1443 |
| FRWY81 | 2710 | 1,210 | 60 | 250 | 1,190 | 2512 | 1.560 | 2 | 0 | 0 | 0 | 12 | 4 | 204 | 1170 | 1392 | 2173 |
| FRWY82 | 2810 | 1,270 | 70 | 260 | 1,210 | 1674 | 1.040 | 2 | 0 | 0 | 0 | 14 | 5 | 212 | 1190 | 1423 | 1480 |
| FRWY83 | 2860 | 1,300 | 70 | 270 | 1,220 | 1819 | 1.130 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 1628 |
| FRWY84 | 2930 | 1,360 | 70 | 270 | 1,230 | 1182 | 0.734 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1209 | 1451 | 1065 |
| FRWY85 | 2900 | 1,340 | 70 | 270 | 1,220 | 2360 | 1.466 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 2113 |
| FRWY86 | 2740 | 1,330 | 60 | 240 | 1,110 | 783 | 0.486 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1091 | 1306 | 635 |
| FRWY87 | 2790 | 1,370 | 60 | 240 | 1,120 | 1370 | 0.851 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1101 | 1316 | 1120 |
| FRWY101 | 2500 | 1,660 | 60 | 190 | 590 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 580 | 755 | 798 |
| FRWY102 | 1980 | 1,200 | 50 | 160 | 570 | 925 | 0.575 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 406 |
| FRWY103 | 1980 | 1,200 | 50 | 160 | 570 | 1770 | 1.100 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 777 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY104 | 1630 | 900 | 40 | 140 | 550 | 3182 | 1.977 | 2 | 0 | 0 | 0 | 8 | 3 | 114 | 541 | 667 | 1319 |
| FRWY105 | 1440 | 730 | 40 | 130 | 540 | 1010 | 0.627 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 407 |
| FRWY106 | 1380 | 670 | 40 | 130 | 540 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 526 |
| FRWY107 | 1220 | 550 | 30 | 120 | 520 | 1655 | 1.028 | 1 | 0 | 0 | 0 | 6 | 2 | 98 | 511 | 618 | 636 |
| FRWY108 | 1120 | 470 | 30 | 110 | 510 | 4341 | 2.697 | 1 | 0 | 0 | 0 | 6 | 2 | 90 | 501 | 600 | 1618 |
| FRWY109 | 1060 | 450 | 30 | 90 | 490 | 1728 | 1.073 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 606 |
| FRWY110 | 1020 | 410 | 30 | 90 | 490 | 2788 | 1.732 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 977 |
| FRWY111 | 1010 | 400 | 30 | 90 | 490 | 7717 | 4.794 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 2704 |
| FRWY112 | 1000 | 400 | 30 | 80 | 490 | 1384 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 482 | 556 | 478 |
| FRWY113 | 860 | 340 | 20 | 70 | 430 | 3380 | 2.100 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1020 |
| FRWY114 | 860 | 340 | 20 | 70 | 430 | 3719 | 2.310 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1123 |
| FRWY129 | 1230 | 910 | 20 | 90 | 210 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 206 | 287 | 798 |
| FRWY130 | 1420 | 1,080 | 20 | 100 | 220 | 3830 | 2.379 | 2 | 0 | 0 | 0 | 4 | 1 | 81 | 216 | 305 | 727 |
| FRWY131 | 1590 | 1,220 | 30 | 110 | 230 | 2967 | 1.843 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 226 | 326 | 602 |
| FRWY132 | 1650 | 1,270 | 30 | 110 | 240 | 1163 | 0.722 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 236 | 336 | 243 |
| FRWY133 | 1680 | 1,290 | 30 | 120 | 240 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 236 | 345 | 972 |
| FRWY167 | 1220 | 840 | 20 | 90 | 270 | 1471 | 0.914 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 265 | 346 | 316 |
| FRWY168 | 1520 | 1,020 | 30 | 110 | 360 | 916 | 0.569 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 354 | 454 | 258 |
| FRWY169 | 1480 | 990 | 30 | 100 | 360 | 4924 | 3.059 | 2 | 0 | 0 | 0 | 6 | 2 | 81 | 354 | 446 | 1363 |
| FRWY171 | 1070 | 580 | 20 | 60 | 410 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 459 | 611 |
| FRWY172 | 1170 | 590 | 20 | 80 | 480 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 472 | 544 | 1013 |
| FRWY173 | 1300 | 710 | 20 | 80 | 490 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 482 | 554 | 860 |
| FRWY174 | 1300 | 700 | 20 | 90 | 490 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 482 | 562 | 396 |
| FRWY175 | 1750 | 1,060 | 40 | 110 | 540 | 1547 | 0.961 | 2 | 0 | 0 | 0 | 8 | 3 | 90 | 531 | 634 | 609 |
| FRWY176 | 1810 | 1,100 | 40 | 120 | 550 | 1359 | 0.844 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 541 | 652 | 550 |
| FRWY134 | 1170 | 580 | 30 | 90 | 470 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 462 | 545 | 469 |
| FRWY135 | 1130 | 570 | 30 | 80 | 450 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 442 | 517 | 549 |
| FRWY136 | 1110 | 560 | 30 | 80 | 440 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 433 | 507 | 327 |
| FRWY137 | 980 | 490 | 20 | 60 | 410 | 1516 | 0.942 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 458 | 432 |
| FRWY138 | 940 | 460 | 20 | 60 | 400 | 2485 | 1.544 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 393 | 449 | 692 |
| FRWY139 | 1050 | 570 | 20 | 70 | 390 | 1950 | 1.211 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 383 | 447 | 542 |
| FRWY140 | 1140 | 620 | 30 | 90 | 400 | 1581 | 0.982 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 393 | 476 | 467 |
| FRWY141 | 1080 | 610 | 30 | 70 | 370 | 1447 | 0.899 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 364 | 430 | 387 |
| FRWY142 | 1060 | 600 | 30 | 70 | 360 | 938 | 0.583 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 354 | 420 | 245 |
| FRWY143 | 1010 | 590 | 20 | 70 | 330 | 2032 | 1.262 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 324 | 388 | 490 |
| FRWY144 | 900 | 540 | 20 | 50 | 290 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 4 | 1 | 41 | 285 | 332 | 644 |
| | | | | | | | | | | | | | | | | Total | 191204 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1<br>Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2<br>Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0052 | 0.0144 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0059 | 0.0162 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0048 | 0.0133 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0059 | 0.0162 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0056 | 0.0152 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0050 | 0.0137 |

**Segment Emissions**

| Freeway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3 | 9.81E-08 | 4.51E-08 | 2.38E-09 | 4.68E-09 | 2.04E-06 | 5.29E-07 | 8.19E-06 | 2.86E-04 | | 2.97E-04 |
| FRWY2 | 3 | 1.14E-07 | 5.24E-08 | 2.76E-09 | 5.43E-09 | 2.79E-06 | 7.23E-07 | 1.12E-05 | 3.96E-04 | | 4.11E-04 |
| FRWY3 | 3 | 9.60E-08 | 4.42E-08 | 2.33E-09 | 4.58E-09 | 2.70E-06 | 7.00E-07 | 9.64E-06 | 3.21E-04 | | 3.34E-04 |
| FRWY4 | 3 | 1.11E-07 | 5.10E-08 | 2.69E-09 | 5.28E-09 | 2.87E-06 | 7.45E-07 | 1.09E-05 | 3.48E-04 | | 3.63E-04 |
| FRWY5 | 3 | 9.19E-08 | 4.23E-08 | 2.23E-09 | 4.38E-09 | 2.21E-06 | 5.73E-07 | 8.88E-06 | 2.73E-04 | | 2.85E-04 |
| FRWY6 | 3 | 1.42E-07 | 6.55E-08 | 3.45E-09 | 6.78E-09 | 3.24E-06 | 8.42E-07 | 1.30E-05 | 4.05E-04 | | 4.22E-04 |
| FRWY7 | 3 | 1.18E-07 | 5.45E-08 | 2.87E-09 | 5.64E-09 | 2.56E-06 | 6.65E-07 | 1.09E-05 | 3.24E-04 | | 3.38E-04 |
| FRWY8 | 3 | 1.14E-07 | 5.24E-08 | 2.76E-09 | 5.43E-09 | 2.39E-06 | 6.20E-07 | 1.01E-05 | 3.05E-04 | | 3.19E-04 |
| FRWY9 | 3 | 1.43E-07 | 6.59E-08 | 3.47E-09 | 6.83E-09 | 3.25E-06 | 8.43E-07 | 1.31E-05 | 3.79E-04 | | 3.96E-04 |
| FRWY10 | 3 | 1.37E-07 | 6.31E-08 | 3.32E-09 | 6.53E-09 | 3.02E-06 | 7.83E-07 | 1.27E-05 | 3.54E-04 | | 3.70E-04 |
| FRWY11 | 3 | 7.29E-08 | 3.35E-08 | 1.77E-09 | 3.47E-09 | 1.54E-06 | 3.99E-07 | 6.78E-06 | 1.82E-04 | | 1.91E-04 |
| FRWY12 | 2 | 2.88E-07 | 1.41E-07 | 6.50E-09 | 1.33E-08 | 4.72E-06 | 1.21E-06 | 2.04E-05 | 4.89E-04 | | 5.16E-04 |
| FRWY13 | 2 | 2.28E-07 | 1.11E-07 | 5.13E-09 | 1.05E-08 | 3.47E-06 | 8.91E-07 | 1.60E-05 | 3.73E-04 | | 3.94E-04 |
| FRWY14 | 2 | 3.38E-07 | 1.65E-07 | 7.61E-09 | 1.56E-08 | 5.58E-06 | 1.43E-06 | 2.47E-05 | 5.55E-04 | | 5.87E-04 |
| FRWY15 | 2 | 2.22E-07 | 1.09E-07 | 5.01E-09 | 1.02E-08 | 3.67E-06 | 9.43E-07 | 1.63E-05 | 3.67E-04 | | 3.88E-04 |
| FRWY16 | 2 | 4.05E-07 | 1.98E-07 | 9.11E-09 | 1.86E-08 | 6.21E-06 | 1.60E-06 | 2.75E-05 | 6.23E-04 | | 6.59E-04 |
| FRWY17 | 2 | 5.54E-07 | 2.70E-07 | 1.25E-08 | 2.55E-08 | 8.03E-06 | 2.06E-06 | 3.43E-05 | 7.49E-04 | | 7.94E-04 |
| FRWY18 | 2 | 4.93E-07 | 2.41E-07 | 1.11E-08 | 2.27E-08 | 6.30E-06 | 1.62E-06 | 2.84E-05 | 5.93E-04 | | 6.30E-04 |
| FRWY19 | 2 | 1.95E-07 | 9.50E-08 | 4.38E-09 | 8.95E-09 | 2.49E-06 | 6.40E-07 | 1.12E-05 | 2.22E-04 | | 2.37E-04 |
| FRWY20 | 2 | 2.00E-07 | 9.75E-08 | 4.49E-09 | 9.19E-09 | 2.65E-06 | 6.81E-07 | 1.14E-05 | 2.12E-04 | | 2.27E-04 |
| FRWY21 | 3 | 8.39E-07 | 3.86E-07 | 2.04E-08 | 4.00E-08 | 1.07E-05 | 2.78E-06 | 4.93E-05 | 8.55E-04 | | 9.19E-04 |
| FRWY22 | 3 | 4.90E-07 | 2.26E-07 | 1.19E-08 | 2.34E-08 | 6.43E-06 | 1.67E-06 | 2.98E-05 | 5.02E-04 | | 5.40E-04 |
| FRWY23 | 3 | 5.00E-07 | 2.30E-07 | 1.21E-08 | 2.38E-08 | 6.47E-06 | 1.68E-06 | 3.07E-05 | 5.10E-04 | | 5.49E-04 |
| FRWY24 | 3 | 1.19E-06 | 5.48E-07 | 2.89E-08 | 5.67E-08 | 1.52E-05 | 3.95E-06 | 7.14E-05 | 1.14E-03 | | 1.23E-03 |
| FRWY25 | 3 | 7.78E-07 | 3.58E-07 | 1.89E-08 | 3.71E-08 | 9.46E-06 | 2.46E-06 | 4.39E-05 | 6.76E-04 | | 7.33E-04 |
| FRWY26 | 3 | 6.19E-07 | 2.85E-07 | 1.50E-08 | 2.95E-08 | 7.08E-06 | 1.84E-06 | 3.25E-05 | 5.00E-04 | | 5.43E-04 |
| FRWY27 | 2 | 9.09E-07 | 4.44E-07 | 2.05E-08 | 4.19E-08 | 8.93E-06 | 2.29E-06 | 4.07E-05 | 6.19E-04 | | 6.73E-04 |
| FRWY28 | 2 | 1.22E-06 | 5.94E-07 | 2.74E-08 | 5.59E-08 | 1.27E-05 | 3.27E-06 | 5.79E-05 | 8.57E-04 | | 9.33E-04 |
| FRWY29 | 2 | 1.25E-06 | 6.10E-07 | 2.81E-08 | 5.75E-08 | 1.31E-05 | 3.36E-06 | 5.97E-05 | 8.61E-04 | | 9.39E-04 |
| FRWY30 | 2 | 1.35E-06 | 6.60E-07 | 3.04E-08 | 6.22E-08 | 1.35E-05 | 3.46E-06 | 5.91E-05 | 8.39E-04 | | 9.17E-04 |
| FRWY31 | 2 | 3.41E-06 | 1.67E-06 | 7.67E-08 | 1.57E-07 | 3.32E-05 | 8.53E-06 | 1.39E-04 | 1.89E-03 | | 2.08E-03 |
| FRWY32 | 2 | 1.19E-06 | 5.83E-07 | 2.69E-08 | 5.50E-08 | 1.14E-05 | 2.93E-06 | 4.63E-05 | 6.21E-04 | | 6.84E-04 |
| FRWY33 | 2 | 2.60E-06 | 1.27E-06 | 5.86E-08 | 1.20E-07 | 2.03E-05 | 5.22E-06 | 9.25E-05 | 1.25E-03 | | 1.37E-03 |
| FRWY34 | 2 | 2.43E-06 | 1.19E-06 | 5.48E-08 | 1.12E-07 | 1.80E-05 | 4.62E-06 | 8.01E-05 | 1.11E-03 | | 1.21E-03 |
| FRWY35 | 2 | 4.46E-07 | 2.18E-07 | 1.00E-08 | 2.05E-08 | 3.13E-06 | 8.04E-07 | 1.33E-05 | 9.89E-05 | | 1.17E-04 |
| FRWY36 | 2 | 3.22E-06 | 1.57E-06 | 7.25E-08 | 1.48E-07 | 2.50E-05 | 6.42E-06 | 8.94E-05 | 6.87E-04 | | 8.13E-04 |
| FRWY37 | 2 | 1.33E-06 | 6.50E-07 | 2.99E-08 | 6.12E-08 | 9.55E-06 | 2.45E-06 | 3.50E-05 | 2.79E-04 | | 3.28E-04 |
| FRWY294 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-05 | | 4.00E-05 |
| FRWY295 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-05 | | 1.43E-05 |
| FRWY296 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.48E-05 | | 2.48E-05 |
| FRWY297 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-05 | | 2.06E-05 |
| FRWY299 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.26E-05 | | 2.26E-05 |
| FRWY75 | 7 | 2.37E-07 | 1.13E-07 | 5.64E-09 | 1.13E-08 | 3.43E-06 | 8.88E-07 | 1.77E-05 | 3.36E-04 | | 3.58E-04 |
| FRWY76 | 7 | 2.41E-07 | 1.14E-07 | 5.73E-09 | 1.14E-08 | 3.00E-06 | 7.76E-07 | 1.71E-05 | 3.01E-04 | | 3.23E-04 |
| FRWY77 | 7 | 4.34E-08 | 2.06E-08 | 1.03E-09 | 2.06E-09 | 5.39E-07 | 1.40E-07 | 3.07E-06 | 5.42E-05 | | 5.81E-05 |
| FRWY78 | 7 | 1.44E-07 | 6.86E-08 | 3.44E-09 | 6.86E-09 | 1.99E-06 | 5.15E-07 | 9.89E-06 | 1.70E-04 | | 1.82E-04 |
| FRWY79 | 7 | 1.98E-07 | 9.41E-08 | 4.71E-09 | 9.41E-09 | 2.46E-06 | 6.38E-07 | 1.28E-05 | 2.12E-04 | | 2.28E-04 |
| FRWY80 | 7 | 2.16E-07 | 1.03E-07 | 5.15E-09 | 1.03E-08 | 2.45E-06 | 6.34E-07 | 1.33E-05 | 2.14E-04 | | 2.31E-04 |
| FRWY81 | 7 | 3.45E-07 | 1.64E-07 | 8.20E-09 | 1.64E-08 | 3.61E-06 | 9.36E-07 | 2.04E-05 | 3.22E-04 | | 3.47E-04 |
| FRWY82 | 7 | 2.41E-07 | 1.15E-07 | 5.74E-09 | 1.15E-08 | 2.81E-06 | 7.27E-07 | 1.41E-05 | 2.18E-04 | | 2.36E-04 |
| FRWY83 | 7 | 2.68E-07 | 1.27E-07 | 6.38E-09 | 1.27E-08 | 3.05E-06 | 7.90E-07 | 1.60E-05 | 2.39E-04 | | 2.59E-04 |
| FRWY84 | 7 | 1.82E-07 | 8.66E-08 | 4.34E-09 | 8.66E-09 | 1.98E-06 | 5.14E-07 | 1.04E-05 | 1.56E-04 | | 1.70E-04 |
| FRWY85 | 7 | 3.59E-07 | 1.70E-07 | 8.53E-09 | 1.70E-08 | 3.96E-06 | 1.03E-06 | 2.07E-05 | 3.10E-04 | | 3.36E-04 |
| FRWY86 | 7 | 1.18E-07 | 5.61E-08 | 2.81E-09 | 5.61E-09 | 1.13E-06 | 2.92E-07 | 6.11E-06 | 9.35E-05 | | 1.01E-04 |
| FRWY87 | 7 | 2.13E-07 | 1.01E-07 | 5.06E-09 | 1.01E-08 | 1.97E-06 | 5.10E-07 | 1.07E-05 | 1.65E-04 | | 1.79E-04 |
| FRWY101 | 2 | 3.28E-07 | 1.60E-07 | 7.40E-09 | 1.51E-08 | 2.33E-06 | 5.99E-07 | 9.92E-06 | 1.02E-04 | | 1.16E-04 |
| FRWY102 | 2 | 1.29E-07 | 6.30E-08 | 2.90E-09 | 5.94E-09 | 1.06E-06 | 2.71E-07 | 4.54E-06 | 5.37E-05 | | 5.97E-05 |
| FRWY103 | 2 | 2.47E-07 | 1.21E-07 | 5.56E-09 | 1.14E-08 | 2.02E-06 | 5.19E-07 | 8.68E-06 | 1.03E-04 | | 1.14E-04 |
| FRWY104 | 2 | 3.33E-07 | 1.63E-07 | 7.49E-09 | 1.53E-08 | 2.90E-06 | 7.46E-07 | 1.37E-05 | 1.78E-04 | | 1.96E-04 |
| FRWY105 | 2 | 8.57E-08 | 4.19E-08 | 1.93E-09 | 3.94E-09 | 9.22E-07 | 2.37E-07 | 4.02E-06 | 5.55E-05 | | 6.08E-05 |
| FRWY106 | 2 | 1.02E-07 | 4.96E-08 | 2.29E-09 | 4.68E-09 | 1.19E-06 | 3.06E-07 | 5.20E-06 | 7.17E-05 | | 7.86E-05 |
| FRWY107 | 2 | 1.06E-07 | 5.17E-08 | 2.38E-09 | 4.87E-09 | 1.13E-06 | 2.91E-07 | 6.09E-06 | 8.76E-05 | | 9.53E-05 |
| FRWY108 | 2 | 2.37E-07 | 1.16E-07 | 5.34E-09 | 1.09E-08 | 2.97E-06 | 7.64E-07 | 1.46E-05 | 2.25E-04 | | 2.44E-04 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY109 | 2 | 9.03E-08 | 4.41E-08 | 2.03E-09 | 4.16E-09 | 1.18E-06 | 3.04E-07 | 4.77E-06 | 8.62E-05 | | 9.26E-05 |
| FRWY110 | 2 | 1.33E-07 | 6.49E-08 | 2.99E-09 | 6.11E-09 | 1.91E-06 | 4.90E-07 | 7.69E-06 | 1.39E-04 | | 1.49E-04 |
| FRWY111 | 2 | 3.59E-07 | 1.75E-07 | 8.07E-09 | 1.65E-08 | 5.28E-06 | 1.36E-06 | 2.13E-05 | 3.85E-04 | | 4.13E-04 |
| FRWY112 | 2 | 6.43E-08 | 3.14E-08 | 1.45E-09 | 2.96E-09 | 9.48E-07 | 2.43E-07 | 3.39E-06 | 6.90E-05 | | 7.37E-05 |
| FRWY113 | 2 | 1.34E-07 | 6.52E-08 | 3.01E-09 | 6.15E-09 | 1.54E-06 | 3.96E-07 | 7.25E-06 | 1.48E-04 | | 1.57E-04 |
| FRWY114 | 2 | 1.47E-07 | 7.18E-08 | 3.31E-09 | 6.76E-09 | 1.70E-06 | 4.36E-07 | 7.98E-06 | 1.63E-04 | | 1.73E-04 |
| FRWY129 | 2 | 4.73E-07 | 2.31E-07 | 1.07E-08 | 2.18E-08 | 2.04E-06 | 5.25E-07 | 1.23E-05 | 9.57E-05 | | 1.11E-04 |
| FRWY130 | 2 | 4.81E-07 | 2.35E-07 | 1.08E-08 | 2.21E-08 | 1.75E-06 | 4.49E-07 | 1.17E-05 | 8.58E-05 | | 1.00E-04 |
| FRWY131 | 2 | 4.21E-07 | 2.05E-07 | 9.47E-09 | 1.94E-08 | 2.03E-06 | 5.22E-07 | 1.00E-05 | 6.95E-05 | | 8.27E-05 |
| FRWY132 | 2 | 1.72E-07 | 8.38E-08 | 3.86E-09 | 7.90E-09 | 7.96E-07 | 2.05E-07 | 3.92E-06 | 2.84E-05 | | 3.36E-05 |
| FRWY133 | 2 | 6.81E-07 | 3.33E-07 | 1.53E-08 | 3.13E-08 | 3.11E-06 | 7.99E-07 | 1.67E-05 | 1.11E-04 | | 1.33E-04 |
| FRWY167 | 2 | 1.44E-07 | 7.01E-08 | 3.23E-09 | 6.61E-09 | 6.71E-07 | 1.73E-07 | 4.06E-06 | 4.04E-05 | | 4.56E-05 |
| FRWY168 | 2 | 1.09E-07 | 5.30E-08 | 2.44E-09 | 5.00E-09 | 6.27E-07 | 1.61E-07 | 3.09E-06 | 3.36E-05 | | 3.76E-05 |
| FRWY169 | 2 | 5.66E-07 | 2.77E-07 | 1.28E-08 | 2.61E-08 | 3.37E-06 | 8.66E-07 | 1.51E-05 | 1.80E-04 | | 2.01E-04 |
| FRWY171 | 2 | 1.45E-07 | 7.06E-08 | 3.25E-09 | 6.65E-09 | 9.79E-07 | 2.52E-07 | 3.94E-06 | 8.95E-05 | | 9.49E-05 |
| FRWY172 | 2 | 2.06E-07 | 1.00E-07 | 4.63E-09 | 9.47E-09 | 1.37E-06 | 3.52E-07 | 7.35E-06 | 1.47E-04 | | 1.56E-04 |
| FRWY173 | 2 | 2.06E-07 | 1.01E-07 | 4.65E-09 | 9.50E-09 | 1.14E-06 | 2.93E-07 | 6.13E-06 | 1.25E-04 | | 1.33E-04 |
| FRWY174 | 2 | 9.23E-08 | 4.51E-08 | 2.08E-09 | 4.25E-09 | 5.18E-07 | 1.33E-07 | 3.13E-06 | 5.66E-05 | | 6.05E-05 |
| FRWY175 | 2 | 1.91E-07 | 9.31E-08 | 4.29E-09 | 8.77E-09 | 1.41E-06 | 3.63E-07 | 5.21E-06 | 8.50E-05 | | 9.23E-05 |
| FRWY176 | 2 | 1.74E-07 | 8.49E-08 | 3.91E-09 | 7.99E-09 | 1.24E-06 | 3.19E-07 | 5.00E-06 | 7.61E-05 | | 8.29E-05 |
| FRWY134 | 3 | 9.44E-08 | 4.35E-08 | 2.29E-09 | 4.50E-09 | 1.08E-06 | 2.79E-07 | 4.33E-06 | 7.48E-05 | | 8.06E-05 |
| FRWY135 | 3 | 1.15E-07 | 5.28E-08 | 2.78E-09 | 5.47E-09 | 1.33E-06 | 3.45E-07 | 4.75E-06 | 8.84E-05 | | 9.50E-05 |
| FRWY136 | 3 | 6.83E-08 | 3.15E-08 | 1.66E-09 | 3.26E-09 | 8.06E-07 | 2.09E-07 | 2.88E-06 | 5.25E-05 | | 5.65E-05 |
| FRWY137 | 3 | 8.73E-08 | 4.02E-08 | 2.12E-09 | 4.16E-09 | 7.85E-07 | 2.04E-07 | 3.16E-06 | 7.14E-05 | | 7.57E-05 |
| FRWY138 | 3 | 1.34E-07 | 6.19E-08 | 3.26E-09 | 6.41E-09 | 1.29E-06 | 3.34E-07 | 5.17E-06 | 1.14E-04 | | 1.21E-04 |
| FRWY139 | 3 | 1.31E-07 | 6.01E-08 | 3.17E-09 | 6.23E-09 | 1.01E-06 | 2.62E-07 | 4.74E-06 | 8.73E-05 | | 9.35E-05 |
| FRWY140 | 7 | 1.11E-07 | 5.28E-08 | 2.64E-09 | 5.28E-09 | 1.14E-06 | 2.94E-07 | 4.62E-06 | 6.81E-05 | | 7.43E-05 |
| FRWY141 | 7 | 1.00E-07 | 4.76E-08 | 2.38E-09 | 4.76E-09 | 1.04E-06 | 2.69E-07 | 3.29E-06 | 5.76E-05 | | 6.24E-05 |
| FRWY142 | 7 | 6.38E-08 | 3.03E-08 | 1.52E-09 | 3.03E-09 | 6.75E-07 | 1.75E-07 | 2.13E-06 | 3.63E-05 | | 3.94E-05 |
| FRWY143 | 7 | 1.36E-07 | 6.46E-08 | 3.23E-09 | 6.46E-09 | 9.74E-07 | 2.52E-07 | 4.62E-06 | 7.22E-05 | | 7.82E-05 |
| FRWY144 | 7 | 1.91E-07 | 9.07E-08 | 4.54E-09 | 9.07E-09 | 1.50E-06 | 3.87E-07 | 5.07E-06 | 9.73E-05 | | 1.05E-04 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/3/2013

**Project Phase 1 Only 2022 (Freeway Segments to Ports)** No Mitigation

**Freeway Segments**

**With EMFAC2014 Emission Factors**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| 230 | 2.70E-05 |
| 229 | 1.69E-05 |
| 228 | 7.11E-06 |
| 227 | 1.14E-05 |
| 226 | 2.93E-05 |
| 225 | 1.41E-05 |
| 224 | 3.73E-05 |
| 223 | 1.62E-05 |
| 222 | 1.69E-05 |
| 221 | 1.58E-05 |
| 220 | 1.99E-05 |
| 219 | 3.37E-05 |
| 218 | 3.69E-05 |
| 217 | 4.22E-05 |
| 216 | 3.42E-05 |
| 215 | 1.98E-05 |
| 214 | 2.14E-05 |
| 213 | 3.35E-05 |
| 212 | 3.21E-05 |
| 211 | 2.42E-05 |
| 210 | 5.12E-05 |
| 209 | 2.71E-05 |
| 263 | 3.01E-05 |
| 264 | 1.45E-05 |
| 265 | 9.84E-06 |
| 266 | 9.23E-06 |
| 267 | 9.01E-06 |
| 268 | 1.38E-05 |

| | |
|---|---|
| 269 | 2.64E-05 |
| 270 | 2.46E-05 |
| 271 | 1.45E-05 |
| 272 | 9.24E-06 |
| 273 | 3.39E-06 |
| 274 | 2.36E-05 |
| 275 | 2.41E-05 |
| 276 | 2.43E-05 |
| 277 | 1.44E-05 |
| 278 | 2.41E-05 |
| 279 | 2.53E-05 |
| 280 | 2.06E-05 |
| 281 | 2.92E-05 |
| 282 | 1.56E-05 |
| 283 | 2.00E-05 |
| 284 | 2.02E-05 |
| 285 | 2.46E-05 |
| 286 | 2.18E-05 |
| 287 | 1.70E-05 |
| 288 | 2.00E-05 |
| 289 | 3.12E-05 |
| 290 | 6.46E-05 |
| 291 | 4.06E-05 |
| 292 | 7.39E-05 |
| 293 | 2.10E-05 |
| 262 | 4.94E-05 |
| 261 | 2.49E-05 |
| 260 | 3.88E-05 |
| 259 | 7.38E-05 |
| 258 | 6.54E-05 |
| 257 | 5.71E-05 |
| 256 | 4.20E-05 |
| 255 | 2.19E-05 |
| 254 | 2.37E-05 |
| 253 | 4.46E-05 |

| | |
|---|---|
| 252 | 3.40E-05 |
| 251 | 3.14E-05 |
| 250 | 5.03E-05 |
| 249 | 1.05E-05 |
| 248 | 1.77E-05 |
| 247 | 3.06E-05 |

| | |
|---|---|
| Total (g/sec) | 1.90E-03 |
| Total (lbs/day) | 3.63E-01 |
| | |
| Total VMT (mi/day) | 1.06E+04 |

TRAFFIC VOLUMES

| ID | Arterial | From | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 127 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 127 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 127 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 127 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 127 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 127 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 127 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 127 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 127 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 127 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 127 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 127 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 127 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 127 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 127 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 127 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 127 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 127 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 127 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 127 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 127 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 127 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 127 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 127 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 127 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 127 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 127 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 127 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 127 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 127 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 127 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 127 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 127 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 127 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 127 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 127 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 127 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 127 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 127 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 127 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 127 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 127 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 127 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 127 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 127 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 127 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 127 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 127 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 127 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 127 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 127 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 127 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 127 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 254 |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 254 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 254 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 254 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 254 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 254 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 254 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 127 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 127 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 127 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 127 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 127 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 127 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 127 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 127 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 127 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **No Mitigation**

Project Phase 1 Only 2022 (Freeway Segments to Ports)
Freeways to Ports

Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.4% | 6.7% | 81.4% | 98.3% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 127 | 0 | 0 | 0 | 127 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 229 | 127 | 0 | 0 | 0 | 127 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 90 |
| 228 | 127 | 0 | 0 | 0 | 127 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 40 |
| 227 | 127 | 0 | 0 | 0 | 127 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 65 |
| 226 | 127 | 0 | 0 | 0 | 127 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 225 | 127 | 0 | 0 | 0 | 127 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 80 |
| 224 | 127 | 0 | 0 | 0 | 127 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 211 |
| 223 | 127 | 0 | 0 | 0 | 127 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 92 |
| 222 | 127 | 0 | 0 | 0 | 127 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 96 |
| 221 | 127 | 0 | 0 | 0 | 127 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 89 |
| 220 | 127 | 0 | 0 | 0 | 127 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 219 | 127 | 0 | 0 | 0 | 127 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 191 |
| 218 | 127 | 0 | 0 | 0 | 127 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 209 |
| 217 | 127 | 0 | 0 | 0 | 127 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 240 |
| 216 | 127 | 0 | 0 | 0 | 127 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 194 |
| 215 | 127 | 0 | 0 | 0 | 127 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 112 |
| 214 | 127 | 0 | 0 | 0 | 127 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 121 |
| 213 | 127 | 0 | 0 | 0 | 127 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 190 |
| 212 | 127 | 0 | 0 | 0 | 127 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 182 |
| 211 | 127 | 0 | 0 | 0 | 127 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 210 | 127 | 0 | 0 | 0 | 127 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 291 |
| 209 | 127 | 0 | 0 | 0 | 127 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 154 |
| 263 | 127 | 0 | 0 | 0 | 127 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 160 |
| 264 | 127 | 0 | 0 | 0 | 127 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 77 |
| 265 | 127 | 0 | 0 | 0 | 127 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 266 | 127 | 0 | 0 | 0 | 127 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 267 | 127 | 0 | 0 | 0 | 127 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 51 |
| 268 | 127 | 0 | 0 | 0 | 127 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 78 |
| 269 | 127 | 0 | 0 | 0 | 127 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 150 |
| 270 | 127 | 0 | 0 | 0 | 127 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 271 | 127 | 0 | 0 | 0 | 127 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 82 |
| 272 | 127 | 0 | 0 | 0 | 127 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 273 | 127 | 0 | 0 | 0 | 127 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 19 |
| 274 | 127 | 0 | 0 | 0 | 127 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 134 |
| 275 | 127 | 0 | 0 | 0 | 127 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 276 | 127 | 0 | 0 | 0 | 127 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 138 |
| 277 | 127 | 0 | 0 | 0 | 127 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| 278 | 127 | 0 | 0 | 0 | 127 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 279 | 127 | 0 | 0 | 0 | 127 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 280 | 127 | 0 | 0 | 0 | 127 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| 281 | 127 | 0 | 0 | 0 | 127 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 282 | 127 | 0 | 0 | 0 | 127 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 88 |
| 283 | 127 | 0 | 0 | 0 | 127 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 114 |
| 284 | 127 | 0 | 0 | 0 | 127 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 115 |
| 285 | 127 | 0 | 0 | 0 | 127 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 286 | 127 | 0 | 0 | 0 | 127 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 124 |
| 287 | 127 | 0 | 0 | 0 | 127 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 97 |
| 288 | 127 | 0 | 0 | 0 | 127 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 289 | 127 | 0 | 0 | 0 | 127 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 177 |
| 290 | 127 | 0 | 0 | 0 | 127 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 367 |
| 291 | 127 | 0 | 0 | 0 | 127 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 230 |
| 292 | 127 | 0 | 0 | 0 | 127 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 419 |
| 293 | 127 | 0 | 0 | 0 | 127 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 119 |
| 262 | 254 | 0 | 0 | 0 | 254 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 263 |
| 261 | 254 | 0 | 0 | 0 | 254 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 132 |
| 260 | 254 | 0 | 0 | 0 | 254 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 206 |
| 259 | 254 | 0 | 0 | 0 | 254 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 392 |
| 258 | 254 | 0 | 0 | 0 | 254 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 348 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 257 | 254 | 0 | 0 | 0 | 254 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 303 |
| 256 | 254 | 0 | 0 | 0 | 254 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 224 |
| 255 | 127 | 0 | 0 | 0 | 127 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 116 |
| 254 | 127 | 0 | 0 | 0 | 127 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 126 |
| 253 | 127 | 0 | 0 | 0 | 127 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 237 |
| 252 | 127 | 0 | 0 | 0 | 127 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 181 |
| 251 | 127 | 0 | 0 | 0 | 127 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 167 |
| 250 | 127 | 0 | 0 | 0 | 127 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 268 |
| 249 | 127 | 0 | 0 | 0 | 127 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 248 | 127 | 0 | 0 | 0 | 127 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 94 |
| 247 | 127 | 0 | 0 | 0 | 127 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 163 |

Total 10558.4

**Vehicle Fleet Emissions - DSL**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6 Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7 Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8 Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9 Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0196 | 0.0155 | 0.0064 | 0.0175 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0052 | 0.0144 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0059 | 0.0162 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0048 | 0.0133 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0059 | 0.0162 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0056 | 0.0152 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0070 | 0.0191 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0050 | 0.0137 |

**Segment Emissions**

| **Freeway Segment** | **Speed Group** | **LDA-DSL (g/sec)** | **LDT1-DSL (g/sec)** | **LDT2-DSL (g/sec)** | **MDT-DSL (g/sec)** | **LHDT1-DSL (g/sec)** | **LHDT2-DSL (g/sec)** | **MHDT-DSL (g/sec)** | **HHDT-DSL (g/sec)** | | **Total (g/sec)** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.70E-05 | | 2.70E-05 |
| 229 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.69E-05 | | 1.69E-05 |
| 228 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.11E-06 | | 7.11E-06 |
| 227 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-05 | | 1.14E-05 |
| 226 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.93E-05 | | 2.93E-05 |
| 225 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E-05 | | 1.41E-05 |
| 224 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.73E-05 | | 3.73E-05 |
| 223 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-05 | | 1.62E-05 |
| 222 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.69E-05 | | 1.69E-05 |
| 221 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.58E-05 | | 1.58E-05 |
| 220 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.99E-05 | | 1.99E-05 |
| 219 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.37E-05 | | 3.37E-05 |
| 218 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.69E-05 | | 3.69E-05 |
| 217 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.22E-05 | | 4.22E-05 |
| 216 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.42E-05 | | 3.42E-05 |
| 215 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-05 | | 1.98E-05 |
| 214 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-05 | | 2.14E-05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 213 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.35E-05 | | 3.35E-05 |
| 212 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-05 | | 3.21E-05 |
| 211 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.42E-05 | | 2.42E-05 |
| 210 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.12E-05 | | 5.12E-05 |
| 209 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-05 | | 2.71E-05 |
| 263 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.01E-05 | | 3.01E-05 |
| 264 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-05 | | 1.45E-05 |
| 265 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.84E-06 | | 9.84E-06 |
| 266 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.23E-06 | | 9.23E-06 |
| 267 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.01E-06 | | 9.01E-06 |
| 268 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-05 | | 1.38E-05 |
| 269 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-05 | | 2.64E-05 |
| 270 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.46E-05 | | 2.46E-05 |
| 271 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-05 | | 1.45E-05 |
| 272 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.24E-06 | | 9.24E-06 |
| 273 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.39E-06 | | 3.39E-06 |
| 274 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-05 | | 2.36E-05 |
| 275 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.41E-05 | | 2.41E-05 |
| 276 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-05 | | 2.43E-05 |
| 277 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.44E-05 | | 1.44E-05 |
| 278 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.41E-05 | | 2.41E-05 |
| 279 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.53E-05 | | 2.53E-05 |
| 280 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-05 | | 2.06E-05 |
| 281 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.92E-05 | | 2.92E-05 |
| 282 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-05 | | 1.56E-05 |
| 283 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-05 | | 2.00E-05 |
| 284 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.02E-05 | | 2.02E-05 |
| 285 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.46E-05 | | 2.46E-05 |
| 286 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.18E-05 | | 2.18E-05 |
| 287 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-05 | | 1.70E-05 |
| 288 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-05 | | 2.00E-05 |
| 289 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-05 | | 3.12E-05 |
| 290 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-05 | | 6.46E-05 |
| 291 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.06E-05 | | 4.06E-05 |
| 292 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.39E-05 | | 7.39E-05 |
| 293 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.10E-05 | | 2.10E-05 |
| 262 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.94E-05 | | 4.94E-05 |
| 261 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.49E-05 | | 2.49E-05 |
| 260 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.88E-05 | | 3.88E-05 |
| 259 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.38E-05 | | 7.38E-05 |
| 258 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.54E-05 | | 6.54E-05 |
| 257 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.71E-05 | | 5.71E-05 |
| 256 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.20E-05 | | 4.20E-05 |
| 255 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-05 | | 2.19E-05 |
| 254 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-05 | | 2.37E-05 |
| 253 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.46E-05 | | 4.46E-05 |
| 252 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.40E-05 | | 3.40E-05 |
| 251 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-05 | | 3.14E-05 |
| 250 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.03E-05 | | 5.03E-05 |
| 249 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-05 | | 1.05E-05 |
| 248 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.77E-05 | | 1.77E-05 |
| 247 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.06E-05 | | 3.06E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for DPM emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2035** **Phase 1** **2035**

**Vehicle Running Exhaust Emissions** **Pollutant** **DPM**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 1.25E-04 |
| Light Logistics | Phase 1 | 2.52E-07 |
| Utilities Service Station | Phase 1 | 2.33E-07 |
| Gas Station w/Convenience Store | Phase 1 | 2.96E-07 |
| Convenience Store | Phase 1 | 4.64E-07 |
| Fire Station | Phase 1 | 3.10E-10 |
| | | |
| Total | | 1.26E-04 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 9.03E-05 |
| Light Logistics | Phase 1 | 5.43E-07 |
| Utilities Service Station | Phase 1 | 1.74E-06 |
| Gas Station w/Convenience Store | Phase 1 | 3.80E-07 |
| Convenience Store | Phase 1 | 5.86E-07 |
| Fire Station | Phase 1 | 0.00E+00 |
| | | |
| Total | | 9.35E-05 |

**Total Onsite Emission**

| | | |
|---|---|---|
| Runing Exhaust | 1.26E-04 | |
| Idling Emissions | 9.35E-05 | |
| Total Vehicle Emissions | 2.20E-04 | |
| | | |
| Total All Sources | 2.20E-04 | g/sec |
| | | |
| Size of Area Source | 4683563 | m2 |
| **Area Emission Rate** | **4.69E-11** | **g/m2-sec** |
| | | |
| Daily VMT | 1.28E+07 | meters/day |
| | 7942 | miles/day |

**World Logistics Center** 2035 Phase 1 No Mitigation 2035
**Diesel Vehicle Emissions** DPM with EMFAC2014

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** DPM Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.002 | 56 | 330 | 0.21 | 2.30E-02 | 5.06E-05 | 2.66E-07 | |
| | LDT1 | 15 | 0.016 | 3 | 330 | 0.21 | 9.21E-03 | 2.03E-05 | 1.07E-07 | |
| | LDT2 | 15 | 0.007 | 3 | 330 | 0.21 | 4.81E-03 | 1.06E-05 | 5.56E-08 | |
| | MDT | 15 | 0.003 | 5 | 330 | 0.21 | 2.55E-03 | 5.62E-06 | 2.95E-08 | |
| | LHDT1 | 15 | 0.015 | 275 | 330 | 0.21 | 8.54E-01 | 1.88E-03 | 9.89E-06 | |
| | LHDT2 | 15 | 0.014 | 90 | 330 | 0.21 | 2.63E-01 | 5.80E-04 | 3.05E-06 | |
| | MHDT | 15 | 0.005 | 1441 | 330 | 0.21 | 1.35E+00 | 2.98E-03 | 1.57E-05 | |
| | HHDT | 15 | 0.009 | 4652 | 330 | 0.21 | 8.28E+00 | 1.82E-02 | 9.58E-05 | |
| | | | | | | | | | | 1.25E-04 |
| Travel at Light Logistics | LDA | 15 | 0.002 | 0 | 175 | 0.11 | 5.18E-05 | 1.14E-07 | 5.99E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 175 | 0.11 | 2.07E-05 | 4.57E-08 | 2.40E-10 | |
| | LDT2 | 15 | 0.007 | 0 | 175 | 0.11 | 1.08E-05 | 2.38E-08 | 1.25E-10 | |
| | MDT | 15 | 0.003 | 0 | 175 | 0.11 | 5.75E-06 | 1.27E-08 | 6.65E-11 | |
| | LHDT1 | 15 | 0.015 | 2 | 175 | 0.11 | 2.83E-03 | 6.24E-06 | 3.28E-08 | |
| | LHDT2 | 15 | 0.014 | 1 | 175 | 0.11 | 8.74E-04 | 1.92E-06 | 1.01E-08 | |
| | MHDT | 15 | 0.005 | 6 | 175 | 0.11 | 2.96E-03 | 6.52E-06 | 3.42E-08 | |
| | HHDT | 15 | 0.009 | 16 | 175 | 0.11 | 1.50E-02 | 3.31E-05 | 1.74E-07 | 2.52E-07 |
| Travel at Utility | LDA | 15 | 0.002 | 0 | 100 | 0.06 | 4.33E-05 | 9.54E-08 | 5.02E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 100 | 0.06 | 1.74E-05 | 3.82E-08 | 2.01E-10 | |
| | LDT2 | 15 | 0.007 | 0 | 100 | 0.06 | 9.06E-06 | 2.00E-08 | 1.05E-10 | |
| | MDT | 15 | 0.003 | 0 | 100 | 0.06 | 4.81E-06 | 1.06E-08 | 5.57E-11 | |
| | LHDT1 | 15 | 0.015 | 6 | 100 | 0.06 | 5.37E-03 | 1.18E-05 | 6.22E-08 | |
| | LHDT2 | 15 | 0.014 | 2 | 100 | 0.06 | 1.66E-03 | 3.65E-06 | 1.92E-08 | |
| | MHDT | 15 | 0.005 | 5 | 100 | 0.06 | 1.39E-03 | 3.06E-06 | 1.61E-08 | |
| | HHDT | 15 | 0.009 | 22 | 100 | 0.06 | 1.16E-02 | 2.56E-05 | 1.35E-07 | 2.33E-07 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 1.26E-05 | 2.78E-08 | 1.46E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 5.06E-06 | 1.11E-08 | 5.85E-11 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 2.64E-06 | 5.81E-09 | 3.06E-11 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 1.40E-06 | 3.09E-09 | 1.62E-11 | |
| | LHDT1 | 15 | 0.015 | 1 | 50 | 0.03 | 3.79E-04 | 8.35E-07 | 4.39E-09 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 1.17E-04 | 2.57E-07 | 1.35E-09 | |
| | MHDT | 15 | 0.005 | 14 | 50 | 0.03 | 1.98E-03 | 4.36E-06 | 2.29E-08 | |
| | HHDT | 15 | 0.009 | 85 | 50 | 0.03 | 2.30E-02 | 5.07E-05 | 2.67E-07 | 2.96E-07 |
| Travel at Convenience Store | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 2.09E-05 | 4.61E-08 | 2.42E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 8.39E-06 | 1.85E-08 | 9.71E-11 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 4.38E-06 | 9.64E-09 | 5.07E-11 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 2.32E-06 | 5.12E-09 | 2.69E-11 | |
| | LHDT1 | 15 | 0.015 | 1 | 50 | 0.03 | 5.79E-04 | 1.27E-06 | 6.70E-09 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 1.78E-04 | 3.93E-07 | 2.06E-09 | |
| | MHDT | 15 | 0.005 | 23 | 50 | 0.03 | 3.24E-03 | 7.14E-06 | 3.75E-08 | |
| | HHDT | 15 | 0.009 | 134 | 50 | 0.03 | 3.60E-02 | 7.93E-05 | 4.17E-07 | 4.64E-07 |
| Travel at Fire Station | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 1.56E-05 | 3.43E-08 | 1.80E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 6.24E-06 | 1.37E-08 | 7.22E-11 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 3.26E-06 | 7.17E-09 | 3.77E-11 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 1.73E-06 | 3.81E-09 | 2.00E-11 | |
| | LHDT1 | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.005 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.009 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-10 |
| Total - All Buildings | LDA | | | 57 | | | 2.31E-02 | 5.09E-05 | 2.68E-07 | |
| | LDT1 | | | 3 | | | 9.27E-03 | 2.04E-05 | 1.07E-07 | |
| | LDT2 | | | 3 | | | 4.84E-03 | 1.07E-05 | 5.60E-08 | |
| | MDT | | | 5 | | | 2.57E-03 | 5.66E-06 | 2.97E-08 | |
| | LHDT1 | | | 284 | | | 8.64E-01 | 1.90E-03 | 9.99E-06 | |
| | LHDT2 | | | 93 | | | 2.66E-01 | 5.86E-04 | 3.08E-06 | |
| | MHDT | | | 1488 | | | 1.36E+00 | 3.01E-03 | 1.58E-05 | |
| | HHDT | | | 4909 | | | 8.36E+00 | 1.84E-02 | 9.68E-05 | |
| | Total | | | 6843 | | | 1.09E+01 | 2.40E-02 | 1.26E-04 | 1.26E-04 |

**Diesel truck Idling Emissions** **DPM Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.454 | 5 | 138 | 5.20E+00 | 1.15E-02 | 6.02E-05 | |
| | **LHDT2** | 0.505 | 5 | 45 | 1.89E+00 | 4.17E-03 | 2.19E-05 | |
| | **MHDT** | 0.002 | 5 | 720 | 1.02E-01 | 2.25E-04 | 1.18E-06 | |
| | **HHDT** | 0.003 | 5 | 2326 | 6.01E-01 | 1.32E-03 | 6.95E-06 | |
| | | | | 3229 | 7.80E+00 | 1.72E-02 | 9.03E-05 | 9.03E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.454 | 5 | 1 | 3.26E-02 | 7.17E-05 | 3.77E-07 | |
| | **LHDT2** | 0.505 | 5 | 0 | 1.18E-02 | 2.61E-05 | 1.37E-07 | |
| | **MHDT** | 0.002 | 5 | 3 | 4.20E-04 | 9.26E-07 | 4.87E-09 | |
| | **HHDT** | 0.003 | 5 | 8 | 2.06E-03 | 4.53E-06 | 2.38E-08 | |
| | | | | 12 | 4.69E-02 | 1.03E-04 | 5.43E-07 | 5.43E-07 |
| **Idle at Utility** | **LHDT1** | 0.454 | 5 | 3 | 1.08E-01 | 2.38E-04 | 1.25E-06 | |
| | **LHDT2** | 0.505 | 5 | 1 | 3.93E-02 | 8.66E-05 | 4.55E-07 | |
| | **MHDT** | 0.002 | 5 | 2 | 3.45E-04 | 7.61E-07 | 4.00E-09 | |
| | **HHDT** | 0.003 | 5 | 11 | 2.79E-03 | 6.14E-06 | 3.23E-08 | |
| | | | | 17 | 1.50E-01 | 3.31E-04 | 1.74E-06 | 1.74E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.454 | 5 | 0 | 1.52E-02 | 3.36E-05 | 1.76E-07 | |
| | **LHDT2** | 0.505 | 5 | 0 | 5.55E-03 | 1.22E-05 | 6.42E-08 | |
| | **MHDT** | 0.002 | 5 | 7 | 9.85E-04 | 2.17E-06 | 1.14E-08 | |
| | **HHDT** | 0.003 | 5 | 43 | 1.10E-02 | 2.43E-05 | 1.28E-07 | |
| | | | | 50 | 3.28E-02 | 7.23E-05 | 3.80E-07 | 3.80E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.454 | 5 | 1 | 2.33E-02 | 5.12E-05 | 2.69E-07 | |
| | **LHDT2** | 0.505 | 5 | 0 | 8.47E-03 | 1.86E-05 | 9.80E-08 | |
| | **MHDT** | 0.002 | 5 | 11 | 1.61E-03 | 3.55E-06 | 1.87E-08 | |
| | **HHDT** | 0.003 | 5 | 67 | 1.73E-02 | 3.80E-05 | 2.00E-07 | |
| | | | | 79 | 5.06E-02 | 1.11E-04 | 5.86E-07 | 5.86E-07 |
| **Idle at Firestation** | **LHDT1** | 0.454 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.505 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3387 | 8.08E+00 | 1.78E-02 | 9.35E-05 | 9.35E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for DPM emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

## World Logistics Center

**2035** **Phase 2** **No Mitigation**
**with EMFAC2014**

**Vehicle Running Exhaust Emissions** **Pollutant** **DPM**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** |
|---|---|---|
| High Cube | Phase 2 | 9.54E-05 |
| Light Logistics | Phase 2 | 8.56E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 |
| Total | | 9.63E-05 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|
| High Cube | Phase 2 | 6.90E-05 |
| Light Logistics | Phase 2 | 1.84E-06 |
| Utilities Service Station | Phase 2 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 |
| Total | | 7.08E-05 |

**Total Onsite Emission**

| | | |
|---|---|---|
| Runing Exhaust | 9.63E-05 | |
| Idling Emissions | 7.08E-05 | |
| Total Vehicle Emissions | 1.67E-04 | |
| Total All Sources | 1.67E-04 | g/sec |
| Size of Area Source | 5152719 | m2 |
| **Area Emission Rate** | **3.24E-11** | **g/m2-sec** |
| Daily VMT | 9.80E+06 | meters/day |
| | 6087 | mils/day |

**World Logistics Center** 2035 Phase 2 No Mitigation
**Diesel Vehicle Emissions** DPM with EMFAC2014

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** DPM Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.002 | 43 | 330 | 0.21 | 1.76E-02 | 3.87E-05 | 2.03E-07 | |
| | LDT1 | 15 | 0.016 | 2 | 330 | 0.21 | 7.04E-03 | 1.55E-05 | 8.14E-08 | |
| | LDT2 | 15 | 0.007 | 2 | 330 | 0.21 | 3.67E-03 | 8.09E-06 | 4.25E-08 | |
| | MDT | 15 | 0.003 | 4 | 330 | 0.21 | 1.95E-03 | 4.30E-06 | 2.26E-08 | |
| | LHDT1 | 15 | 0.015 | 210 | 330 | 0.21 | 6.53E-01 | 1.44E-03 | 7.56E-06 | |
| | LHDT2 | 15 | 0.014 | 69 | 330 | 0.21 | 2.01E-01 | 4.43E-04 | 2.33E-06 | |
| | MHDT | 15 | 0.005 | 1101 | 330 | 0.21 | 1.04E+00 | 2.28E-03 | 1.20E-05 | |
| | HHDT | 15 | 0.009 | 3555 | 330 | 0.21 | 6.32E+00 | 1.39E-02 | 7.32E-05 | |
| | | | | | | | | | | 9.54E-05 |
| Travel at Light Logistics | LDA | 15 | 0.002 | 1 | 175 | 0.11 | 1.76E-04 | 3.87E-07 | 2.03E-09 | |
| | LDT1 | 15 | 0.016 | 0 | 175 | 0.11 | 7.04E-05 | 1.55E-07 | 8.15E-10 | |
| | LDT2 | 15 | 0.007 | 0 | 175 | 0.11 | 3.68E-05 | 8.10E-08 | 4.25E-10 | |
| | MDT | 15 | 0.003 | 0 | 175 | 0.11 | 1.95E-05 | 4.30E-08 | 2.26E-10 | |
| | LHDT1 | 15 | 0.015 | 6 | 175 | 0.11 | 9.62E-03 | 2.12E-05 | 1.11E-07 | |
| | LHDT2 | 15 | 0.014 | 2 | 175 | 0.11 | 2.97E-03 | 6.54E-06 | 3.43E-08 | |
| | MHDT | 15 | 0.005 | 20 | 175 | 0.11 | 1.00E-02 | 2.21E-05 | 1.16E-07 | |
| | HHDT | 15 | 0.009 | 54 | 175 | 0.11 | 5.10E-02 | 1.12E-04 | 5.90E-07 | 8.56E-07 |
| Travel at Utility | LDA | 15 | 0.002 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.016 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.007 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.003 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.015 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.014 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.005 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.009 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.005 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.009 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.005 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.009 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.005 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.009 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 43 | | | 1.77E-02 | 3.91E-05 | 2.05E-07 | |
| | LDT1 | | | 2 | | | 7.11E-03 | 1.57E-05 | 8.23E-08 | |
| | LDT2 | | | 2 | | | 3.71E-03 | 8.17E-06 | 4.29E-08 | |
| | MDT | | | 4 | | | 1.97E-03 | 4.34E-06 | 2.28E-08 | |
| | LHDT1 | | | 216 | | | 6.63E-01 | 1.46E-03 | 7.67E-06 | |
| | LHDT2 | | | 71 | | | 2.04E-01 | 4.50E-04 | 2.36E-06 | |
| | MHDT | | | 1121 | | | 1.05E+00 | 2.30E-03 | 1.21E-05 | |
| | HHDT | | | 3609 | | | 6.38E+00 | 1.40E-02 | 7.38E-05 | |
| | Total | | | 5069 | | | 8.32E+00 | 1.83E-02 | 9.63E-05 | 9.63E-05 |

**Diesel truck Idling Emissions** **DPM Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.454 | 5 | 105 | 3.98E+00 | 8.76E-03 | 4.60E-05 | |
| | **LHDT2** | 0.505 | 5 | 34 | 1.45E+00 | 3.19E-03 | 1.68E-05 | |
| | **MHDT** | 0.002 | 5 | 551 | 7.80E-02 | 1.72E-04 | 9.03E-07 | |
| | **HHDT** | 0.003 | 5 | 1778 | 4.59E-01 | 1.01E-03 | 5.31E-06 | |
| | | | | 2468 | 5.96E+00 | 1.31E-02 | 6.90E-05 | 6.90E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.454 | 5 | 3 | 1.11E-01 | 2.43E-04 | 1.28E-06 | |
| | **LHDT2** | 0.505 | 5 | 1 | 4.02E-02 | 8.86E-05 | 4.66E-07 | |
| | **MHDT** | 0.002 | 5 | 10 | 1.43E-03 | 3.14E-06 | 1.65E-08 | |
| | **HHDT** | 0.003 | 5 | 27 | 6.98E-03 | 1.54E-05 | 8.08E-08 | |
| | | | | 41 | 1.59E-01 | 3.51E-04 | 1.84E-06 | 1.84E-06 |
| **Idle at Utility** | **LHDT1** | 0.454 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.505 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.454 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.505 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.454 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.505 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.454 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.505 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.003 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2509 | 6.12E+00 | 1.35E-02 | 7.08E-05 | 7.08E-05 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013

**Project Phase 1 and Phase 2 Emissions** **REV5** No Mitigation

**Internal Roadway Circulation**

**WITH EMFAC2014**

| Roadway Segment | Diesel Emissions (g/sec) | |
|---|---|---|
| 1 | 1.59E-04 | |
| 2 | 4.17E-04 | |
| 3 | 5.09E-04 | |
| 5 | 2.61E-05 | |
| 6 | 2.07E-04 | |
| 8 | 3.83E-05 | |
| 11 | 8.74E-07 | |
| 12 | 5.31E-07 | |
| 14 | 1.05E-04 | |
| 18 | 4.95E-05 | |
| 19 | 2.06E-04 | |
| 21 | 1.18E-04 | |
| 24 | 2.07E-04 | |
| ~~26~~ | ~~0.00E+00~~ | |
| 29 | 8.01E-05 | |
| 30 | 3.81E-04 | |
| 31 | 6.18E-05 | |
| | 2.57E-03 | g/sec |
| | 4.89E-01 | lbs/day |

# TRAFFIC VOLUMES

| ID | Arterial | From | To | | 2035 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by ParsonsBrinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **No Mitigation**

Project Phase 1 and Phase 2 Emissions
Internal Roadway Circulation

**WITH EMFAC2014**

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 8.02E-08 | 3.15E-08 | 1.80E-08 | 1.07E-08 | 4.54E-06 | 1.45E-06 | 1.79E-05 | 1.35E-04 | 1.59E-04 |
| 2 | 1 | 2.12E-07 | 8.32E-08 | 4.76E-08 | 2.82E-08 | 1.81E-05 | 5.79E-06 | 4.72E-05 | 3.45E-04 | 4.17E-04 |
| 3 | 1 | 2.72E-07 | 1.07E-07 | 6.10E-08 | 3.61E-08 | 2.31E-05 | 7.40E-06 | 5.85E-05 | 4.20E-04 | 5.09E-04 |
| 5 | 1 | 1.02E-07 | 4.01E-08 | 2.29E-08 | 1.36E-08 | 5.42E-06 | 1.74E-06 | 1.55E-05 | 3.30E-06 | 2.61E-05 |
| 6 | 1 | 1.23E-07 | 4.83E-08 | 2.76E-08 | 1.64E-08 | 9.22E-06 | 2.95E-06 | 2.56E-05 | 1.69E-04 | 2.07E-04 |
| 8 | 1 | 1.66E-07 | 6.54E-08 | 3.74E-08 | 2.21E-08 | 9.22E-06 | 2.95E-06 | 2.58E-05 | 0.00E+00 | 3.83E-05 |
| 11 | 1 | 4.09E-09 | 1.61E-09 | 9.19E-10 | 5.44E-10 | 3.20E-07 | 1.02E-07 | 4.44E-07 | 0.00E+00 | 8.74E-07 |
| 12 | 1 | 2.21E-09 | 8.69E-10 | 4.97E-10 | 2.94E-10 | 1.55E-07 | 4.96E-08 | 3.23E-07 | 0.00E+00 | 5.31E-07 |
| 14 | 1 | 6.38E-08 | 2.51E-08 | 1.43E-08 | 8.48E-09 | 6.31E-06 | 2.02E-06 | 1.31E-05 | 8.32E-05 | 1.05E-04 |
| 18 | 1 | 5.12E-08 | 2.01E-08 | 1.15E-08 | 6.81E-09 | 3.98E-06 | 1.27E-06 | 8.88E-06 | 3.53E-05 | 4.95E-05 |
| 19 | 1 | 9.23E-08 | 3.63E-08 | 2.08E-08 | 1.23E-08 | 7.66E-06 | 2.45E-06 | 2.35E-05 | 1.73E-04 | 2.06E-04 |
| 21 | 1 | 1.37E-07 | 5.40E-08 | 3.09E-08 | 1.83E-08 | 8.23E-06 | 2.64E-06 | 2.43E-05 | 8.26E-05 | 1.18E-04 |
| 24 | 1 | 2.56E-07 | 1.01E-07 | 5.77E-08 | 3.41E-08 | 1.24E-05 | 3.97E-06 | 3.64E-05 | 1.54E-04 | 2.07E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.63E-08 | 1.82E-08 | 1.04E-08 | 6.16E-09 | 2.50E-06 | 8.02E-07 | 9.06E-06 | 6.76E-05 | 8.01E-05 |
| 30 | 1 | 2.67E-07 | 1.05E-07 | 5.99E-08 | 3.55E-08 | 1.43E-05 | 4.59E-06 | 4.90E-05 | 3.13E-04 | 3.81E-04 |
| 31 | 1 | 1.10E-07 | 4.34E-08 | 2.48E-08 | 1.47E-08 | 4.96E-06 | 1.59E-06 | 1.33E-05 | 4.17E-05 | 6.18E-05 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013
**Phase 1 and Phase 2 Emissions** No Mitigation
**Surface Street Segments** **with EMFAC2014**

| Surface Street Segment | Segment | From | To | Diesel Emissions (g/sec) |
|---|---|---|---|---|
| 9 | John F Kennedy Dr | south of Cactus Ave | | 3.63E-05 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1.71E-06 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1.67E-05 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1.13E-05 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 3.52E-06 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 2.24E-05 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1.39E-05 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 5.74E-06 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 6.63E-06 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1.82E-04 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 1.30E-05 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 3.97E-06 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 4.21E-06 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 4.96E-06 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 1.41E-05 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 1.16E-07 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 2.54E-05 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 0.00E+00 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 1.95E-06 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 3.47E-08 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 6.44E-06 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1.30E-06 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 2.33E-07 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 3.97E-06 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 1.95E-06 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 9.77E-07 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | 6.50E-06 |
| 65 | Alessandro Blvd | Nason St | Oliver St | 5.11E-06 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 5.60E-06 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0.00E+00 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 1.31E-06 |
| 69 | Cactus Ave | Nason St | Oliver St | 2.16E-06 |

| | | | | |
|---|---|---|---|---|
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 4.19E-06 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 1.15E-06 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0.00E+00 |
| 73 | Iris Ave | Nason St | Oliver St | 1.48E-05 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 1.32E-06 |
| 75 | Ironwood Ave | Graham St | Heacock St | 3.72E-07 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 6.84E-08 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 6.14E-07 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 2.82E-07 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0.00E+00 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 2.21E-06 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 3.65E-07 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0.00E+00 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 9.72E-06 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 3.10E-07 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 3.14E-07 |
| 95 | W 6th St | I-10 | N California Ave | 1.29E-06 |
| 96 | N California Ave | W 6th St | E 8th St | 1.12E-07 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 1.14E-06 |
| 98 | N California Ave | W 6th St | I-10 | 1.49E-08 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 4.20E-07 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 3.79E-07 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 2.12E-06 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0.00E+00 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 2.40E-06 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 2.26E-06 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0.00E+00 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 3.98E-08 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 2.18E-06 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 6.43E-08 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 2.38E-07 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 3.63E-06 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 2.15E-11 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 5.53E-06 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 1.16E-06 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 1.73E-06 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 4.37E-06 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 1.21E-07 |

| | | | | |
|---|---|---|---|---|
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 2.70E-08 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 4.72E-06 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 4.84E-07 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 1.98E-06 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 4.64E-06 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 6.82E-07 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 6.78E-08 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 4.57E-06 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 2.90E-08 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 4.66E-06 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 2.62E-05 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 1.46E-08 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 5.01E-06 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 5.58E-08 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 2.77E-08 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 5.45E-08 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 2.29E-07 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 5.29E-06 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 9.83E-08 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 4.28E-08 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 3.64E-07 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 1.23E-06 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 2.96E-07 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 1.92E-06 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 1.32E-07 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 1.50E-06 |
| 144 | Cactus Ave | Frederick St | Graham St | 1.37E-06 |
| 145 | Cactus Ave | Graham St | Heacock St | 1.41E-06 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 1.52E-08 |
| 147 | Cactus Ave | Heacock St | Indian St | 1.59E-06 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 1.54E-07 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 1.79E-06 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0.00E+00 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 1.99E-06 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 2.45E-05 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 2.15E-06 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 3.93E-11 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 2.31E-06 |

| | | | | |
|---|---|---|---|---|
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 4.42E-07 |
| 157 | Cactus Ave | Morrison St | Nason St | 2.84E-06 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 2.54E-06 |
| 159 | Beaumont Ave | E 6th St | I-10 | 1.92E-07 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0.00E+00 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 4.57E-06 |
| 162 | Iris Ave | Kitching St | Lasselle St | 1.50E-05 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 2.94E-06 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 8.38E-08 |
| 165 | Iris Ave | Lasselle St | Nason St | 3.60E-05 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 1.70E-06 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0.00E+00 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 1.62E-06 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2.60E-06 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 4.95E-06 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | 6.80E-08 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | 6.29E-09 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 3.49E-05 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 1.64E-05 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 7.40E-05 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 2.07E-06 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | 1.03E-05 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | 8.71E-06 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | 0.00E+00 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | 7.49E-06 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | 0.00E+00 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | 4.21E-06 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2.77E-04 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 1.60E-04 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 4.97E-05 |
| 194 | Crescent Ave | West of Alessandro Rd | | 7.27E-07 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 1.55E-06 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 4.25E-06 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 1.96E-07 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 2.53E-07 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 7.96E-06 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 9.18E-06 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 1.58E-05 |

| | | | | |
|---|---|---|---|---|
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 5.25E-07 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 4.59E-07 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 5.59E-06 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 1.16E-06 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 2.25E-06 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 1.13E-07 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 4.75E-07 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 3.76E-07 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 5.93E-11 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 1.91E-06 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0.00E+00 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 8.73E-08 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 3.66E-08 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 3.35E-06 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 2.81E-05 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 1.17E-06 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 2.06E-07 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 2.54E-05 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 1.02E-06 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 2.23E-05 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 1.19E-08 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0.00E+00 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 1.44E-05 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 2.77E-08 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 7.33E-07 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 2.76E-07 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 3.08E-06 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 7.03E-07 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 1.90E-06 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 2.74E-05 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 5.88E-08 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 1.77E-06 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0.00E+00 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 3.24E-05 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 1.95E-06 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 2.63E-06 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 2.66E-06 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 3.06E-07 |

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|---|---|---|---|---|
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 1.26E-06 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 5.65E-06 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 6.27E-07 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 1.76E-06 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 2.70E-05 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 6.38E-08 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 4.11E-06 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 5.25E-08 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 1.51E-07 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 1.40E-05 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 1.07E-07 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 1.85E-06 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 2.82E-07 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0.00E+00 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 8.06E-07 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 2.75E-06 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0.00E+00 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 1.72E-06 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0.00E+00 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 2.08E-06 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 9.79E-07 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 2.95E-07 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 5.04E-06 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 3.01E-07 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 5.41E-06 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 1.08E-05 |
| 294 | Via Del Lago | South of Iris Ave | | 1.33E-08 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 1.27E-07 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 1.59E-07 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 4.02E-05 |
| 304 | Iris Ave | Indian St | Perris Blvd | 7.61E-07 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 2.53E-05 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 0.00E+00 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 1.73E-06 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 5.64E-05 |
| 326 | Ramona Expy | Sanderson Ave | State St | 2.28E-05 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 4.14E-06 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0.00E+00 |

| | | | | |
|---|---|---|---|---|
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 0.00E+00 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 0.00E+00 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 1.76E-07 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 6.28E-06 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1.25E-05 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 2.43E-08 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 4.03E-05 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 8.85E-06 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 8.81E-06 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 3.26E-07 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0.00E+00 |
| 375 | Mid County Pkwy WB On-Ramp | Mid County Pkwy | 3rd St | 5.46E-06 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramp | 6.68E-06 |
| 377 | Mid County Pkwy WB Off-Ramp | Mid County Pkwy | 3rd St | 1.93E-07 |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramp | 1.41E-06 |
| 379 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | 3rd St | 3.26E-06 |
| 380 | Mid County Pkwy EB On-Ramp | 3rd St | Mid County Pkwy | 2.03E-08 |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | 8.16E-07 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 3.06E-06 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 7.80E-05 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0.00E+00 |
| 389 | El Cerrito Dr | South of Central Ave | | 2.85E-08 |
| 390 | Ramona Expy | Webster Ave | Indian St | 2.79E-06 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 2.81E-06 |
| 393 | Indian St | Ramona Expy | Morgan St | 3.86E-06 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 3.51E-05 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 4.16E-05 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 8.67E-07 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2.65E-06 |
| 399 | Ramona Expy | Evans Rd | Rider St | 6.35E-07 |
| 400 | Evans Rd | Ramona Expy | Rider St | 6.20E-06 |
| 401 | Morgan St | Indian St | Perris Blvd | 0.00E+00 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0.00E+00 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0.00E+00 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 2.65E-10 |
| 406 | Ironwood Ave | East of Thedore St | | 5.93E-07 |
| 407 | Rider St | Indian St | Perris Blvd | 1.65E-11 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 0.00E+00 |

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|---|---|---|---|---|
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 2.24E-07 |
| 410 | Rider St | Wilson Ave | Evans Rd | 3.72E-08 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0.00E+00 |
| 412 | Maude St | North of Arlington Ave | | 0.00E+00 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 1.16E-06 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 1.88E-07 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1.22E-05 |
| 416 | Mid County Pkwy WB On-Ramp | Mid County Pkwy | Perris Blvd | 2.02E-06 |
| 417 | Mid County Pkwy WB Off-Ramp | Perris Blvd | Mid County Pkwy | 1.02E-06 |
| 419 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | Perris Blvd | 1.58E-06 |
| 420 | Mid County Pkwy EB On-Ramp | Perris Blvd | Mid County Pkwy | 4.96E-07 |
| 421 | Via Del Lago | South of Iris Ave | | 0.00E+00 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 2.66E-05 |
| 425 | Mid County Pkwy WB On-Ramp | West of Evan | | 1.31E-08 |
| 426 | Mid County Pkwy WB Off-Ramp | East of Evan | | 5.09E-07 |
| 427 | Day St | south of Alessandro Blvd | | 5.66E-08 |
| 428 | Mid County Pkwy EB Off-Ramp | West of Evan | | 3.99E-08 |
| 429 | Mid County Pkwy EB On-Ramp | East of Evan | | 3.88E-07 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 5.89E-07 |
| 431 | Placentia Ave | Water Ave | Evans Rd | 7.77E-08 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | 3.13E-08 |
| 433 | Evans Rd | Rider St | Orange Ave | 7.41E-06 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 0.00E+00 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 8.50E-08 |
| 436 | Elsworth St | south of Cactus Ave | | 1.27E-11 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0.00E+00 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 1.03E-05 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 2.99E-08 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | 3.92E-06 |
| 452 | San Jacinto Ave | West of Evan Rd | | 1.55E-10 |
| 453 | Evans Rd | North of San Jancito Ave | | 6.28E-06 |
| 454 | San Jacinto Ave | East of Evan Rd | | 2.88E-07 |
| 455 | Evans Rd | South of San Jancito Ave | | 1.33E-06 |
| 458 | Nason St | South of Cactus Ave | | 5.21E-09 |
| 464 | Quincy | South of Eucalyptus | | 1.21E-07 |
| 477 | Ellis Ave | West of Evan Rd | | 5.11E-07 |
| 478 | Evans Rd | North of Ellis Ave | | 1.41E-06 |
| 479 | Oliver St | South of Irris Ave | | 0.00E+00 |

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|---|---|---|---|---|
| 480 | Ellis Ave | Evans Rd | SR-215 | 7.27E-07 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | 1.86E-08 |
| 482 | Ellis Ave | East of SR-215 | | 3.58E-07 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | 1.51E-06 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | 3.38E-08 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | 8.49E-07 |
| 488 | Nason St | North of Iris Ave | | 2.71E-08 |
| 494 | Evans Rd | North of Harley Knox Blvd | | 5.00E-06 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | 5.67E-11 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 2.15E-05 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 1.29E-05 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | 1.86E-11 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | 0.00E+00 |
| 504 | Krameria Ave | west of Perris Blvd | | 9.25E-07 |

2.15E-03 g/sec
4.09E-01 lbs/day

## TRAFFIC VOLUMES

| ID | Segment | From | To | 2035 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 7,006 | 301 | 797 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1,011 | 43 | 72 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1,555 | 60 | 190 | 1,041 |
| 32 | Cactus Ave | west of Redlands Blvd | | 3,010 | 179 | 228 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 749 | 24 | 57 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 595 | 47 | 127 | 636 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 2,377 | 142 | 365 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 388 | 41 | 144 | 587 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 3,045 | 201 | 383 | 7 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,903 | 143 | 401 | 636 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 350 | 15 | 25 | 110 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 777 | 46 | 109 | 59 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 938 | 37 | 88 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 892 | 33 | 74 | 102 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 11,199 | 540 | 1,087 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 75 | 2 | 5 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 7,014 | 299 | 801 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 0 | 0 | 0 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 1,535 | 83 | 247 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 19 | 1 | 0 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 1,535 | 83 | 247 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,267 | 86 | 227 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 493 | 26 | 37 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 974 | 116 | 121 | 0 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 307 | 25 | 66 | 209 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 562 | 30 | 52 | 168 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | 1,330 | 199 | 192 | 0 |
| 65 | Alessandro Blvd | Nason St | Oliver St | 1,018 | 37 | 81 | 102 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 1,167 | 47 | 97 | 102 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 731 | 32 | 64 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 1,033 | 56 | 91 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 2,169 | 130 | 165 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 620 | 42 | 25 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 6,962 | 297 | 799 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 560 | 17 | 27 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 114 | 5 | 5 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 16 | 1 | 1 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 661 | 21 | 30 | 6 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 773 | 27 | 40 | 12 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 976 | 37 | 68 | 93 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 356 | 16 | 27 | 59 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 802 | 38 | 60 | 650 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 77 | 5 | 13 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 70 | 5 | 13 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 637 | 14 | 36 | 48 |
| 96 | N California Ave | W 6th St | E 8th St | 147 | 2 | 4 | 3 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 468 | 12 | 29 | 41 |
| 98 | N California Ave | W 6th St | I-10 | 13 | 0 | 2 | 1 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 330 | 6 | 12 | 13 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 88 | 3 | 8 | 29 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 728 | 24 | 65 | 98 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 297 | 12 | 31 | 148 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 535 | 18 | 53 | 82 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 13 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 554 | 19 | 56 | 81 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 1 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 67 | 4 | 10 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 562 | 19 | 57 | 81 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 573 | 21 | 64 | 124 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 18 | 3 | 10 | 24 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 27 | 2 | 8 | 40 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 590 | 21 | 60 | 87 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 3 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 24 | 1 | 1 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 624 | 23 | 66 | 108 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 7 | 1 | 3 | 13 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 43 | 3 | 9 | 44 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 121 | Alessandro Blvd | Heacock St | Indian St | 656 | 24 | 65 | 95 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 6 | 1 | 3 | 19 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 33 | 2 | 2 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 701 | 26 | 68 | 95 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 12 | 1 | 1 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 756 | 27 | 70 | 101 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 32 | 3 | 11 | 636 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 14 | 0 | 1 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 814 | 29 | 72 | 101 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 61 | 3 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 27 | 1 | 1 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 73 | 4 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 144 | 6 | 8 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 1,040 | 39 | 82 | 102 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 42 | 3 | 4 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 20 | 1 | 2 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 6 | 1 | 5 | 25 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 251 | 10 | 30 | 32 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 223 | 8 | 18 | 0 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 393 | 15 | 37 | 16 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 11 | 1 | 4 | 7 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 531 | 22 | 57 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 539 | 23 | 62 | 5 |
| 145 | Cactus Ave | Graham St | Heacock St | 556 | 26 | 70 | 1 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 4 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 605 | 29 | 76 | 2 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 5 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 664 | 33 | 80 | 4 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 696 | 35 | 82 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 25 | 3 | 10 | 629 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 814 | 40 | 85 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 2 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,228 | 59 | 106 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 302 | 14 | 18 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,415 | 73 | 123 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 380 | 10 | 27 | 42 |
| 159 | Beaumont Ave | E 6th St | I-10 | 275 | 5 | 13 | 19 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,520 | 74 | 246 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 162 | Iris Ave | Kitching St | Lasselle St | 3,857 | 189 | 592 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 2,337 | 115 | 347 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 63 | 5 | 5 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 6,778 | 286 | 794 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 451 | 24 | 80 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 1,886 | 91 | 267 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,694 | 82 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,694 | 82 | 192 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | 2 | 0 | 0 | 1 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | 21 | 0 | 1 | 0 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,655 | 128 | 370 | 587 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 168 | 11 | 23 | 44 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,823 | 138 | 394 | 631 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 46 | 3 | 6 | 4 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | 2,096 | 71 | 179 | 223 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | 3,183 | 107 | 286 | 333 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | 3,204 | 108 | 284 | 347 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | 1,037 | 36 | 102 | 118 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 6,955 | 162 | 514 | 815 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 5,432 | 131 | 448 | 577 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 1,521 | 32 | 66 | 248 |
| 194 | Crescent Ave | West of Alessandro Rd | | 305 | 26 | 69 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 690 | 47 | 134 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 996 | 73 | 202 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 48 | 3 | 6 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 223 | 11 | 20 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,267 | 86 | 227 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 1,502 | 82 | 254 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 1,486 | 81 | 246 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 18 | 2 | 9 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 89 | 2 | 2 | 2 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 359 | 11 | 36 | 46 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 169 | 6 | 16 | 32 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 241 | 8 | 29 | 33 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 14 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 51 | 1 | 2 | 3 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 194 | 5 | 20 | 14 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 2 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 73 | 3 | 12 | 23 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 27 | 1 | 1 | 1 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 52 | 1 | 1 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 152 | 4 | 13 | 33 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 1,025 | 36 | 129 | 345 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 70 | 3 | 12 | 24 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 20 | 1 | 4 | 4 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 889 | 35 | 131 | 344 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 136 | 3 | 10 | 16 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 720 | 31 | 117 | 319 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 1 | 0 | 0 | 1 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 634 | 26 | 94 | 242 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 23 | 1 | 3 | 7 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 52 | 6 | 21 | 74 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 53 | 2 | 9 | 26 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 187 | 14 | 55 | 198 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 530 | 18 | 63 | 128 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 104 | 3 | 11 | 22 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 1,032 | 36 | 126 | 339 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 35 | 1 | 2 | 2 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 367 | 9 | 18 | 33 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 1,346 | 43 | 137 | 354 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 162 | 4 | 13 | 26 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 254 | 9 | 27 | 46 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 1,166 | 38 | 120 | 312 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 14 | 1 | 5 | 25 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 834 | 27 | 84 | 212 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,799 | 64 | 201 | 553 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 216 | 10 | 32 | 63 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 818 | 26 | 80 | 178 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 482 | 23 | 77 | 219 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 488 | 23 | 78 | 220 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 2 | 4 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 508 | 23 | 81 | 225 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 25 | 1 | 3 | 4 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 543 | 25 | 83 | 230 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 14 | 1 | 2 | 4 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 227 | 10 | 33 | 85 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 619 | 29 | 98 | 286 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 454 | 19 | 66 | 171 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0 | 0 | 0 | 0 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,004 | 39 | 62 | 71 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 217 | 12 | 25 | 70 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 516 | 19 | 28 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 439 | 21 | 34 | 325 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 174 | 9 | 21 | 27 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 519 | 24 | 39 | 357 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 227 | 15 | 26 | 649 |
| 294 | Via Del Lago | South of Iris Ave | | 43 | 1 | 0 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 41 | 2 | 7 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 83 | 3 | 8 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 50 | 4 | 11 | 625 |
| 304 | Iris Ave | Indian St | Perris Blvd | 483 | 13 | 44 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 1,019 | 60 | 203 | 620 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,220 | 59 | 189 | 620 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 86 | 3 | 11 | 9 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 3,002 | 74 | 268 | 497 |
| 326 | Ramona Expy | Sanderson Ave | State St | 664 | 19 | 81 | 122 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 2,251 | 52 | 177 | 365 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 5,416 | 130 | 447 | 577 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 54 | 2 | 6 | 7 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 3,734 | 86 | 281 | 353 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 3,310 | 85 | 326 | 572 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 24 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 2,313 | 48 | 137 | 100 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 2,820 | 76 | 286 | 467 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 723 | 23 | 64 | 93 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 5 | 0 | 1 | 4 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-R | Mid County Pkwy | 3rd St | 678 | 16 | 36 | 262 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | 1,331 | 27 | 60 | 245 |
| 377 | Mid County Pkwy WB Off-R | Mid County Pkwy | 3rd St | 68 | 2 | 6 | 8 |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | 957 | 19 | 38 | 109 |
| 379 | Mid County Pkwy EB Off-Ra | Mid County Pkwy | 3rd St | 530 | 12 | 25 | 183 |
| 380 | Mid County Pkwy EB On-Ra | 3rd St | Mid County Pkwy | 24 | 0 | 1 | 1 |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | 681 | 13 | 26 | 18 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 230 | 20 | 56 | 57 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,317 | 58 | 179 | 569 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 25 | 1 | 1 | 3 |
| 390 | Ramona Expy | Webster Ave | Indian St | 430 | 18 | 44 | 33 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 477 | 28 | 113 | 103 |
| 393 | Indian St | Ramona Expy | Morgan St | 49 | 11 | 70 | 70 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 2,613 | 109 | 340 | 451 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 2,125 | 73 | 216 | 293 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 203 | 7 | 16 | 4 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,446 | 73 | 184 | 1 |
| 399 | Ramona Expy | Evans Rd | Rider St | 242 | 4 | 7 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 1,740 | 50 | 140 | 4 |
| 401 | Morgan St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 11 | 0 | 0 | 0 |
| 406 | Ironwood Ave | East of Thedore St | | 668 | 59 | 18 | 7 |
| 407 | Rider St | Indian St | Perris Blvd | 1 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 0 | 0 | 0 | 0 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 176 | 7 | 5 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 0 | 0 | 0 | 1 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 125 | 6 | 23 | 28 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 7 | 0 | 0 | 5 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1,870 | 62 | 172 | 238 |
| 416 | Mid County Pkwy WB On-R | Mid County Pkwy | Perris Blvd | 626 | 18 | 66 | 107 |
| 417 | Mid County Pkwy WB Off-R | Perris Blvd | Mid County Pkwy | 8 | 0 | 2 | 67 |
| 419 | Mid County Pkwy EB Off-Ra | Mid County Pkwy | Perris Blvd | 367 | 9 | 30 | 76 |
| 420 | Mid County Pkwy EB On-Ra | Perris Blvd | Mid County Pkwy | 3 | 0 | 1 | 33 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 101 | 6 | 15 | 640 |
| 425 | Mid County Pkwy WB On-R | West of Evan | | 23 | 1 | 2 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 426 | Mid County Pkwy WB Off-R | East of Evan | | 12 | 1 | 2 | 36 |
| 427 | Day St | south of Alessandro Blvd | | 23 | 1 | 3 | 0 |
| 428 | Mid County Pkwy EB Off-Ra | West of Evan | | 27 | 1 | 3 | 1 |
| 429 | Mid County Pkwy EB On-Ra | East of Evan | | 13 | 1 | 1 | 35 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 639 | 21 | 58 | 70 |
| 431 | Placentia Ave | Water Ave | Evans Rd | 4 | 0 | 0 | 3 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | 17 | 0 | 0 | 1 |
| 433 | Evans Rd | Rider St | Orange Ave | 1,581 | 42 | 132 | 22 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 70 | 1 | 2 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 3 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 1,444 | 40 | 129 | 30 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 10 | 0 | 1 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | 1,403 | 40 | 128 | 30 |
| 452 | San Jacinto Ave | West of Evan Rd | | 8 | 0 | 0 | 0 |
| 453 | Evans Rd | North of San Jancito Ave | | 1,288 | 34 | 121 | 28 |
| 454 | San Jacinto Ave | East of Evan Rd | | 246 | 5 | 15 | 0 |
| 455 | Evans Rd | South of San Jancito Ave | | 1,034 | 30 | 106 | 27 |
| 458 | Nason St | South of Cactus Ave | | 9 | 0 | 1 | 0 |
| 464 | Quincy | South of Eucalyptus | | 61 | 3 | 5 | 0 |
| 477 | Ellis Ave | West of Evan Rd | | 80 | 4 | 7 | 9 |
| 478 | Evans Rd | North of Ellis Ave | | 1,054 | 36 | 117 | 46 |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | 726 | 15 | 64 | 0 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | 0 | 0 | 0 | 1 |
| 482 | Ellis Ave | East of SR-215 | | 164 | 2 | 10 | 1 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | 837 | 22 | 96 | 0 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | 1 | 0 | 0 | 1 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | 1,360 | 23 | 99 | 0 |
| 488 | Nason St | North of Iris Ave | | 9 | 0 | 1 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | 2,525 | 76 | 188 | 0 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | 3 | 0 | 0 | 0 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 170 | 11 | 20 | 645 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 189 | 12 | 21 | 645 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 504 | Krameria Ave | west of Perris Blvd | | 251 | 25 | 94 | 0 |

Traffic Volume Data Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **No Mitigation**

Phase 1 and Phase 2 Emissions
Surface Street Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8104 | 7,006 | 301 | 797 | 0 | 1820 | 1.131 | 12 | 1 | 1 | 1 | 61 | 20 | 650 | 0 | 745 |
| 10 | 1126 | 1,011 | 43 | 72 | 0 | 826 | 0.513 | 2 | 0 | 0 | 0 | 9 | 3 | 59 | 0 | 72 |
| 13 | 2846 | 1,555 | 60 | 190 | 1,041 | 345 | 0.214 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 1026 | 1200 |
| 32 | 3417 | 3,010 | 179 | 228 | 0 | 1551 | 0.964 | 5 | 0 | 0 | 1 | 36 | 12 | 186 | 0 | 240 |
| 33 | 830 | 749 | 24 | 57 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 0 | 54 |
| 35 | 1405 | 595 | 47 | 127 | 636 | 801 | 0.498 | 1 | 0 | 0 | 0 | 10 | 3 | 104 | 627 | 744 |
| 36 | 2884 | 2,377 | 142 | 365 | 0 | 1627 | 1.011 | 4 | 0 | 0 | 0 | 29 | 10 | 298 | 0 | 341 |
| 37 | 1160 | 388 | 41 | 144 | 587 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 117 | 578 | 708 |
| 38 | 3636 | 3,045 | 201 | 383 | 7 | 659 | 0.409 | 5 | 0 | 0 | 1 | 41 | 14 | 312 | 7 | 380 |
| 42 | 3083 | 1,903 | 143 | 401 | 636 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 29 | 10 | 327 | 627 | 996 |
| 43 | 500 | 350 | 15 | 25 | 110 | 2598 | 1.614 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 108 | 134 |
| 46 | 991 | 777 | 46 | 109 | 59 | 806 | 0.501 | 1 | 0 | 0 | 0 | 9 | 3 | 89 | 58 | 161 |
| 47 | 1063 | 938 | 37 | 88 | 0 | 1995 | 1.239 | 2 | 0 | 0 | 0 | 8 | 2 | 72 | 0 | 84 |
| 48 | 1101 | 892 | 33 | 74 | 102 | 795 | 0.494 | 1 | 0 | 0 | 0 | 7 | 2 | 60 | 101 | 172 |
| 50 | 12826 | 11,199 | 540 | 1,087 | 0 | 479 | 0.298 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 51 | 82 | 75 | 2 | 5 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 |
| 52 | 8114 | 7,014 | 299 | 801 | 0 | 1269 | 0.788 | 12 | 1 | 1 | 1 | 61 | 20 | 653 | 0 | 748 |
| 53 | 0 | 0 | 0 | 0 | 0 | 795 | 0.494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 1865 | 1,535 | 83 | 247 | 0 | 325 | 0.202 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 |
| 55 | 20 | 19 | 1 | 0 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1865 | 1,535 | 83 | 247 | 0 | 1152 | 0.716 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 |
| 57 | 1580 | 1,267 | 86 | 227 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 |
| 58 | 556 | 493 | 26 | 37 | 0 | 172 | 0.107 | 1 | 0 | 0 | 0 | 5 | 2 | 30 | 0 | 38 |
| 59 | 1211 | 974 | 116 | 121 | 0 | 786 | 0.488 | 2 | 0 | 0 | 0 | 24 | 8 | 99 | 0 | 132 |
| 60 | 607 | 307 | 25 | 66 | 209 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 206 | 267 |
| 61 | 812 | 562 | 30 | 52 | 168 | 97 | 0.060 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 166 | 217 |
| 62 | 1721 | 1,330 | 199 | 192 | 0 | 781 | 0.485 | 2 | 0 | 0 | 0 | 40 | 13 | 157 | 0 | 213 |
| 65 | 1238 | 1,018 | 37 | 81 | 102 | 795 | 0.494 | 2 | 0 | 0 | 0 | 8 | 2 | 66 | 101 | 179 |
| 66 | 1413 | 1,167 | 47 | 97 | 102 | 812 | 0.504 | 2 | 0 | 0 | 0 | 10 | 3 | 79 | 101 | 195 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 827 | 731 | 32 | 64 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 6 | 2 | 52 | 0 | 62 |
| 69 | 1180 | 1,033 | 56 | 91 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 11 | 4 | 74 | 0 | 91 |
| 70 | 2464 | 2,169 | 130 | 165 | 0 | 795 | 0.494 | 4 | 0 | 0 | 0 | 26 | 9 | 135 | 0 | 174 |
| 71 | 687 | 620 | 42 | 25 | 0 | 803 | 0.499 | 1 | 0 | 0 | 0 | 9 | 3 | 20 | 0 | 33 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 8058 | 6,962 | 297 | 799 | 0 | 742 | 0.461 | 12 | 1 | 1 | 1 | 60 | 20 | 651 | 0 | 746 |
| 74 | 605 | 560 | 17 | 27 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 1 | 29 |
| 75 | 129 | 114 | 5 | 5 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 5 | 11 |
| 76 | 18 | 16 | 1 | 1 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 77 | 718 | 661 | 21 | 30 | 6 | 438 | 0.272 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 6 | 37 |
| 80 | 852 | 773 | 27 | 40 | 12 | 138 | 0.086 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 12 | 53 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1174 | 976 | 37 | 68 | 93 | 322 | 0.200 | 2 | 0 | 0 | 0 | 8 | 2 | 55 | 92 | 159 |
| 83 | 458 | 356 | 16 | 27 | 59 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 58 | 85 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1550 | 802 | 38 | 60 | 650 | 284 | 0.176 | 1 | 0 | 0 | 0 | 8 | 3 | 49 | 641 | 701 |
| 87 | 95 | 77 | 5 | 13 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 |
| 88 | 88 | 70 | 5 | 13 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 |
| 95 | 735 | 637 | 14 | 36 | 48 | 439 | 0.273 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 47 | 82 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 156 | 147 | 2 | 4 | 3 | 399 | 0.248 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 |
| 97 | 550 | 468 | 12 | 29 | 41 | 389 | 0.242 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 40 | 68 |
| 98 | 16 | 13 | 0 | 2 | 1 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 |
| 99 | 361 | 330 | 6 | 12 | 13 | 405 | 0.252 | 1 | 0 | 0 | 0 | 1 | 0 | 10 | 13 | 25 |
| 100 | 128 | 88 | 3 | 8 | 29 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 29 | 36 |
| 101 | 915 | 728 | 24 | 65 | 98 | 313 | 0.194 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 97 | 158 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 488 | 297 | 12 | 31 | 148 | 291 | 0.181 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 146 | 175 |
| 104 | 688 | 535 | 18 | 53 | 82 | 404 | 0.251 | 1 | 0 | 0 | 0 | 4 | 1 | 43 | 81 | 130 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 14 | 13 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 107 | 710 | 554 | 19 | 56 | 81 | 388 | 0.241 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 132 |
| 108 | 15 | 12 | 1 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 109 | 81 | 67 | 4 | 10 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 9 |
| 110 | 719 | 562 | 19 | 57 | 81 | 756 | 0.470 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 133 |
| 111 | 1 | 1 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 782 | 573 | 21 | 64 | 124 | 817 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 122 | 181 |
| 113 | 55 | 18 | 3 | 10 | 24 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 24 | 33 |
| 114 | 77 | 27 | 2 | 8 | 40 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 39 | 47 |
| 115 | 758 | 590 | 21 | 60 | 87 | 851 | 0.529 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 86 | 142 |
| 116 | 3 | 0 | 0 | 0 | 3 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 117 | 26 | 24 | 1 | 1 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 118 | 821 | 624 | 23 | 66 | 108 | 765 | 0.475 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 106 | 168 |
| 119 | 24 | 7 | 1 | 3 | 13 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 16 |
| 120 | 99 | 43 | 3 | 9 | 44 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 43 | 52 |
| 121 | 840 | 656 | 24 | 65 | 95 | 825 | 0.513 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 94 | 154 |
| 122 | 29 | 6 | 1 | 3 | 19 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 19 | 21 |
| 123 | 37 | 33 | 2 | 2 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 124 | 890 | 701 | 26 | 68 | 95 | 800 | 0.497 | 1 | 0 | 0 | 0 | 5 | 2 | 55 | 94 | 158 |
| 125 | 14 | 12 | 1 | 1 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 126 | 954 | 756 | 27 | 70 | 101 | 774 | 0.481 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 100 | 165 |
| 127 | 682 | 32 | 3 | 11 | 636 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 627 | 637 |
| 128 | 15 | 14 | 0 | 1 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 129 | 1016 | 814 | 29 | 72 | 101 | 823 | 0.511 | 1 | 0 | 0 | 0 | 6 | 2 | 59 | 100 | 168 |
| 130 | 65 | 61 | 3 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 131 | 29 | 27 | 1 | 1 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 133 | 77 | 73 | 4 | 0 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 134 | 158 | 144 | 6 | 8 | 0 | 760 | 0.472 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 |
| 135 | 1263 | 1,040 | 39 | 82 | 102 | 816 | 0.507 | 2 | 0 | 0 | 0 | 8 | 3 | 67 | 101 | 180 |
| 136 | 49 | 42 | 3 | 4 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 |
| 137 | 23 | 20 | 1 | 2 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 138 | 37 | 6 | 1 | 5 | 25 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 |
| 139 | 323 | 251 | 10 | 30 | 32 | 504 | 0.313 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 32 | 59 |
| 140 | 249 | 223 | 8 | 18 | 0 | 527 | 0.327 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 17 |
| 141 | 461 | 393 | 15 | 37 | 16 | 1001 | 0.622 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 16 | 51 |
| 142 | 23 | 11 | 1 | 4 | 7 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 10 |
| 143 | 618 | 531 | 22 | 57 | 8 | 845 | 0.525 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 8 | 61 |
| 144 | 629 | 539 | 23 | 62 | 5 | 783 | 0.486 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 5 | 63 |
| 145 | 653 | 556 | 26 | 70 | 1 | 787 | 0.489 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 1 | 66 |
| 146 | 5 | 4 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 147 | 712 | 605 | 29 | 76 | 2 | 798 | 0.496 | 1 | 0 | 0 | 0 | 6 | 2 | 62 | 2 | 73 |
| 148 | 5 | 0 | 0 | 0 | 5 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| 149 | 781 | 664 | 33 | 80 | 4 | 808 | 0.502 | 1 | 0 | 0 | 0 | 7 | 2 | 65 | 4 | 79 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 813 | 696 | 35 | 82 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 7 | 2 | 67 | 0 | 78 |
| 152 | 667 | 25 | 3 | 10 | 629 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 620 | 629 |
| 153 | 939 | 814 | 40 | 85 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 8 | 3 | 69 | 0 | 82 |
| 154 | 2 | 2 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1393 | 1,228 | 59 | 106 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 12 | 4 | 86 | 0 | 105 |
| 156 | 334 | 302 | 14 | 18 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 15 | 0 | 19 |
| 157 | 1611 | 1,415 | 73 | 123 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 15 | 5 | 100 | 0 | 123 |
| 158 | 459 | 380 | 10 | 27 | 42 | 1039 | 0.645 | 1 | 0 | 0 | 0 | 2 | 1 | 22 | 41 | 67 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159 | 312 | 275 | 5 | 13 | 19 | 170 | 0.106 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 19 | 31 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1840 | 1,520 | 74 | 246 | 0 | 784 | 0.487 | 3 | 0 | 0 | 0 | 15 | 5 | 201 | 0 | 224 |
| 162 | 4638 | 3,857 | 189 | 592 | 0 | 1052 | 0.654 | 6 | 0 | 0 | 1 | 38 | 13 | 483 | 0 | 542 |
| 163 | 2799 | 2,337 | 115 | 347 | 0 | 350 | 0.217 | 4 | 0 | 0 | 0 | 23 | 8 | 283 | 0 | 319 |
| 164 | 73 | 63 | 5 | 5 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 |
| 165 | 7858 | 6,778 | 286 | 794 | 0 | 1541 | 0.957 | 11 | 1 | 1 | 1 | 58 | 19 | 647 | 0 | 738 |
| 168 | 555 | 451 | 24 | 80 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 0 | 73 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 2244 | 1,886 | 91 | 267 | 0 | 248 | 0.154 | 3 | 0 | 0 | 0 | 18 | 6 | 218 | 0 | 246 |
| 171 | 2968 | 2,694 | 82 | 192 | 0 | 522 | 0.324 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 |
| 172 | 2968 | 2,694 | 82 | 192 | 0 | 993 | 0.617 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 |
| 173 | 3 | 2 | 0 | 0 | 1 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 174 | 22 | 21 | 0 | 1 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 177 | 2740 | 1,655 | 128 | 370 | 587 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 26 | 9 | 302 | 578 | 918 |
| 178 | 246 | 168 | 11 | 23 | 44 | 7132 | 4.430 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 43 | 65 |
| 179 | 2986 | 1,823 | 138 | 394 | 631 | 2189 | 1.360 | 3 | 0 | 0 | 0 | 28 | 9 | 321 | 622 | 984 |
| 180 | 59 | 46 | 3 | 6 | 4 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 4 | 10 |
| 181 | 2569 | 2,096 | 71 | 179 | 223 | 625 | 0.388 | 3 | 0 | 0 | 0 | 14 | 5 | 146 | 220 | 389 |
| 182 | 3909 | 3,183 | 107 | 286 | 333 | 349 | 0.217 | 5 | 0 | 0 | 1 | 22 | 7 | 233 | 328 | 597 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 3943 | 3,204 | 108 | 284 | 347 | 292 | 0.181 | 5 | 0 | 0 | 1 | 22 | 7 | 232 | 342 | 609 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1293 | 1,037 | 36 | 102 | 118 | 477 | 0.296 | 2 | 0 | 0 | 0 | 7 | 2 | 83 | 116 | 211 |
| 190 | 8446 | 6,955 | 162 | 514 | 815 | 6368 | 3.956 | 12 | 1 | 1 | 1 | 33 | 11 | 419 | 803 | 1280 |
| 191 | 6588 | 5,432 | 131 | 448 | 577 | 4906 | 3.048 | 9 | 1 | 1 | 1 | 27 | 9 | 365 | 569 | 980 |
| 192 | 1867 | 1,521 | 32 | 66 | 248 | 4358 | 2.707 | 3 | 0 | 0 | 0 | 6 | 2 | 54 | 244 | 310 |
| 194 | 400 | 305 | 26 | 69 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 0 | 64 |
| 195 | 871 | 690 | 47 | 134 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 10 | 3 | 109 | 0 | 123 |
| 196 | 1271 | 996 | 73 | 202 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 15 | 5 | 165 | 0 | 186 |
| 198 | 57 | 48 | 3 | 6 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 6 |
| 199 | 254 | 223 | 11 | 20 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 20 |
| 200 | 1580 | 1,267 | 86 | 227 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 |
| 205 | 1838 | 1,502 | 82 | 254 | 0 | 1501 | 0.932 | 2 | 0 | 0 | 0 | 17 | 6 | 207 | 0 | 232 |
| 206 | 1813 | 1,486 | 81 | 246 | 0 | 2658 | 1.651 | 2 | 0 | 0 | 0 | 16 | 5 | 201 | 0 | 225 |
| 207 | 29 | 18 | 2 | 9 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 |
| 215 | 95 | 89 | 2 | 2 | 2 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 216 | 452 | 359 | 11 | 36 | 46 | 2000 | 1.242 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 45 | 78 |
| 217 | 223 | 169 | 6 | 16 | 32 | 663 | 0.412 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 32 | 47 |
| 218 | 311 | 241 | 8 | 29 | 33 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 33 | 59 |
| 219 | 15 | 14 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 221 | 57 | 51 | 1 | 2 | 3 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 |
| 223 | 233 | 194 | 5 | 20 | 14 | 359 | 0.223 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 14 | 32 |
| 225 | 2 | 2 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 111 | 73 | 3 | 12 | 23 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 23 | 33 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 30 | 27 | 1 | 1 | 1 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 230 | 54 | 52 | 1 | 1 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 231 | 202 | 152 | 4 | 13 | 33 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 33 | 45 |
| 232 | 1535 | 1,025 | 36 | 129 | 345 | 1719 | 1.068 | 2 | 0 | 0 | 0 | 7 | 2 | 105 | 340 | 457 |
| 233 | 109 | 70 | 3 | 12 | 24 | 976 | 0.606 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 24 | 34 |
| 236 | 29 | 20 | 1 | 4 | 4 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 8 |
| 237 | 1399 | 889 | 35 | 131 | 344 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 7 | 2 | 107 | 339 | 457 |
| 238 | 165 | 136 | 3 | 10 | 16 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 16 | 25 |
| 239 | 1187 | 720 | 31 | 117 | 319 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 95 | 314 | 420 |
| 240 | 2 | 1 | 0 | 0 | 1 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 996 | 634 | 26 | 94 | 242 | 989 | 0.614 | 1 | 0 | 0 | 0 | 5 | 2 | 77 | 238 | 323 |
| 243 | 34 | 23 | 1 | 3 | 7 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 10 |
| 244 | 153 | 52 | 6 | 21 | 74 | 173 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 73 | 92 |
| 245 | 90 | 53 | 2 | 9 | 26 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 26 | 34 |
| 246 | 454 | 187 | 14 | 55 | 198 | 273 | 0.170 | 0 | 0 | 0 | 0 | 3 | 1 | 45 | 195 | 244 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 247 | 739 | 530 | 18 | 63 | 128 | 87 | 0.054 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 126 | 183 |
| 250 | 140 | 104 | 3 | 11 | 22 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 22 | 32 |
| 252 | 1533 | 1,032 | 36 | 126 | 339 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 103 | 334 | 449 |
| 254 | 40 | 35 | 1 | 2 | 2 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 256 | 427 | 367 | 9 | 18 | 33 | 943 | 0.586 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 33 | 50 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1880 | 1,346 | 43 | 137 | 354 | 1783 | 1.108 | 2 | 0 | 0 | 0 | 9 | 3 | 112 | 349 | 475 |
| 261 | 205 | 162 | 4 | 13 | 26 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 26 | 38 |
| 262 | 336 | 254 | 9 | 27 | 46 | 860 | 0.534 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 45 | 70 |
| 263 | 1636 | 1,166 | 38 | 120 | 312 | 141 | 0.088 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 307 | 418 |
| 264 | 45 | 14 | 1 | 5 | 25 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 |
| 265 | 1157 | 834 | 27 | 84 | 212 | 98 | 0.061 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 209 | 286 |
| 266 | 2617 | 1,799 | 64 | 201 | 553 | 171 | 0.106 | 3 | 0 | 0 | 0 | 13 | 4 | 164 | 545 | 730 |
| 267 | 321 | 216 | 10 | 32 | 63 | 156 | 0.097 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 62 | 91 |
| 268 | 1102 | 818 | 26 | 80 | 178 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 175 | 249 |
| 269 | 801 | 482 | 23 | 77 | 219 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 216 | 286 |
| 270 | 13 | 10 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 271 | 809 | 488 | 23 | 78 | 220 | 370 | 0.230 | 1 | 0 | 0 | 0 | 5 | 2 | 64 | 217 | 288 |
| 272 | 4 | 3 | 0 | 0 | 1 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 273 | 16 | 10 | 0 | 2 | 4 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| 274 | 837 | 508 | 23 | 81 | 225 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 222 | 295 |
| 275 | 33 | 25 | 1 | 3 | 4 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 |
| 276 | 881 | 543 | 25 | 83 | 230 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 227 | 302 |
| 277 | 21 | 14 | 1 | 2 | 4 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 355 | 227 | 10 | 33 | 85 | 157 | 0.098 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 84 | 114 |
| 280 | 1032 | 619 | 29 | 98 | 286 | 163 | 0.101 | 1 | 0 | 0 | 0 | 6 | 2 | 80 | 282 | 371 |
| 281 | 0 | 0 | 0 | 0 | 0 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 710 | 454 | 19 | 66 | 171 | 167 | 0.104 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 169 | 228 |
| 283 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1176 | 1,004 | 39 | 62 | 71 | 365 | 0.227 | 2 | 0 | 0 | 0 | 8 | 3 | 51 | 70 | 133 |
| 285 | 324 | 217 | 12 | 25 | 70 | 230 | 0.143 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 69 | 93 |
| 286 | 571 | 516 | 19 | 28 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 4 | 1 | 23 | 8 | 37 |
| 287 | 819 | 439 | 21 | 34 | 325 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 28 | 320 | 355 |
| 288 | 231 | 174 | 9 | 21 | 27 | 152 | 0.094 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 27 | 47 |
| 289 | 939 | 519 | 24 | 39 | 357 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 32 | 352 | 391 |
| 290 | 917 | 227 | 15 | 26 | 649 | 328 | 0.204 | 0 | 0 | 0 | 0 | 3 | 1 | 21 | 640 | 665 |
| 294 | 44 | 43 | 1 | 0 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 50 | 41 | 2 | 7 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| 302 | 94 | 83 | 3 | 8 | 0 | 796 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 |
| 303 | 690 | 50 | 4 | 11 | 625 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 616 | 626 |
| 304 | 540 | 483 | 13 | 44 | 0 | 729 | 0.453 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 40 |
| 306 | 1902 | 1,019 | 60 | 203 | 620 | 818 | 0.508 | 2 | 0 | 0 | 0 | 12 | 4 | 166 | 611 | 795 |
| 307 | 2088 | 1,220 | 59 | 189 | 620 | 0 | 0.000 | 2 | 0 | 0 | 0 | 12 | 4 | 154 | 611 | 784 |
| 324 | 109 | 86 | 3 | 11 | 9 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 9 | 19 |
| 325 | 3841 | 3,002 | 74 | 268 | 497 | 2224 | 1.382 | 5 | 0 | 0 | 1 | 15 | 5 | 219 | 490 | 734 |
| 326 | 886 | 664 | 19 | 81 | 122 | 3506 | 2.178 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 120 | 193 |
| 327 | 2845 | 2,251 | 52 | 177 | 365 | 227 | 0.141 | 4 | 0 | 0 | 0 | 11 | 3 | 144 | 360 | 523 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 6570 | 5,416 | 130 | 447 | 577 | 0 | 0.000 | 9 | 1 | 1 | 1 | 26 | 9 | 364 | 569 | 979 |
| 359 | 69 | 54 | 2 | 6 | 7 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 12 |
| 360 | 4454 | 3,734 | 86 | 281 | 353 | 247 | 0.153 | 6 | 0 | 0 | 1 | 17 | 6 | 229 | 348 | 608 |
| 361 | 4293 | 3,310 | 85 | 326 | 572 | 337 | 0.209 | 5 | 0 | 0 | 1 | 17 | 6 | 266 | 564 | 859 |
| 362 | 26 | 24 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 363 | 2598 | 2,313 | 48 | 137 | 100 | 4495 | 2.792 | 4 | 0 | 0 | 0 | 10 | 3 | 112 | 99 | 228 |
| 364 | 3649 | 2,820 | 76 | 286 | 467 | 286 | 0.178 | 5 | 0 | 0 | 0 | 15 | 5 | 233 | 460 | 720 |
| 365 | 903 | 723 | 23 | 64 | 93 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 92 | 152 |
| 366 | 10 | 5 | 0 | 1 | 4 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 992 | 678 | 16 | 36 | 262 | 388 | 0.241 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 258 | 293 |
| 376 | 1663 | 1,331 | 27 | 60 | 245 | 477 | 0.296 | 2 | 0 | 0 | 0 | 5 | 2 | 49 | 241 | 300 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 377 | 84 | 68 | 2 | 6 | 8 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 8 | 13 |
| 378 | 1123 | 957 | 19 | 38 | 109 | 212 | 0.132 | 2 | 0 | 0 | 0 | 4 | 1 | 31 | 107 | 145 |
| 379 | 750 | 530 | 12 | 25 | 183 | 331 | 0.206 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 180 | 205 |
| 380 | 26 | 24 | 0 | 1 | 1 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 381 | 738 | 681 | 13 | 26 | 18 | 469 | 0.291 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 18 | 44 |
| 386 | 363 | 230 | 20 | 56 | 57 | 810 | 0.503 | 0 | 0 | 0 | 0 | 4 | 1 | 46 | 56 | 108 |
| 387 | 2123 | 1,317 | 58 | 179 | 569 | 2761 | 1.715 | 2 | 0 | 0 | 0 | 12 | 4 | 146 | 561 | 725 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 30 | 25 | 1 | 1 | 3 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| 390 | 525 | 430 | 18 | 44 | 33 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 4 | 1 | 36 | 33 | 74 |
| 392 | 721 | 477 | 28 | 113 | 103 | 436 | 0.271 | 1 | 0 | 0 | 0 | 6 | 2 | 92 | 102 | 202 |
| 393 | 200 | 49 | 11 | 70 | 70 | 934 | 0.580 | 0 | 0 | 0 | 0 | 2 | 1 | 57 | 69 | 129 |
| 394 | 3513 | 2,613 | 109 | 340 | 451 | 1292 | 0.803 | 4 | 0 | 0 | 0 | 22 | 7 | 277 | 444 | 756 |
| 396 | 2707 | 2,125 | 73 | 216 | 293 | 2366 | 1.470 | 4 | 0 | 0 | 0 | 15 | 5 | 176 | 289 | 489 |
| 397 | 230 | 203 | 7 | 16 | 4 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 4 | 19 |
| 398 | 2704 | 2,446 | 73 | 184 | 1 | 560 | 0.348 | 4 | 0 | 0 | 0 | 15 | 5 | 150 | 1 | 176 |
| 399 | 253 | 242 | 4 | 7 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 |
| 400 | 1934 | 1,740 | 50 | 140 | 4 | 1704 | 1.059 | 3 | 0 | 0 | 0 | 10 | 3 | 114 | 4 | 135 |
| 401 | 0 | 0 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 11 | 11 | 0 | 0 | 0 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 406 | 752 | 668 | 59 | 18 | 7 | 395 | 0.245 | 1 | 0 | 0 | 0 | 12 | 4 | 15 | 7 | 39 |
| 407 | 1 | 1 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 0 | 0 | 0 | 0 | 0 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 188 | 176 | 7 | 5 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 |
| 410 | 1 | 0 | 0 | 0 | 1 | 884 | 0.549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 182 | 125 | 6 | 23 | 28 | 678 | 0.421 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 28 | 48 |
| 414 | 12 | 7 | 0 | 0 | 5 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| 415 | 2342 | 1,870 | 62 | 172 | 238 | 855 | 0.531 | 3 | 0 | 0 | 0 | 13 | 4 | 140 | 235 | 395 |
| 416 | 817 | 626 | 18 | 66 | 107 | 284 | 0.176 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 105 | 165 |
| 417 | 77 | 8 | 0 | 2 | 67 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 66 | 68 |
| 419 | 482 | 367 | 9 | 30 | 76 | 343 | 0.213 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 75 | 103 |
| 420 | 37 | 3 | 0 | 1 | 33 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 33 | 33 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 762 | 101 | 6 | 15 | 640 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 631 | 645 |
| 425 | 26 | 23 | 1 | 2 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 426 | 51 | 12 | 1 | 2 | 36 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 35 | 37 |
| 427 | 27 | 23 | 1 | 3 | 0 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| 428 | 32 | 27 | 1 | 3 | 1 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 4 |
| 429 | 50 | 13 | 1 | 1 | 35 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 34 | 36 |
| 430 | 788 | 639 | 21 | 58 | 70 | 114 | 0.071 | 1 | 0 | 0 | 0 | 4 | 1 | 47 | 69 | 123 |
| 431 | 7 | 4 | 0 | 0 | 3 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 432 | 18 | 17 | 0 | 0 | 1 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 433 | 1777 | 1,581 | 42 | 132 | 22 | 1802 | 1.119 | 3 | 0 | 0 | 0 | 9 | 3 | 108 | 22 | 144 |
| 434 | 0 | 0 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 73 | 70 | 1 | 2 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 436 | 3 | 3 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 1643 | 1,444 | 40 | 129 | 30 | 2365 | 1.469 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 30 | 148 |
| 443 | 11 | 10 | 0 | 1 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 444 | 1601 | 1,403 | 40 | 128 | 30 | 905 | 0.562 | 2 | 0 | 0 | 0 | 8 | 3 | 104 | 30 | 148 |
| 452 | 8 | 8 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 1471 | 1,288 | 34 | 121 | 28 | 1563 | 0.971 | 2 | 0 | 0 | 0 | 7 | 2 | 99 | 28 | 138 |
| 454 | 266 | 246 | 5 | 15 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 |
| 455 | 1197 | 1,034 | 30 | 106 | 27 | 366 | 0.227 | 2 | 0 | 0 | 0 | 6 | 2 | 86 | 27 | 123 |
| 458 | 10 | 9 | 0 | 1 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 464 | 69 | 61 | 3 | 5 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 |
| 477 | 100 | 80 | 4 | 7 | 9 | 750 | 0.466 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 9 | 16 |
| 478 | 1253 | 1,054 | 36 | 117 | 46 | 253 | 0.157 | 2 | 0 | 0 | 0 | 7 | 2 | 95 | 45 | 153 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 805 | 726 | 15 | 64 | 0 | 500 | 0.311 | 1 | 0 | 0 | 0 | 3 | 1 | 52 | 0 | 58 |
| 481 | 1 | 0 | 0 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 482 | 177 | 164 | 2 | 10 | 1 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 10 |
| 483 | 955 | 837 | 22 | 96 | 0 | 589 | 0.366 | 1 | 0 | 0 | 0 | 4 | 1 | 78 | 0 | 86 |
| 484 | 2 | 1 | 0 | 0 | 1 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 485 | 1482 | 1,360 | 23 | 99 | 0 | 319 | 0.198 | 2 | 0 | 0 | 0 | 5 | 2 | 81 | 0 | 90 |
| 488 | 10 | 9 | 0 | 1 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 494 | 2789 | 2,525 | 76 | 188 | 0 | 1039 | 0.645 | 4 | 0 | 0 | 0 | 15 | 5 | 153 | 0 | 179 |
| 498 | 3 | 3 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 846 | 170 | 11 | 20 | 645 | 660 | 0.410 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 636 | 655 |
| 500 | 867 | 189 | 12 | 21 | 645 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 636 | 656 |
| 502 | 1 | 1 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 370 | 251 | 25 | 94 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 5 | 2 | 77 | 0 | 84 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6 Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7 Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8 Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9 Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0028 | 0.0052 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0025 | 0.0047 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0030 | 0.0055 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0026 | 0.0049 |

**Segment Emissions**

| | **Speed** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|---|
| **Street Segment** | **Group** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** |
| 9 | 6 | 1.59E-07 | 6.20E-08 | 3.58E-08 | 2.12E-08 | 6.89E-06 | 2.20E-06 | 2.70E-05 | 0.00E+00 |
| 10 | 3 | 9.69E-09 | 3.81E-09 | 2.17E-09 | 1.29E-09 | 4.47E-07 | 1.43E-07 | 1.11E-06 | 0.00E+00 |
| 13 | 6 | 6.69E-09 | 2.61E-09 | 1.51E-09 | 8.91E-10 | 2.60E-07 | 8.31E-08 | 1.22E-06 | 1.51E-05 |
| 32 | 3 | 5.42E-08 | 2.13E-08 | 1.22E-08 | 7.20E-09 | 3.49E-06 | 1.11E-06 | 6.58E-06 | 0.00E+00 |

| **Total** |
|---|
| **(g/sec)** |
| 3.63E-05 |
| 1.71E-06 |
| 1.67E-05 |
| 1.13E-05 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 | 1 | 2.05E-08 | 8.04E-09 | 4.60E-09 | 2.72E-09 | 7.54E-07 | 2.41E-07 | 2.49E-06 | 0.00E+00 | 3.52E-06 |
| 35 | 7 | 5.18E-09 | 2.05E-09 | 1.16E-09 | 6.88E-10 | 4.37E-07 | 1.39E-07 | 1.77E-06 | 2.00E-05 | 2.24E-05 |
| 36 | 7 | 4.21E-08 | 1.67E-08 | 9.41E-09 | 5.58E-09 | 2.68E-06 | 8.52E-07 | 1.03E-05 | 0.00E+00 | 1.39E-05 |
| 37 | 7 | 9.24E-10 | 3.66E-10 | 2.07E-10 | 1.23E-10 | 1.04E-07 | 3.31E-08 | 5.48E-07 | 5.05E-06 | 5.74E-06 |
| 38 | 7 | 2.18E-08 | 8.64E-09 | 4.88E-09 | 2.89E-09 | 1.54E-06 | 4.88E-07 | 4.38E-06 | 1.81E-07 | 6.63E-06 |
| 42 | 7 | 1.10E-07 | 4.38E-08 | 2.47E-08 | 1.47E-08 | 8.86E-06 | 2.81E-06 | 3.72E-05 | 1.33E-04 | 1.82E-04 |
| 43 | 7 | 9.89E-09 | 3.92E-09 | 2.21E-09 | 1.31E-09 | 4.52E-07 | 1.44E-07 | 1.13E-06 | 1.12E-05 | 1.30E-05 |
| 46 | 7 | 6.81E-09 | 2.70E-09 | 1.52E-09 | 9.03E-10 | 4.30E-07 | 1.37E-07 | 1.53E-06 | 1.87E-06 | 3.97E-06 |
| 47 | 7 | 2.04E-08 | 8.06E-09 | 4.55E-09 | 2.70E-09 | 8.56E-07 | 2.72E-07 | 3.05E-06 | 0.00E+00 | 4.21E-06 |
| 48 | 6 | 8.85E-09 | 3.45E-09 | 1.99E-09 | 1.18E-09 | 3.30E-07 | 1.05E-07 | 1.09E-06 | 3.41E-06 | 4.96E-06 |
| 50 | 3 | 6.22E-08 | 2.45E-08 | 1.40E-08 | 8.27E-09 | 3.25E-06 | 1.04E-06 | 9.68E-06 | 0.00E+00 | 1.41E-05 |
| 51 | 7 | 7.95E-10 | 3.15E-10 | 1.78E-10 | 1.05E-10 | 2.26E-08 | 7.19E-09 | 8.47E-08 | 0.00E+00 | 1.16E-07 |
| 52 | 3 | 1.03E-07 | 4.06E-08 | 2.32E-08 | 1.37E-08 | 4.77E-06 | 1.52E-06 | 1.89E-05 | 0.00E+00 | 2.54E-05 |
| 53 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 54 | 6 | 6.22E-09 | 2.42E-09 | 1.40E-09 | 8.28E-10 | 3.39E-07 | 1.08E-07 | 1.49E-06 | 0.00E+00 | 1.95E-06 |
| 55 | 6 | 4.84E-10 | 1.89E-10 | 1.09E-10 | 6.44E-11 | 2.57E-08 | 8.20E-09 | 0.00E+00 | 0.00E+00 | 3.47E-08 |
| 56 | 7 | 1.92E-08 | 7.62E-09 | 4.30E-09 | 2.55E-09 | 1.11E-06 | 3.52E-07 | 4.94E-06 | 0.00E+00 | 6.44E-06 |
| 57 | 7 | 3.39E-09 | 1.34E-09 | 7.58E-10 | 4.50E-10 | 2.45E-07 | 7.80E-08 | 9.70E-07 | 0.00E+00 | 1.30E-06 |
| 58 | 1 | 1.15E-09 | 4.54E-10 | 2.60E-10 | 1.54E-10 | 7.00E-08 | 2.24E-08 | 1.38E-07 | 0.00E+00 | 2.33E-07 |
| 59 | 1 | 1.04E-08 | 4.10E-09 | 2.34E-09 | 1.39E-09 | 1.43E-06 | 4.57E-07 | 2.07E-06 | 0.00E+00 | 3.97E-06 |
| 60 | 1 | 6.65E-10 | 2.61E-10 | 1.49E-10 | 8.84E-11 | 6.22E-08 | 1.99E-08 | 2.28E-07 | 1.64E-06 | 1.95E-06 |
| 61 | 1 | 7.42E-10 | 2.92E-10 | 1.67E-10 | 9.88E-11 | 4.56E-08 | 1.46E-08 | 1.10E-07 | 8.05E-07 | 9.77E-07 |
| 62 | 1 | 1.41E-08 | 5.56E-09 | 3.18E-09 | 1.88E-09 | 2.43E-06 | 7.80E-07 | 3.26E-06 | 0.00E+00 | 6.50E-06 |
| 65 | 3 | 9.39E-09 | 3.70E-09 | 2.11E-09 | 1.25E-09 | 3.70E-07 | 1.18E-07 | 1.20E-06 | 3.41E-06 | 5.11E-06 |
| 66 | 3 | 1.10E-08 | 4.33E-09 | 2.47E-09 | 1.46E-09 | 4.80E-07 | 1.53E-07 | 1.46E-06 | 3.48E-06 | 5.60E-06 |
| 67 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 68 | 7 | 6.47E-09 | 2.56E-09 | 1.45E-09 | 8.58E-10 | 3.02E-07 | 9.60E-08 | 9.05E-07 | 0.00E+00 | 1.31E-06 |
| 69 | 3 | 9.82E-09 | 3.86E-09 | 2.20E-09 | 1.30E-09 | 5.77E-07 | 1.84E-07 | 1.39E-06 | 0.00E+00 | 2.16E-06 |
| 70 | 3 | 2.00E-08 | 7.87E-09 | 4.49E-09 | 2.66E-09 | 1.30E-06 | 4.15E-07 | 2.44E-06 | 0.00E+00 | 4.19E-06 |
| 71 | 1 | 6.78E-09 | 2.67E-09 | 1.52E-09 | 9.02E-10 | 5.28E-07 | 1.69E-07 | 4.37E-07 | 0.00E+00 | 1.15E-06 |
| 72 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 73 | 3 | 5.99E-08 | 2.36E-08 | 1.34E-08 | 7.97E-09 | 2.77E-06 | 8.85E-07 | 1.10E-05 | 0.00E+00 | 1.48E-05 |
| 74 | 6 | 1.10E-08 | 4.28E-09 | 2.47E-09 | 1.46E-09 | 3.36E-07 | 1.07E-07 | 7.90E-07 | 6.62E-08 | 1.32E-06 |
| 75 | 1 | 1.25E-09 | 4.91E-10 | 2.81E-10 | 1.66E-10 | 6.30E-08 | 2.02E-08 | 8.76E-08 | 1.99E-07 | 3.72E-07 |
| 76 | 1 | 3.48E-10 | 1.37E-10 | 7.82E-11 | 4.63E-11 | 2.50E-08 | 8.01E-09 | 3.48E-08 | 0.00E+00 | 6.84E-08 |
| 77 | 5 | 4.39E-09 | 1.82E-09 | 9.82E-10 | 5.83E-10 | 1.44E-07 | 4.61E-08 | 2.86E-07 | 1.30E-07 | 6.14E-07 |
| 80 | 5 | 1.62E-09 | 6.72E-10 | 3.62E-10 | 2.15E-10 | 5.83E-08 | 1.87E-08 | 1.20E-07 | 8.18E-08 | 2.82E-07 |
| 81 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 82 | 1 | 4.28E-09 | 1.68E-09 | 9.62E-10 | 5.69E-10 | 1.87E-07 | 5.98E-08 | 4.76E-07 | 1.48E-06 | 2.21E-06 |
| 83 | 5 | 5.13E-10 | 2.13E-10 | 1.15E-10 | 6.81E-11 | 2.38E-08 | 7.62E-09 | 5.58E-08 | 2.77E-07 | 3.65E-07 |
| 85 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 86 | 1 | 3.10E-09 | 1.22E-09 | 6.97E-10 | 4.13E-10 | 1.69E-07 | 5.41E-08 | 3.71E-07 | 9.12E-06 | 9.72E-06 |
| 87 | 1 | 8.39E-10 | 3.30E-10 | 1.89E-10 | 1.12E-10 | 6.26E-08 | 2.01E-08 | 2.26E-07 | 0.00E+00 | 3.10E-07 |
| 88 | 1 | 7.71E-10 | 3.03E-10 | 1.73E-10 | 1.03E-10 | 6.33E-08 | 2.03E-08 | 2.29E-07 | 0.00E+00 | 3.14E-07 |
| 95 | 6 | 3.49E-09 | 1.36E-09 | 7.85E-10 | 4.64E-10 | 7.73E-08 | 2.47E-08 | 2.94E-07 | 8.87E-07 | 1.29E-06 |
| 96 | 8 | 1.01E-09 | 4.44E-10 | 2.25E-10 | 1.34E-10 | 1.25E-08 | 4.00E-09 | 3.47E-08 | 5.92E-08 | 1.12E-07 |
| 97 | 5 | 2.76E-09 | 1.15E-09 | 6.18E-10 | 3.67E-10 | 7.31E-08 | 2.34E-08 | 2.45E-07 | 7.88E-07 | 1.14E-06 |
| 98 | 5 | 3.16E-11 | 1.31E-11 | 7.06E-12 | 4.19E-12 | 0.00E+00 | 0.00E+00 | 6.96E-09 | 7.91E-09 | 1.49E-08 |
| 99 | 5 | 2.03E-09 | 8.42E-10 | 4.54E-10 | 2.69E-10 | 3.80E-08 | 1.22E-08 | 1.06E-07 | 2.60E-07 | 4.20E-07 |
| 100 | 1 | 2.72E-10 | 1.07E-10 | 6.11E-11 | 3.62E-11 | 1.07E-08 | 3.42E-09 | 3.95E-08 | 3.25E-07 | 3.79E-07 |
| 101 | 1 | 3.10E-09 | 1.22E-09 | 6.97E-10 | 4.13E-10 | 1.18E-07 | 3.77E-08 | 4.43E-07 | 1.52E-06 | 2.12E-06 |
| 102 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 103 | 1 | 1.18E-09 | 4.63E-10 | 2.65E-10 | 1.57E-10 | 5.47E-08 | 1.75E-08 | 1.96E-07 | 2.13E-06 | 2.40E-06 |
| 104 | 1 | 2.94E-09 | 1.16E-09 | 6.62E-10 | 3.92E-10 | 1.14E-07 | 3.65E-08 | 4.66E-07 | 1.64E-06 | 2.26E-06 |
| 105 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 106 | 1 | 3.19E-10 | 1.25E-10 | 7.17E-11 | 4.25E-11 | 0.00E+00 | 0.00E+00 | 3.92E-08 | 0.00E+00 | 3.98E-08 |
| 107 | 1 | 2.93E-09 | 1.15E-09 | 6.58E-10 | 3.89E-10 | 1.15E-07 | 3.70E-08 | 4.73E-07 | 1.55E-06 | 2.18E-06 |
| 108 | 1 | 1.63E-10 | 6.41E-11 | 3.66E-11 | 2.17E-11 | 1.56E-08 | 5.00E-09 | 4.34E-08 | 0.00E+00 | 6.43E-08 |
| 109 | 5 | 8.00E-10 | 3.32E-10 | 1.79E-10 | 1.06E-10 | 4.93E-08 | 1.58E-08 | 1.71E-07 | 0.00E+00 | 2.38E-07 |
| 110 | 6 | 5.30E-09 | 2.06E-09 | 1.19E-09 | 7.05E-10 | 1.81E-07 | 5.77E-08 | 8.01E-07 | 2.58E-06 | 3.63E-06 |
| 111 | 5 | 1.21E-11 | 5.04E-12 | 2.71E-12 | 1.61E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.15E-11 |
| 112 | 6 | 5.84E-09 | 2.27E-09 | 1.31E-09 | 7.77E-10 | 2.16E-07 | 6.89E-08 | 9.72E-07 | 4.26E-06 | 5.53E-06 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 113 | 5 | 2.16E-10 | 8.97E-11 | 4.83E-11 | 2.87E-11 | 3.72E-08 | 1.19E-08 | 1.72E-07 | 9.38E-07 | 1.16E-06 |
| 114 | 1 | 2.91E-10 | 1.14E-10 | 6.54E-11 | 3.87E-11 | 2.48E-08 | 7.93E-09 | 1.38E-07 | 1.56E-06 | 1.73E-06 |
| 115 | 6 | 6.26E-09 | 2.44E-09 | 1.41E-09 | 8.34E-10 | 2.25E-07 | 7.18E-08 | 9.50E-07 | 3.12E-06 | 4.37E-06 |
| 116 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-07 | 1.21E-07 |
| 117 | 6 | 2.27E-10 | 8.83E-11 | 5.10E-11 | 3.02E-11 | 9.52E-09 | 3.04E-09 | 1.41E-08 | 0.00E+00 | 2.70E-08 |
| 118 | 6 | 5.95E-09 | 2.32E-09 | 1.34E-09 | 7.93E-10 | 2.21E-07 | 7.06E-08 | 9.39E-07 | 3.48E-06 | 4.72E-06 |
| 119 | 6 | 6.83E-11 | 2.66E-11 | 1.54E-11 | 9.09E-12 | 9.83E-09 | 3.14E-09 | 4.36E-08 | 4.28E-07 | 4.84E-07 |
| 120 | 1 | 4.77E-10 | 1.87E-10 | 1.07E-10 | 6.34E-11 | 3.82E-08 | 1.22E-08 | 1.59E-07 | 1.77E-06 | 1.98E-06 |
| 121 | 6 | 6.75E-09 | 2.63E-09 | 1.52E-09 | 8.99E-10 | 2.49E-07 | 7.95E-08 | 9.97E-07 | 3.30E-06 | 4.64E-06 |
| 122 | 3 | 5.44E-11 | 2.14E-11 | 1.22E-11 | 7.24E-12 | 9.83E-09 | 3.14E-09 | 4.36E-08 | 6.25E-07 | 6.82E-07 |
| 123 | 1 | 3.55E-10 | 1.40E-10 | 7.99E-11 | 4.73E-11 | 2.48E-08 | 7.93E-09 | 3.44E-08 | 0.00E+00 | 6.78E-08 |
| 124 | 6 | 7.00E-09 | 2.72E-09 | 1.57E-09 | 9.31E-10 | 2.62E-07 | 8.35E-08 | 1.01E-06 | 3.20E-06 | 4.57E-06 |
| 125 | 6 | 1.22E-10 | 4.76E-11 | 2.75E-11 | 1.63E-11 | 1.03E-08 | 3.28E-09 | 1.52E-08 | 0.00E+00 | 2.90E-08 |
| 126 | 6 | 7.30E-09 | 2.84E-09 | 1.64E-09 | 9.72E-10 | 2.63E-07 | 8.39E-08 | 1.01E-06 | 3.29E-06 | 4.66E-06 |
| 127 | 1 | 3.59E-10 | 1.41E-10 | 8.08E-11 | 4.78E-11 | 3.87E-08 | 1.24E-08 | 1.97E-07 | 2.59E-05 | 2.62E-05 |
| 128 | 6 | 1.35E-10 | 5.26E-11 | 3.04E-11 | 1.80E-11 | 0.00E+00 | 0.00E+00 | 1.44E-08 | 0.00E+00 | 1.46E-08 |
| 129 | 6 | 8.36E-09 | 3.25E-09 | 1.88E-09 | 1.11E-09 | 3.00E-07 | 9.58E-08 | 1.10E-06 | 3.50E-06 | 5.01E-06 |
| 130 | 6 | 6.09E-10 | 2.37E-10 | 1.37E-10 | 8.10E-11 | 3.02E-08 | 9.64E-09 | 1.49E-08 | 0.00E+00 | 5.58E-08 |
| 131 | 6 | 2.61E-10 | 1.02E-10 | 5.87E-11 | 3.47E-11 | 9.74E-09 | 3.11E-09 | 1.44E-08 | 0.00E+00 | 2.77E-08 |
| 133 | 3 | 6.81E-10 | 2.68E-10 | 1.53E-10 | 9.05E-11 | 4.04E-08 | 1.29E-08 | 0.00E+00 | 0.00E+00 | 5.45E-08 |
| 134 | 1 | 1.49E-09 | 5.86E-10 | 3.35E-10 | 1.98E-10 | 7.14E-08 | 2.29E-08 | 1.32E-07 | 0.00E+00 | 2.29E-07 |
| 135 | 3 | 9.85E-09 | 3.88E-09 | 2.21E-09 | 1.31E-09 | 4.00E-07 | 1.28E-07 | 1.24E-06 | 3.50E-06 | 5.29E-06 |
| 136 | 6 | 4.12E-10 | 1.60E-10 | 9.27E-11 | 5.48E-11 | 2.96E-08 | 9.47E-09 | 5.85E-08 | 0.00E+00 | 9.83E-08 |
| 137 | 6 | 1.97E-10 | 7.68E-11 | 4.43E-11 | 2.62E-11 | 9.93E-09 | 3.17E-09 | 2.94E-08 | 0.00E+00 | 4.28E-08 |
| 138 | 1 | 2.18E-11 | 8.58E-12 | 4.90E-12 | 2.90E-12 | 4.18E-09 | 1.34E-09 | 2.91E-08 | 3.30E-07 | 3.64E-07 |
| 139 | 1 | 1.72E-09 | 6.77E-10 | 3.87E-10 | 2.29E-10 | 7.89E-08 | 2.53E-08 | 3.29E-07 | 7.97E-07 | 1.23E-06 |
| 140 | 1 | 1.60E-09 | 6.29E-10 | 3.60E-10 | 2.13E-10 | 6.60E-08 | 2.11E-08 | 2.06E-07 | 0.00E+00 | 2.96E-07 |
| 141 | 1 | 5.36E-09 | 2.11E-09 | 1.20E-09 | 7.13E-10 | 2.35E-07 | 7.53E-08 | 8.06E-07 | 7.91E-07 | 1.92E-06 |
| 142 | 1 | 4.36E-11 | 1.71E-11 | 9.80E-12 | 5.80E-12 | 4.56E-09 | 1.46E-09 | 2.53E-08 | 1.01E-07 | 1.32E-07 |
| 143 | 3 | 5.21E-09 | 2.05E-09 | 1.17E-09 | 6.92E-10 | 2.34E-07 | 7.46E-08 | 8.96E-07 | 2.84E-07 | 1.50E-06 |
| 144 | 3 | 4.90E-09 | 1.93E-09 | 1.10E-09 | 6.51E-10 | 2.26E-07 | 7.23E-08 | 9.03E-07 | 1.65E-07 | 1.37E-06 |
| 145 | 3 | 5.08E-09 | 2.00E-09 | 1.14E-09 | 6.75E-10 | 2.57E-07 | 8.22E-08 | 1.02E-06 | 3.31E-08 | 1.41E-06 |
| 146 | 6 | 4.06E-11 | 1.58E-11 | 9.14E-12 | 5.41E-12 | 0.00E+00 | 0.00E+00 | 1.51E-08 | 0.00E+00 | 1.52E-08 |
| 147 | 6 | 6.02E-09 | 2.35E-09 | 1.35E-09 | 8.02E-10 | 2.91E-07 | 9.29E-08 | 1.13E-06 | 6.72E-08 | 1.59E-06 |
| 148 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.54E-07 | 1.54E-07 |
| 149 | 6 | 6.69E-09 | 2.61E-09 | 1.51E-09 | 8.91E-10 | 3.35E-07 | 1.07E-07 | 1.20E-06 | 1.36E-07 | 1.79E-06 |
| 150 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 151 | 1 | 7.46E-09 | 2.93E-09 | 1.68E-09 | 9.92E-10 | 4.31E-07 | 1.38E-07 | 1.40E-06 | 0.00E+00 | 1.99E-06 |
| 152 | 1 | 2.66E-10 | 1.05E-10 | 5.98E-11 | 3.54E-11 | 3.67E-08 | 1.18E-08 | 1.70E-07 | 2.43E-05 | 2.45E-05 |
| 153 | 1 | 8.85E-09 | 3.48E-09 | 1.99E-09 | 1.18E-09 | 5.00E-07 | 1.60E-07 | 1.48E-06 | 0.00E+00 | 2.15E-06 |
| 154 | 6 | 2.25E-11 | 8.76E-12 | 5.06E-12 | 2.99E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.93E-11 |
| 155 | 3 | 1.10E-08 | 4.35E-09 | 2.48E-09 | 1.47E-09 | 5.75E-07 | 1.84E-07 | 1.53E-06 | 0.00E+00 | 2.31E-06 |
| 156 | 3 | 2.70E-09 | 1.06E-09 | 6.06E-10 | 3.59E-10 | 1.36E-07 | 4.33E-08 | 2.58E-07 | 0.00E+00 | 4.42E-07 |
| 157 | 3 | 1.32E-08 | 5.20E-09 | 2.96E-09 | 1.75E-09 | 7.38E-07 | 2.36E-07 | 1.84E-06 | 0.00E+00 | 2.84E-06 |
| 158 | 6 | 4.92E-09 | 1.92E-09 | 1.11E-09 | 6.56E-10 | 1.31E-07 | 4.17E-08 | 5.22E-07 | 1.84E-06 | 2.54E-06 |
| 159 | 6 | 5.83E-10 | 2.27E-10 | 1.31E-10 | 7.76E-11 | 1.07E-08 | 3.41E-09 | 4.11E-08 | 1.36E-07 | 1.92E-07 |
| 160 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 161 | 3 | 1.38E-08 | 5.44E-09 | 3.10E-09 | 1.84E-09 | 7.29E-07 | 2.33E-07 | 3.59E-06 | 0.00E+00 | 4.57E-06 |
| 162 | 3 | 4.71E-08 | 1.85E-08 | 1.06E-08 | 6.26E-09 | 2.50E-06 | 7.98E-07 | 1.16E-05 | 0.00E+00 | 1.50E-05 |
| 163 | 3 | 9.49E-09 | 3.74E-09 | 2.13E-09 | 1.26E-09 | 5.06E-07 | 1.62E-07 | 2.26E-06 | 0.00E+00 | 2.94E-06 |
| 164 | 3 | 3.46E-10 | 1.36E-10 | 7.76E-11 | 4.60E-11 | 2.97E-08 | 9.50E-09 | 4.40E-08 | 0.00E+00 | 8.38E-08 |
| 165 | 1 | 1.42E-07 | 5.59E-08 | 3.20E-08 | 1.89E-08 | 6.90E-06 | 2.21E-06 | 2.66E-05 | 0.00E+00 | 3.60E-05 |
| 168 | 1 | 4.66E-09 | 1.83E-09 | 1.05E-09 | 6.19E-10 | 2.85E-07 | 9.12E-08 | 1.32E-06 | 0.00E+00 | 1.70E-06 |
| 169 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 170 | 3 | 5.43E-09 | 2.14E-09 | 1.22E-09 | 7.21E-10 | 2.84E-07 | 9.06E-08 | 1.23E-06 | 0.00E+00 | 1.62E-06 |
| 171 | 3 | 1.63E-08 | 6.42E-09 | 3.66E-09 | 2.17E-09 | 5.38E-07 | 1.72E-07 | 1.86E-06 | 0.00E+00 | 2.60E-06 |
| 172 | 6 | 3.34E-08 | 1.30E-08 | 7.51E-09 | 4.44E-09 | 1.02E-06 | 3.27E-07 | 3.55E-06 | 0.00E+00 | 4.95E-06 |
| 173 | 6 | 4.03E-11 | 1.57E-11 | 9.07E-12 | 5.36E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.80E-08 | 6.80E-08 |
| 174 | 6 | 8.64E-11 | 3.37E-11 | 1.94E-11 | 1.15E-11 | 0.00E+00 | 0.00E+00 | 6.14E-09 | 0.00E+00 | 6.29E-09 |
| 177 | 7 | 2.00E-08 | 7.91E-09 | 4.47E-09 | 2.65E-09 | 1.65E-06 | 5.24E-07 | 7.13E-06 | 2.56E-05 | 3.49E-05 |
| 178 | 7 | 1.30E-08 | 5.16E-09 | 2.92E-09 | 1.73E-09 | 9.10E-07 | 2.89E-07 | 2.85E-06 | 1.23E-05 | 1.64E-05 |
| 179 | 7 | 4.34E-08 | 1.72E-08 | 9.71E-09 | 5.76E-09 | 3.50E-06 | 1.11E-06 | 1.50E-05 | 5.43E-05 | 7.40E-05 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 180 | 7 | 3.36E-09 | 1.33E-09 | 7.53E-10 | 4.46E-10 | 2.34E-07 | 7.44E-08 | 7.01E-07 | 1.06E-06 | 2.07E-06 |
| 181 | 1 | 1.78E-08 | 7.01E-09 | 4.01E-09 | 2.37E-09 | 6.95E-07 | 2.23E-07 | 2.43E-06 | 6.89E-06 | 1.03E-05 |
| 182 | 1 | 1.51E-08 | 5.95E-09 | 3.40E-09 | 2.01E-09 | 5.85E-07 | 1.87E-07 | 2.17E-06 | 5.74E-06 | 8.71E-06 |
| 183 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 184 | 1 | 1.27E-08 | 5.01E-09 | 2.86E-09 | 1.70E-09 | 4.94E-07 | 1.58E-07 | 1.80E-06 | 5.01E-06 | 7.49E-06 |
| 185 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 186 | 1 | 6.74E-09 | 2.65E-09 | 1.51E-09 | 8.96E-10 | 2.69E-07 | 8.61E-08 | 1.06E-06 | 2.78E-06 | 4.21E-06 |
| 190 | 7 | 4.82E-07 | 1.91E-07 | 1.08E-07 | 6.39E-08 | 1.20E-05 | 3.80E-06 | 5.69E-05 | 2.04E-04 | 2.77E-04 |
| 191 | 7 | 2.90E-07 | 1.15E-07 | 6.48E-08 | 3.84E-08 | 7.46E-06 | 2.37E-06 | 3.82E-05 | 1.11E-04 | 1.60E-04 |
| 192 | 7 | 7.21E-08 | 2.86E-08 | 1.61E-08 | 9.56E-09 | 1.62E-06 | 5.14E-07 | 5.00E-06 | 4.25E-05 | 4.97E-05 |
| 194 | 5 | 1.64E-09 | 6.82E-10 | 3.67E-10 | 2.18E-10 | 1.45E-07 | 4.63E-08 | 5.33E-07 | 0.00E+00 | 7.27E-07 |
| 195 | 5 | 4.16E-09 | 1.73E-09 | 9.30E-10 | 5.52E-10 | 2.92E-07 | 9.36E-08 | 1.16E-06 | 0.00E+00 | 1.55E-06 |
| 196 | 5 | 1.08E-08 | 4.49E-09 | 2.42E-09 | 1.44E-09 | 8.18E-07 | 2.62E-07 | 3.15E-06 | 0.00E+00 | 4.25E-06 |
| 198 | 5 | 7.35E-10 | 3.05E-10 | 1.64E-10 | 9.76E-11 | 4.74E-08 | 1.52E-08 | 1.32E-07 | 0.00E+00 | 1.96E-07 |
| 199 | 5 | 1.28E-09 | 5.31E-10 | 2.86E-10 | 1.70E-10 | 6.51E-08 | 2.09E-08 | 1.65E-07 | 0.00E+00 | 2.53E-07 |
| 200 | 6 | 2.22E-08 | 8.64E-09 | 4.99E-09 | 2.95E-09 | 1.52E-06 | 4.84E-07 | 5.92E-06 | 0.00E+00 | 7.96E-06 |
| 205 | 6 | 2.81E-08 | 1.10E-08 | 6.33E-09 | 3.74E-09 | 1.55E-06 | 4.94E-07 | 7.09E-06 | 0.00E+00 | 9.18E-06 |
| 206 | 6 | 4.93E-08 | 1.92E-08 | 1.11E-08 | 6.56E-09 | 2.71E-06 | 8.64E-07 | 1.22E-05 | 0.00E+00 | 1.58E-05 |
| 207 | 6 | 5.86E-10 | 2.28E-10 | 1.32E-10 | 7.80E-11 | 6.57E-08 | 2.10E-08 | 4.37E-07 | 0.00E+00 | 5.25E-07 |
| 215 | 3 | 3.03E-09 | 1.19E-09 | 6.80E-10 | 4.03E-10 | 7.39E-08 | 2.36E-08 | 1.09E-07 | 2.47E-07 | 4.59E-07 |
| 216 | 6 | 8.96E-09 | 3.49E-09 | 2.02E-09 | 1.19E-09 | 2.77E-07 | 8.83E-08 | 1.34E-06 | 3.87E-06 | 5.59E-06 |
| 217 | 3 | 1.30E-09 | 5.12E-10 | 2.92E-10 | 1.73E-10 | 5.00E-08 | 1.60E-08 | 1.97E-07 | 8.93E-07 | 1.16E-06 |
| 218 | 7 | 3.06E-09 | 1.21E-09 | 6.84E-10 | 4.06E-10 | 1.08E-07 | 3.44E-08 | 5.88E-07 | 1.51E-06 | 2.25E-06 |
| 219 | 6 | 4.67E-10 | 1.82E-10 | 1.05E-10 | 6.21E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.12E-07 | 1.13E-07 |
| 221 | 6 | 1.67E-09 | 6.50E-10 | 3.75E-10 | 2.22E-10 | 3.30E-08 | 1.05E-08 | 9.75E-08 | 3.31E-07 | 4.75E-07 |
| 223 | 6 | 8.69E-10 | 3.38E-10 | 1.95E-10 | 1.16E-10 | 2.26E-08 | 7.21E-09 | 1.34E-07 | 2.11E-07 | 3.76E-07 |
| 225 | 1 | 3.39E-11 | 1.33E-11 | 7.61E-12 | 4.50E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.93E-11 |
| 226 | 7 | 1.30E-09 | 5.17E-10 | 2.92E-10 | 1.73E-10 | 5.72E-08 | 1.82E-08 | 3.42E-07 | 1.49E-06 | 1.91E-06 |
| 227 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 229 | 6 | 3.78E-10 | 1.47E-10 | 8.50E-11 | 5.03E-11 | 1.41E-08 | 4.51E-09 | 2.09E-08 | 4.72E-08 | 8.73E-08 |
| 230 | 6 | 6.53E-10 | 2.54E-10 | 1.47E-10 | 8.69E-11 | 1.27E-08 | 4.04E-09 | 1.87E-08 | 0.00E+00 | 3.66E-08 |
| 231 | 6 | 3.73E-09 | 1.45E-09 | 8.40E-10 | 4.97E-10 | 9.90E-08 | 3.16E-08 | 4.76E-07 | 2.73E-06 | 3.35E-06 |
| 232 | 7 | 1.92E-08 | 7.59E-09 | 4.29E-09 | 2.54E-09 | 7.18E-07 | 2.28E-07 | 3.85E-06 | 2.33E-05 | 2.81E-05 |
| 233 | 7 | 7.43E-10 | 2.94E-10 | 1.66E-10 | 9.86E-11 | 3.40E-08 | 1.08E-08 | 2.03E-07 | 9.21E-07 | 1.17E-06 |
| 236 | 6 | 1.98E-10 | 7.72E-11 | 4.46E-11 | 2.64E-11 | 9.98E-09 | 3.19E-09 | 5.91E-08 | 1.34E-07 | 2.06E-07 |
| 237 | 7 | 1.50E-08 | 5.96E-09 | 3.37E-09 | 2.00E-09 | 6.32E-07 | 2.01E-07 | 3.54E-06 | 2.10E-05 | 2.54E-05 |
| 238 | 6 | 1.90E-09 | 7.40E-10 | 4.27E-10 | 2.53E-10 | 4.22E-08 | 1.35E-08 | 2.08E-07 | 7.54E-07 | 1.02E-06 |
| 239 | 6 | 1.24E-08 | 4.85E-09 | 2.80E-09 | 1.66E-09 | 5.40E-07 | 1.72E-07 | 3.01E-06 | 1.86E-05 | 2.23E-05 |
| 240 | 8 | 4.14E-12 | 1.82E-12 | 9.21E-13 | 5.49E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.19E-08 | 1.19E-08 |
| 241 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 242 | 1 | 8.54E-09 | 3.36E-09 | 1.92E-09 | 1.14E-09 | 4.03E-07 | 1.29E-07 | 2.02E-06 | 1.18E-05 | 1.44E-05 |
| 243 | 1 | 2.00E-11 | 7.88E-12 | 4.51E-12 | 2.67E-12 | 1.00E-09 | 3.21E-10 | 4.18E-09 | 2.21E-08 | 2.77E-08 |
| 244 | 1 | 1.23E-10 | 4.82E-11 | 2.75E-11 | 1.63E-11 | 1.63E-08 | 5.21E-09 | 7.91E-08 | 6.33E-07 | 7.33E-07 |
| 245 | 1 | 1.31E-10 | 5.14E-11 | 2.94E-11 | 1.74E-11 | 5.67E-09 | 1.82E-09 | 3.54E-08 | 2.33E-07 | 2.76E-07 |
| 246 | 1 | 6.95E-10 | 2.73E-10 | 1.56E-10 | 9.25E-11 | 5.98E-08 | 1.92E-08 | 3.27E-07 | 2.67E-06 | 3.08E-06 |
| 247 | 1 | 6.28E-10 | 2.47E-10 | 1.41E-10 | 8.35E-11 | 2.45E-08 | 7.85E-09 | 1.19E-07 | 5.50E-07 | 7.03E-07 |
| 250 | 5 | 2.16E-09 | 8.95E-10 | 4.82E-10 | 2.86E-10 | 6.42E-08 | 2.06E-08 | 3.27E-07 | 1.49E-06 | 1.90E-06 |
| 252 | 6 | 2.04E-08 | 7.96E-09 | 4.60E-09 | 2.72E-09 | 7.19E-07 | 2.30E-07 | 3.72E-06 | 2.27E-05 | 2.74E-05 |
| 254 | 6 | 1.85E-10 | 7.21E-11 | 4.16E-11 | 2.46E-11 | 5.33E-09 | 1.70E-09 | 1.58E-08 | 3.57E-08 | 5.88E-08 |
| 256 | 6 | 4.32E-09 | 1.68E-09 | 9.71E-10 | 5.75E-10 | 1.07E-07 | 3.41E-08 | 3.16E-07 | 1.31E-06 | 1.77E-06 |
| 258 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 260 | 3 | 2.78E-08 | 1.10E-08 | 6.25E-09 | 3.70E-09 | 9.64E-07 | 3.08E-07 | 4.54E-06 | 2.66E-05 | 3.24E-05 |
| 261 | 5 | 2.90E-09 | 1.21E-09 | 6.49E-10 | 3.86E-10 | 7.40E-08 | 2.37E-08 | 3.34E-07 | 1.52E-06 | 1.95E-06 |
| 262 | 1 | 2.97E-09 | 1.17E-09 | 6.69E-10 | 3.96E-10 | 1.21E-07 | 3.88E-08 | 5.05E-07 | 1.95E-06 | 2.63E-06 |
| 263 | 1 | 2.24E-09 | 8.80E-10 | 5.03E-10 | 2.98E-10 | 8.39E-08 | 2.69E-08 | 3.68E-07 | 2.17E-06 | 2.66E-06 |
| 264 | 1 | 4.27E-11 | 1.68E-11 | 9.60E-12 | 5.68E-12 | 3.51E-09 | 1.12E-09 | 2.44E-08 | 2.77E-07 | 3.06E-07 |
| 265 | 1 | 1.11E-09 | 4.38E-10 | 2.50E-10 | 1.48E-10 | 4.14E-08 | 1.33E-08 | 1.79E-07 | 1.03E-06 | 1.26E-06 |
| 266 | 1 | 4.19E-09 | 1.65E-09 | 9.42E-10 | 5.57E-10 | 1.71E-07 | 5.49E-08 | 7.48E-07 | 4.67E-06 | 5.65E-06 |
| 267 | 1 | 4.59E-10 | 1.80E-10 | 1.03E-10 | 6.11E-11 | 2.44E-08 | 7.82E-09 | 1.09E-07 | 4.86E-07 | 6.27E-07 |
| 268 | 1 | 1.77E-09 | 6.96E-10 | 3.98E-10 | 2.36E-10 | 6.47E-08 | 2.07E-08 | 2.77E-07 | 1.40E-06 | 1.76E-06 |
| 269 | 6 | 1.47E-08 | 5.74E-09 | 3.31E-09 | 1.96E-09 | 7.09E-07 | 2.26E-07 | 3.51E-06 | 2.26E-05 | 2.70E-05 |
| 270 | 6 | 7.73E-11 | 3.01E-11 | 1.74E-11 | 1.03E-11 | 0.00E+00 | 0.00E+00 | 1.15E-08 | 5.22E-08 | 6.38E-08 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 271 | 6 | 2.25E-09 | 8.77E-10 | 5.07E-10 | 3.00E-10 | 1.07E-07 | 3.42E-08 | 5.37E-07 | 3.42E-06 | 4.11E-06 |
| 272 | 6 | 4.66E-11 | 1.82E-11 | 1.05E-11 | 6.21E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.24E-08 | 5.25E-08 |
| 273 | 1 | 8.51E-11 | 3.35E-11 | 1.91E-11 | 1.13E-11 | 0.00E+00 | 0.00E+00 | 2.72E-08 | 1.24E-07 | 1.51E-07 |
| 274 | 6 | 7.80E-09 | 3.04E-09 | 1.76E-09 | 1.04E-09 | 3.56E-07 | 1.14E-07 | 1.85E-06 | 1.17E-05 | 1.40E-05 |
| 275 | 1 | 1.28E-10 | 5.05E-11 | 2.88E-11 | 1.71E-11 | 5.90E-09 | 1.89E-09 | 2.46E-08 | 7.45E-08 | 1.07E-07 |
| 276 | 6 | 1.08E-09 | 4.19E-10 | 2.42E-10 | 1.43E-10 | 5.00E-08 | 1.60E-08 | 2.45E-07 | 1.54E-06 | 1.85E-06 |
| 277 | 1 | 2.05E-10 | 8.05E-11 | 4.60E-11 | 2.72E-11 | 1.68E-08 | 5.39E-09 | 4.67E-08 | 2.12E-07 | 2.82E-07 |
| 278 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 279 | 1 | 4.85E-10 | 1.91E-10 | 1.09E-10 | 6.46E-11 | 2.46E-08 | 7.87E-09 | 1.13E-07 | 6.59E-07 | 8.06E-07 |
| 280 | 1 | 1.37E-09 | 5.40E-10 | 3.09E-10 | 1.83E-10 | 7.40E-08 | 2.37E-08 | 3.48E-07 | 2.30E-06 | 2.75E-06 |
| 281 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 282 | 1 | 1.03E-09 | 4.06E-10 | 2.32E-10 | 1.37E-10 | 4.97E-08 | 1.59E-08 | 2.40E-07 | 1.41E-06 | 1.72E-06 |
| 283 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 284 | 1 | 4.99E-09 | 1.96E-09 | 1.12E-09 | 6.64E-10 | 2.23E-07 | 7.14E-08 | 4.92E-07 | 1.28E-06 | 2.08E-06 |
| 285 | 1 | 6.80E-10 | 2.67E-10 | 1.53E-10 | 9.04E-11 | 4.32E-08 | 1.38E-08 | 1.25E-07 | 7.96E-07 | 9.79E-07 |
| 286 | 1 | 1.47E-09 | 5.77E-10 | 3.30E-10 | 1.95E-10 | 6.22E-08 | 1.99E-08 | 1.27E-07 | 8.26E-08 | 2.95E-07 |
| 287 | 1 | 1.75E-09 | 6.86E-10 | 3.92E-10 | 2.32E-10 | 9.60E-08 | 3.08E-08 | 2.16E-07 | 4.69E-06 | 5.04E-06 |
| 288 | 1 | 3.60E-10 | 1.42E-10 | 8.10E-11 | 4.79E-11 | 2.14E-08 | 6.86E-09 | 6.95E-08 | 2.03E-07 | 3.01E-07 |
| 289 | 1 | 2.01E-09 | 7.92E-10 | 4.53E-10 | 2.68E-10 | 1.07E-07 | 3.43E-08 | 2.42E-07 | 5.03E-06 | 5.41E-06 |
| 290 | 1 | 1.01E-09 | 3.99E-10 | 2.28E-10 | 1.35E-10 | 7.70E-08 | 2.47E-08 | 1.86E-07 | 1.05E-05 | 1.08E-05 |
| 294 | 7 | 3.85E-10 | 1.53E-10 | 8.62E-11 | 5.11E-11 | 9.56E-09 | 3.04E-09 | 0.00E+00 | 0.00E+00 | 1.33E-08 |
| 301 | 6 | 3.96E-10 | 1.54E-10 | 8.91E-11 | 5.27E-11 | 1.95E-08 | 6.22E-09 | 1.01E-07 | 0.00E+00 | 1.27E-07 |
| 302 | 6 | 8.24E-10 | 3.21E-10 | 1.85E-10 | 1.10E-10 | 3.00E-08 | 9.59E-09 | 1.18E-07 | 0.00E+00 | 1.59E-07 |
| 303 | 6 | 9.44E-10 | 3.68E-10 | 2.12E-10 | 1.26E-10 | 7.61E-08 | 2.43E-08 | 3.10E-07 | 3.98E-05 | 4.02E-05 |
| 304 | 6 | 4.39E-09 | 1.71E-09 | 9.88E-10 | 5.85E-10 | 1.19E-07 | 3.81E-08 | 5.96E-07 | 0.00E+00 | 7.61E-07 |
| 306 | 6 | 1.04E-08 | 4.05E-09 | 2.34E-09 | 1.38E-09 | 6.17E-07 | 1.97E-07 | 3.09E-06 | 2.13E-05 | 2.53E-05 |
| 307 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 324 | 7 | 2.74E-09 | 1.08E-09 | 6.12E-10 | 3.63E-10 | 1.02E-07 | 3.23E-08 | 5.59E-07 | 1.03E-06 | 1.73E-06 |
| 325 | 7 | 7.26E-08 | 2.88E-08 | 1.62E-08 | 9.63E-09 | 1.91E-06 | 6.07E-07 | 1.04E-05 | 4.34E-05 | 5.64E-05 |
| 326 | 7 | 2.53E-08 | 1.00E-08 | 5.66E-09 | 3.36E-09 | 7.73E-07 | 2.46E-07 | 4.93E-06 | 1.68E-05 | 2.28E-05 |
| 327 | 7 | 5.56E-09 | 2.20E-09 | 1.24E-09 | 7.37E-10 | 1.37E-07 | 4.35E-08 | 6.98E-07 | 3.26E-06 | 4.14E-06 |
| 340 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 351 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 358 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 359 | 1 | 2.49E-10 | 9.80E-11 | 5.60E-11 | 3.32E-11 | 1.06E-08 | 3.40E-09 | 4.43E-08 | 1.17E-07 | 1.76E-07 |
| 360 | 1 | 1.26E-08 | 4.94E-09 | 2.82E-09 | 1.67E-09 | 3.33E-07 | 1.07E-07 | 1.51E-06 | 4.31E-06 | 6.28E-06 |
| 361 | 1 | 1.52E-08 | 5.97E-09 | 3.41E-09 | 2.02E-09 | 4.48E-07 | 1.44E-07 | 2.39E-06 | 9.53E-06 | 1.25E-05 |
| 362 | 1 | 1.10E-10 | 4.34E-11 | 2.48E-11 | 1.47E-11 | 0.00E+00 | 0.00E+00 | 7.36E-09 | 1.67E-08 | 2.43E-08 |
| 363 | 1 | 1.42E-07 | 5.57E-08 | 3.18E-08 | 1.88E-08 | 3.38E-06 | 1.08E-06 | 1.34E-05 | 2.22E-05 | 4.03E-05 |
| 364 | 1 | 1.10E-08 | 4.32E-09 | 2.47E-09 | 1.46E-09 | 3.40E-07 | 1.09E-07 | 1.78E-06 | 6.60E-06 | 8.85E-06 |
| 365 | 6 | 1.44E-08 | 5.63E-09 | 3.25E-09 | 1.92E-09 | 4.63E-07 | 1.48E-07 | 1.91E-06 | 6.27E-06 | 8.81E-06 |
| 366 | 6 | 1.09E-10 | 4.23E-11 | 2.44E-11 | 1.45E-11 | 0.00E+00 | 0.00E+00 | 3.24E-08 | 2.93E-07 | 3.26E-07 |
| 367 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 375 | 1 | 3.58E-09 | 1.41E-09 | 8.05E-10 | 4.77E-10 | 9.72E-08 | 3.11E-08 | 3.04E-07 | 5.02E-06 | 5.46E-06 |
| 376 | 1 | 8.65E-09 | 3.40E-09 | 1.94E-09 | 1.15E-09 | 2.02E-07 | 6.46E-08 | 6.23E-07 | 5.78E-06 | 6.68E-06 |
| 377 | 1 | 3.14E-10 | 1.23E-10 | 7.06E-11 | 4.18E-11 | 1.06E-08 | 3.40E-09 | 4.43E-08 | 1.34E-07 | 1.93E-07 |
| 378 | 1 | 2.76E-09 | 1.09E-09 | 6.21E-10 | 3.68E-10 | 6.31E-08 | 2.02E-08 | 1.75E-07 | 1.14E-06 | 1.41E-06 |
| 379 | 1 | 2.39E-09 | 9.39E-10 | 5.37E-10 | 3.18E-10 | 6.22E-08 | 1.99E-08 | 1.80E-07 | 2.99E-06 | 3.26E-06 |
| 380 | 1 | 9.25E-11 | 3.64E-11 | 2.08E-11 | 1.23E-11 | 0.00E+00 | 0.00E+00 | 6.16E-09 | 1.40E-08 | 2.03E-08 |
| 381 | 1 | 4.35E-09 | 1.71E-09 | 9.78E-10 | 5.79E-10 | 9.55E-08 | 3.06E-08 | 2.65E-07 | 4.17E-07 | 8.16E-07 |
| 386 | 6 | 2.32E-09 | 9.05E-10 | 5.23E-10 | 3.09E-10 | 2.04E-07 | 6.50E-08 | 8.44E-07 | 1.94E-06 | 3.06E-06 |
| 387 | 3 | 4.22E-08 | 1.66E-08 | 9.47E-09 | 5.61E-09 | 2.01E-06 | 6.43E-07 | 9.19E-06 | 6.61E-05 | 7.80E-05 |
| 388 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 389 | 7 | 5.14E-11 | 2.04E-11 | 1.15E-11 | 6.82E-12 | 2.19E-09 | 6.97E-10 | 3.28E-09 | 2.23E-08 | 2.85E-08 |
| 390 | 7 | 5.56E-09 | 2.20E-09 | 1.24E-09 | 7.38E-10 | 2.48E-07 | 7.89E-08 | 9.09E-07 | 1.54E-06 | 2.79E-06 |
| 392 | 7 | 2.26E-09 | 8.96E-10 | 5.06E-10 | 3.00E-10 | 1.42E-07 | 4.50E-08 | 8.56E-07 | 1.76E-06 | 2.81E-06 |
| 393 | 7 | 4.98E-10 | 1.97E-10 | 1.11E-10 | 6.60E-11 | 1.19E-07 | 3.79E-08 | 1.14E-06 | 2.57E-06 | 3.86E-06 |
| 394 | 3 | 3.92E-08 | 1.54E-08 | 8.79E-09 | 5.21E-09 | 1.77E-06 | 5.65E-07 | 8.17E-06 | 2.45E-05 | 3.51E-05 |
| 396 | 3 | 5.83E-08 | 2.30E-08 | 1.31E-08 | 7.75E-09 | 2.17E-06 | 6.93E-07 | 9.50E-06 | 2.92E-05 | 4.16E-05 |
| 397 | 7 | 3.51E-09 | 1.39E-09 | 7.84E-10 | 4.65E-10 | 1.29E-07 | 4.10E-08 | 4.41E-07 | 2.50E-07 | 8.67E-07 |
| 398 | 6 | 1.71E-08 | 6.66E-09 | 3.84E-09 | 2.27E-09 | 5.14E-07 | 1.64E-07 | 1.92E-06 | 2.36E-08 | 2.65E-06 |
| 399 | 7 | 8.92E-09 | 3.53E-09 | 2.00E-09 | 1.18E-09 | 1.57E-07 | 5.00E-08 | 4.12E-07 | 0.00E+00 | 6.35E-07 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 6 | 3.70E-08 | 1.44E-08 | 8.32E-09 | 4.92E-09 | 1.07E-06 | 3.42E-07 | 4.44E-06 | 2.87E-07 | 6.20E-06 |
| 401 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 402 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 404 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 405 | 1 | 1.51E-10 | 5.95E-11 | 3.40E-11 | 2.01E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-10 |
| 406 | 7 | 2.87E-09 | 1.14E-09 | 6.42E-10 | 3.81E-10 | 2.70E-07 | 8.59E-08 | 1.24E-07 | 1.09E-07 | 5.93E-07 |
| 407 | 6 | 9.43E-12 | 3.67E-12 | 2.12E-12 | 1.26E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-11 |
| 408 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 409 | 7 | 2.18E-09 | 8.62E-10 | 4.87E-10 | 2.89E-10 | 9.23E-08 | 2.93E-08 | 9.88E-08 | 0.00E+00 | 2.24E-07 |
| 410 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.72E-08 | 3.72E-08 |
| 411 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 412 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 413 | 6 | 1.06E-09 | 4.12E-10 | 2.38E-10 | 1.41E-10 | 5.11E-08 | 1.63E-08 | 2.90E-07 | 7.99E-07 | 1.16E-06 |
| 414 | 6 | 7.81E-11 | 3.04E-11 | 1.76E-11 | 1.04E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-07 | 1.88E-07 |
| 415 | 3 | 1.86E-08 | 7.30E-09 | 4.16E-09 | 2.47E-09 | 6.67E-07 | 2.13E-07 | 2.73E-06 | 8.56E-06 | 1.22E-05 |
| 416 | 1 | 2.42E-09 | 9.52E-10 | 5.44E-10 | 3.22E-10 | 8.00E-08 | 2.56E-08 | 4.08E-07 | 1.50E-06 | 2.02E-06 |
| 417 | 1 | 3.30E-11 | 1.30E-11 | 7.42E-12 | 4.39E-12 | 0.00E+00 | 0.00E+00 | 1.32E-08 | 1.00E-06 | 1.02E-06 |
| 419 | 1 | 1.71E-09 | 6.74E-10 | 3.85E-10 | 2.28E-10 | 4.83E-08 | 1.55E-08 | 2.24E-07 | 1.29E-06 | 1.58E-06 |
| 420 | 1 | 1.23E-11 | 4.82E-12 | 2.75E-12 | 1.63E-12 | 0.00E+00 | 0.00E+00 | 6.53E-09 | 4.89E-07 | 4.96E-07 |
| 421 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 424 | 1 | 1.14E-09 | 4.48E-10 | 2.56E-10 | 1.52E-10 | 7.78E-08 | 2.49E-08 | 2.70E-07 | 2.62E-05 | 2.66E-05 |
| 425 | 1 | 6.36E-11 | 2.50E-11 | 1.43E-11 | 8.46E-12 | 3.18E-09 | 1.02E-09 | 8.84E-09 | 0.00E+00 | 1.31E-08 |
| 426 | 1 | 4.51E-11 | 1.77E-11 | 1.01E-11 | 6.00E-12 | 4.32E-09 | 1.38E-09 | 1.20E-08 | 4.91E-07 | 5.09E-07 |
| 427 | 5 | 2.28E-10 | 9.48E-11 | 5.10E-11 | 3.03E-11 | 1.02E-08 | 3.28E-09 | 4.27E-08 | 0.00E+00 | 5.66E-08 |
| 428 | 1 | 1.08E-10 | 4.24E-11 | 2.42E-11 | 1.43E-11 | 4.59E-09 | 1.47E-09 | 1.91E-08 | 1.45E-08 | 3.99E-08 |
| 429 | 1 | 3.88E-11 | 1.52E-11 | 8.71E-12 | 5.16E-12 | 3.43E-09 | 1.10E-09 | 4.77E-09 | 3.79E-07 | 3.88E-07 |
| 430 | 1 | 9.92E-10 | 3.90E-10 | 2.23E-10 | 1.32E-10 | 3.75E-08 | 1.20E-08 | 1.44E-07 | 3.94E-07 | 5.89E-07 |
| 431 | 1 | 2.85E-11 | 1.12E-11 | 6.42E-12 | 3.80E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.77E-08 | 7.77E-08 |
| 432 | 1 | 1.46E-10 | 5.73E-11 | 3.27E-11 | 1.94E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.11E-08 | 3.13E-08 |
| 433 | 6 | 3.55E-08 | 1.38E-08 | 8.00E-09 | 4.73E-09 | 9.52E-07 | 3.04E-07 | 4.42E-06 | 1.67E-06 | 7.41E-06 |
| 434 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 435 | 6 | 1.34E-09 | 5.23E-10 | 3.02E-10 | 1.79E-10 | 1.93E-08 | 6.17E-09 | 5.72E-08 | 0.00E+00 | 8.50E-08 |
| 436 | 1 | 7.27E-12 | 2.86E-12 | 1.63E-12 | 9.68E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-11 |
| 441 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 442 | 6 | 4.26E-08 | 1.66E-08 | 9.58E-09 | 5.67E-09 | 1.19E-06 | 3.80E-07 | 5.67E-06 | 2.99E-06 | 1.03E-05 |
| 443 | 6 | 1.98E-10 | 7.72E-11 | 4.46E-11 | 2.64E-11 | 0.00E+00 | 0.00E+00 | 2.95E-08 | 0.00E+00 | 2.99E-08 |
| 444 | 6 | 1.58E-08 | 6.17E-09 | 3.56E-09 | 2.11E-09 | 4.55E-07 | 1.45E-07 | 2.15E-06 | 1.14E-06 | 3.92E-06 |
| 452 | 1 | 8.88E-11 | 3.49E-11 | 2.00E-11 | 1.18E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-10 |
| 453 | 6 | 2.51E-08 | 9.78E-09 | 5.65E-09 | 3.34E-09 | 6.68E-07 | 2.13E-07 | 3.52E-06 | 1.84E-06 | 6.28E-06 |
| 454 | 1 | 2.21E-09 | 8.71E-10 | 4.98E-10 | 2.95E-10 | 5.17E-08 | 1.66E-08 | 2.16E-07 | 0.00E+00 | 2.88E-07 |
| 455 | 6 | 4.72E-09 | 1.84E-09 | 1.06E-09 | 6.28E-10 | 1.38E-07 | 4.41E-08 | 7.21E-07 | 4.16E-07 | 1.33E-06 |
| 458 | 1 | 2.90E-11 | 1.14E-11 | 6.53E-12 | 3.86E-12 | 0.00E+00 | 0.00E+00 | 5.16E-09 | 0.00E+00 | 5.21E-09 |
| 464 | 5 | 6.50E-10 | 2.70E-10 | 1.45E-10 | 8.63E-11 | 3.30E-08 | 1.06E-08 | 7.64E-08 | 0.00E+00 | 1.21E-07 |
| 477 | 1 | 8.17E-10 | 3.21E-10 | 1.84E-10 | 1.09E-10 | 4.70E-08 | 1.50E-08 | 1.14E-07 | 3.34E-07 | 5.11E-07 |
| 478 | 1 | 3.63E-09 | 1.43E-09 | 8.16E-10 | 4.83E-10 | 1.43E-07 | 4.57E-08 | 6.44E-07 | 5.75E-07 | 1.41E-06 |
| 479 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 480 | 6 | 4.53E-09 | 1.76E-09 | 1.02E-09 | 6.03E-10 | 9.43E-08 | 3.01E-08 | 5.95E-07 | 0.00E+00 | 7.27E-07 |
| 481 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-08 | 1.86E-08 |
| 482 | 6 | 2.77E-09 | 1.08E-09 | 6.23E-10 | 3.68E-10 | 3.40E-08 | 1.09E-08 | 2.52E-07 | 5.69E-08 | 3.58E-07 |
| 483 | 1 | 6.71E-09 | 2.64E-09 | 1.51E-09 | 8.93E-10 | 2.03E-07 | 6.50E-08 | 1.23E-06 | 0.00E+00 | 1.51E-06 |
| 484 | 1 | 9.31E-12 | 3.66E-12 | 2.09E-12 | 1.24E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.38E-08 | 3.38E-08 |
| 485 | 1 | 5.91E-09 | 2.32E-09 | 1.33E-09 | 7.86E-10 | 1.15E-07 | 3.68E-08 | 6.87E-07 | 0.00E+00 | 8.49E-07 |
| 488 | 6 | 1.62E-10 | 6.30E-11 | 3.64E-11 | 2.15E-11 | 0.00E+00 | 0.00E+00 | 2.68E-08 | 0.00E+00 | 2.71E-08 |
| 494 | 6 | 3.27E-08 | 1.27E-08 | 7.36E-09 | 4.36E-09 | 9.93E-07 | 3.17E-07 | 3.63E-06 | 0.00E+00 | 5.00E-06 |
| 498 | 1 | 3.24E-11 | 1.27E-11 | 7.27E-12 | 4.30E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.67E-11 |
| 499 | 1 | 1.53E-09 | 6.01E-10 | 3.43E-10 | 2.03E-10 | 1.14E-07 | 3.64E-08 | 2.87E-07 | 2.10E-05 | 2.15E-05 |
| 500 | 1 | 1.02E-09 | 4.00E-10 | 2.29E-10 | 1.35E-10 | 7.42E-08 | 2.38E-08 | 1.81E-07 | 1.26E-05 | 1.29E-05 |
| 502 | 6 | 1.07E-11 | 4.15E-12 | 2.40E-12 | 1.42E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-11 |
| 503 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 504 | 1 | 1.23E-09 | 4.84E-10 | 2.77E-10 | 1.64E-10 | 1.41E-07 | 4.51E-08 | 7.36E-07 | 0.00E+00 | 9.25E-07 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and Phase 2 Emissions** No Mitigation With EMFAC2014 Emission Factors
**Freeway Segments** with Revised Vehicle Speeds

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| FRWY1 | 1.71E-04 |
| FRWY2 | 2.37E-04 |
| FRWY3 | 1.94E-04 |
| FRWY4 | 2.11E-04 |
| FRWY5 | 1.66E-04 |
| FRWY6 | 2.44E-04 |
| FRWY7 | 1.94E-04 |
| FRWY8 | 1.83E-04 |
| FRWY9 | 2.29E-04 |
| FRWY10 | 2.15E-04 |
| FRWY11 | 1.10E-04 |
| FRWY12 | 3.13E-04 |
| FRWY13 | 2.40E-04 |
| FRWY14 | 3.60E-04 |
| FRWY15 | 2.37E-04 |
| FRWY16 | 4.04E-04 |
| FRWY17 | 5.17E-04 |
| FRWY18 | 4.12E-04 |
| FRWY19 | 1.55E-04 |
| FRWY20 | 1.41E-04 |
| FRWY21 | 5.77E-04 |
| FRWY22 | 3.40E-04 |
| FRWY23 | 3.47E-04 |
| FRWY24 | 7.78E-04 |
| FRWY25 | 4.73E-04 |
| FRWY26 | 3.34E-04 |
| FRWY27 | 4.34E-04 |
| FRWY28 | 6.04E-04 |

| | |
|---|---|
| FRWY29 | 6.06E-04 |
| FRWY30 | 5.83E-04 |
| FRWY31 | 1.37E-03 |
| FRWY32 | 4.50E-04 |
| FRWY33 | 7.99E-04 |
| FRWY34 | 6.64E-04 |
| FRWY35 | 1.33E-04 |
| FRWY36 | 6.91E-04 |
| FRWY37 | 2.81E-04 |
| FRWY294 | 4.84E-05 |
| FRWY295 | 1.73E-05 |
| FRWY296 | 2.99E-05 |
| FRWY297 | 2.49E-05 |
| FRWY299 | 2.73E-05 |
| FRWY75 | 2.64E-04 |
| FRWY76 | 2.41E-04 |
| FRWY77 | 4.33E-05 |
| FRWY78 | 1.34E-04 |
| FRWY79 | 1.68E-04 |
| FRWY80 | 1.70E-04 |
| FRWY81 | 2.53E-04 |
| FRWY82 | 1.71E-04 |
| FRWY83 | 1.87E-04 |
| FRWY84 | 1.10E-04 |
| FRWY85 | 2.19E-04 |
| FRWY86 | 6.73E-05 |
| FRWY87 | 1.19E-04 |
| FRWY101 | 8.45E-05 |
| FRWY102 | 4.43E-05 |
| FRWY103 | 8.49E-05 |
| FRWY104 | 1.47E-04 |
| FRWY105 | 4.45E-05 |
| FRWY106 | 5.68E-05 |
| FRWY107 | 7.01E-05 |
| FRWY108 | 1.82E-04 |

| | |
|---|---|
| FRWY109 | 6.83E-05 |
| FRWY110 | 1.10E-04 |
| FRWY111 | 3.02E-04 |
| FRWY112 | 5.40E-05 |
| FRWY113 | 1.14E-04 |
| FRWY114 | 1.26E-04 |
| FRWY129 | 5.56E-05 |
| FRWY130 | 4.88E-05 |
| FRWY131 | 4.00E-05 |
| FRWY132 | 1.63E-05 |
| FRWY133 | 5.99E-05 |
| FRWY167 | 1.94E-05 |
| FRWY168 | 1.58E-05 |
| FRWY169 | 8.30E-05 |
| FRWY171 | 2.96E-05 |
| FRWY172 | 4.91E-05 |
| FRWY173 | 4.59E-05 |
| FRWY174 | 2.14E-05 |
| FRWY175 | 3.60E-05 |
| FRWY176 | 3.45E-05 |
| FRWY134 | 5.43E-05 |
| FRWY135 | 6.61E-05 |
| FRWY136 | 4.01E-05 |
| FRWY137 | 5.42E-05 |
| FRWY138 | 8.77E-05 |
| FRWY139 | 7.25E-05 |
| FRWY140 | 6.01E-05 |
| FRWY141 | 4.90E-05 |
| FRWY142 | 3.14E-05 |
| FRWY143 | 6.17E-05 |
| FRWY144 | 8.46E-05 |

| | |
|---|---|
| 1.94E-02 | g/sec |
| 3.69E+00 | lbs/day |

## TRAFFIC VOLUMES

| ID | Arterial | From | 2031 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 830 | 80 | 210 | 2,450 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 650 | 80 | 220 | 2,490 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 680 | 80 | 230 | 2,520 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 740 | 90 | 240 | 2,570 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 770 | 90 | 250 | 2,620 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 790 | 90 | 260 | 2,630 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 810 | 90 | 260 | 2,640 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 830 | 90 | 270 | 2,670 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 920 | 100 | 310 | 2,860 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 950 | 100 | 310 | 2,890 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 1,030 | 100 | 320 | 2,910 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,440 | 130 | 420 | 3,230 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,500 | 140 | 460 | 3,360 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,540 | 140 | 480 | 3,480 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,540 | 140 | 480 | 3,490 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,610 | 150 | 490 | 3,500 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 2,230 | 180 | 590 | 3,780 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 2,490 | 190 | 620 | 3,830 |
| FRWY19 | SR60 | Market St to Main St | 2,630 | 200 | 670 | 3,950 |
| FRWY20 | SR60 | Main St to SR-91 | 3,010 | 230 | 760 | 4,200 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 5,080 | 340 | 1,200 | 6,960 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 5,210 | 350 | 1,250 | 7,120 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 5,350 | 360 | 1,290 | 7,190 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 5,890 | 380 | 1,370 | 7,420 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 7,110 | 430 | 1,510 | 7,770 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 7,720 | 400 | 1,420 | 7,330 |
| FRWY27 | SR60 | I-215 to Day St | 8,150 | 460 | 1,650 | 8,410 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 8,170 | 490 | 1,720 | 8,410 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 8,130 | 510 | 1,770 | 8,440 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 9,210 | 540 | 1,830 | 8,520 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 10,110 | 590 | 1,900 | 9,200 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 10,910 | 630 | 1,940 | 9,200 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 12,070 | 690 | 2,070 | 9,320 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,650 | 690 | 2,030 | 8,920 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 6,820 | 300 | 820 | 2,470 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 6,830 | 230 | 670 | 1,540 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 6,800 | 220 | 640 | 1,510 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 393 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 393 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 393 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 393 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 393 |
| FRWY75 | SR91 | I-15 to McKinley St | 1,160 | 90 | 330 | 2,010 |
| FRWY76 | SR91 | McKinley St to Pierce St | 1,320 | 100 | 360 | 2,090 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 1,320 | 100 | 360 | 2,090 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 1,410 | 100 | 370 | 2,100 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,530 | 100 | 390 | 2,120 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,610 | 100 | 400 | 2,150 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,680 | 110 | 410 | 2,170 |
| FRWY82 | SR91 | Adam St to Madison St | 1,730 | 110 | 430 | 2,200 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,740 | 110 | 430 | 2,210 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,660 | 90 | 380 | 2,010 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,640 | 90 | 380 | 2,000 |
| FRWY86 | SR91 | 14th St to University Ave | 1,660 | 80 | 340 | 1,860 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,790 | 90 | 350 | 1,880 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 2,930 | 100 | 300 | 1,090 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 2,040 | 70 | 250 | 1,040 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 1,610 | 60 | 220 | 1,000 |
| FRWY106 | I-10 | 22nd St to S 8th St | 1,500 | 60 | 210 | 990 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY107 | I-10 | S 8th St to S Hargrave St | 1,410 | 50 | 200 | 970 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 1,330 | 50 | 190 | 960 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 1,230 | 50 | 150 | 920 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 1,230 | 50 | 150 | 920 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 1,210 | 50 | 150 | 910 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 1,200 | 40 | 150 | 910 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 1,020 | 40 | 120 | 790 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 1,020 | 40 | 120 | 790 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 1,390 | 20 | 130 | 250 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,620 | 30 | 140 | 250 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,800 | 30 | 160 | 260 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,850 | 40 | 160 | 270 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,440 | 30 | 120 | 270 |
| FRWY167 | I-215 | Redlands Ave to D St | 480 | 10 | 50 | 310 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 620 | 20 | 70 | 400 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 590 | 20 | 70 | 390 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 320 | 10 | 40 | 330 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 330 | 10 | 50 | 390 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 750 | 30 | 80 | 420 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 470 | 20 | 70 | 440 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 710 | 30 | 90 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 760 | 30 | 100 | 590 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 380 | 30 | 90 | 880 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 370 | 20 | 90 | 870 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 340 | 20 | 90 | 870 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 300 | 20 | 70 | 810 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 270 | 20 | 70 | 800 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 1,200 | 60 | 180 | 780 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 1,140 | 60 | 180 | 800 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 1,070 | 60 | 160 | 710 |
| FRWY142 | SR-215 | Mill St to 2rd St | 1,080 | 60 | 160 | 700 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 1,020 | 50 | 140 | 640 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 890 | 40 | 110 | 580 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **No Mitigation**

Project Phase 1 and Phase 2 Emissions
Freeway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3570 | 830 | 80 | 210 | 2,450 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 16 | 5 | 171 | 2414 | 2609 |
| FRWY2 | 3440 | 650 | 80 | 220 | 2,490 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 16 | 5 | 179 | 2454 | 2656 |
| FRWY3 | 3510 | 680 | 80 | 230 | 2,520 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 16 | 5 | 188 | 2483 | 2694 |
| FRWY4 | 3640 | 740 | 90 | 240 | 2,570 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 18 | 6 | 196 | 2533 | 2754 |
| FRWY5 | 3730 | 770 | 90 | 250 | 2,620 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 18 | 6 | 204 | 2582 | 2812 |
| FRWY6 | 3770 | 790 | 90 | 260 | 2,630 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2592 | 2830 |
| FRWY7 | 3800 | 810 | 90 | 260 | 2,640 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2602 | 2840 |
| FRWY8 | 3860 | 830 | 90 | 270 | 2,670 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 18 | 6 | 220 | 2631 | 2877 |
| FRWY9 | 4190 | 920 | 100 | 310 | 2,860 | 1792 | 1.113 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2819 | 3100 |
| FRWY10 | 4250 | 950 | 100 | 310 | 2,890 | 1665 | 1.034 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2848 | 3130 |
| FRWY11 | 4360 | 1,030 | 100 | 320 | 2,910 | 849 | 0.527 | 2 | 0 | 0 | 0 | 20 | 7 | 261 | 2868 | 3158 |
| FRWY12 | 5220 | 1,440 | 130 | 420 | 3,230 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 26 | 9 | 342 | 3183 | 3564 |
| FRWY13 | 5460 | 1,500 | 140 | 460 | 3,360 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 28 | 9 | 375 | 3311 | 3727 |
| FRWY14 | 5640 | 1,540 | 140 | 480 | 3,480 | 2444 | 1.518 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3430 | 3862 |
| FRWY15 | 5650 | 1,540 | 140 | 480 | 3,490 | 1608 | 0.999 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3439 | 3872 |
| FRWY16 | 5750 | 1,610 | 150 | 490 | 3,500 | 2722 | 1.691 | 3 | 0 | 0 | 0 | 30 | 10 | 400 | 3449 | 3893 |
| FRWY17 | 6780 | 2,230 | 180 | 590 | 3,780 | 3198 | 1.987 | 4 | 0 | 0 | 0 | 37 | 12 | 481 | 3725 | 4259 |
| FRWY18 | 7130 | 2,490 | 190 | 620 | 3,830 | 2509 | 1.559 | 4 | 0 | 0 | 0 | 39 | 13 | 506 | 3774 | 4336 |
| FRWY19 | 7450 | 2,630 | 200 | 670 | 3,950 | 910 | 0.565 | 4 | 0 | 0 | 0 | 41 | 13 | 546 | 3893 | 4498 |
| FRWY20 | 8200 | 3,010 | 230 | 760 | 4,200 | 774 | 0.481 | 5 | 0 | 0 | 1 | 47 | 15 | 620 | 4139 | 4827 |
| FRWY21 | 13580 | 5,080 | 340 | 1,200 | 6,960 | 1798 | 1.117 | 8 | 1 | 0 | 1 | 69 | 23 | 978 | 6859 | 7940 |
| FRWY22 | 13930 | 5,210 | 350 | 1,250 | 7,120 | 1035 | 0.643 | 9 | 1 | 1 | 1 | 71 | 24 | 1019 | 7017 | 8141 |
| FRWY23 | 14190 | 5,350 | 360 | 1,290 | 7,190 | 1042 | 0.647 | 9 | 1 | 1 | 1 | 73 | 24 | 1052 | 7086 | 8246 |
| FRWY24 | 15060 | 5,890 | 380 | 1,370 | 7,420 | 2260 | 1.404 | 10 | 1 | 1 | 1 | 77 | 26 | 1117 | 7312 | 8544 |
| FRWY25 | 16820 | 7,110 | 430 | 1,510 | 7,770 | 1305 | 0.811 | 12 | 1 | 1 | 1 | 87 | 29 | 1231 | 7657 | 9019 |
| FRWY26 | 16870 | 7,720 | 400 | 1,420 | 7,330 | 977 | 0.607 | 13 | 1 | 1 | 1 | 81 | 27 | 1158 | 7224 | 8505 |
| FRWY27 | 18670 | 8,150 | 460 | 1,650 | 8,410 | 1186 | 0.737 | 14 | 1 | 1 | 1 | 93 | 31 | 1345 | 8288 | 9774 |
| FRWY28 | 18790 | 8,170 | 490 | 1,720 | 8,410 | 1642 | 1.020 | 14 | 1 | 1 | 1 | 99 | 33 | 1402 | 8288 | 9840 |
| FRWY29 | 18850 | 8,130 | 510 | 1,770 | 8,440 | 1636 | 1.016 | 13 | 1 | 1 | 1 | 103 | 34 | 1443 | 8318 | 9915 |
| FRWY30 | 20100 | 9,210 | 540 | 1,830 | 8,520 | 1555 | 0.966 | 15 | 1 | 1 | 2 | 110 | 36 | 1492 | 8397 | 10053 |
| FRWY31 | 21800 | 10,110 | 590 | 1,900 | 9,200 | 3384 | 2.102 | 17 | 1 | 1 | 2 | 120 | 40 | 1549 | 9067 | 10796 |
| FRWY32 | 22680 | 10,910 | 630 | 1,940 | 9,200 | 1112 | 0.691 | 18 | 1 | 1 | 2 | 128 | 42 | 1582 | 9067 | 10841 |
| FRWY33 | 24150 | 12,070 | 690 | 2,070 | 9,320 | 1935 | 1.202 | 20 | 1 | 1 | 2 | 140 | 46 | 1688 | 9185 | 11084 |
| FRWY34 | 24290 | 12,650 | 690 | 2,030 | 8,920 | 1675 | 1.041 | 21 | 1 | 1 | 2 | 140 | 46 | 1655 | 8791 | 10658 |
| FRWY35 | 10410 | 6,820 | 300 | 820 | 2,470 | 1143 | 0.710 | 11 | 1 | 1 | 1 | 61 | 20 | 669 | 2434 | 3198 |
| FRWY36 | 9270 | 6,830 | 230 | 670 | 1,540 | 9120 | 5.665 | 11 | 1 | 1 | 1 | 47 | 15 | 546 | 1518 | 2140 |
| FRWY37 | 9170 | 6,800 | 220 | 640 | 1,510 | 3802 | 2.362 | 11 | 1 | 1 | 1 | 45 | 15 | 522 | 1488 | 2083 |
| FRWY294 | 393 | 0 | 0 | 0 | 393 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY295 | 393 | 0 | 0 | 0 | 393 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY296 | 393 | 0 | 0 | 0 | 393 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY297 | 393 | 0 | 0 | 0 | 393 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY299 | 393 | 0 | 0 | 0 | 393 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY75 | 3590 | 1,160 | 90 | 330 | 2,010 | 2861 | 1.777 | 2 | 0 | 0 | 0 | 18 | 6 | 269 | 1981 | 2277 |
| FRWY76 | 3870 | 1,320 | 100 | 360 | 2,090 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 |
| FRWY77 | 3870 | 1,320 | 100 | 360 | 2,090 | 450 | 0.280 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 |
| FRWY78 | 3980 | 1,410 | 100 | 370 | 2,100 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 20 | 7 | 302 | 2070 | 2401 |
| FRWY79 | 4140 | 1,530 | 100 | 390 | 2,120 | 1713 | 1.064 | 3 | 0 | 0 | 0 | 20 | 7 | 318 | 2089 | 2437 |
| FRWY80 | 4260 | 1,610 | 100 | 400 | 2,150 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 20 | 7 | 326 | 2119 | 2475 |
| FRWY81 | 4370 | 1,680 | 110 | 410 | 2,170 | 2512 | 1.560 | 3 | 0 | 0 | 0 | 22 | 7 | 334 | 2139 | 2506 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY82 | 4470 | 1,730 | 110 | 430 | 2,200 | 1674 | 1.040 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2168 | 2552 |
| FRWY83 | 4490 | 1,740 | 110 | 430 | 2,210 | 1819 | 1.130 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2178 | 2562 |
| FRWY84 | 4140 | 1,660 | 90 | 380 | 2,010 | 1182 | 0.734 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1981 | 2318 |
| FRWY85 | 4110 | 1,640 | 90 | 380 | 2,000 | 2360 | 1.466 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1971 | 2308 |
| FRWY86 | 3940 | 1,660 | 80 | 340 | 1,860 | 783 | 0.486 | 3 | 0 | 0 | 0 | 16 | 5 | 277 | 1833 | 2135 |
| FRWY87 | 4110 | 1,790 | 90 | 350 | 1,880 | 1370 | 0.851 | 3 | 0 | 0 | 0 | 18 | 6 | 285 | 1853 | 2166 |
| FRWY101 | 4420 | 2,930 | 100 | 300 | 1,090 | 1703 | 1.058 | 5 | 0 | 0 | 1 | 20 | 7 | 245 | 1074 | 1352 |
| FRWY102 | 3950 | 2,520 | 90 | 280 | 1,060 | 925 | 0.575 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 |
| FRWY103 | 3950 | 2,520 | 90 | 280 | 1,060 | 1770 | 1.100 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 |
| FRWY104 | 3400 | 2,040 | 70 | 250 | 1,040 | 3182 | 1.977 | 3 | 0 | 0 | 0 | 14 | 5 | 204 | 1025 | 1252 |
| FRWY105 | 2890 | 1,610 | 60 | 220 | 1,000 | 1010 | 0.627 | 3 | 0 | 0 | 0 | 12 | 4 | 179 | 986 | 1184 |
| FRWY106 | 2760 | 1,500 | 60 | 210 | 990 | 1305 | 0.811 | 2 | 0 | 0 | 0 | 12 | 4 | 171 | 976 | 1166 |
| FRWY107 | 2630 | 1,410 | 50 | 200 | 970 | 1655 | 1.028 | 2 | 0 | 0 | 0 | 10 | 3 | 163 | 956 | 1135 |
| FRWY108 | 2530 | 1,330 | 50 | 190 | 960 | 4341 | 2.697 | 2 | 0 | 0 | 0 | 10 | 3 | 155 | 946 | 1117 |
| FRWY109 | 2350 | 1,230 | 50 | 150 | 920 | 1728 | 1.073 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 |
| FRWY110 | 2350 | 1,230 | 50 | 150 | 920 | 2788 | 1.732 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 |
| FRWY111 | 2320 | 1,210 | 50 | 150 | 910 | 7717 | 4.794 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 897 | 1035 |
| FRWY112 | 2300 | 1,200 | 40 | 150 | 910 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 8 | 3 | 122 | 897 | 1032 |
| FRWY113 | 1970 | 1,020 | 40 | 120 | 790 | 3380 | 2.100 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 |
| FRWY114 | 1970 | 1,020 | 40 | 120 | 790 | 3719 | 2.310 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 |
| FRWY129 | 1790 | 1,390 | 20 | 130 | 250 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 106 | 246 | 361 |
| FRWY130 | 2040 | 1,620 | 30 | 140 | 250 | 3830 | 2.379 | 3 | 0 | 0 | 0 | 6 | 2 | 114 | 246 | 372 |
| FRWY131 | 2250 | 1,800 | 30 | 160 | 260 | 2967 | 1.843 | 3 | 0 | 0 | 0 | 6 | 2 | 130 | 256 | 398 |
| FRWY132 | 2320 | 1,850 | 40 | 160 | 270 | 1163 | 0.722 | 3 | 0 | 0 | 0 | 8 | 3 | 130 | 266 | 411 |
| FRWY133 | 1860 | 1,440 | 30 | 120 | 270 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 266 | 375 |
| FRWY167 | 850 | 480 | 10 | 50 | 310 | 1471 | 0.914 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 306 | 350 |
| FRWY168 | 1110 | 620 | 20 | 70 | 400 | 916 | 0.569 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 394 | 458 |
| FRWY169 | 1070 | 590 | 20 | 70 | 390 | 4924 | 3.059 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 384 | 448 |
| FRWY171 | 700 | 320 | 10 | 40 | 330 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 325 | 361 |
| FRWY172 | 780 | 330 | 10 | 50 | 390 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 384 | 428 |
| FRWY173 | 1280 | 750 | 30 | 80 | 420 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 414 | 489 |
| FRWY174 | 1000 | 470 | 20 | 70 | 440 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 434 | 497 |
| FRWY175 | 1370 | 710 | 30 | 90 | 540 | 1547 | 0.961 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 532 | 615 |
| FRWY176 | 1480 | 760 | 30 | 100 | 590 | 1359 | 0.844 | 1 | 0 | 0 | 0 | 6 | 2 | 82 | 581 | 673 |
| FRWY134 | 1380 | 380 | 30 | 90 | 880 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 867 | 950 |
| FRWY135 | 1350 | 370 | 20 | 90 | 870 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 |
| FRWY136 | 1320 | 340 | 20 | 90 | 870 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 |
| FRWY137 | 1200 | 300 | 20 | 70 | 810 | 1516 | 0.942 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 798 | 861 |
| FRWY138 | 1160 | 270 | 20 | 70 | 800 | 2485 | 1.544 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 788 | 851 |
| FRWY139 | 2220 | 1,200 | 60 | 180 | 780 | 1950 | 1.211 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 769 | 934 |
| FRWY140 | 2180 | 1,140 | 60 | 180 | 800 | 1581 | 0.982 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 788 | 954 |
| FRWY141 | 2000 | 1,070 | 60 | 160 | 710 | 1447 | 0.899 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 700 | 849 |
| FRWY142 | 2000 | 1,080 | 60 | 160 | 700 | 938 | 0.583 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 690 | 839 |
| FRWY143 | 1850 | 1,020 | 50 | 140 | 640 | 2032 | 1.262 | 2 | 0 | 0 | 0 | 10 | 3 | 114 | 631 | 760 |
| FRWY144 | 1620 | 890 | 40 | 110 | 580 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 8 | 3 | 90 | 572 | 674 |

**Vehicle Fleet Emissions - Non-Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0028 | 0.0052 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0025 | 0.0047 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0030 | 0.0055 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0026 | 0.0049 |

**Segment Emissions**

| Freeway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 6 | 1.63E-08 | 6.35E-09 | 3.67E-09 | 2.17E-09 | 1.58E-06 | 5.06E-07 | 6.15E-06 | 1.62E-04 | | 1.71E-04 |
| FRWY2 | 6 | 1.75E-08 | 6.80E-09 | 3.93E-09 | 2.32E-09 | 2.17E-06 | 6.92E-07 | 8.81E-06 | 2.26E-04 | | 2.37E-04 |
| FRWY3 | 6 | 1.47E-08 | 5.74E-09 | 3.32E-09 | 1.96E-09 | 1.75E-06 | 5.58E-07 | 7.43E-06 | 1.84E-04 | | 1.94E-04 |
| FRWY4 | 6 | 1.70E-08 | 6.64E-09 | 3.84E-09 | 2.27E-09 | 2.09E-06 | 6.67E-07 | 8.24E-06 | 2.00E-04 | | 2.11E-04 |
| FRWY5 | 6 | 1.37E-08 | 5.32E-09 | 3.07E-09 | 1.82E-09 | 1.61E-06 | 5.14E-07 | 6.61E-06 | 1.57E-04 | | 1.66E-04 |
| FRWY6 | 6 | 2.06E-08 | 8.01E-09 | 4.63E-09 | 2.74E-09 | 2.36E-06 | 7.54E-07 | 1.01E-05 | 2.31E-04 | | 2.44E-04 |
| FRWY7 | 6 | 1.67E-08 | 6.49E-09 | 3.75E-09 | 2.22E-09 | 1.87E-06 | 5.96E-07 | 7.98E-06 | 1.83E-04 | | 1.94E-04 |
| FRWY8 | 6 | 1.59E-08 | 6.20E-09 | 3.58E-09 | 2.12E-09 | 1.74E-06 | 5.55E-07 | 7.72E-06 | 1.73E-04 | | 1.83E-04 |
| FRWY9 | 6 | 2.06E-08 | 8.01E-09 | 4.63E-09 | 2.74E-09 | 2.25E-06 | 7.20E-07 | 1.03E-05 | 2.16E-04 | | 2.29E-04 |
| FRWY10 | 6 | 1.97E-08 | 7.69E-09 | 4.44E-09 | 2.63E-09 | 2.09E-06 | 6.69E-07 | 9.60E-06 | 2.02E-04 | | 2.15E-04 |
| FRWY11 | 6 | 1.09E-08 | 4.25E-09 | 2.45E-09 | 1.45E-09 | 1.07E-06 | 3.41E-07 | 5.05E-06 | 1.04E-04 | | 1.10E-04 |
| FRWY12 | 7 | 3.60E-08 | 1.43E-08 | 8.06E-09 | 4.78E-09 | 3.47E-06 | 1.10E-06 | 1.68E-05 | 2.92E-04 | | 3.13E-04 |
| FRWY13 | 7 | 2.76E-08 | 1.09E-08 | 6.16E-09 | 3.65E-09 | 2.74E-06 | 8.72E-07 | 1.35E-05 | 2.23E-04 | | 2.40E-04 |
| FRWY14 | 7 | 4.09E-08 | 1.62E-08 | 9.16E-09 | 5.43E-09 | 3.97E-06 | 1.26E-06 | 2.04E-05 | 3.34E-04 | | 3.60E-04 |
| FRWY15 | 7 | 2.69E-08 | 1.07E-08 | 6.03E-09 | 3.57E-09 | 2.61E-06 | 8.30E-07 | 1.34E-05 | 2.21E-04 | | 2.37E-04 |
| FRWY16 | 7 | 4.77E-08 | 1.89E-08 | 1.07E-08 | 6.32E-09 | 4.74E-06 | 1.50E-06 | 2.32E-05 | 3.74E-04 | | 4.04E-04 |
| FRWY17 | 7 | 7.76E-08 | 3.07E-08 | 1.74E-08 | 1.03E-08 | 6.68E-06 | 2.12E-06 | 3.28E-05 | 4.75E-04 | | 5.17E-04 |
| FRWY18 | 7 | 6.80E-08 | 2.69E-08 | 1.52E-08 | 9.01E-09 | 5.53E-06 | 1.76E-06 | 2.70E-05 | 3.78E-04 | | 4.12E-04 |
| FRWY19 | 7 | 2.60E-08 | 1.03E-08 | 5.82E-09 | 3.45E-09 | 2.11E-06 | 6.71E-07 | 1.06E-05 | 1.41E-04 | | 1.55E-04 |
| FRWY20 | 7 | 2.53E-08 | 1.00E-08 | 5.67E-09 | 3.36E-09 | 2.07E-06 | 6.56E-07 | 1.02E-05 | 1.28E-04 | | 1.41E-04 |
| FRWY21 | 6 | 1.14E-07 | 4.44E-08 | 2.56E-08 | 1.52E-08 | 7.69E-06 | 2.45E-06 | 4.01E-05 | 5.27E-04 | | 5.77E-04 |
| FRWY22 | 6 | 6.73E-08 | 2.62E-08 | 1.51E-08 | 8.95E-09 | 4.55E-06 | 1.45E-06 | 2.41E-05 | 3.10E-04 | | 3.40E-04 |
| FRWY23 | 6 | 6.95E-08 | 2.71E-08 | 1.56E-08 | 9.26E-09 | 4.72E-06 | 1.51E-06 | 2.50E-05 | 3.15E-04 | | 3.47E-04 |
| FRWY24 | 6 | 1.66E-07 | 6.47E-08 | 3.74E-08 | 2.21E-08 | 1.08E-05 | 3.45E-06 | 5.76E-05 | 7.06E-04 | | 7.78E-04 |
| FRWY25 | 6 | 1.16E-07 | 4.51E-08 | 2.60E-08 | 1.54E-08 | 7.06E-06 | 2.25E-06 | 3.66E-05 | 4.27E-04 | | 4.73E-04 |
| FRWY26 | 6 | 9.41E-08 | 3.66E-08 | 2.12E-08 | 1.25E-08 | 4.91E-06 | 1.57E-06 | 2.58E-05 | 3.01E-04 | | 3.34E-04 |
| FRWY27 | 7 | 1.05E-07 | 4.16E-08 | 2.35E-08 | 1.39E-08 | 6.33E-06 | 2.01E-06 | 3.40E-05 | 3.92E-04 | | 4.34E-04 |
| FRWY28 | 7 | 1.46E-07 | 5.78E-08 | 3.26E-08 | 1.94E-08 | 9.33E-06 | 2.97E-06 | 4.91E-05 | 5.43E-04 | | 6.04E-04 |
| FRWY29 | 7 | 1.45E-07 | 5.73E-08 | 3.24E-08 | 1.92E-08 | 9.68E-06 | 3.08E-06 | 5.03E-05 | 5.43E-04 | | 6.06E-04 |
| FRWY30 | 7 | 1.56E-07 | 6.17E-08 | 3.48E-08 | 2.07E-08 | 9.74E-06 | 3.10E-06 | 4.94E-05 | 5.21E-04 | | 5.83E-04 |
| FRWY31 | 7 | 3.72E-07 | 1.47E-07 | 8.32E-08 | 4.94E-08 | 2.32E-05 | 7.36E-06 | 1.12E-04 | 1.22E-03 | | 1.37E-03 |
| FRWY32 | 7 | 1.32E-07 | 5.23E-08 | 2.95E-08 | 1.75E-08 | 8.13E-06 | 2.58E-06 | 3.75E-05 | 4.02E-04 | | 4.50E-04 |
| FRWY33 | 7 | 2.54E-07 | 1.01E-07 | 5.68E-08 | 3.37E-08 | 1.55E-05 | 4.92E-06 | 6.96E-05 | 7.09E-04 | | 7.99E-04 |
| FRWY34 | 7 | 2.30E-07 | 9.13E-08 | 5.16E-08 | 3.06E-08 | 1.34E-05 | 4.26E-06 | 5.91E-05 | 5.87E-04 | | 6.64E-04 |
| FRWY35 | 7 | 8.48E-08 | 3.36E-08 | 1.90E-08 | 1.12E-08 | 3.98E-06 | 1.26E-06 | 1.63E-05 | 1.11E-04 | | 1.33E-04 |
| FRWY36 | 7 | 6.78E-07 | 2.68E-07 | 1.52E-07 | 8.99E-08 | 2.43E-05 | 7.73E-06 | 1.06E-04 | 5.52E-04 | | 6.91E-04 |
| FRWY37 | 7 | 2.81E-07 | 1.11E-07 | 6.29E-08 | 3.73E-08 | 9.70E-06 | 3.08E-06 | 4.23E-05 | 2.26E-04 | | 2.81E-04 |
| FRWY294 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.84E-05 | | 4.84E-05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY295 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-05 | | 1.73E-05 |
| FRWY296 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.99E-05 | | 2.99E-05 |
| FRWY297 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.49E-05 | | 2.49E-05 |
| FRWY299 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.73E-05 | | 2.73E-05 |
| FRWY75 | 3 | 3.85E-08 | 1.52E-08 | 8.64E-09 | 5.12E-09 | 3.24E-06 | 1.03E-06 | 1.76E-05 | 2.42E-04 | | 2.64E-04 |
| FRWY76 | 3 | 3.83E-08 | 1.51E-08 | 8.59E-09 | 5.09E-09 | 3.14E-06 | 1.00E-06 | 1.67E-05 | 2.20E-04 | | 2.41E-04 |
| FRWY77 | 3 | 6.89E-09 | 2.71E-09 | 1.55E-09 | 9.16E-10 | 5.66E-07 | 1.81E-07 | 3.01E-06 | 3.96E-05 | | 4.33E-05 |
| FRWY78 | 3 | 2.26E-08 | 8.91E-09 | 5.08E-09 | 3.01E-09 | 1.74E-06 | 5.56E-07 | 9.52E-06 | 1.22E-04 | | 1.34E-04 |
| FRWY79 | 3 | 3.04E-08 | 1.20E-08 | 6.82E-09 | 4.04E-09 | 2.15E-06 | 6.88E-07 | 1.24E-05 | 1.53E-04 | | 1.68E-04 |
| FRWY80 | 3 | 3.18E-08 | 1.25E-08 | 7.14E-09 | 4.23E-09 | 2.14E-06 | 6.84E-07 | 1.27E-05 | 1.54E-04 | | 1.70E-04 |
| FRWY81 | 3 | 4.90E-08 | 1.93E-08 | 1.10E-08 | 6.51E-09 | 3.47E-06 | 1.11E-06 | 1.92E-05 | 2.29E-04 | | 2.53E-04 |
| FRWY82 | 3 | 3.36E-08 | 1.32E-08 | 7.54E-09 | 4.47E-09 | 2.32E-06 | 7.39E-07 | 1.34E-05 | 1.55E-04 | | 1.71E-04 |
| FRWY83 | 3 | 3.67E-08 | 1.45E-08 | 8.24E-09 | 4.88E-09 | 2.52E-06 | 8.03E-07 | 1.45E-05 | 1.69E-04 | | 1.87E-04 |
| FRWY84 | 3 | 2.28E-08 | 8.96E-09 | 5.11E-09 | 3.03E-09 | 1.34E-06 | 4.27E-07 | 8.35E-06 | 1.00E-04 | | 1.10E-04 |
| FRWY85 | 3 | 4.49E-08 | 1.77E-08 | 1.01E-08 | 5.97E-09 | 2.67E-06 | 8.53E-07 | 1.67E-05 | 1.99E-04 | | 2.19E-04 |
| FRWY86 | 3 | 1.51E-08 | 5.94E-09 | 3.38E-09 | 2.00E-09 | 7.88E-07 | 2.52E-07 | 4.95E-06 | 6.13E-05 | | 6.73E-05 |
| FRWY87 | 3 | 2.85E-08 | 1.12E-08 | 6.38E-09 | 3.78E-09 | 1.55E-06 | 4.95E-07 | 8.92E-06 | 1.08E-04 | | 1.19E-04 |
| FRWY101 | 7 | 5.43E-08 | 2.15E-08 | 1.21E-08 | 7.20E-09 | 1.98E-06 | 6.28E-07 | 8.87E-06 | 7.29E-05 | | 8.45E-05 |
| FRWY102 | 7 | 2.54E-08 | 1.00E-08 | 5.67E-09 | 3.36E-09 | 9.66E-07 | 3.07E-07 | 4.50E-06 | 3.85E-05 | | 4.43E-05 |
| FRWY103 | 7 | 4.85E-08 | 1.92E-08 | 1.09E-08 | 6.43E-09 | 1.85E-06 | 5.87E-07 | 8.61E-06 | 7.37E-05 | | 8.49E-05 |
| FRWY104 | 7 | 7.06E-08 | 2.80E-08 | 1.58E-08 | 9.36E-09 | 2.58E-06 | 8.21E-07 | 1.38E-05 | 1.30E-04 | | 1.47E-04 |
| FRWY105 | 7 | 1.77E-08 | 7.01E-09 | 3.96E-09 | 2.35E-09 | 7.03E-07 | 2.23E-07 | 3.86E-06 | 3.97E-05 | | 4.45E-05 |
| FRWY106 | 7 | 2.13E-08 | 8.43E-09 | 4.76E-09 | 2.82E-09 | 9.08E-07 | 2.89E-07 | 4.76E-06 | 5.08E-05 | | 5.68E-05 |
| FRWY107 | 7 | 2.54E-08 | 1.01E-08 | 5.68E-09 | 3.37E-09 | 9.60E-07 | 3.05E-07 | 5.75E-06 | 6.31E-05 | | 7.01E-05 |
| FRWY108 | 7 | 6.28E-08 | 2.49E-08 | 1.40E-08 | 8.33E-09 | 2.52E-06 | 8.00E-07 | 1.43E-05 | 1.64E-04 | | 1.82E-04 |
| FRWY109 | 7 | 2.31E-08 | 9.16E-09 | 5.17E-09 | 3.07E-09 | 1.00E-06 | 3.18E-07 | 4.50E-06 | 6.25E-05 | | 6.83E-05 |
| FRWY110 | 7 | 3.73E-08 | 1.48E-08 | 8.34E-09 | 4.95E-09 | 1.62E-06 | 5.14E-07 | 7.26E-06 | 1.01E-04 | | 1.10E-04 |
| FRWY111 | 7 | 1.02E-07 | 4.02E-08 | 2.27E-08 | 1.35E-08 | 4.48E-06 | 1.42E-06 | 2.01E-05 | 2.76E-04 | | 3.02E-04 |
| FRWY112 | 7 | 1.81E-08 | 7.15E-09 | 4.04E-09 | 2.40E-09 | 6.42E-07 | 2.04E-07 | 3.61E-06 | 4.95E-05 | | 5.40E-05 |
| FRWY113 | 7 | 3.75E-08 | 1.49E-08 | 8.39E-09 | 4.97E-09 | 1.57E-06 | 4.98E-07 | 7.05E-06 | 1.05E-04 | | 1.14E-04 |
| FRWY114 | 7 | 4.13E-08 | 1.63E-08 | 9.23E-09 | 5.47E-09 | 1.73E-06 | 5.48E-07 | 7.75E-06 | 1.15E-04 | | 1.26E-04 |
| FRWY129 | 7 | 6.77E-08 | 2.68E-08 | 1.51E-08 | 8.98E-09 | 1.04E-06 | 3.30E-07 | 1.01E-05 | 4.40E-05 | | 5.56E-05 |
| FRWY130 | 7 | 6.75E-08 | 2.67E-08 | 1.51E-08 | 8.95E-09 | 1.33E-06 | 4.24E-07 | 9.31E-06 | 3.76E-05 | | 4.88E-05 |
| FRWY131 | 7 | 5.81E-08 | 2.30E-08 | 1.30E-08 | 7.70E-09 | 1.03E-06 | 3.28E-07 | 8.25E-06 | 3.03E-05 | | 4.00E-05 |
| FRWY132 | 7 | 2.34E-08 | 9.27E-09 | 5.24E-09 | 3.10E-09 | 5.40E-07 | 1.71E-07 | 3.23E-06 | 1.23E-05 | | 1.63E-05 |
| FRWY133 | 7 | 7.11E-08 | 2.82E-08 | 1.59E-08 | 9.43E-09 | 1.58E-06 | 5.02E-07 | 9.47E-06 | 4.82E-05 | | 5.99E-05 |
| FRWY167 | 7 | 7.68E-09 | 3.04E-09 | 1.72E-09 | 1.02E-09 | 1.71E-07 | 5.42E-08 | 1.28E-06 | 1.79E-05 | | 1.94E-05 |
| FRWY168 | 7 | 6.18E-09 | 2.45E-09 | 1.38E-09 | 8.19E-10 | 2.13E-07 | 6.75E-08 | 1.11E-06 | 1.44E-05 | | 1.58E-05 |
| FRWY169 | 7 | 3.16E-08 | 1.25E-08 | 7.07E-09 | 4.19E-09 | 1.14E-06 | 3.63E-07 | 5.99E-06 | 7.55E-05 | | 8.30E-05 |
| FRWY171 | 7 | 7.47E-09 | 2.96E-09 | 1.67E-09 | 9.90E-10 | 2.49E-07 | 7.91E-08 | 1.49E-06 | 2.78E-05 | | 2.96E-05 |
| FRWY172 | 7 | 1.08E-08 | 4.27E-09 | 2.41E-09 | 1.43E-09 | 3.48E-07 | 1.11E-07 | 2.61E-06 | 4.60E-05 | | 4.91E-05 |
| FRWY173 | 7 | 2.04E-08 | 8.08E-09 | 4.56E-09 | 2.71E-09 | 8.70E-07 | 2.77E-07 | 3.48E-06 | 4.13E-05 | | 4.59E-05 |
| FRWY174 | 7 | 5.80E-09 | 2.30E-09 | 1.30E-09 | 7.70E-10 | 2.63E-07 | 8.37E-08 | 1.38E-06 | 1.96E-05 | | 2.14E-05 |
| FRWY175 | 7 | 1.19E-08 | 4.73E-09 | 2.67E-09 | 1.58E-09 | 5.38E-07 | 1.71E-07 | 2.42E-06 | 3.28E-05 | | 3.60E-05 |
| FRWY176 | 7 | 1.12E-08 | 4.45E-09 | 2.51E-09 | 1.49E-09 | 4.73E-07 | 1.50E-07 | 2.36E-06 | 3.15E-05 | | 3.45E-05 |
| FRWY134 | 6 | 6.56E-09 | 2.56E-09 | 1.48E-09 | 8.74E-10 | 5.22E-07 | 1.67E-07 | 2.32E-06 | 5.13E-05 | | 5.43E-05 |
| FRWY135 | 6 | 7.90E-09 | 3.08E-09 | 1.78E-09 | 1.05E-09 | 4.30E-07 | 1.37E-07 | 2.86E-06 | 6.26E-05 | | 6.61E-05 |
| FRWY136 | 6 | 4.40E-09 | 1.71E-09 | 9.90E-10 | 5.86E-10 | 2.61E-07 | 8.34E-08 | 1.74E-06 | 3.80E-05 | | 4.01E-05 |
| FRWY137 | 6 | 5.67E-09 | 2.21E-09 | 1.28E-09 | 7.55E-10 | 3.81E-07 | 1.22E-07 | 1.97E-06 | 5.17E-05 | | 5.42E-05 |
| FRWY138 | 6 | 8.37E-09 | 3.26E-09 | 1.88E-09 | 1.11E-09 | 6.25E-07 | 2.00E-07 | 3.23E-06 | 8.36E-05 | | 8.77E-05 |
| FRWY139 | 6 | 2.92E-08 | 1.14E-08 | 6.57E-09 | 3.89E-09 | 1.47E-06 | 4.70E-07 | 6.53E-06 | 6.40E-05 | | 7.25E-05 |
| FRWY140 | 3 | 2.09E-08 | 8.23E-09 | 4.69E-09 | 2.78E-09 | 1.19E-06 | 3.81E-07 | 5.29E-06 | 5.32E-05 | | 6.01E-05 |
| FRWY141 | 3 | 1.80E-08 | 7.07E-09 | 4.03E-09 | 2.39E-09 | 1.09E-06 | 3.49E-07 | 4.31E-06 | 4.32E-05 | | 4.90E-05 |
| FRWY142 | 3 | 1.18E-08 | 4.63E-09 | 2.64E-09 | 1.56E-09 | 7.08E-07 | 2.26E-07 | 2.79E-06 | 2.76E-05 | | 3.14E-05 |
| FRWY143 | 3 | 2.41E-08 | 9.46E-09 | 5.40E-09 | 3.20E-09 | 1.28E-06 | 4.08E-07 | 5.29E-06 | 5.47E-05 | | 6.17E-05 |
| FRWY144 | 3 | 3.22E-08 | 1.27E-08 | 7.23E-09 | 4.28E-09 | 1.57E-06 | 5.01E-07 | 6.38E-06 | 7.61E-05 | | 8.46E-05 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013

**Project Phase 1 and Phase 2 Emissions**

**Freeway TO Ports Segments** No Mitigation

**with EMFAC2014 Emission Factors**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| 230 | 2.69E-05 |
| 229 | 1.68E-05 |
| 228 | 7.10E-06 |
| 227 | 1.14E-05 |
| 226 | 2.92E-05 |
| 225 | 1.41E-05 |
| 224 | 3.72E-05 |
| 223 | 1.62E-05 |
| 222 | 1.68E-05 |
| 221 | 1.58E-05 |
| 220 | 1.99E-05 |
| 219 | 3.37E-05 |
| 218 | 3.69E-05 |
| 217 | 4.22E-05 |
| 216 | 3.42E-05 |
| 215 | 1.97E-05 |
| 214 | 2.14E-05 |
| 213 | 3.35E-05 |
| 212 | 3.21E-05 |
| 211 | 2.41E-05 |
| 210 | 5.12E-05 |
| 209 | 2.71E-05 |
| 263 | 2.99E-05 |
| 264 | 1.45E-05 |
| 265 | 9.84E-06 |
| 266 | 9.22E-06 |
| 267 | 9.00E-06 |
| 268 | 1.38E-05 |

| | |
|---|---|
| 269 | 2.64E-05 |
| 270 | 2.46E-05 |
| 271 | 1.45E-05 |
| 272 | 9.24E-06 |
| 273 | 3.39E-06 |
| 274 | 2.36E-05 |
| 275 | 2.41E-05 |
| 276 | 2.43E-05 |
| 277 | 1.43E-05 |
| 278 | 2.41E-05 |
| 279 | 2.53E-05 |
| 280 | 2.06E-05 |
| 281 | 2.92E-05 |
| 282 | 1.55E-05 |
| 283 | 2.00E-05 |
| 284 | 2.02E-05 |
| 285 | 2.46E-05 |
| 286 | 2.18E-05 |
| 287 | 1.70E-05 |
| 288 | 2.00E-05 |
| 289 | 3.12E-05 |
| 290 | 6.46E-05 |
| 291 | 4.05E-05 |
| 292 | 7.38E-05 |
| 293 | 2.09E-05 |
| 262 | 4.92E-05 |
| 261 | 2.48E-05 |
| 260 | 3.86E-05 |
| 259 | 7.33E-05 |
| 258 | 6.50E-05 |
| 257 | 5.67E-05 |
| 256 | 4.18E-05 |
| 255 | 2.18E-05 |
| 254 | 2.36E-05 |
| 253 | 4.44E-05 |

| | |
|---|---|
| 252 | 3.38E-05 |
| 251 | 3.12E-05 |
| 250 | 5.01E-05 |
| 249 | 1.05E-05 |
| 248 | 1.76E-05 |
| 247 | 3.04E-05 |

| | |
|---|---|
| 1.90E-03 | g/sec |
| 3.62E-01 | lbs/day |

## TRAFFIC VOLUMES

| ID | Arterial | From | 2031 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 393 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 393 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 393 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 393 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 393 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 393 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 393 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 393 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 393 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 393 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 393 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 393 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 393 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 393 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 393 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 393 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 393 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 393 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 393 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 393 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 393 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 393 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 393 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 393 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 393 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 393 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 393 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 393 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 393 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 393 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 393 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 393 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 393 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 393 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 393 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 393 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 393 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 393 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 393 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 393 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 393 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 393 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 393 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 393 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 393 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 393 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 393 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 393 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 393 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 393 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 393 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 393 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 393 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 786 |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 786 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 786 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 786 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 786 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 786 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 786 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 393 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 393 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 393 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 393 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 393 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 393 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 393 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 393 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 393 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **No Mitigation**

Project Phase 1 and Phase 2 Emissions
Freeway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 393 | 0 | 0 | 0 | 393 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 229 | 393 | 0 | 0 | 0 | 393 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 228 | 393 | 0 | 0 | 0 | 393 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 227 | 393 | 0 | 0 | 0 | 393 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 226 | 393 | 0 | 0 | 0 | 393 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 225 | 393 | 0 | 0 | 0 | 393 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 224 | 393 | 0 | 0 | 0 | 393 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 223 | 393 | 0 | 0 | 0 | 393 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 222 | 393 | 0 | 0 | 0 | 393 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 221 | 393 | 0 | 0 | 0 | 393 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 220 | 393 | 0 | 0 | 0 | 393 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 219 | 393 | 0 | 0 | 0 | 393 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 218 | 393 | 0 | 0 | 0 | 393 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 217 | 393 | 0 | 0 | 0 | 393 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 216 | 393 | 0 | 0 | 0 | 393 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 215 | 393 | 0 | 0 | 0 | 393 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 214 | 393 | 0 | 0 | 0 | 393 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 213 | 393 | 0 | 0 | 0 | 393 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 212 | 393 | 0 | 0 | 0 | 393 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 211 | 393 | 0 | 0 | 0 | 393 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 210 | 393 | 0 | 0 | 0 | 393 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 209 | 393 | 0 | 0 | 0 | 393 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 263 | 393 | 0 | 0 | 0 | 393 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 264 | 393 | 0 | 0 | 0 | 393 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 265 | 393 | 0 | 0 | 0 | 393 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 266 | 393 | 0 | 0 | 0 | 393 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 267 | 393 | 0 | 0 | 0 | 393 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 268 | 393 | 0 | 0 | 0 | 393 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 269 | 393 | 0 | 0 | 0 | 393 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 270 | 393 | 0 | 0 | 0 | 393 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 271 | 393 | 0 | 0 | 0 | 393 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 272 | 393 | 0 | 0 | 0 | 393 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 273 | 393 | 0 | 0 | 0 | 393 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 274 | 393 | 0 | 0 | 0 | 393 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 275 | 393 | 0 | 0 | 0 | 393 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 276 | 393 | 0 | 0 | 0 | 393 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 277 | 393 | 0 | 0 | 0 | 393 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 278 | 393 | 0 | 0 | 0 | 393 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 279 | 393 | 0 | 0 | 0 | 393 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 280 | 393 | 0 | 0 | 0 | 393 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 281 | 393 | 0 | 0 | 0 | 393 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 282 | 393 | 0 | 0 | 0 | 393 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 283 | 393 | 0 | 0 | 0 | 393 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 284 | 393 | 0 | 0 | 0 | 393 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 285 | 393 | 0 | 0 | 0 | 393 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 286 | 393 | 0 | 0 | 0 | 393 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 287 | 393 | 0 | 0 | 0 | 393 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 288 | 393 | 0 | 0 | 0 | 393 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 289 | 393 | 0 | 0 | 0 | 393 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 290 | 393 | 0 | 0 | 0 | 393 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 291 | 393 | 0 | 0 | 0 | 393 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 292 | 393 | 0 | 0 | 0 | 393 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 293 | 393 | 0 | 0 | 0 | 393 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 262 | 786 | 0 | 0 | 0 | 786 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 261 | 786 | 0 | 0 | 0 | 786 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 260 | 786 | 0 | 0 | 0 | 786 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 259 | 786 | 0 | 0 | 0 | 786 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 258 | 786 | 0 | 0 | 0 | 786 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 257 | 786 | 0 | 0 | 0 | 786 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 256 | 786 | 0 | 0 | 0 | 786 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 255 | 393 | 0 | 0 | 0 | 393 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 254 | 393 | 0 | 0 | 0 | 393 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 253 | 393 | 0 | 0 | 0 | 393 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 252 | 393 | 0 | 0 | 0 | 393 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 251 | 393 | 0 | 0 | 0 | 393 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 250 | 393 | 0 | 0 | 0 | 393 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 249 | 393 | 0 | 0 | 0 | 393 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 248 | 393 | 0 | 0 | 0 | 393 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 247 | 393 | 0 | 0 | 0 | 393 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |

**Vehicle Fleet Emissions - Non-Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1<br>Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2<br>Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0028 | 0.0052 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0025 | 0.0047 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0032 | 0.0059 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0030 | 0.0055 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0037 | 0.0070 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0026 | 0.0049 |

**Segment Emissions**

| | **Speed** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Freeway Segment** | **Group** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | | **(g/sec)** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.69E-05 | | 2.69E-05 |
| 229 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-05 | | 1.68E-05 |
| 228 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.10E-06 | | 7.10E-06 |
| 227 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.14E-05 | | 1.14E-05 |
| 226 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.92E-05 | | 2.92E-05 |
| 225 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E-05 | | 1.41E-05 |
| 224 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.72E-05 | | 3.72E-05 |
| 223 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.62E-05 | | 1.62E-05 |
| 222 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-05 | | 1.68E-05 |
| 221 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.58E-05 | | 1.58E-05 |
| 220 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.99E-05 | | 1.99E-05 |
| 219 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.37E-05 | | 3.37E-05 |
| 218 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.69E-05 | | 3.69E-05 |
| 217 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.22E-05 | | 4.22E-05 |
| 216 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.42E-05 | | 3.42E-05 |
| 215 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-05 | | 1.97E-05 |
| 214 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-05 | | 2.14E-05 |
| 213 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.35E-05 | | 3.35E-05 |
| 212 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-05 | | 3.21E-05 |
| 211 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.41E-05 | | 2.41E-05 |
| 210 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.12E-05 | | 5.12E-05 |
| 209 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-05 | | 2.71E-05 |
| 263 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.99E-05 | | 2.99E-05 |
| 264 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-05 | | 1.45E-05 |
| 265 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.84E-06 | | 9.84E-06 |
| 266 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.22E-06 | | 9.22E-06 |
| 267 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.00E-06 | | 9.00E-06 |
| 268 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-05 | | 1.38E-05 |
| 269 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-05 | | 2.64E-05 |
| 270 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.46E-05 | | 2.46E-05 |
| 271 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.45E-05 | | 1.45E-05 |
| 272 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.24E-06 | | 9.24E-06 |
| 273 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.39E-06 | | 3.39E-06 |
| 274 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-05 | | 2.36E-05 |
| 275 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.41E-05 | | 2.41E-05 |
| 276 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-05 | | 2.43E-05 |
| 277 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-05 | | 1.43E-05 |
| 278 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.41E-05 | | 2.41E-05 |
| 279 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.53E-05 | | 2.53E-05 |
| 280 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.06E-05 | | 2.06E-05 |
| 281 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.92E-05 | | 2.92E-05 |
| 282 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-05 | | 1.55E-05 |
| 283 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-05 | | 2.00E-05 |
| 284 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.02E-05 | | 2.02E-05 |
| 285 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.46E-05 | | 2.46E-05 |
| 286 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.18E-05 | | 2.18E-05 |
| 287 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-05 | | 1.70E-05 |
| 288 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-05 | | 2.00E-05 |
| 289 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-05 | | 3.12E-05 |
| 290 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-05 | | 6.46E-05 |
| 291 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.05E-05 | | 4.05E-05 |
| 292 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.38E-05 | | 7.38E-05 |
| 293 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-05 | | 2.09E-05 |
| 262 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.92E-05 | | 4.92E-05 |
| 261 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.48E-05 | | 2.48E-05 |
| 260 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.86E-05 | | 3.86E-05 |
| 259 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.33E-05 | | 7.33E-05 |
| 258 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.50E-05 | | 6.50E-05 |
| 257 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.67E-05 | | 5.67E-05 |
| 256 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.18E-05 | | 4.18E-05 |
| 255 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.18E-05 | | 2.18E-05 |
| 254 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.36E-05 | | 2.36E-05 |
| 253 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.44E-05 | | 4.44E-05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 252 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.38E-05 | | 3.38E-05 |
| 251 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-05 | | 3.12E-05 |
| 250 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.01E-05 | | 5.01E-05 |
| 249 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-05 | | 1.05E-05 |
| 248 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.76E-05 | | 1.76E-05 |
| 247 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.04E-05 | | 3.04E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 3 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for DPM emissions
c) Emissions calculated for 2022

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2022** **Phase 1** **Mitigation: T6 and T7 DSL MY2010**

**Vehicle Running Exhaust Emissions** **Pollutant** **DPM**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 2.16E-04 |
| Light Logistics | Phase 1 | 4.43E-07 |
| Utilities Service Station | Phase 1 | 4.38E-07 |
| Gas Station w/Convenience Store | Phase 1 | 5.04E-07 |
| Convenience Store | Phase 1 | 7.89E-07 |
| Fire Station | Phase 1 | 3.33E-09 |
| Total | | 2.19E-04 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 7.49E-05 |
| Light Logistics | Phase 1 | 4.62E-07 |
| Utilities Service Station | Phase 1 | 1.51E-06 |
| Gas Station w/Convenience Store | Phase 1 | 2.52E-07 |
| Convenience Store | Phase 1 | 3.87E-07 |
| Fire Station | Phase 1 | 0.00E+00 |
| Total | | 7.75E-05 |

| **Total Onsite Emission** | **Emissions (g/sec)** |
|---|---|
| Runing Exhaust | 2.19E-04 |
| Idling Emissions | 7.75E-05 |
| Total Vehicle Emissions | 2.96E-04 |
| Area (m2) | 4.68E+06 |
| Emission Rate (g/m2-sec) | 6.32E-11 |

**World Logistics Center** **2022** **Phase 1** Mitigation: T6 and T7 DSL MY2010
**Diesel Vehicle Emissions** **DPM**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **DPM Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.025 | 53 | 330 | 0.21 | 2.70E-01 | 5.94E-04 | 3.12E-06 | |
| | **LDT1** | 15 | 0.210 | 3 | 330 | 0.21 | 1.10E-01 | 2.43E-04 | 1.27E-06 | |
| | **LDT2** | 15 | 0.009 | 3 | 330 | 0.21 | 4.81E-03 | 1.06E-05 | 5.57E-08 | |
| | **MDT** | 15 | 0.011 | 5 | 330 | 0.21 | 1.11E-02 | 2.45E-05 | 1.29E-07 | |
| | **LHDT1** | 15 | 0.035 | 274 | 330 | 0.21 | 1.94E+00 | 4.27E-03 | 2.25E-05 | |
| | **LHDT2** | 15 | 0.026 | 93 | 330 | 0.21 | 5.04E-01 | 1.11E-03 | 5.83E-06 | |
| | **MHDT** | 15 | 0.005 | 1425 | 330 | 0.21 | 1.43E+00 | 3.16E-03 | 1.66E-05 | |
| | **HHDT** | 15 | 0.015 | 4628 | 330 | 0.21 | 1.44E+01 | 3.18E-02 | 1.67E-04 | |
| | | | | | | | | | | 2.16E-04 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.025 | 0 | 175 | 0.11 | 6.07E-04 | 1.34E-06 | 7.03E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 175 | 0.11 | 2.48E-04 | 5.46E-07 | 2.87E-09 | |
| | **LDT2** | 15 | 0.009 | 0 | 175 | 0.11 | 1.08E-05 | 2.39E-08 | 1.25E-10 | |
| | **MDT** | 15 | 0.011 | 0 | 175 | 0.11 | 2.51E-05 | 5.52E-08 | 2.90E-10 | |
| | **LHDT1** | 15 | 0.035 | 2 | 175 | 0.11 | 6.44E-03 | 1.42E-05 | 7.45E-08 | |
| | **LHDT2** | 15 | 0.026 | 1 | 175 | 0.11 | 1.67E-03 | 3.68E-06 | 1.93E-08 | |
| | **MHDT** | 15 | 0.005 | 6 | 175 | 0.11 | 3.13E-03 | 6.90E-06 | 3.63E-08 | |
| | **HHDT** | 15 | 0.015 | 16 | 175 | 0.11 | 2.62E-02 | 5.77E-05 | 3.03E-07 | 4.43E-07 |
| **Travel at Utility** | **LDA** | 15 | 0.025 | 0 | 100 | 0.06 | 5.09E-04 | 1.12E-06 | 5.89E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 100 | 0.06 | 2.08E-04 | 4.57E-07 | 2.40E-09 | |
| | **LDT2** | 15 | 0.009 | 0 | 100 | 0.06 | 9.07E-06 | 2.00E-08 | 1.05E-10 | |
| | **MDT** | 15 | 0.011 | 0 | 100 | 0.06 | 2.10E-05 | 4.62E-08 | 2.43E-10 | |
| | **LHDT1** | 15 | 0.035 | 6 | 100 | 0.06 | 1.22E-02 | 2.69E-05 | 1.41E-07 | |
| | **LHDT2** | 15 | 0.026 | 2 | 100 | 0.06 | 3.17E-03 | 6.98E-06 | 3.67E-08 | |
| | **MHDT** | 15 | 0.005 | 5 | 100 | 0.06 | 1.47E-03 | 3.24E-06 | 1.70E-08 | |
| | **HHDT** | 15 | 0.015 | 21 | 100 | 0.06 | 2.03E-02 | 4.47E-05 | 2.35E-07 | 4.38E-07 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.025 | 0 | 50 | 0.03 | 1.48E-04 | 3.26E-07 | 1.71E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 50 | 0.03 | 6.05E-05 | 1.33E-07 | 7.00E-10 | |
| | **LDT2** | 15 | 0.009 | 0 | 50 | 0.03 | 2.64E-06 | 5.82E-09 | 3.06E-11 | |
| | **MDT** | 15 | 0.011 | 0 | 50 | 0.03 | 6.12E-06 | 1.35E-08 | 7.08E-11 | |
| | **LHDT1** | 15 | 0.035 | 1 | 50 | 0.03 | 8.60E-04 | 1.90E-06 | 9.96E-09 | |
| | **LHDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 2.23E-04 | 4.92E-07 | 2.59E-09 | |
| | **MHDT** | 15 | 0.005 | 14 | 50 | 0.03 | 2.10E-03 | 4.62E-06 | 2.43E-08 | |
| | **HHDT** | 15 | 0.015 | 85 | 50 | 0.03 | 4.01E-02 | 8.84E-05 | 4.65E-07 | 5.04E-07 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.025 | 0 | 50 | 0.03 | 2.46E-04 | 5.41E-07 | 2.84E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 50 | 0.03 | 1.00E-04 | 2.21E-07 | 1.16E-09 | |
| | **LDT2** | 15 | 0.009 | 0 | 50 | 0.03 | 4.38E-06 | 9.65E-09 | 5.07E-11 | |
| | **MDT** | 15 | 0.011 | 0 | 50 | 0.03 | 1.01E-05 | 2.23E-08 | 1.17E-10 | |
| | **LHDT1** | 15 | 0.035 | 1 | 50 | 0.03 | 1.31E-03 | 2.89E-06 | 1.52E-08 | |
| | **LHDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 3.41E-04 | 7.51E-07 | 3.95E-09 | |
| | **MHDT** | 15 | 0.005 | 23 | 50 | 0.03 | 3.44E-03 | 7.57E-06 | 3.98E-08 | |
| | **HHDT** | 15 | 0.015 | 133 | 50 | 0.03 | 6.28E-02 | 1.38E-04 | 7.26E-07 | 7.89E-07 |
| **Travel at Fire Station** | **LDA** | 15 | 0.025 | 0 | 50 | 0.03 | 1.90E-04 | 4.19E-07 | 2.20E-09 | |
| | **LDT1** | 15 | 0.210 | 0 | 50 | 0.03 | 8.60E-05 | 1.89E-07 | 9.96E-10 | |
| | **LDT2** | 15 | 0.009 | 0 | 50 | 0.03 | 3.70E-06 | 8.16E-09 | 4.29E-11 | |
| | **MDT** | 15 | 0.011 | 0 | 50 | 0.03 | 7.67E-06 | 1.69E-08 | 8.88E-11 | |
| | **LHDT1** | 15 | 0.035 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.026 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.005 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.33E-09 |
| **Total - All Buildings** | **LDA** | | | 54 | | | 2.71E-01 | 5.98E-04 | 3.14E-06 | |
| | **LDT1** | | | 3 | | | 1.11E-01 | 2.44E-04 | 1.28E-06 | |
| | **LDT2** | | | 3 | | | 4.84E-03 | 1.07E-05 | 5.60E-08 | |
| | **MDT** | | | 5 | | | 1.12E-02 | 2.47E-05 | 1.30E-07 | |
| | **LHDT1** | | | 283 | | | 1.96E+00 | 4.32E-03 | 2.27E-05 | |
| | **LHDT2** | | | 96 | | | 5.09E-01 | 1.12E-03 | 5.89E-06 | |
| | **MHDT** | | | 1472 | | | 1.44E+00 | 3.18E-03 | 1.67E-05 | |
| | **HHDT** | | | 4883 | | | 1.46E+01 | 3.21E-02 | 1.69E-04 | |
| | **Total** | | | 6800 | | | 1.89E+01 | 4.16E-02 | 2.19E-04 | 2.19E-04 |

**Diesel truck Idling Emissions** **DPM Emissions** Idle Time (minutes) 3

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.675 | 3 | 137 | 4.62E+00 | 1.02E-02 | 5.35E-05 | |
| | **LHDT2** | 0.703 | 3 | 47 | 1.64E+00 | 3.61E-03 | 1.89E-05 | |
| | **MHDT** | 0.002 | 3 | 713 | 5.35E-02 | 1.18E-04 | 6.19E-07 | |
| | **HHDT** | 0.001 | 3 | 2314 | 1.62E-01 | 3.57E-04 | 1.87E-06 | |
| | | | | 3210 | 6.47E+00 | 1.43E-02 | 7.49E-05 | 7.49E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.675 | 3 | 1 | 2.89E-02 | 6.37E-05 | 3.35E-07 | |
| | **LHDT2** | 0.703 | 3 | 0 | 1.02E-02 | 2.26E-05 | 1.18E-07 | |
| | **MHDT** | 0.002 | 3 | 3 | 2.20E-04 | 4.85E-07 | 2.55E-09 | |
| | **HHDT** | 0.001 | 3 | 8 | 5.54E-04 | 1.22E-06 | 6.42E-09 | |
| | | | | 12 | 3.99E-02 | 8.79E-05 | 4.62E-07 | 4.62E-07 |
| **Idle at Utility** | **LHDT1** | 0.675 | 3 | 3 | 9.59E-02 | 2.11E-04 | 1.11E-06 | |
| | **LHDT2** | 0.703 | 3 | 1 | 3.40E-02 | 7.48E-05 | 3.93E-07 | |
| | **MHDT** | 0.002 | 3 | 2 | 1.81E-04 | 3.98E-07 | 2.09E-09 | |
| | **HHDT** | 0.001 | 3 | 11 | 7.51E-04 | 1.66E-06 | 8.70E-09 | |
| | | | | 17 | 1.31E-01 | 2.88E-04 | 1.51E-06 | 1.51E-06 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.675 | 3 | 0 | 1.35E-02 | 2.98E-05 | 1.57E-07 | |
| | **LHDT2** | 0.703 | 3 | 0 | 4.79E-03 | 1.06E-05 | 5.55E-08 | |
| | **MHDT** | 0.002 | 3 | 7 | 5.16E-04 | 1.14E-06 | 5.97E-09 | |
| | **HHDT** | 0.001 | 3 | 43 | 2.98E-03 | 6.55E-06 | 3.44E-08 | |
| | | | | 50 | 2.18E-02 | 4.80E-05 | 2.52E-07 | 2.52E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.675 | 3 | 1 | 2.07E-02 | 4.55E-05 | 2.39E-07 | |
| | **LHDT2** | 0.703 | 3 | 0 | 7.31E-03 | 1.61E-05 | 8.47E-08 | |
| | **MHDT** | 0.002 | 3 | 11 | 8.45E-04 | 1.86E-06 | 9.78E-09 | |
| | **HHDT** | 0.001 | 3 | 66 | 4.65E-03 | 1.02E-05 | 5.39E-08 | |
| | | | | 79 | 3.35E-02 | 7.37E-05 | 3.87E-07 | 3.87E-07 |
| **Idle at Firestation** | **LHDT1** | 0.675 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.703 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.002 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.001 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3367 | 6.70E+00 | 1.48E-02 | 7.75E-05 | 7.75E-05 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/3/2013
**Project Only Phase 1 2022** Rev 5 Mitigation: T6 and T7 DSL MY2010
**Internal Roadway Circulation**

**with EMFAC 2014**

| Roadway Segment | Diesel Emissions (g/sec) |
|---|---|
| 1 | 1.80E-04 |
| 2 | 4.50E-04 |
| 3 | 7.41E-04 |
| 5 | 2.05E-05 |
| 6 | 1.76E-04 |
| 8 | 3.19E-05 |
| 11 | 6.97E-07 |
| 12 | 7.20E-06 |
| 14 | 4.70E-05 |
| 18 | 0.00E+00 |
| 19 | 2.37E-08 |
| 21 | 2.67E-05 |
| 24 | 4.14E-05 |
| 26 | 0.00E+00 |
| 29 | 2.52E-06 |
| 30 | 1.06E-05 |
| 31 | 2.05E-05 |
| | |
| Total (g/sec) | 1.76E-03 |
| Total (lbs/day) | 3.34E-01 |
| | |
| Total VMT (mi/day) | 1.79E+04 |

## TRAFFIC VOLUMES

| ID | Arterial | From | To | | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 17,546 | 680 | 2,253 | 7,100 |
| 2 | Street A | Eucalyptus Ave | Street F | | 18,224 | 1,321 | 2,451 | 7,634 |
| 3 | Street E | west of Street A | | | 9,089 | 613 | 1,261 | 3,945 |
| 5 | Street E | Street D | Street A | | 4,165 | 151 | 317 | 106 |
| 6 | Street A | Street F | Street C | | 7,907 | 434 | 821 | 1,851 |
| 8 | Street D | Street E | Cactus Ave | | 7,495 | 318 | 621 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 74 | 8 | 10 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 548 | 142 | 117 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 1,049 | 146 | 140 | 298 |
| 18 | Street B | Street A | Gilman Springs Rd | | 0 | 0 | 0 | 0 |
| 19 | Street F | Street A | Street C | | 48 | 0 | 0 | 0 |
| 21 | Street C | Street A | Street F | | 2,797 | 62 | 172 | 214 |
| 24 | Street C | Street F | Gilman Springs Rd | | 2,790 | 54 | 176 | 219 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 225 | 8 | 26 | 42 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 225 | 8 | 26 | 42 |
| 31 | Gilman Springs Rd | south of Street C | | | 2,993 | 62 | 202 | 261 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **Mitigation: T6 and T7 DSL MY2010**
Project Only Phase 1 2022
Internal Roadway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Roadway Segment | Total Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27579 | 17,546 | 680 | 2,253 | 7,100 | 327 | 0.203 | 32 | 2 | 2 | 3 | 139 | 45 | 1834 | 6980 | 9037 | 1836 |
| 2 | 29630 | 18,224 | 1,321 | 2,451 | 7,634 | 731 | 0.454 | 33 | 2 | 2 | 3 | 270 | 88 | 1996 | 7505 | 9898 | 4495 |
| 3 | 14908 | 9,089 | 613 | 1,261 | 3,945 | 2352 | 1.461 | 16 | 1 | 1 | 1 | 125 | 41 | 1027 | 3878 | 5091 | 7438 |
| 5 | 4739 | 4,165 | 151 | 317 | 106 | 953 | 0.592 | 8 | 0 | 0 | 1 | 31 | 10 | 258 | 104 | 412 | 244 |
| 6 | 11013 | 7,907 | 434 | 821 | 1,851 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 89 | 29 | 668 | 1820 | 2623 | 1791 |
| 8 | 8434 | 7,495 | 318 | 621 | 0 | 1091 | 0.678 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 412 |
| 11 | 92 | 74 | 8 | 10 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 0 | 10 | 8 |
| 12 | 807 | 548 | 142 | 117 | 0 | 824 | 0.512 | 1 | 0 | 0 | 0 | 29 | 9 | 95 | 0 | 135 | 69 |
| 14 | 1633 | 1,049 | 146 | 140 | 298 | 1618 | 1.005 | 2 | 0 | 0 | 0 | 30 | 10 | 114 | 293 | 449 | 451 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 48 | 48 | 0 | 0 | 0 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 3245 | 2,797 | 62 | 172 | 214 | 1258 | 0.781 | 5 | 0 | 0 | 0 | 13 | 4 | 140 | 210 | 373 | 292 |
| 24 | 3239 | 2,790 | 54 | 176 | 219 | 1946 | 1.209 | 5 | 0 | 0 | 0 | 11 | 4 | 143 | 215 | 379 | 458 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 301 | 225 | 8 | 26 | 42 | 675 | 0.419 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 27 |
| 30 | 301 | 225 | 8 | 26 | 42 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 2 | 1 | 21 | 41 | 65 | 114 |
| 31 | 3518 | 2,993 | 62 | 202 | 261 | 820 | 0.509 | 5 | 0 | 0 | 0 | 13 | 4 | 164 | 257 | 444 | 226 |
| | | | | | | | | | | | | | | | | Total | 17862 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0030 | 0.0074 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0034 | 0.0074 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0026 | 0.0074 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 7.76E-07 | 3.55E-07 | 1.92E-08 | 3.73E-08 | 7.35E-06 | 1.89E-06 | 1.72E-05 | 1.52E-04 | 1.80E-04 |
| 2 | 1 | 1.80E-06 | 8.24E-07 | 4.46E-08 | 8.66E-08 | 3.19E-05 | 8.21E-06 | 4.17E-05 | 3.66E-04 | 4.50E-04 |
| 3 | 1 | 2.89E-06 | 1.32E-06 | 7.16E-08 | 1.39E-07 | 4.76E-05 | 1.23E-05 | 6.91E-05 | 6.08E-04 | 7.41E-04 |
| 5 | 1 | 5.37E-07 | 2.45E-07 | 1.33E-08 | 2.58E-08 | 4.76E-06 | 1.22E-06 | 7.04E-06 | 6.62E-06 | 2.05E-05 |
| 6 | 1 | 1.17E-06 | 5.37E-07 | 2.91E-08 | 5.65E-08 | 1.58E-05 | 4.06E-06 | 2.10E-05 | 1.33E-04 | 1.76E-04 |
| 8 | 1 | 1.11E-06 | 5.06E-07 | 2.74E-08 | 5.32E-08 | 1.15E-05 | 2.95E-06 | 1.58E-05 | 0.00E+00 | 3.19E-05 |
| 11 | 1 | 1.20E-08 | 5.50E-09 | 2.98E-10 | 5.78E-10 | 3.17E-07 | 8.17E-08 | 2.80E-07 | 0.00E+00 | 6.97E-07 |
| 12 | 1 | 6.10E-08 | 2.79E-08 | 1.51E-09 | 2.94E-09 | 3.87E-06 | 9.95E-07 | 2.25E-06 | 0.00E+00 | 7.20E-06 |
| 14 | 1 | 2.29E-07 | 1.05E-07 | 5.69E-09 | 1.10E-08 | 7.81E-06 | 2.01E-06 | 5.28E-06 | 3.16E-05 | 4.70E-05 |
| 18 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 19 | 1 | 1.55E-08 | 7.08E-09 | 3.84E-10 | 7.45E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.37E-08 |
| 21 | 1 | 4.76E-07 | 2.18E-07 | 1.18E-08 | 2.29E-08 | 2.58E-06 | 6.63E-07 | 5.04E-06 | 1.76E-05 | 2.67E-05 |
| 24 | 1 | 7.34E-07 | 3.36E-07 | 1.82E-08 | 3.53E-08 | 3.47E-06 | 8.94E-07 | 7.98E-06 | 2.79E-05 | 4.14E-05 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.05E-08 | 9.39E-09 | 5.09E-10 | 9.88E-10 | 1.78E-07 | 4.59E-08 | 4.09E-07 | 1.86E-06 | 2.52E-06 |
| 30 | 1 | 8.60E-08 | 3.93E-08 | 2.13E-09 | 4.14E-09 | 7.47E-07 | 1.92E-07 | 1.71E-06 | 7.78E-06 | 1.06E-05 |
| 31 | 1 | 3.32E-07 | 1.52E-07 | 8.22E-09 | 1.60E-08 | 1.68E-06 | 4.32E-07 | 3.86E-06 | 1.40E-05 | 2.05E-05 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/1/2013
**Project Only Phase 1 2022** **Mitigation: T6 and T7 DSL MY2010** **With EMFAC2014**
**Surface Street Segments**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| 9 | 3.73E-05 |
| 10 | 1.56E-06 |
| 13 | 7.27E-06 |
| 32 | 6.79E-06 |
| 33 | 2.92E-06 |
| 35 | 2.10E-05 |
| 36 | 9.22E-06 |
| 37 | 5.63E-06 |
| 38 | 7.76E-06 |
| 42 | 1.82E-04 |
| 43 | 6.40E-06 |
| 46 | 5.59E-06 |
| 47 | 4.10E-07 |
| 48 | 1.88E-06 |
| 50 | 1.16E-05 |
| 51 | 0.00E+00 |
| 52 | 1.96E-05 |
| 53 | 1.36E-06 |
| 54 | 0.00E+00 |
| 55 | 3.20E-07 |
| 56 | 0.00E+00 |
| 57 | 1.37E-06 |
| 58 | 3.70E-08 |
| 59 | 9.58E-06 |
| 60 | 3.41E-06 |
| 61 | 6.17E-07 |
| 62 | 0.00E+00 |
| 65 | 1.93E-06 |

| | |
|---|---|
| 66 | 2.29E-06 |
| 67 | 0.00E+00 |
| 68 | 1.47E-10 |
| 69 | 1.98E-06 |
| 70 | 2.88E-06 |
| 71 | 0.00E+00 |
| 72 | 0.00E+00 |
| 73 | 1.13E-05 |
| 74 | 9.44E-07 |
| 75 | 5.56E-07 |
| 76 | 2.28E-07 |
| 77 | 5.53E-07 |
| 80 | 2.41E-07 |
| 81 | 0.00E+00 |
| 82 | 4.59E-06 |
| 83 | 6.75E-07 |
| 85 | 0.00E+00 |
| 86 | 6.05E-06 |
| 87 | 2.16E-08 |
| 88 | 5.76E-08 |
| 95 | 1.59E-06 |
| 96 | 7.66E-07 |
| 97 | 2.37E-07 |
| 98 | 1.79E-07 |
| 99 | 1.51E-07 |
| 100 | 5.28E-07 |
| 101 | 1.81E-06 |
| 102 | 6.01E-11 |
| 103 | 1.51E-06 |
| 104 | 1.02E-06 |
| 105 | 0.00E+00 |
| 106 | 4.73E-08 |
| 107 | 1.03E-06 |
| 108 | 4.94E-08 |

| | |
|---|---|
| 109 | 2.01E-07 |
| 110 | 1.61E-06 |
| 111 | 0.00E+00 |
| 112 | 3.46E-06 |
| 113 | 9.23E-07 |
| 114 | 1.82E-06 |
| 115 | 2.28E-06 |
| 116 | 4.30E-07 |
| 117 | 2.04E-09 |
| 118 | 2.30E-06 |
| 119 | 4.10E-08 |
| 120 | 7.19E-06 |
| 121 | 2.03E-06 |
| 122 | 4.65E-06 |
| 123 | 2.32E-09 |
| 124 | 2.04E-06 |
| 125 | 1.69E-10 |
| 126 | 1.86E-06 |
| 127 | 1.05E-05 |
| 128 | 1.60E-10 |
| 129 | 1.89E-06 |
| 130 | 9.32E-08 |
| 131 | 6.42E-10 |
| 133 | 9.34E-08 |
| 134 | 3.72E-07 |
| 135 | 1.97E-06 |
| 136 | 1.13E-07 |
| 137 | 1.64E-10 |
| 138 | 2.12E-07 |
| 139 | 6.42E-07 |
| 140 | 4.62E-07 |
| 141 | 1.03E-06 |
| 142 | 1.10E-07 |
| 143 | 7.79E-07 |

| | |
|---|---|
| 144 | 3.88E-07 |
| 145 | 4.51E-07 |
| 146 | 2.30E-08 |
| 147 | 6.77E-07 |
| 148 | 3.93E-06 |
| 149 | 8.58E-07 |
| 150 | 0.00E+00 |
| 151 | 9.38E-07 |
| 152 | 9.66E-06 |
| 153 | 1.14E-06 |
| 154 | 0.00E+00 |
| 155 | 2.27E-06 |
| 156 | 1.19E-06 |
| 157 | 2.92E-06 |
| 158 | 1.85E-06 |
| 159 | 2.95E-07 |
| 160 | 0.00E+00 |
| 161 | 2.50E-06 |
| 162 | 8.33E-06 |
| 163 | 1.61E-06 |
| 164 | 4.50E-08 |
| 165 | 2.82E-05 |
| 168 | 3.91E-06 |
| 169 | 0.00E+00 |
| 170 | 0.00E+00 |
| 171 | 3.48E-06 |
| 172 | 7.68E-06 |
| 173 | 0.00E+00 |
| 174 | 0.00E+00 |
| 177 | 3.47E-05 |
| 178 | 3.45E-05 |
| 179 | 7.94E-05 |
| 180 | 2.81E-06 |
| 181 | 0.00E+00 |

| | |
|---|---|
| 182 | 0.00E+00 |
| 183 | 0.00E+00 |
| 184 | 0.00E+00 |
| 185 | 0.00E+00 |
| 186 | 0.00E+00 |
| 190 | 1.04E-04 |
| 191 | 6.81E-05 |
| 192 | 1.10E-05 |
| 194 | 8.51E-07 |
| 195 | 1.46E-06 |
| 196 | 4.32E-06 |
| 198 | 0.00E+00 |
| 199 | 1.99E-07 |
| 200 | 9.42E-06 |
| 205 | 2.25E-06 |
| 206 | 0.00E+00 |
| 207 | 3.92E-06 |
| 215 | 5.54E-09 |
| 216 | 3.55E-06 |
| 217 | 1.55E-06 |
| 218 | 7.30E-07 |
| 219 | 1.81E-07 |
| 221 | 2.72E-09 |
| 223 | 9.67E-10 |
| 225 | 0.00E+00 |
| 226 | 1.02E-06 |
| 227 | 0.00E+00 |
| 229 | 2.09E-09 |
| 230 | 7.30E-09 |
| 231 | 1.02E-06 |
| 232 | 9.38E-06 |
| 233 | 6.08E-07 |
| 236 | 1.43E-07 |
| 237 | 8.49E-06 |

| | |
|---|---|
| 238 | 2.14E-06 |
| 239 | 5.87E-06 |
| 240 | 0.00E+00 |
| 241 | 0.00E+00 |
| 242 | 4.13E-06 |
| 243 | 3.11E-08 |
| 244 | 9.91E-08 |
| 245 | 2.53E-07 |
| 246 | 3.73E-07 |
| 247 | 3.04E-07 |
| 250 | 0.00E+00 |
| 252 | 1.04E-05 |
| 254 | 8.78E-11 |
| 256 | 6.16E-07 |
| 258 | 0.00E+00 |
| 260 | 1.13E-05 |
| 261 | 3.68E-06 |
| 262 | 4.89E-06 |
| 263 | 1.20E-06 |
| 264 | 0.00E+00 |
| 265 | 5.25E-07 |
| 266 | 2.23E-06 |
| 267 | 5.79E-07 |
| 268 | 1.27E-06 |
| 269 | 3.26E-05 |
| 270 | 9.69E-08 |
| 271 | 5.00E-06 |
| 272 | 0.00E+00 |
| 273 | 1.12E-07 |
| 274 | 1.70E-05 |
| 275 | 1.25E-06 |
| 276 | 2.31E-06 |
| 277 | 7.12E-08 |
| 278 | 0.00E+00 |

| | |
|---|---|
| 279 | 5.81E-07 |
| 280 | 2.71E-06 |
| 281 | 1.43E-07 |
| 282 | 1.34E-06 |
| 283 | 3.16E-06 |
| 284 | 7.15E-06 |
| 285 | 2.60E-06 |
| 286 | 6.30E-07 |
| 287 | 3.06E-06 |
| 288 | 1.95E-07 |
| 289 | 2.59E-06 |
| 290 | 5.08E-06 |
| 294 | 9.47E-08 |
| 301 | 1.05E-06 |
| 302 | 1.05E-06 |
| 303 | 1.83E-05 |
| 304 | 5.22E-07 |
| 306 | 1.21E-05 |
| 307 | 0.00E+00 |
| 324 | 2.35E-07 |
| 325 | 1.66E-05 |
| 326 | 6.90E-07 |
| 327 | 1.62E-06 |
| 340 | 0.00E+00 |
| 351 | 0.00E+00 |
| 358 | 0.00E+00 |
| 359 | 3.29E-08 |
| 360 | 2.73E-06 |
| 361 | 3.13E-06 |
| 362 | 3.31E-08 |
| 363 | 3.05E-05 |
| 364 | 1.80E-06 |
| 365 | 8.13E-06 |
| 366 | 1.23E-06 |

| | |
|---|---|
| 367 | 0.00E+00 |
| 375 | 0.00E+00 |
| 376 | 0.00E+00 |
| 377 | 0.00E+00 |
| 378 | 0.00E+00 |
| 379 | 0.00E+00 |
| 380 | 0.00E+00 |
| 381 | 0.00E+00 |
| 386 | 1.25E-07 |
| 387 | 2.50E-05 |
| 388 | 0.00E+00 |
| 389 | 2.54E-08 |
| 390 | 2.16E-06 |
| 392 | 1.38E-06 |
| 393 | 3.38E-06 |
| 394 | 1.06E-05 |
| 396 | 1.54E-05 |
| 397 | 7.07E-06 |
| 398 | 4.08E-06 |
| 399 | 1.09E-06 |
| 400 | 1.44E-06 |
| 401 | 7.04E-08 |
| 402 | 0.00E+00 |
| 404 | 0.00E+00 |
| 405 | 5.81E-07 |
| 406 | 2.36E-07 |
| 407 | 0.00E+00 |
| 408 | 7.14E-08 |
| 409 | 3.28E-07 |
| 410 | 4.21E-07 |
| 411 | 1.93E-09 |
| 412 | 0.00E+00 |
| 413 | 5.32E-07 |
| 414 | 9.27E-10 |

| | |
|---|---|
| 415 | 4.20E-06 |
| 416 | 0.00E+00 |
| 417 | 0.00E+00 |
| 419 | 0.00E+00 |
| 420 | 0.00E+00 |
| 421 | 0.00E+00 |
| 424 | 1.14E-05 |
| 425 | 0.00E+00 |
| 426 | 0.00E+00 |
| 427 | 4.04E-07 |
| 428 | 0.00E+00 |
| 429 | 0.00E+00 |
| 430 | 4.83E-07 |
| 431 | 0.00E+00 |
| 432 | 0.00E+00 |
| 433 | 6.22E-07 |
| 434 | 4.47E-09 |
| 435 | 0.00E+00 |
| 436 | 0.00E+00 |
| 441 | 0.00E+00 |
| 442 | 2.38E-07 |
| 443 | 1.55E-07 |
| 444 | 0.00E+00 |
| 452 | 0.00E+00 |
| 453 | 0.00E+00 |
| 454 | 0.00E+00 |
| 455 | 0.00E+00 |
| 458 | 0.00E+00 |
| 464 | 0.00E+00 |
| 477 | 0.00E+00 |
| 478 | 0.00E+00 |
| 479 | 0.00E+00 |
| 480 | 0.00E+00 |
| 481 | 0.00E+00 |

| | |
|---|---|
| 482 | 0.00E+00 |
| 483 | 0.00E+00 |
| 484 | 0.00E+00 |
| 485 | 0.00E+00 |
| 488 | 0.00E+00 |
| 494 | 0.00E+00 |
| 498 | 0.00E+00 |
| 499 | 9.79E-06 |
| 500 | 5.89E-06 |
| 502 | 0.00E+00 |
| 503 | 0.00E+00 |
| 504 | 6.77E-07 |

| | |
|---|---|
| Total (g/sec) | 1.25E-03 |
| Total (lb/day) | 2.37E-01 |
| | |
| VMT (mi/day) | 15943 |

## TRAFFIC VOLUMES

| ID | Segment | From | To | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 4,976 | 198 | 482 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 647 | 29 | 41 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 620 | 13 | 38 | 298 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1,576 | 69 | 92 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 481 | 16 | 29 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 187 | 12 | 31 | 450 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1,116 | 62 | 173 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 478 | 39 | 151 | 382 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 2,191 | 129 | 349 | 4 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,607 | 93 | 285 | 449 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 125 | 5 | 5 | 39 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 176 | 8 | 8 | 116 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 85 | 4 | 3 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 239 | 6 | 13 | 27 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 7,495 | 318 | 621 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 0 | 0 | 0 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 4,474 | 164 | 464 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 434 | 30 | 16 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 0 | 0 | 0 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 42 | 3 | 1 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 0 | 0 | 0 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,122 | 59 | 173 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 83 | 3 | 3 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 0 | 0 | 0 | 186 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 738 | 20 | 64 | 289 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 37 | 5 | 5 | 92 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | | | | |
| 65 | Alessandro Blvd | Nason St | Oliver St | 317 | 8 | 16 | 32 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 401 | 13 | 27 | 32 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 69 | Cactus Ave | Nason St | Oliver St | 907 | 34 | 57 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 1,333 | 51 | 86 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 4,386 | 161 | 462 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 388 | 7 | 7 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 140 | 4 | 7 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 32 | 1 | 4 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 525 | 10 | 10 | 7 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 693 | 15 | 17 | 8 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 1,058 | 28 | 53 | 177 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 504 | 14 | 26 | 88 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 1,379 | 47 | 110 | 251 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 15 | 0 | 1 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 26 | 1 | 1 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 480 | 12 | 37 | 33 |
| 96 | N California Ave | W 6th St | E 8th St | 404 | 9 | 19 | 15 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 57 | 2 | 5 | 6 |
| 98 | N California Ave | W 6th St | I-10 | 38 | 2 | 13 | 11 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 141 | 1 | 4 | 3 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 196 | 5 | 13 | 27 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 563 | 13 | 36 | 65 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 1 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 511 | 12 | 30 | 59 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 113 | 2 | 8 | 34 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 12 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 142 | 3 | 12 | 34 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 0 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 29 | 2 | 7 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 121 | 3 | 9 | 27 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 0 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 133 | 5 | 17 | 55 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 12 | 2 | 7 | 14 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 20 | 2 | 8 | 31 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 130 | 3 | 10 | 35 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 8 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 13 | 0 | 0 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 140 | 4 | 11 | 39 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 28 | 0 | 2 | 0 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 88 | 5 | 15 | 126 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 121 | Alessandro Blvd | Heacock St | Indian St | 146 | 4 | 10 | 31 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 58 | 3 | 10 | 101 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 12 | 0 | 0 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 170 | 5 | 12 | 31 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 188 | 5 | 11 | 29 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 39 | 3 | 10 | 188 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 207 | 5 | 12 | 27 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 49 | 2 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 4 | 0 | 0 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 59 | 2 | 2 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 36 | 2 | 3 | 5 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 275 | 8 | 16 | 32 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 67 | 2 | 2 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 1 | 0 | 0 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 10 | 1 | 4 | 10 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 168 | 4 | 12 | 12 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 12 | 1 | 2 | 12 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 167 | 3 | 9 | 10 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 13 | 1 | 3 | 4 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 177 | 5 | 14 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 181 | 5 | 15 | 0 |
| 145 | Cactus Ave | Graham St | Heacock St | 208 | 6 | 17 | 0 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 24 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 243 | 8 | 20 | 0 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 54 | 2 | 8 | 92 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 307 | 10 | 25 | 0 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 340 | 11 | 28 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 28 | 2 | 9 | 184 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 437 | 15 | 30 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,147 | 36 | 77 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 607 | 17 | 44 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,334 | 51 | 86 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 194 | 5 | 15 | 18 |
| 159 | Beaumont Ave | E 6th St | I-10 | 317 | 5 | 15 | 17 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 583 | 31 | 104 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 162 | Iris Ave | Kitching St | Lasselle St | 1,351 | 77 | 259 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 712 | 44 | 152 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 15 | 1 | 3 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 4,320 | 157 | 459 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 648 | 40 | 143 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 0 | 0 | 0 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,787 | 71 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,632 | 67 | 189 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | | | | |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | | | | |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,600 | 98 | 324 | 382 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 328 | 15 | 39 | 63 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,943 | 115 | 364 | 446 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 115 | 4 | 5 | 3 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | | | | |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | | | | |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | | | | |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | | | | |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | | | | |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | | | | |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2,924 | 54 | 187 | 185 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 2,523 | 47 | 171 | 152 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 401 | 7 | 16 | 34 |
| 194 | Crescent Ave | West of Alessandro Rd | | 329 | 20 | 63 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 592 | 31 | 95 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 921 | 50 | 158 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 0 | 0 | 0 | 0 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 152 | 6 | 10 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,122 | 59 | 173 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 221 | 12 | 41 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 0 | 0 | 0 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 221 | 12 | 41 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 10 | 0 | 0 | 0 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 197 | 4 | 11 | 20 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 317 | 7 | 19 | 30 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 60 | 1 | 4 | 9 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 11 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 5 | 0 | 0 | 0 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 13 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 36 | 1 | 4 | 9 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 9 | 0 | 0 | 0 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 35 | 0 | 0 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 66 | 1 | 3 | 6 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 520 | 12 | 45 | 73 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 47 | 1 | 4 | 9 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 13 | 0 | 2 | 2 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 404 | 11 | 45 | 74 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 185 | 4 | 17 | 20 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 197 | 6 | 26 | 51 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 0 | 0 | 0 | 0 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 201 | 6 | 26 | 50 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 16 | 1 | 2 | 6 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 8 | 0 | 2 | 8 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 46 | 1 | 7 | 18 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 27 | 1 | 6 | 18 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 190 | 6 | 22 | 41 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 0 | 0 | 0 | 0 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 546 | 12 | 46 | 74 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 1 | 0 | 0 | 0 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 205 | 3 | 4 | 6 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 761 | 16 | 51 | 83 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 98 | 4 | 13 | 40 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 209 | 7 | 27 | 72 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 781 | 18 | 57 | 95 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 0 | 0 | 0 | 0 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 421 | 11 | 37 | 60 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,049 | 26 | 90 | 147 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 163 | 6 | 26 | 43 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 724 | 17 | 54 | 89 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 448 | 15 | 65 | 169 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 9 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 457 | 16 | 66 | 171 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 0 | 0 | 0 | 0 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 7 | 0 | 2 | 2 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 472 | 16 | 69 | 174 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 27 | 3 | 10 | 45 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 463 | 17 | 69 | 185 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 141 | 5 | 19 | 46 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 558 | 19 | 81 | 211 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 16 | 0 | 2 | 7 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 298 | 10 | 41 | 100 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 79 | 8 | 30 | 103 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,139 | 36 | 78 | 244 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 366 | 13 | 33 | 151 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 766 | 24 | 56 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 682 | 22 | 49 | 126 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 206 | 7 | 18 | 8 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 721 | 23 | 52 | 103 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 422 | 16 | 33 | 213 |
| 294 | Via Del Lago | South of Iris Ave | | 55 | 2 | 2 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 397 | 10 | 37 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 411 | 10 | 35 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 23 | 1 | 5 | 182 |
| 304 | Iris Ave | Indian St | Perris Blvd | 28 | 7 | 18 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 503 | 22 | 87 | 180 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 936 | 47 | 165 | 180 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 25 | 0 | 1 | 1 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 1,181 | 20 | 76 | 91 |
| 326 | Ramona Expy | Sanderson Ave | State St | 71 | 1 | 2 | 2 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 1,073 | 19 | 73 | 87 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 15 | 1 | 1 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 2,520 | 47 | 170 | 151 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 34 | 0 | 1 | 1 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 1,855 | 36 | 130 | 93 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1,297 | 21 | 80 | 95 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 37 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 1,316 | 25 | 92 | 50 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 1,103 | 21 | 58 | 58 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 556 | 13 | 35 | 55 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 7 | 0 | 2 | 10 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-Ram | Mid County Pkwy | 3rd St | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | | | | |
| 377 | Mid County Pkwy WB Off-Ran | Mid County Pkwy | 3rd St | | | | |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | | | | |
| 379 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | 3rd St | | | | |
| 380 | Mid County Pkwy EB On-Ram | 3rd St | Mid County Pkwy | | | | |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | | | | |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 2 | 0 | 1 | 2 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 701 | 29 | 109 | 104 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 16 | 0 | 1 | 2 |
| 390 | Ramona Expy | Webster Ave | Indian St | 286 | 11 | 34 | 13 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 189 | 14 | 64 | 25 |
| 393 | Indian St | Ramona Expy | Morgan St | 34 | 6 | 48 | 44 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 668 | 27 | 106 | 91 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 1,162 | 39 | 139 | 40 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 1,136 | 34 | 124 | 12 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,378 | 62 | 181 | 0 |
| 399 | Ramona Expy | Evans Rd | Rider St | 183 | 4 | 8 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 386 | 9 | 14 | 1 |
| 401 | Morgan St | Indian St | Perris Blvd | 1 | 0 | 1 | 1 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 147 | 6 | 4 | 3 |
| 406 | Ironwood Ave | East of Thedore St | | 76 | 8 | 5 | 4 |
| 407 | Rider St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 1 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 103 | 4 | 7 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 198 | 6 | 8 | 0 |
| 411 | Rider St | Evans Rd | Ramona Expy | 4 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 72 | 2 | 7 | 8 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 5 | 0 | 0 | 0 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 998 | 32 | 109 | 27 |
| 416 | Mid County Pkwy WB On-Ram | Mid County Pkwy | Perris Blvd | 388 | 17 | 65 | 10 |
| 417 | Mid County Pkwy WB Off-Ran | Perris Blvd | Mid County Pkwy | 6 | 0 | 0 | 2 |
| 419 | Mid County Pkwy EB Off-Ram | Mid County Pkwy | Perris Blvd | 451 | 13 | 50 | 12 |
| 420 | Mid County Pkwy EB On-Ram | Perris Blvd | Mid County Pkwy | 0 | 0 | 0 | 2 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 110 | 5 | 14 | 202 |
| 425 | Mid County Pkwy WB On-Ram | West of Evan | | 121 | 1 | 5 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 426 | Mid County Pkwy WB Off-Ran | East of Evan | | 0 | 0 | 0 | 1 |
| 427 | Day St | south of Alessandro Blvd | | 4 | 1 | 5 | 7 |
| 428 | Mid County Pkwy EB Off-Ram | West of Evan | | 41 | 0 | 1 | 2 |
| 429 | Mid County Pkwy EB On-Ram | East of Evan | | 1 | 0 | 0 | 0 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 366 | 8 | 23 | 50 |
| 431 | Placentia Ave | Water Ave | Evans Rd | | | | |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | | | | |
| 433 | Evans Rd | Rider St | Orange Ave | 185 | 3 | 5 | 1 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 17 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 0 | 0 | 0 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 0 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 61 | 1 | 2 | 0 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 45 | 1 | 2 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | | | | |
| 452 | San Jacinto Ave | West of Evan Rd | | | | | |
| 453 | Evans Rd | North of San Jancito Ave | | | | | |
| 454 | San Jacinto Ave | East of Evan Rd | | | | | |
| 455 | Evans Rd | South of San Jancito Ave | | | | | |
| 458 | Nason St | South of Cactus Ave | | 0 | 0 | 0 | 0 |
| 464 | Quincy | South of Eucalyptus | | | | | |
| 477 | Ellis Ave | West of Evan Rd | | | | | |
| 478 | Evans Rd | North of Ellis Ave | | | | | |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | | | | |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | | | | |
| 482 | Ellis Ave | East of SR-215 | | | | | |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | | | | |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | | | | |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | | | | |
| 488 | Nason St | North of Iris Ave | | 0 | 0 | 0 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | | | | |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | | | | |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 340 | 13 | 25 | 208 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 358 | 14 | 26 | 208 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | | | | |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | | | | |
| 504 | Krameria Ave | west of Perris Blvd | | 151 | 13 | 56 | 0 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **Mitigation: T6 and T7 DSL MY2010**
Project Only Phase 1 2022
Surface Street Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5656 | 4,976 | 198 | 482 | 0 | 1820 | 1.131 | 9 | 0 | 0 | 1 | 40 | 13 | 392 | 0 | 457 | 517 |
| 10 | 717 | 647 | 29 | 41 | 0 | 826 | 0.513 | 1 | 0 | 0 | 0 | 6 | 2 | 33 | 0 | 43 | 22 |
| 13 | 969 | 620 | 13 | 38 | 298 | 345 | 0.214 | 1 | 0 | 0 | 0 | 3 | 1 | 31 | 293 | 329 | 70 |
| 32 | 1737 | 1,576 | 69 | 92 | 0 | 1551 | 0.964 | 3 | 0 | 0 | 0 | 14 | 5 | 75 | 0 | 97 | 93 |
| 33 | 526 | 481 | 16 | 29 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 36 |
| 35 | 680 | 187 | 12 | 31 | 450 | 801 | 0.498 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 442 | 471 | 235 |
| 36 | 1351 | 1,116 | 62 | 173 | 0 | 1627 | 1.011 | 2 | 0 | 0 | 0 | 13 | 4 | 141 | 0 | 160 | 162 |
| 37 | 1050 | 478 | 39 | 151 | 382 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 123 | 376 | 510 | 69 |
| 38 | 2673 | 2,191 | 129 | 349 | 4 | 659 | 0.409 | 4 | 0 | 0 | 0 | 26 | 9 | 284 | 4 | 328 | 134 |
| 42 | 2434 | 1,607 | 93 | 285 | 449 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 19 | 6 | 232 | 441 | 702 | 2328 |
| 43 | 174 | 125 | 5 | 5 | 39 | 2598 | 1.614 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 38 | 44 | 71 |
| 46 | 308 | 176 | 8 | 8 | 116 | 806 | 0.501 | 0 | 0 | 0 | 0 | 2 | 1 | 7 | 114 | 123 | 62 |
| 47 | 92 | 85 | 4 | 3 | 0 | 1995 | 1.239 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 5 |
| 48 | 285 | 239 | 6 | 13 | 27 | 795 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 19 |
| 50 | 8434 | 7,495 | 318 | 621 | 0 | 479 | 0.298 | 14 | 1 | 1 | 1 | 65 | 21 | 506 | 0 | 608 | 181 |
| 51 | 0 | 0 | 0 | 0 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 5102 | 4,474 | 164 | 464 | 0 | 1269 | 0.788 | 8 | 0 | 0 | 1 | 33 | 11 | 378 | 0 | 432 | 340 |
| 53 | 480 | 434 | 30 | 16 | 0 | 795 | 0.494 | 1 | 0 | 0 | 0 | 6 | 2 | 13 | 0 | 22 | 11 |
| 54 | 0 | 0 | 0 | 0 | 0 | 325 | 0.202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 46 | 42 | 3 | 1 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1152 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57 | 1354 | 1,122 | 59 | 173 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 24 |
| 58 | 89 | 83 | 3 | 3 | 0 | 172 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 |
| 59 | 186 | 0 | 0 | 0 | 186 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 183 | 89 |
| 60 | 1111 | 738 | 20 | 64 | 289 | 159 | 0.099 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 284 | 343 | 34 |
| 61 | 139 | 37 | 5 | 5 | 92 | 97 | 0.060 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 90 | 96 | 6 |
| 62 | 0 | 0 | 0 | 0 | 0 | 781 | 0.485 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 | 373 | 317 | 8 | 16 | 32 | 795 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 23 |
| 66 | 473 | 401 | 13 | 27 | 32 | 812 | 0.504 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 31 | 58 | 29 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 69 | 998 | 907 | 34 | 57 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 7 | 2 | 46 | 0 | 58 | 29 |
| 70 | 1470 | 1,333 | 51 | 86 | 0 | 795 | 0.494 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 71 | 0 | 0 | 0 | 0 | 0 | 803 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 5009 | 4,386 | 161 | 462 | 0 | 742 | 0.461 | 8 | 0 | 0 | 1 | 33 | 11 | 376 | 0 | 429 | 198 |
| 74 | 403 | 388 | 7 | 7 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 9 | 9 |
| 75 | 156 | 140 | 4 | 7 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 5 | 12 | 6 |
| 76 | 37 | 32 | 1 | 4 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 4 |
| 77 | 552 | 525 | 10 | 10 | 7 | 438 | 0.272 | 1 | 0 | 0 | 0 | 2 | 1 | 8 | 7 | 19 | 5 |
| 80 | 733 | 693 | 15 | 17 | 8 | 138 | 0.086 | 1 | 0 | 0 | 0 | 3 | 1 | 14 | 8 | 27 | 2 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1316 | 1,058 | 28 | 53 | 177 | 322 | 0.200 | 2 | 0 | 0 | 0 | 6 | 2 | 43 | 174 | 227 | 45 |
| 83 | 632 | 504 | 14 | 26 | 88 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 87 | 113 | 7 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1787 | 1,379 | 47 | 110 | 251 | 284 | 0.176 | 2 | 0 | 0 | 0 | 10 | 3 | 90 | 247 | 352 | 62 |
| 87 | 16 | 15 | 0 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 88 | 28 | 26 | 1 | 1 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 95 | 562 | 480 | 12 | 37 | 33 | 439 | 0.273 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 32 | 67 | 18 |
| 96 | 447 | 404 | 9 | 19 | 15 | 399 | 0.248 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 15 | 34 | 8 |
| 97 | 70 | 57 | 2 | 5 | 6 | 389 | 0.242 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 11 | 3 |
| 98 | 64 | 38 | 2 | 13 | 11 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 22 | 2 |
| 99 | 149 | 141 | 1 | 4 | 3 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 241 | 196 | 5 | 13 | 27 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 27 | 39 | 5 |
| 101 | 677 | 563 | 13 | 36 | 65 | 313 | 0.194 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 64 | 98 | 19 |
| 102 | 1 | 1 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 612 | 511 | 12 | 30 | 59 | 291 | 0.181 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 58 | 87 | 16 |
| 104 | 157 | 113 | 2 | 8 | 34 | 404 | 0.251 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 33 | 41 | 10 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 13 | 12 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 107 | 191 | 142 | 3 | 12 | 34 | 388 | 0.241 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 33 | 44 | 11 |
| 108 | 14 | 12 | 0 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 109 | 38 | 29 | 2 | 7 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 3 |
| 110 | 160 | 121 | 3 | 9 | 27 | 756 | 0.470 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 27 | 35 | 16 |
| 111 | 0 | 0 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 210 | 133 | 5 | 17 | 55 | 817 | 0.508 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 54 | 70 | 35 |
| 113 | 35 | 12 | 2 | 7 | 14 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 | 20 | 10 |
| 114 | 61 | 20 | 2 | 8 | 31 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 38 | 18 |
| 115 | 178 | 130 | 3 | 10 | 35 | 851 | 0.529 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 34 | 44 | 23 |
| 116 | 9 | 1 | 0 | 0 | 8 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 4 |
| 117 | 13 | 13 | 0 | 0 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 118 | 194 | 140 | 4 | 11 | 39 | 765 | 0.475 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 38 | 49 | 23 |
| 119 | 30 | 28 | 0 | 2 | 0 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 120 | 234 | 88 | 5 | 15 | 126 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 124 | 138 | 70 |
| 121 | 191 | 146 | 4 | 10 | 31 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 30 | 40 | 21 |
| 122 | 172 | 58 | 3 | 10 | 101 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 99 | 108 | 53 |
| 123 | 12 | 12 | 0 | 0 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | 218 | 170 | 5 | 12 | 31 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 30 | 42 | 21 |
| 125 | 1 | 1 | 0 | 0 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 126 | 233 | 188 | 5 | 11 | 29 | 774 | 0.481 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 29 | 39 | 19 |
| 127 | 240 | 39 | 3 | 10 | 188 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 185 | 194 | 99 |
| 128 | 1 | 1 | 0 | 0 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | 251 | 207 | 5 | 12 | 27 | 823 | 0.511 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 27 | 38 | 19 |
| 130 | 52 | 49 | 2 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 131 | 4 | 4 | 0 | 0 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | 63 | 59 | 2 | 2 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 134 | 46 | 36 | 2 | 3 | 5 | 760 | 0.472 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 4 |
| 135 | 331 | 275 | 8 | 16 | 32 | 816 | 0.507 | 0 | 0 | 0 | 0 | 2 | 1 | 13 | 31 | 47 | 24 |
| 136 | 71 | 67 | 2 | 2 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 137 | 1 | 1 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 138 | 25 | 10 | 1 | 4 | 10 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 13 | 2 |
| 139 | 196 | 168 | 4 | 12 | 12 | 504 | 0.313 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 12 | 23 | 7 |
| 140 | 27 | 12 | 1 | 2 | 12 | 527 | 0.327 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 14 | 4 |
| 141 | 189 | 167 | 3 | 9 | 10 | 1001 | 0.622 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 10 | 18 | 11 |
| 142 | 21 | 13 | 1 | 3 | 4 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 | 1 |
| 143 | 204 | 177 | 5 | 14 | 8 | 845 | 0.525 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 8 | 21 | 11 |
| 144 | 201 | 181 | 5 | 15 | 0 | 783 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 | 7 |
| 145 | 231 | 208 | 6 | 17 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 0 | 16 | 8 |
| 146 | 25 | 24 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 147 | 271 | 243 | 8 | 20 | 0 | 798 | 0.496 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 19 | 9 |
| 148 | 156 | 54 | 2 | 8 | 92 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 90 | 98 | 44 |
| 149 | 342 | 307 | 10 | 25 | 0 | 808 | 0.502 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 0 | 24 | 12 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 379 | 340 | 11 | 28 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 2 | 1 | 23 | 0 | 27 | 13 |
| 152 | 223 | 28 | 2 | 9 | 184 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 181 | 189 | 92 |
| 153 | 482 | 437 | 15 | 30 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 3 | 1 | 24 | 0 | 29 | 15 |
| 154 | 0 | 0 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1260 | 1,147 | 36 | 77 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 7 | 2 | 63 | 0 | 75 | 36 |
| 156 | 668 | 607 | 17 | 44 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 42 | 20 |
| 157 | 1471 | 1,334 | 51 | 86 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 10 | 3 | 70 | 0 | 87 | 43 |
| 158 | 232 | 194 | 5 | 15 | 18 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 18 | 32 | 20 |
| 159 | 354 | 317 | 5 | 15 | 17 | 170 | 0.106 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 17 | 31 | 3 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 718 | 583 | 31 | 104 | 0 | 784 | 0.487 | 1 | 0 | 0 | 0 | 6 | 2 | 85 | 0 | 94 | 46 |
| 162 | 1687 | 1,351 | 77 | 259 | 0 | 1052 | 0.654 | 2 | 0 | 0 | 0 | 16 | 5 | 211 | 0 | 235 | 153 |
| 163 | 908 | 712 | 44 | 152 | 0 | 350 | 0.217 | 1 | 0 | 0 | 0 | 9 | 3 | 124 | 0 | 137 | 30 |
| 164 | 19 | 15 | 1 | 3 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 |
| 165 | 4936 | 4,320 | 157 | 459 | 0 | 1541 | 0.957 | 8 | 0 | 0 | 1 | 32 | 10 | 374 | 0 | 426 | 407 |
| 168 | 831 | 648 | 40 | 143 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 8 | 3 | 116 | 0 | 129 | 61 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 170 | 0 | 0 | 0 | 0 | 0 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 171 | 3050 | 2,787 | 71 | 192 | 0 | 522 | 0.324 | 5 | 0 | 0 | 0 | 15 | 5 | 156 | 0 | 182 | 59 |
| 172 | 2888 | 2,632 | 67 | 189 | 0 | 993 | 0.617 | 5 | 0 | 0 | 0 | 14 | 4 | 154 | 0 | 178 | 110 |
| 173 | 0 | 0 | 0 | 0 | 0 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 174 | 0 | 0 | 0 | 0 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177 | 2404 | 1,600 | 98 | 324 | 382 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 20 | 7 | 264 | 376 | 669 | 462 |
| 178 | 445 | 328 | 15 | 39 | 63 | 7132 | 4.430 | 1 | 0 | 0 | 0 | 3 | 1 | 32 | 62 | 98 | 436 |
| 179 | 2868 | 1,943 | 115 | 364 | 446 | 2189 | 1.360 | 4 | 0 | 0 | 0 | 23 | 8 | 296 | 438 | 770 | 1047 |
| 180 | 127 | 115 | 4 | 5 | 3 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 | 8 | 35 |
| 181 | 0 | 0 | 0 | 0 | 0 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 182 | 0 | 0 | 0 | 0 | 0 | 349 | 0.217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190 | 3350 | 2,924 | 54 | 187 | 185 | 6368 | 3.956 | 5 | 0 | 0 | 0 | 11 | 4 | 152 | 182 | 355 | 1405 |
| 191 | 2893 | 2,523 | 47 | 171 | 152 | 4906 | 3.048 | 5 | 0 | 0 | 0 | 10 | 3 | 139 | 149 | 307 | 935 |
| 192 | 458 | 401 | 7 | 16 | 34 | 4358 | 2.707 | 1 | 0 | 0 | 0 | 1 | 0 | 13 | 33 | 49 | 133 |
| 194 | 412 | 329 | 20 | 63 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 0 | 57 | 13 |
| 195 | 718 | 592 | 31 | 95 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 6 | 2 | 77 | 0 | 87 | 21 |
| 196 | 1129 | 921 | 50 | 158 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 10 | 3 | 129 | 0 | 144 | 64 |
| 198 | 0 | 0 | 0 | 0 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199 | 168 | 152 | 6 | 10 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 10 | 2 |
| 200 | 1354 | 1,122 | 59 | 173 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 12 | 4 | 141 | 0 | 159 | 139 |
| 205 | 274 | 221 | 12 | 41 | 0 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 35 |
| 206 | 0 | 0 | 0 | 0 | 0 | 2658 | 1.651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 207 | 274 | 221 | 12 | 41 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 0 | 37 | 60 |
| 215 | 10 | 10 | 0 | 0 | 0 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 216 | 232 | 197 | 4 | 11 | 20 | 2000 | 1.242 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 20 | 30 | 37 |
| 217 | 373 | 317 | 7 | 19 | 30 | 663 | 0.412 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | 29 | 48 | 20 |
| 218 | 74 | 60 | 1 | 4 | 9 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 13 | 9 |
| 219 | 12 | 11 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 221 | 5 | 5 | 0 | 0 | 0 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 223 | 13 | 13 | 0 | 0 | 0 | 359 | 0.223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225 | 0 | 0 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 50 | 36 | 1 | 4 | 9 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 13 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 9 | 9 | 0 | 0 | 0 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230 | 35 | 35 | 0 | 0 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 231 | 76 | 66 | 1 | 3 | 6 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 11 |
| 232 | 650 | 520 | 12 | 45 | 73 | 1719 | 1.068 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 72 | 113 | 120 |
| 233 | 61 | 47 | 1 | 4 | 9 | 976 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 12 | 8 |
| 236 | 17 | 13 | 0 | 2 | 2 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 2 |
| 237 | 534 | 404 | 11 | 45 | 74 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 113 | 109 |
| 238 | 226 | 185 | 4 | 17 | 20 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 20 | 35 | 24 |
| 239 | 280 | 197 | 6 | 26 | 51 | 1385 | 0.860 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 50 | 73 | 63 |
| 240 | 0 | 0 | 0 | 0 | 0 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 283 | 201 | 6 | 26 | 50 | 989 | 0.614 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 49 | 72 | 44 |
| 243 | 25 | 16 | 1 | 2 | 6 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | 0 |
| 244 | 18 | 8 | 0 | 2 | 8 | 173 | 0.107 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 10 | 1 |
| 245 | 72 | 46 | 1 | 7 | 18 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 18 | 24 | 3 |
| 246 | 52 | 27 | 1 | 6 | 18 | 273 | 0.170 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 18 | 23 | 4 |
| 247 | 259 | 190 | 6 | 22 | 41 | 87 | 0.054 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 40 | 60 | 3 |
| 250 | 0 | 0 | 0 | 0 | 0 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 252 | 678 | 546 | 12 | 46 | 74 | 1588 | 0.986 | 1 | 0 | 0 | 0 | 2 | 1 | 37 | 73 | 115 | 113 |
| 254 | 1 | 1 | 0 | 0 | 0 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 256 | 218 | 205 | 3 | 4 | 6 | 943 | 0.586 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 6 | 10 | 6 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 911 | 761 | 16 | 51 | 83 | 1783 | 1.108 | 1 | 0 | 0 | 0 | 3 | 1 | 42 | 82 | 129 | 143 |
| 261 | 155 | 98 | 4 | 13 | 40 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 39 | 51 | 38 |
| 262 | 315 | 209 | 7 | 27 | 72 | 860 | 0.534 | 0 | 0 | 0 | 0 | 1 | 0 | 22 | 71 | 95 | 51 |
| 263 | 951 | 781 | 18 | 57 | 95 | 141 | 0.088 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 93 | 146 | 13 |
| 264 | 0 | 0 | 0 | 0 | 0 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 265 | 529 | 421 | 11 | 37 | 60 | 98 | 0.061 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 59 | 93 | 6 |
| 266 | 1312 | 1,049 | 26 | 90 | 147 | 171 | 0.106 | 2 | 0 | 0 | 0 | 5 | 2 | 73 | 145 | 227 | 24 |
| 267 | 238 | 163 | 6 | 26 | 43 | 156 | 0.097 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 42 | 65 | 6 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 268 | 884 | 724 | 17 | 54 | 89 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 44 | 87 | 138 | 14 |
| 269 | 697 | 448 | 15 | 65 | 169 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 3 | 1 | 53 | 166 | 224 | 341 |
| 270 | 12 | 9 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 271 | 710 | 457 | 16 | 66 | 171 | 370 | 0.230 | 1 | 0 | 0 | 0 | 3 | 1 | 54 | 168 | 227 | 52 |
| 272 | 0 | 0 | 0 | 0 | 0 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 273 | 11 | 7 | 0 | 2 | 2 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 |
| 274 | 731 | 472 | 16 | 69 | 174 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 171 | 233 | 178 |
| 275 | 85 | 27 | 3 | 10 | 45 | 377 | 0.234 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 44 | 53 | 12 |
| 276 | 734 | 463 | 17 | 69 | 185 | 159 | 0.099 | 1 | 0 | 0 | 0 | 3 | 1 | 56 | 182 | 244 | 24 |
| 277 | 4 | 3 | 0 | 0 | 1 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 211 | 141 | 5 | 19 | 46 | 157 | 0.098 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 45 | 62 | 6 |
| 280 | 869 | 558 | 19 | 81 | 211 | 163 | 0.101 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 207 | 280 | 28 |
| 281 | 25 | 16 | 0 | 2 | 7 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 1 |
| 282 | 449 | 298 | 10 | 41 | 100 | 167 | 0.104 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 98 | 135 | 14 |
| 283 | 220 | 79 | 8 | 30 | 103 | 405 | 0.252 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 101 | 128 | 32 |
| 284 | 1497 | 1,139 | 36 | 78 | 244 | 365 | 0.227 | 2 | 0 | 0 | 0 | 7 | 2 | 64 | 240 | 316 | 72 |
| 285 | 563 | 366 | 13 | 33 | 151 | 230 | 0.143 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 148 | 180 | 26 |
| 286 | 854 | 766 | 24 | 56 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 8 | 62 | 8 |
| 287 | 879 | 682 | 22 | 49 | 126 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 40 | 124 | 171 | 31 |
| 288 | 239 | 206 | 7 | 18 | 8 | 152 | 0.094 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 8 | 25 | 2 |
| 289 | 899 | 721 | 23 | 52 | 103 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 42 | 101 | 151 | 27 |
| 290 | 684 | 422 | 16 | 33 | 213 | 328 | 0.204 | 1 | 0 | 0 | 0 | 3 | 1 | 27 | 209 | 242 | 49 |
| 294 | 59 | 55 | 2 | 2 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 |
| 301 | 444 | 397 | 10 | 37 | 0 | 774 | 0.481 | 1 | 0 | 0 | 0 | 2 | 1 | 30 | 0 | 34 | 16 |
| 302 | 456 | 411 | 10 | 35 | 0 | 796 | 0.494 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 0 | 32 | 16 |
| 303 | 211 | 23 | 1 | 5 | 182 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 179 | 183 | 172 |
| 304 | 53 | 28 | 7 | 18 | 0 | 729 | 0.453 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 17 | 8 |
| 306 | 792 | 503 | 22 | 87 | 180 | 818 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 71 | 177 | 255 | 130 |
| 307 | 1328 | 936 | 47 | 165 | 180 | 0 | 0.000 | 2 | 0 | 0 | 0 | 10 | 3 | 134 | 177 | 326 | 0 |
| 324 | 27 | 25 | 0 | 1 | 1 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 |
| 325 | 1368 | 1,181 | 20 | 76 | 91 | 2224 | 1.382 | 2 | 0 | 0 | 0 | 4 | 1 | 62 | 89 | 159 | 220 |
| 326 | 76 | 71 | 1 | 2 | 2 | 3506 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 9 |
| 327 | 1252 | 1,073 | 19 | 73 | 87 | 227 | 0.141 | 2 | 0 | 0 | 0 | 4 | 1 | 59 | 86 | 152 | 21 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 17 | 15 | 1 | 1 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 358 | 2888 | 2,520 | 47 | 170 | 151 | 0 | 0.000 | 5 | 0 | 0 | 0 | 10 | 3 | 138 | 148 | 305 | 0 |
| 359 | 36 | 34 | 0 | 1 | 1 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 360 | 2114 | 1,855 | 36 | 130 | 93 | 247 | 0.153 | 3 | 0 | 0 | 0 | 7 | 2 | 106 | 91 | 211 | 32 |
| 361 | 1493 | 1,297 | 21 | 80 | 95 | 337 | 0.209 | 2 | 0 | 0 | 0 | 4 | 1 | 65 | 93 | 167 | 35 |
| 362 | 39 | 37 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 |
| 363 | 1483 | 1,316 | 25 | 92 | 50 | 4495 | 2.792 | 2 | 0 | 0 | 0 | 5 | 2 | 75 | 49 | 134 | 373 |
| 364 | 1240 | 1,103 | 21 | 58 | 58 | 286 | 0.178 | 2 | 0 | 0 | 0 | 4 | 1 | 47 | 57 | 112 | 20 |
| 365 | 659 | 556 | 13 | 35 | 55 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 3 | 1 | 28 | 54 | 87 | 87 |
| 366 | 19 | 7 | 0 | 2 | 10 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 11 | 12 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 0 | 0 | 0 | 0 | 0 | 388 | 0.241 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 376 | 0 | 0 | 0 | 0 | 0 | 477 | 0.296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 377 | 0 | 0 | 0 | 0 | 0 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 0 | 0 | 0 | 0 | 212 | 0.132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 379 | 0 | 0 | 0 | 0 | 0 | 331 | 0.206 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 380 | 0 | 0 | 0 | 0 | 0 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 381 | 0 | 0 | 0 | 0 | 0 | 469 | 0.291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 386 | 5 | 2 | 0 | 1 | 2 | 810 | 0.503 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 387 | 943 | 701 | 29 | 109 | 104 | 2761 | 1.715 | 1 | 0 | 0 | 0 | 6 | 2 | 89 | 102 | 200 | 344 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 19 | 16 | 0 | 1 | 2 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 |
| 390 | 344 | 286 | 11 | 34 | 13 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 2 | 1 | 28 | 13 | 44 | 33 |
| 392 | 292 | 189 | 14 | 64 | 25 | 436 | 0.271 | 0 | 0 | 0 | 0 | 3 | 1 | 52 | 25 | 81 | 22 |
| 393 | 132 | 34 | 6 | 48 | 44 | 934 | 0.580 | 0 | 0 | 0 | 0 | 1 | 0 | 39 | 43 | 84 | 49 |
| 394 | 892 | 668 | 27 | 106 | 91 | 1292 | 0.803 | 1 | 0 | 0 | 0 | 6 | 2 | 86 | 89 | 185 | 148 |
| 396 | 1380 | 1,162 | 39 | 139 | 40 | 2366 | 1.470 | 2 | 0 | 0 | 0 | 8 | 3 | 113 | 39 | 166 | 243 |
| 397 | 1306 | 1,136 | 34 | 124 | 12 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 101 | 12 | 124 | 123 |
| 398 | 2621 | 2,378 | 62 | 181 | 0 | 560 | 0.348 | 4 | 0 | 0 | 0 | 13 | 4 | 147 | 0 | 169 | 59 |
| 399 | 195 | 183 | 4 | 8 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 | 17 |
| 400 | 410 | 386 | 9 | 14 | 1 | 1704 | 1.059 | 1 | 0 | 0 | 0 | 2 | 1 | 11 | 1 | 16 | 17 |
| 401 | 3 | 1 | 0 | 1 | 1 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 160 | 147 | 6 | 4 | 3 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 8 | 5 |
| 406 | 93 | 76 | 8 | 5 | 4 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 4 | 10 | 3 |
| 407 | 0 | 0 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 6 | 5 | 0 | 0 | 1 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 409 | 114 | 103 | 4 | 7 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 5 |
| 410 | 212 | 198 | 6 | 8 | 0 | 884 | 0.549 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 9 | 5 |
| 411 | 4 | 4 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 89 | 72 | 2 | 7 | 8 | 678 | 0.421 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 14 | 6 |
| 414 | 5 | 5 | 0 | 0 | 0 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 415 | 1166 | 998 | 32 | 109 | 27 | 855 | 0.531 | 2 | 0 | 0 | 0 | 7 | 2 | 89 | 27 | 126 | 67 |
| 416 | 0 | 0 | 0 | 0 | 0 | 284 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 419 | 0 | 0 | 0 | 0 | 0 | 343 | 0.213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420 | 0 | 0 | 0 | 0 | 0 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 331 | 110 | 5 | 14 | 202 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 199 | 212 | 109 |
| 425 | 0 | 0 | 0 | 0 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 426 | 0 | 0 | 0 | 0 | 0 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 427 | 17 | 4 | 1 | 5 | 7 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 11 | 5 |
| 428 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 429 | 0 | 0 | 0 | 0 | 0 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 447 | 366 | 8 | 23 | 50 | 114 | 0.071 | 1 | 0 | 0 | 0 | 2 | 1 | 19 | 49 | 71 | 5 |
| 431 | 0 | 0 | 0 | 0 | 0 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 432 | 0 | 0 | 0 | 0 | 0 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 433 | 194 | 185 | 3 | 5 | 1 | 1802 | 1.119 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 6 | 7 |
| 434 | 17 | 17 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 0 | 0 | 0 | 0 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 436 | 0 | 0 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 64 | 61 | 1 | 2 | 0 | 2365 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| 443 | 48 | 45 | 1 | 2 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 444 | 0 | 0 | 0 | 0 | 0 | 905 | 0.562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 452 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 0 | 0 | 0 | 0 | 0 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 454 | 0 | 0 | 0 | 0 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 455 | 0 | 0 | 0 | 0 | 0 | 366 | 0.227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 458 | 0 | 0 | 0 | 0 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 0 | 0 | 0 | 0 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 477 | 0 | 0 | 0 | 0 | 0 | 750 | 0.466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 478 | 0 | 0 | 0 | 0 | 0 | 253 | 0.157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 0 | 0 | 0 | 0 | 0 | 500 | 0.311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 481 | 0 | 0 | 0 | 0 | 0 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 482 | 0 | 0 | 0 | 0 | 0 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 483 | 0 | 0 | 0 | 0 | 0 | 589 | 0.366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 484 | 0 | 0 | 0 | 0 | 0 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 485 | 0 | 0 | 0 | 0 | 0 | 319 | 0.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 488 | 0 | 0 | 0 | 0 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 494 | 0 | 0 | 0 | 0 | 0 | 1039 | 0.645 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 498 | 0 | 0 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 586 | 340 | 13 | 25 | 208 | 660 | 0.410 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 204 | 229 | 94 |
| 500 | 606 | 358 | 14 | 26 | 208 | 395 | 0.245 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 204 | 230 | 56 |
| 502 | 0 | 0 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 220 | 151 | 13 | 56 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 3 | 1 | 46 | 0 | 49 | 11 |
| | | | | | | | | | | | | | | | | Total | 15943 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |

Segment Speed Group 2

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0030 | 0.0074 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0034 | 0.0079 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0026 | 0.0073 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0034 | 0.0079 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0032 | 0.0076 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0028 | 0.0068 |

**Segment Emissions**

| Street Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 1 | 1.23E-06 | 5.60E-07 | 3.02E-08 | 5.89E-08 | 1.19E-05 | 3.07E-06 | 2.04E-05 | 0.00E+00 | | 3.73E-05 |
| 10 | 6 | 6.58E-08 | 3.02E-08 | 1.63E-09 | 3.19E-09 | 6.20E-07 | 1.61E-07 | 6.74E-07 | 0.00E+00 | | 1.56E-06 |
| 13 | 1 | 2.90E-08 | 1.32E-08 | 7.12E-10 | 1.39E-09 | 1.48E-07 | 3.82E-08 | 3.05E-07 | 6.74E-06 | | 7.27E-06 |
| 32 | 6 | 3.01E-07 | 1.38E-07 | 7.46E-09 | 1.46E-08 | 2.77E-06 | 7.19E-07 | 2.84E-06 | 0.00E+00 | | 6.79E-06 |
| 33 | 5 | 1.56E-07 | 6.94E-08 | 3.61E-09 | 7.11E-09 | 1.06E-06 | 2.74E-07 | 1.36E-06 | 0.00E+00 | | 2.92E-06 |
| 35 | 3 | 1.76E-08 | 8.11E-09 | 4.27E-10 | 8.40E-10 | 2.49E-07 | 6.46E-08 | 4.94E-07 | 2.01E-05 | | 2.10E-05 |
| 36 | 3 | 2.13E-07 | 9.83E-08 | 5.18E-09 | 1.02E-08 | 2.61E-06 | 6.78E-07 | 5.60E-06 | 0.00E+00 | | 9.22E-06 |
| 37 | 3 | 1.23E-08 | 5.66E-09 | 2.98E-10 | 5.87E-10 | 2.21E-07 | 5.74E-08 | 6.58E-07 | 4.67E-06 | | 5.63E-06 |
| 38 | 3 | 1.70E-07 | 7.81E-08 | 4.12E-09 | 8.09E-09 | 2.20E-06 | 5.71E-07 | 4.58E-06 | 1.47E-07 | | 7.76E-06 |
| 42 | 3 | 1.01E-06 | 4.64E-07 | 2.45E-08 | 4.81E-08 | 1.29E-05 | 3.34E-06 | 3.03E-05 | 1.34E-04 | | 1.82E-04 |
| 43 | 3 | 3.82E-08 | 1.76E-08 | 9.26E-10 | 1.82E-09 | 3.36E-07 | 8.73E-08 | 2.59E-07 | 5.66E-06 | | 6.40E-06 |
| 46 | 3 | 1.67E-08 | 7.68E-09 | 4.04E-10 | 7.95E-10 | 1.67E-07 | 4.33E-08 | 1.28E-07 | 5.22E-06 | | 5.59E-06 |
| 47 | 3 | 1.99E-08 | 9.18E-09 | 4.83E-10 | 9.50E-10 | 2.07E-07 | 5.36E-08 | 1.19E-07 | 0.00E+00 | | 4.10E-07 |
| 48 | 1 | 2.57E-08 | 1.17E-08 | 6.33E-10 | 1.24E-09 | 1.58E-07 | 4.07E-08 | 2.41E-07 | 1.41E-06 | | 1.88E-06 |
| 50 | 6 | 4.42E-07 | 2.03E-07 | 1.10E-08 | 2.14E-08 | 3.94E-06 | 1.02E-06 | 5.92E-06 | 0.00E+00 | | 1.16E-05 |
| 51 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 52 | 6 | 6.99E-07 | 3.21E-07 | 1.73E-08 | 3.39E-08 | 5.39E-06 | 1.40E-06 | 1.17E-05 | 0.00E+00 | | 1.96E-05 |
| 53 | 1 | 4.67E-08 | 2.13E-08 | 1.15E-09 | 2.24E-09 | 7.88E-07 | 2.03E-07 | 2.96E-07 | 0.00E+00 | | 1.36E-06 |
| 54 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 55 | 1 | 1.16E-08 | 5.30E-09 | 2.86E-10 | 5.58E-10 | 2.02E-07 | 5.22E-08 | 4.76E-08 | 0.00E+00 | | 3.20E-07 |
| 56 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 57 | 3 | 3.24E-08 | 1.49E-08 | 7.87E-10 | 1.55E-09 | 3.76E-07 | 9.75E-08 | 8.47E-07 | 0.00E+00 | | 1.37E-06 |
| 58 | 5 | 2.30E-09 | 1.03E-09 | 5.35E-11 | 1.05E-10 | 1.70E-08 | 4.40E-09 | 1.20E-08 | 0.00E+00 | | 3.70E-08 |
| 59 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.58E-06 | | 9.58E-06 |
| 60 | 5 | 1.89E-08 | 8.44E-09 | 4.40E-10 | 8.64E-10 | 1.05E-07 | 2.71E-08 | 2.37E-07 | 3.01E-06 | | 3.41E-06 |
| 61 | 5 | 5.79E-10 | 2.58E-10 | 1.34E-11 | 2.64E-11 | 1.60E-08 | 4.13E-09 | 1.13E-08 | 5.85E-07 | | 6.17E-07 |
| 62 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 65 | 6 | 3.10E-08 | 1.42E-08 | 7.70E-10 | 1.50E-09 | 1.65E-07 | 4.27E-08 | 2.53E-07 | 1.42E-06 | | 1.93E-06 |
| 66 | 6 | 4.01E-08 | 1.84E-08 | 9.94E-10 | 1.94E-09 | 2.73E-07 | 7.09E-08 | 4.36E-07 | 1.45E-06 | | 2.29E-06 |
| 67 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 68 | 3 | 9.57E-11 | 4.40E-11 | 2.32E-12 | 4.56E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.47E-10 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | 6 | 9.15E-08 | 4.20E-08 | 2.27E-09 | 4.43E-09 | 7.21E-07 | 1.87E-07 | 9.29E-07 | 0.00E+00 | | 1.98E-06 |
| 70 | 6 | 1.31E-07 | 5.99E-08 | 3.24E-09 | 6.32E-09 | 1.05E-06 | 2.72E-07 | 1.36E-06 | 0.00E+00 | | 2.88E-06 |
| 71 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 72 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 73 | 6 | 4.01E-07 | 1.84E-07 | 9.94E-09 | 1.94E-08 | 3.09E-06 | 8.03E-07 | 6.82E-06 | 0.00E+00 | | 1.13E-05 |
| 74 | 1 | 8.27E-08 | 3.77E-08 | 2.03E-09 | 3.97E-09 | 3.64E-07 | 9.38E-08 | 2.57E-07 | 1.03E-07 | | 9.44E-07 |
| 75 | 5 | 1.82E-08 | 8.11E-09 | 4.22E-10 | 8.30E-10 | 1.06E-07 | 2.74E-08 | 1.31E-07 | 2.64E-07 | | 5.56E-07 |
| 76 | 5 | 8.24E-09 | 3.68E-09 | 1.91E-10 | 3.76E-10 | 5.27E-08 | 1.36E-08 | 1.49E-07 | 0.00E+00 | | 2.28E-07 |
| 77 | 8 | 4.53E-08 | 2.01E-08 | 9.93E-10 | 1.98E-09 | 1.45E-07 | 3.73E-08 | 1.02E-07 | 2.01E-07 | | 5.53E-07 |
| 80 | 8 | 1.88E-08 | 8.35E-09 | 4.13E-10 | 8.23E-10 | 6.84E-08 | 1.76E-08 | 5.47E-08 | 7.23E-08 | | 2.41E-07 |
| 81 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 82 | 5 | 5.49E-08 | 2.45E-08 | 1.28E-09 | 2.51E-09 | 2.98E-07 | 7.68E-08 | 3.98E-07 | 3.73E-06 | | 4.59E-06 |
| 83 | 8 | 9.43E-09 | 4.18E-09 | 2.07E-10 | 4.12E-10 | 4.39E-08 | 1.13E-08 | 5.75E-08 | 5.48E-07 | | 6.75E-07 |
| 85 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 86 | 5 | 6.31E-08 | 2.82E-08 | 1.47E-09 | 2.88E-09 | 4.41E-07 | 1.14E-07 | 7.28E-07 | 4.67E-06 | | 6.05E-06 |
| 87 | 5 | 1.93E-09 | 8.64E-10 | 4.50E-11 | 8.84E-11 | 0.00E+00 | 0.00E+00 | 1.86E-08 | 0.00E+00 | | 2.16E-08 |
| 88 | 5 | 3.39E-09 | 1.51E-09 | 7.88E-11 | 1.55E-10 | 2.67E-08 | 6.90E-09 | 1.88E-08 | 0.00E+00 | | 5.76E-08 |
| 95 | 1 | 2.85E-08 | 1.30E-08 | 7.02E-10 | 1.37E-09 | 1.74E-07 | 4.49E-08 | 3.78E-07 | 9.49E-07 | | 1.59E-06 |
| 96 | 8 | 3.18E-08 | 1.41E-08 | 6.96E-10 | 1.39E-09 | 1.19E-07 | 3.06E-08 | 1.77E-07 | 3.92E-07 | | 7.66E-07 |
| 97 | 8 | 4.37E-09 | 1.93E-09 | 9.58E-11 | 1.91E-10 | 2.57E-08 | 6.63E-09 | 4.53E-08 | 1.53E-07 | | 2.37E-07 |
| 98 | 8 | 1.20E-09 | 5.31E-10 | 2.63E-11 | 5.23E-11 | 1.06E-08 | 2.73E-09 | 4.85E-08 | 1.15E-07 | | 1.79E-07 |
| 99 | 8 | 1.13E-08 | 4.98E-09 | 2.47E-10 | 4.91E-10 | 1.34E-08 | 3.45E-09 | 3.77E-08 | 7.96E-08 | | 1.51E-07 |
| 100 | 5 | 7.17E-09 | 3.20E-09 | 1.67E-10 | 3.28E-10 | 3.75E-08 | 9.67E-09 | 6.88E-08 | 4.02E-07 | | 5.28E-07 |
| 101 | 5 | 2.84E-08 | 1.27E-08 | 6.60E-10 | 1.30E-09 | 1.34E-07 | 3.47E-08 | 2.63E-07 | 1.33E-06 | | 1.81E-06 |
| 102 | 5 | 3.97E-11 | 1.77E-11 | 9.21E-13 | 1.81E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 6.01E-11 |
| 103 | 5 | 2.40E-08 | 1.07E-08 | 5.57E-10 | 1.10E-09 | 1.15E-07 | 2.98E-08 | 2.03E-07 | 1.13E-06 | | 1.51E-06 |
| 104 | 5 | 7.36E-09 | 3.29E-09 | 1.71E-10 | 3.36E-10 | 2.67E-08 | 6.89E-09 | 7.53E-08 | 9.00E-07 | | 1.02E-06 |
| 105 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 106 | 5 | 3.49E-09 | 1.56E-09 | 8.10E-11 | 1.59E-10 | 0.00E+00 | 0.00E+00 | 4.20E-08 | 0.00E+00 | | 4.73E-08 |
| 107 | 5 | 8.88E-09 | 3.96E-09 | 2.06E-10 | 4.06E-10 | 3.84E-08 | 9.92E-09 | 1.08E-07 | 8.64E-07 | | 1.03E-06 |
| 108 | 5 | 1.93E-09 | 8.61E-10 | 4.48E-11 | 8.81E-11 | 0.00E+00 | 0.00E+00 | 4.65E-08 | 0.00E+00 | | 4.94E-08 |
| 109 | 8 | 4.50E-09 | 1.99E-09 | 9.86E-11 | 1.96E-10 | 5.20E-08 | 1.34E-08 | 1.28E-07 | 0.00E+00 | | 2.01E-07 |
| 110 | 1 | 1.24E-08 | 5.65E-09 | 3.05E-10 | 5.95E-10 | 7.49E-08 | 1.93E-08 | 1.59E-07 | 1.34E-06 | | 1.61E-06 |
| 111 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 112 | 1 | 1.47E-08 | 6.72E-09 | 3.62E-10 | 7.07E-10 | 1.35E-07 | 3.48E-08 | 3.24E-07 | 2.94E-06 | | 3.46E-06 |
| 113 | 8 | 1.87E-09 | 8.28E-10 | 4.10E-11 | 8.16E-11 | 5.23E-08 | 1.35E-08 | 1.29E-07 | 7.26E-07 | | 9.23E-07 |
| 114 | 5 | 2.55E-09 | 1.14E-09 | 5.93E-11 | 1.17E-10 | 5.23E-08 | 1.35E-08 | 1.47E-07 | 1.61E-06 | | 1.82E-06 |
| 115 | 1 | 1.50E-08 | 6.84E-09 | 3.68E-10 | 7.20E-10 | 8.43E-08 | 2.18E-08 | 1.98E-07 | 1.95E-06 | | 2.28E-06 |
| 116 | 5 | 1.32E-10 | 5.89E-11 | 3.07E-12 | 6.03E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.29E-07 | | 4.30E-07 |
| 117 | 1 | 1.33E-09 | 6.08E-10 | 3.28E-11 | 6.40E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.04E-09 |
| 118 | 1 | 1.45E-08 | 6.62E-09 | 3.57E-10 | 6.97E-10 | 1.01E-07 | 2.61E-08 | 1.96E-07 | 1.95E-06 | | 2.30E-06 |
| 119 | 1 | 2.97E-09 | 1.35E-09 | 7.29E-11 | 1.42E-10 | 0.00E+00 | 0.00E+00 | 3.64E-08 | 0.00E+00 | | 4.10E-08 |
| 120 | 5 | 1.15E-08 | 5.15E-09 | 2.68E-10 | 5.28E-10 | 1.34E-07 | 3.47E-08 | 2.84E-07 | 6.72E-06 | | 7.19E-06 |
| 121 | 1 | 1.63E-08 | 7.45E-09 | 4.01E-10 | 7.84E-10 | 1.09E-07 | 2.81E-08 | 1.92E-07 | 1.68E-06 | | 2.03E-06 |
| 122 | 6 | 5.59E-09 | 2.56E-09 | 1.38E-10 | 2.71E-10 | 6.07E-08 | 1.58E-08 | 1.56E-07 | 4.41E-06 | | 4.65E-06 |
| 123 | 5 | 1.53E-09 | 6.83E-10 | 3.56E-11 | 6.99E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.32E-09 |
| 124 | 1 | 1.84E-08 | 8.41E-09 | 4.53E-10 | 8.85E-10 | 1.32E-07 | 3.41E-08 | 2.24E-07 | 1.63E-06 | | 2.04E-06 |
| 125 | 1 | 1.11E-10 | 5.05E-11 | 2.72E-12 | 5.31E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.69E-10 |
| 126 | 1 | 1.97E-08 | 8.99E-09 | 4.85E-10 | 9.47E-10 | 1.28E-07 | 3.30E-08 | 1.98E-07 | 1.47E-06 | | 1.86E-06 |
| 127 | 5 | 5.19E-09 | 2.32E-09 | 1.21E-10 | 2.37E-10 | 8.17E-08 | 2.11E-08 | 1.92E-07 | 1.02E-05 | | 1.05E-05 |
| 128 | 1 | 1.05E-10 | 4.78E-11 | 2.58E-12 | 5.03E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.60E-10 |
| 129 | 1 | 2.31E-08 | 1.05E-08 | 5.67E-10 | 1.11E-09 | 1.36E-07 | 3.51E-08 | 2.30E-07 | 1.46E-06 | | 1.89E-06 |
| 130 | 1 | 5.31E-09 | 2.42E-09 | 1.31E-10 | 2.55E-10 | 5.28E-08 | 1.36E-08 | 1.86E-08 | 0.00E+00 | | 9.32E-08 |
| 131 | 1 | 4.20E-10 | 1.92E-10 | 1.03E-11 | 2.02E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 6.42E-10 |
| 133 | 6 | 5.84E-09 | 2.68E-09 | 1.45E-10 | 2.83E-10 | 4.16E-08 | 1.08E-08 | 3.20E-08 | 0.00E+00 | | 9.34E-08 |
| 134 | 5 | 4.41E-09 | 1.97E-09 | 1.02E-10 | 2.02E-10 | 5.02E-08 | 1.30E-08 | 5.31E-08 | 2.49E-07 | | 3.72E-07 |
| 135 | 6 | 2.76E-08 | 1.27E-08 | 6.85E-10 | 1.34E-09 | 1.69E-07 | 4.39E-08 | 2.60E-07 | 1.46E-06 | | 1.97E-06 |
| 136 | 1 | 7.13E-09 | 3.26E-09 | 1.75E-10 | 3.43E-10 | 5.19E-08 | 1.34E-08 | 3.66E-08 | 0.00E+00 | | 1.13E-07 |
| 137 | 1 | 1.07E-10 | 4.88E-11 | 2.63E-12 | 5.14E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.64E-10 |
| 138 | 5 | 4.30E-10 | 1.92E-10 | 1.00E-11 | 1.97E-11 | 8.82E-09 | 2.28E-09 | 2.49E-08 | 1.75E-07 | | 2.12E-07 |
| 139 | 5 | 1.36E-08 | 6.09E-09 | 3.17E-10 | 6.24E-10 | 6.66E-08 | 1.72E-08 | 1.41E-07 | 3.96E-07 | | 6.42E-07 |
| 140 | 5 | 1.02E-09 | 4.55E-10 | 2.37E-11 | 4.66E-11 | 1.74E-08 | 4.49E-09 | 2.46E-08 | 4.14E-07 | | 4.62E-07 |
| 141 | 5 | 2.69E-08 | 1.20E-08 | 6.26E-10 | 1.23E-09 | 9.92E-08 | 2.56E-08 | 2.10E-07 | 6.56E-07 | | 1.03E-06 |
| 142 | 5 | 6.10E-10 | 2.72E-10 | 1.42E-11 | 2.79E-11 | 9.61E-09 | 2.48E-09 | 2.03E-08 | 7.63E-08 | | 1.10E-07 |
| 143 | 6 | 1.84E-08 | 8.45E-09 | 4.57E-10 | 8.92E-10 | 1.09E-07 | 2.84E-08 | 2.35E-07 | 3.77E-07 | | 7.79E-07 |
| 144 | 6 | 1.75E-08 | 8.01E-09 | 4.33E-10 | 8.45E-10 | 1.01E-07 | 2.63E-08 | 2.34E-07 | 0.00E+00 | | 3.88E-07 |
| 145 | 6 | 2.02E-08 | 9.25E-09 | 5.00E-10 | 9.76E-10 | 1.22E-07 | 3.17E-08 | 2.66E-07 | 0.00E+00 | | 4.51E-07 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 146 | 1 | 2.65E-09 | 1.21E-09 | 6.50E-11 | 1.27E-10 | 0.00E+00 | 0.00E+00 | 1.90E-08 | 0.00E+00 | | 2.30E-08 |
| 147 | 1 | 2.63E-08 | 1.20E-08 | 6.46E-10 | 1.26E-09 | 2.11E-07 | 5.44E-08 | 3.72E-07 | 0.00E+00 | | 6.77E-07 |
| 148 | 6 | 4.86E-09 | 2.23E-09 | 1.21E-10 | 2.35E-10 | 3.78E-08 | 9.83E-09 | 1.16E-07 | 3.76E-06 | | 3.93E-06 |
| 149 | 1 | 3.36E-08 | 1.53E-08 | 8.26E-10 | 1.61E-09 | 2.67E-07 | 6.89E-08 | 4.71E-07 | 0.00E+00 | | 8.58E-07 |
| 150 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 151 | 5 | 4.31E-08 | 1.93E-08 | 1.00E-09 | 1.97E-09 | 2.86E-07 | 7.38E-08 | 5.13E-07 | 0.00E+00 | | 9.38E-07 |
| 152 | 5 | 3.53E-09 | 1.58E-09 | 8.20E-11 | 1.61E-10 | 5.17E-08 | 1.33E-08 | 1.64E-07 | 9.43E-06 | | 9.66E-06 |
| 153 | 5 | 5.62E-08 | 2.51E-08 | 1.31E-09 | 2.57E-09 | 3.95E-07 | 1.02E-07 | 5.58E-07 | 0.00E+00 | | 1.14E-06 |
| 154 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 155 | 6 | 1.10E-07 | 5.02E-08 | 2.71E-09 | 5.30E-09 | 7.22E-07 | 1.87E-07 | 1.19E-06 | 0.00E+00 | | 2.27E-06 |
| 156 | 6 | 5.77E-08 | 2.65E-08 | 1.43E-09 | 2.79E-09 | 3.39E-07 | 8.81E-08 | 6.75E-07 | 0.00E+00 | | 1.19E-06 |
| 157 | 6 | 1.32E-07 | 6.06E-08 | 3.28E-09 | 6.40E-09 | 1.06E-06 | 2.76E-07 | 1.38E-06 | 0.00E+00 | | 2.92E-06 |
| 158 | 1 | 2.73E-08 | 1.25E-08 | 6.71E-10 | 1.31E-09 | 1.72E-07 | 4.43E-08 | 3.63E-07 | 1.23E-06 | | 1.85E-06 |
| 159 | 1 | 7.30E-09 | 3.33E-09 | 1.79E-10 | 3.51E-10 | 2.81E-08 | 7.24E-09 | 5.94E-08 | 1.89E-07 | | 2.95E-07 |
| 160 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 161 | 6 | 5.63E-08 | 2.58E-08 | 1.40E-09 | 2.73E-09 | 6.29E-07 | 1.63E-07 | 1.62E-06 | 0.00E+00 | | 2.50E-06 |
| 162 | 6 | 1.75E-07 | 8.03E-08 | 4.34E-09 | 8.48E-09 | 2.10E-06 | 5.44E-07 | 5.42E-06 | 0.00E+00 | | 8.33E-06 |
| 163 | 6 | 3.07E-08 | 1.41E-08 | 7.61E-10 | 1.49E-09 | 3.99E-07 | 1.03E-07 | 1.06E-06 | 0.00E+00 | | 1.61E-06 |
| 164 | 6 | 8.74E-10 | 4.01E-10 | 2.17E-11 | 4.23E-11 | 1.22E-08 | 3.18E-09 | 2.82E-08 | 0.00E+00 | | 4.50E-08 |
| 165 | 5 | 1.07E-06 | 4.79E-07 | 2.49E-08 | 4.90E-08 | 7.99E-06 | 2.06E-06 | 1.65E-05 | 0.00E+00 | | 2.82E-05 |
| 168 | 5 | 7.92E-08 | 3.53E-08 | 1.84E-09 | 3.62E-09 | 1.00E-06 | 2.58E-07 | 2.53E-06 | 0.00E+00 | | 3.91E-06 |
| 169 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 170 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 171 | 6 | 1.79E-07 | 8.22E-08 | 4.44E-09 | 8.68E-09 | 9.59E-07 | 2.49E-07 | 1.99E-06 | 0.00E+00 | | 3.48E-06 |
| 172 | 1 | 3.54E-07 | 1.62E-07 | 8.70E-09 | 1.70E-08 | 2.20E-06 | 5.67E-07 | 4.37E-06 | 0.00E+00 | | 7.68E-06 |
| 173 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 174 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 177 | 3 | 2.09E-07 | 9.61E-08 | 5.06E-09 | 9.95E-09 | 2.82E-06 | 7.31E-07 | 7.16E-06 | 2.37E-05 | | 3.47E-05 |
| 178 | 3 | 2.75E-07 | 1.27E-07 | 6.67E-09 | 1.31E-08 | 2.77E-06 | 7.19E-07 | 5.54E-06 | 2.51E-05 | | 3.45E-05 |
| 179 | 3 | 5.00E-07 | 2.30E-07 | 1.21E-08 | 2.38E-08 | 6.52E-06 | 1.69E-06 | 1.59E-05 | 5.45E-05 | | 7.94E-05 |
| 180 | 3 | 9.09E-08 | 4.19E-08 | 2.20E-09 | 4.33E-09 | 6.96E-07 | 1.81E-07 | 6.69E-07 | 1.13E-06 | | 2.81E-06 |
| 181 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 182 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 183 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 184 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 185 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 186 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 190 | 3 | 2.19E-06 | 1.01E-06 | 5.31E-08 | 1.04E-07 | 8.90E-06 | 2.31E-06 | 2.37E-05 | 6.58E-05 | | 1.04E-04 |
| 191 | 3 | 1.46E-06 | 6.70E-07 | 3.53E-08 | 6.94E-08 | 5.97E-06 | 1.55E-06 | 1.67E-05 | 4.16E-05 | | 6.81E-05 |
| 192 | 3 | 2.05E-07 | 9.46E-08 | 4.98E-09 | 9.79E-09 | 7.90E-07 | 2.05E-07 | 1.39E-06 | 8.27E-06 | | 1.10E-05 |
| 194 | 8 | 2.30E-08 | 1.02E-08 | 5.04E-10 | 1.00E-09 | 2.35E-07 | 6.05E-08 | 5.21E-07 | 0.00E+00 | | 8.51E-07 |
| 195 | 8 | 4.63E-08 | 2.05E-08 | 1.02E-09 | 2.02E-09 | 4.06E-07 | 1.05E-07 | 8.79E-07 | 0.00E+00 | | 1.46E-06 |
| 196 | 8 | 1.30E-07 | 5.75E-08 | 2.85E-09 | 5.67E-09 | 1.18E-06 | 3.05E-07 | 2.64E-06 | 0.00E+00 | | 4.32E-06 |
| 198 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 199 | 8 | 1.13E-08 | 5.01E-09 | 2.48E-10 | 4.94E-10 | 7.49E-08 | 1.93E-08 | 8.81E-08 | 0.00E+00 | | 1.99E-07 |
| 200 | 1 | 2.13E-07 | 9.73E-08 | 5.24E-09 | 1.02E-08 | 2.73E-06 | 7.06E-07 | 5.66E-06 | 0.00E+00 | | 9.42E-06 |
| 205 | 1 | 4.49E-08 | 2.05E-08 | 1.10E-09 | 2.16E-09 | 5.95E-07 | 1.54E-07 | 1.43E-06 | 0.00E+00 | | 2.25E-06 |
| 206 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 207 | 1 | 7.82E-08 | 3.57E-08 | 1.92E-09 | 3.75E-09 | 1.03E-06 | 2.67E-07 | 2.49E-06 | 0.00E+00 | | 3.92E-06 |
| 215 | 6 | 3.62E-09 | 1.66E-09 | 8.97E-11 | 1.75E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 5.54E-09 |
| 216 | 1 | 5.34E-08 | 2.44E-08 | 1.31E-09 | 2.56E-09 | 2.64E-07 | 6.82E-08 | 5.13E-07 | 2.62E-06 | | 3.55E-06 |
| 217 | 6 | 2.59E-08 | 1.19E-08 | 6.42E-10 | 1.25E-09 | 1.20E-07 | 3.12E-08 | 2.51E-07 | 1.11E-06 | | 1.55E-06 |
| 218 | 3 | 8.23E-09 | 3.79E-09 | 2.00E-10 | 3.92E-10 | 3.02E-08 | 7.84E-09 | 9.29E-08 | 5.87E-07 | | 7.30E-07 |
| 219 | 1 | 3.98E-09 | 1.82E-09 | 9.79E-11 | 1.91E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.75E-07 | | 1.81E-07 |
| 221 | 1 | 1.78E-09 | 8.10E-10 | 4.37E-11 | 8.53E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.72E-09 |
| 223 | 1 | 6.32E-10 | 2.88E-10 | 1.55E-11 | 3.04E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 9.67E-10 |
| 225 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 226 | 3 | 6.95E-09 | 3.20E-09 | 1.69E-10 | 3.32E-10 | 4.25E-08 | 1.10E-08 | 1.31E-07 | 8.26E-07 | | 1.02E-06 |
| 227 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 229 | 1 | 1.37E-09 | 6.24E-10 | 3.36E-11 | 6.57E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 2.09E-09 |
| 230 | 1 | 4.77E-09 | 2.18E-09 | 1.17E-10 | 2.29E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 7.30E-09 |
| 231 | 1 | 1.76E-08 | 8.03E-09 | 4.32E-10 | 8.45E-10 | 6.50E-08 | 1.68E-08 | 1.38E-07 | 7.74E-07 | | 1.02E-06 |
| 232 | 3 | 1.05E-07 | 4.84E-08 | 2.55E-09 | 5.01E-09 | 5.34E-07 | 1.39E-07 | 1.54E-06 | 7.01E-06 | | 9.38E-06 |
| 233 | 3 | 5.39E-09 | 2.48E-09 | 1.31E-10 | 2.57E-10 | 2.53E-08 | 6.56E-09 | 7.77E-08 | 4.91E-07 | | 6.08E-07 |
| 236 | 1 | 1.40E-09 | 6.38E-10 | 3.44E-11 | 6.71E-11 | 0.00E+00 | 0.00E+00 | 3.70E-08 | 1.04E-07 | | 1.43E-07 |
| 237 | 3 | 7.39E-08 | 3.40E-08 | 1.79E-09 | 3.52E-09 | 4.43E-07 | 1.15E-07 | 1.39E-06 | 6.43E-06 | | 8.49E-06 |
| 238 | 1 | 2.81E-08 | 1.28E-08 | 6.90E-10 | 1.35E-09 | 1.48E-07 | 3.82E-08 | 4.44E-07 | 1.47E-06 | | 2.14E-06 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 239 | 1 | 3.70E-08 | 1.69E-08 | 9.08E-10 | 1.77E-09 | 2.74E-07 | 7.08E-08 | 8.39E-07 | 4.63E-06 | | 5.87E-06 |
| 240 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 241 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 242 | 5 | 3.20E-08 | 1.43E-08 | 7.45E-10 | 1.46E-09 | 1.96E-07 | 5.06E-08 | 5.99E-07 | 3.24E-06 | | 4.13E-06 |
| 243 | 5 | 1.65E-10 | 7.37E-11 | 3.84E-12 | 7.54E-12 | 2.11E-09 | 5.45E-10 | 2.98E-09 | 2.52E-08 | | 3.11E-08 |
| 244 | 5 | 2.23E-10 | 9.96E-11 | 5.18E-12 | 1.02E-11 | 0.00E+00 | 0.00E+00 | 8.06E-09 | 9.07E-08 | | 9.91E-08 |
| 245 | 5 | 1.34E-09 | 5.99E-10 | 3.12E-11 | 6.13E-11 | 5.98E-09 | 1.54E-09 | 2.95E-08 | 2.13E-07 | | 2.53E-07 |
| 246 | 5 | 1.19E-09 | 5.30E-10 | 2.76E-11 | 5.43E-11 | 9.02E-09 | 2.33E-09 | 3.82E-08 | 3.22E-07 | | 3.73E-07 |
| 247 | 5 | 2.66E-09 | 1.19E-09 | 6.19E-11 | 1.22E-10 | 1.72E-08 | 4.45E-09 | 4.46E-08 | 2.34E-07 | | 3.04E-07 |
| 250 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 252 | 1 | 1.17E-07 | 5.36E-08 | 2.89E-09 | 5.64E-09 | 6.29E-07 | 1.62E-07 | 1.70E-06 | 7.70E-06 | | 1.04E-05 |
| 254 | 1 | 5.74E-11 | 2.62E-11 | 1.41E-12 | 2.76E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 8.78E-11 |
| 256 | 1 | 2.62E-08 | 1.19E-08 | 6.44E-10 | 1.26E-09 | 9.34E-08 | 2.41E-08 | 8.79E-08 | 3.71E-07 | | 6.16E-07 |
| 258 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 260 | 6 | 1.67E-07 | 7.67E-08 | 4.14E-09 | 8.09E-09 | 7.39E-07 | 1.92E-07 | 1.81E-06 | 8.26E-06 | | 1.13E-05 |
| 261 | 8 | 2.28E-08 | 1.01E-08 | 5.00E-10 | 9.95E-10 | 1.56E-07 | 4.03E-08 | 3.58E-07 | 3.10E-06 | | 3.68E-06 |
| 262 | 5 | 2.90E-08 | 1.29E-08 | 6.73E-10 | 1.32E-09 | 1.99E-07 | 5.13E-08 | 5.41E-07 | 4.06E-06 | | 4.89E-06 |
| 263 | 5 | 1.78E-08 | 7.92E-09 | 4.12E-10 | 8.11E-10 | 8.38E-08 | 2.16E-08 | 1.87E-07 | 8.78E-07 | | 1.20E-06 |
| 264 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 265 | 5 | 6.65E-09 | 2.97E-09 | 1.55E-10 | 3.04E-10 | 3.56E-08 | 9.19E-09 | 8.45E-08 | 3.85E-07 | | 5.25E-07 |
| 266 | 5 | 2.89E-08 | 1.29E-08 | 6.72E-10 | 1.32E-09 | 1.47E-07 | 3.79E-08 | 3.59E-07 | 1.65E-06 | | 2.23E-06 |
| 267 | 5 | 4.10E-09 | 1.83E-09 | 9.53E-11 | 1.87E-10 | 3.09E-08 | 7.98E-09 | 9.45E-08 | 4.40E-07 | | 5.79E-07 |
| 268 | 5 | 1.86E-08 | 8.28E-09 | 4.31E-10 | 8.48E-10 | 8.93E-08 | 2.30E-08 | 2.00E-07 | 9.27E-07 | | 1.27E-06 |
| 269 | 1 | 1.49E-07 | 6.78E-08 | 3.65E-09 | 7.14E-09 | 1.21E-06 | 3.13E-07 | 3.71E-06 | 2.71E-05 | | 3.26E-05 |
| 270 | 1 | 7.56E-10 | 3.45E-10 | 1.86E-11 | 3.63E-11 | 0.00E+00 | 0.00E+00 | 1.44E-08 | 8.13E-08 | | 9.69E-08 |
| 271 | 1 | 2.29E-08 | 1.05E-08 | 5.63E-10 | 1.10E-09 | 1.96E-07 | 5.05E-08 | 5.69E-07 | 4.15E-06 | | 5.00E-06 |
| 272 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 273 | 5 | 7.05E-10 | 3.15E-10 | 1.64E-11 | 3.22E-11 | 0.00E+00 | 0.00E+00 | 2.91E-08 | 8.19E-08 | | 1.12E-07 |
| 274 | 1 | 7.87E-08 | 3.59E-08 | 1.93E-09 | 3.78E-09 | 6.51E-07 | 1.68E-07 | 1.98E-06 | 1.40E-05 | | 1.70E-05 |
| 275 | 5 | 1.64E-09 | 7.32E-10 | 3.81E-11 | 7.50E-11 | 3.74E-08 | 9.64E-09 | 8.78E-08 | 1.11E-06 | | 1.25E-06 |
| 276 | 1 | 9.97E-09 | 4.55E-09 | 2.45E-10 | 4.79E-10 | 8.93E-08 | 2.30E-08 | 2.56E-07 | 1.93E-06 | | 2.31E-06 |
| 277 | 5 | 5.19E-10 | 2.32E-10 | 1.21E-11 | 2.37E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.04E-08 | | 7.12E-08 |
| 278 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 279 | 5 | 3.57E-09 | 1.59E-09 | 8.29E-11 | 1.63E-10 | 2.59E-08 | 6.69E-09 | 6.95E-08 | 4.73E-07 | | 5.81E-07 |
| 280 | 5 | 1.47E-08 | 6.55E-09 | 3.41E-10 | 6.70E-10 | 1.02E-07 | 2.64E-08 | 3.08E-07 | 2.25E-06 | | 2.71E-06 |
| 281 | 5 | 7.22E-10 | 3.22E-10 | 1.68E-11 | 3.30E-11 | 0.00E+00 | 0.00E+00 | 1.30E-08 | 1.28E-07 | | 1.43E-07 |
| 282 | 5 | 8.02E-09 | 3.58E-09 | 1.86E-10 | 3.67E-10 | 5.52E-08 | 1.42E-08 | 1.60E-07 | 1.09E-06 | | 1.34E-06 |
| 283 | 5 | 5.16E-09 | 2.30E-09 | 1.20E-10 | 2.36E-10 | 1.07E-07 | 2.76E-08 | 2.83E-07 | 2.73E-06 | | 3.16E-06 |
| 284 | 5 | 6.70E-08 | 2.99E-08 | 1.56E-09 | 3.06E-09 | 4.34E-07 | 1.12E-07 | 6.63E-07 | 5.84E-06 | | 7.15E-06 |
| 285 | 5 | 1.36E-08 | 6.06E-09 | 3.15E-10 | 6.20E-10 | 9.88E-08 | 2.55E-08 | 1.77E-07 | 2.28E-06 | | 2.60E-06 |
| 286 | 5 | 2.58E-08 | 1.15E-08 | 6.00E-10 | 1.18E-09 | 1.66E-07 | 4.28E-08 | 2.73E-07 | 1.10E-07 | | 6.30E-07 |
| 287 | 5 | 3.21E-08 | 1.43E-08 | 7.46E-10 | 1.47E-09 | 2.12E-07 | 5.48E-08 | 3.33E-07 | 2.41E-06 | | 3.06E-06 |
| 288 | 5 | 5.05E-09 | 2.25E-09 | 1.17E-10 | 2.31E-10 | 3.51E-08 | 9.07E-09 | 6.37E-08 | 7.97E-08 | | 1.95E-07 |
| 289 | 5 | 3.31E-08 | 1.48E-08 | 7.70E-10 | 1.51E-09 | 2.17E-07 | 5.59E-08 | 3.45E-07 | 1.92E-06 | | 2.59E-06 |
| 290 | 5 | 2.23E-08 | 9.96E-09 | 5.18E-10 | 1.02E-09 | 1.73E-07 | 4.47E-08 | 2.52E-07 | 4.58E-06 | | 5.08E-06 |
| 294 | 3 | 5.33E-09 | 2.45E-09 | 1.29E-10 | 2.54E-10 | 4.27E-08 | 1.11E-08 | 3.28E-08 | 0.00E+00 | | 9.47E-08 |
| 301 | 1 | 4.16E-08 | 1.90E-08 | 1.02E-09 | 2.00E-09 | 2.56E-07 | 6.60E-08 | 6.67E-07 | 0.00E+00 | | 1.05E-06 |
| 302 | 1 | 4.43E-08 | 2.02E-08 | 1.09E-09 | 2.13E-09 | 2.63E-07 | 6.78E-08 | 6.49E-07 | 0.00E+00 | | 1.05E-06 |
| 303 | 1 | 4.72E-09 | 2.15E-09 | 1.16E-10 | 2.27E-10 | 5.00E-08 | 1.29E-08 | 1.76E-07 | 1.81E-05 | | 1.83E-05 |
| 304 | 1 | 2.77E-09 | 1.26E-09 | 6.80E-11 | 1.33E-10 | 1.69E-07 | 4.35E-08 | 3.06E-07 | 0.00E+00 | | 5.22E-07 |
| 306 | 1 | 5.57E-08 | 2.54E-08 | 1.37E-09 | 2.68E-09 | 5.94E-07 | 1.53E-07 | 1.66E-06 | 9.65E-06 | | 1.21E-05 |
| 307 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 324 | 3 | 8.60E-09 | 3.96E-09 | 2.08E-10 | 4.10E-10 | 0.00E+00 | 0.00E+00 | 5.82E-08 | 1.63E-07 | | 2.35E-07 |
| 325 | 3 | 3.09E-07 | 1.42E-07 | 7.49E-09 | 1.47E-08 | 1.15E-06 | 2.99E-07 | 3.36E-06 | 1.13E-05 | | 1.66E-05 |
| 326 | 3 | 2.93E-08 | 1.35E-08 | 7.10E-10 | 1.40E-09 | 9.08E-08 | 2.36E-08 | 1.40E-07 | 3.92E-07 | | 6.90E-07 |
| 327 | 3 | 2.86E-08 | 1.32E-08 | 6.94E-10 | 1.37E-09 | 1.12E-07 | 2.90E-08 | 3.30E-07 | 1.10E-06 | | 1.62E-06 |
| 340 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 351 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 358 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 359 | 5 | 1.86E-09 | 8.29E-10 | 4.32E-11 | 8.49E-11 | 0.00E+00 | 0.00E+00 | 7.90E-09 | 2.22E-08 | | 3.29E-08 |
| 360 | 5 | 7.39E-08 | 3.30E-08 | 1.72E-09 | 3.38E-09 | 2.94E-07 | 7.58E-08 | 7.48E-07 | 1.51E-06 | | 2.73E-06 |
| 361 | 5 | 7.05E-08 | 3.15E-08 | 1.64E-09 | 3.22E-09 | 2.34E-07 | 6.03E-08 | 6.28E-07 | 2.10E-06 | | 3.13E-06 |
| 362 | 5 | 2.02E-09 | 9.00E-10 | 4.68E-11 | 9.21E-11 | 0.00E+00 | 0.00E+00 | 7.87E-09 | 2.21E-08 | | 3.31E-08 |
| 363 | 5 | 9.54E-07 | 4.26E-07 | 2.22E-08 | 4.36E-08 | 3.71E-06 | 9.58E-07 | 9.63E-06 | 1.47E-05 | | 3.05E-05 |
| 364 | 5 | 5.08E-08 | 2.27E-08 | 1.18E-09 | 2.32E-09 | 1.98E-07 | 5.12E-08 | 3.86E-07 | 1.09E-06 | | 1.80E-06 |
| 365 | 1 | 1.21E-07 | 5.51E-08 | 2.97E-09 | 5.79E-09 | 6.88E-07 | 1.77E-07 | 1.31E-06 | 5.77E-06 | | 8.13E-06 |
| 366 | 1 | 1.65E-09 | 7.54E-10 | 4.06E-11 | 7.93E-11 | 0.00E+00 | 0.00E+00 | 8.12E-08 | 1.14E-06 | | 1.23E-06 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 367 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 375 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 376 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 377 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 378 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 379 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 380 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 381 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 386 | 1 | 2.19E-10 | 1.00E-10 | 5.39E-12 | 1.05E-11 | 0.00E+00 | 0.00E+00 | 1.89E-08 | 1.06E-07 | | 1.25E-07 |
| 387 | 6 | 2.38E-07 | 1.09E-07 | 5.91E-09 | 1.15E-08 | 2.07E-06 | 5.38E-07 | 5.99E-06 | 1.60E-05 | | 2.50E-05 |
| 388 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 389 | 3 | 3.55E-10 | 1.64E-10 | 8.62E-12 | 1.69E-11 | 0.00E+00 | 0.00E+00 | 3.76E-09 | 2.11E-08 | | 2.54E-08 |
| 390 | 3 | 4.00E-08 | 1.84E-08 | 9.70E-10 | 1.91E-09 | 3.39E-07 | 8.79E-08 | 8.05E-07 | 8.63E-07 | | 2.16E-06 |
| 392 | 3 | 9.69E-09 | 4.46E-09 | 2.35E-10 | 4.62E-10 | 1.58E-07 | 4.10E-08 | 5.55E-07 | 6.09E-07 | | 1.38E-06 |
| 393 | 3 | 3.73E-09 | 1.72E-09 | 9.05E-11 | 1.78E-10 | 1.45E-07 | 3.77E-08 | 8.92E-07 | 2.29E-06 | | 3.38E-06 |
| 394 | 6 | 1.06E-07 | 4.88E-08 | 2.64E-09 | 5.15E-09 | 9.03E-07 | 2.34E-07 | 2.73E-06 | 6.57E-06 | | 1.06E-05 |
| 396 | 6 | 3.39E-07 | 1.55E-07 | 8.40E-09 | 1.64E-08 | 2.39E-06 | 6.20E-07 | 6.55E-06 | 5.28E-06 | | 1.54E-05 |
| 397 | 3 | 2.12E-07 | 9.76E-08 | 5.14E-09 | 1.01E-08 | 1.40E-06 | 3.63E-07 | 3.92E-06 | 1.06E-06 | | 7.07E-06 |
| 398 | 1 | 1.80E-07 | 8.23E-08 | 4.43E-09 | 8.66E-09 | 1.15E-06 | 2.96E-07 | 2.36E-06 | 0.00E+00 | | 4.08E-06 |
| 399 | 3 | 7.29E-08 | 3.36E-08 | 1.77E-09 | 3.48E-09 | 3.51E-07 | 9.11E-08 | 5.40E-07 | 0.00E+00 | | 1.09E-06 |
| 400 | 1 | 8.91E-08 | 4.07E-08 | 2.19E-09 | 4.28E-09 | 5.07E-07 | 1.31E-07 | 5.56E-07 | 1.12E-07 | | 1.44E-06 |
| 401 | 5 | 1.27E-10 | 5.68E-11 | 2.96E-12 | 5.82E-12 | 0.00E+00 | 0.00E+00 | 1.84E-08 | 5.18E-08 | | 7.04E-08 |
| 402 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 404 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 405 | 5 | 2.39E-08 | 1.07E-08 | 5.56E-10 | 1.09E-09 | 2.00E-07 | 5.16E-08 | 9.41E-08 | 1.99E-07 | | 5.81E-07 |
| 406 | 3 | 3.53E-09 | 1.62E-09 | 8.56E-11 | 1.68E-10 | 8.18E-08 | 2.12E-08 | 3.93E-08 | 8.82E-08 | | 2.36E-07 |
| 407 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 408 | 1 | 7.26E-10 | 3.31E-10 | 1.78E-11 | 3.49E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.02E-08 | | 7.14E-08 |
| 409 | 3 | 1.38E-08 | 6.34E-09 | 3.34E-10 | 6.56E-10 | 1.18E-07 | 3.06E-08 | 1.58E-07 | 0.00E+00 | | 3.28E-07 |
| 410 | 1 | 2.37E-08 | 1.08E-08 | 5.83E-10 | 1.14E-09 | 1.75E-07 | 4.52E-08 | 1.65E-07 | 0.00E+00 | | 4.21E-07 |
| 411 | 1 | 1.26E-09 | 5.77E-10 | 3.11E-11 | 6.07E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 1.93E-09 |
| 412 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 413 | 1 | 6.61E-09 | 3.02E-09 | 1.63E-10 | 3.18E-10 | 4.48E-08 | 1.16E-08 | 1.11E-07 | 3.55E-07 | | 5.32E-07 |
| 414 | 1 | 6.06E-10 | 2.77E-10 | 1.49E-11 | 2.91E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 9.27E-10 |
| 415 | 6 | 1.05E-07 | 4.82E-08 | 2.61E-09 | 5.09E-09 | 7.08E-07 | 1.84E-07 | 1.85E-06 | 1.29E-06 | | 4.20E-06 |
| 416 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 417 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 419 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 420 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 421 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 424 | 5 | 1.47E-08 | 6.55E-09 | 3.41E-10 | 6.71E-10 | 1.37E-07 | 3.53E-08 | 2.70E-07 | 1.10E-05 | | 1.14E-05 |
| 425 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 426 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 427 | 8 | 5.15E-10 | 2.28E-10 | 1.13E-11 | 2.25E-11 | 2.16E-08 | 5.57E-09 | 7.62E-08 | 3.00E-07 | | 4.04E-07 |
| 428 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 429 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 430 | 5 | 6.73E-09 | 3.00E-09 | 1.56E-10 | 3.07E-10 | 3.01E-08 | 7.77E-09 | 6.11E-08 | 3.74E-07 | | 4.83E-07 |
| 431 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 432 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 433 | 1 | 4.52E-08 | 2.06E-08 | 1.11E-09 | 2.17E-09 | 1.79E-07 | 4.61E-08 | 2.10E-07 | 1.18E-07 | | 6.22E-07 |
| 434 | 1 | 2.92E-09 | 1.33E-09 | 7.18E-11 | 1.40E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 4.47E-09 |
| 435 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 436 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 441 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 442 | 1 | 1.95E-08 | 8.92E-09 | 4.80E-10 | 9.38E-10 | 7.81E-08 | 2.02E-08 | 1.10E-07 | 0.00E+00 | | 2.38E-07 |
| 443 | 1 | 9.68E-09 | 4.42E-09 | 2.38E-10 | 4.65E-10 | 5.25E-08 | 1.35E-08 | 7.40E-08 | 0.00E+00 | | 1.55E-07 |
| 444 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 452 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 453 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 454 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 455 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 458 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 464 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 477 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 478 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 479 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 480 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 481 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 482 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 483 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 484 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 485 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 488 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 494 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 498 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 499 | 5 | 3.62E-08 | 1.61E-08 | 8.41E-10 | 1.65E-09 | 2.83E-07 | 7.31E-08 | 3.84E-07 | 9.00E-06 | | 9.79E-06 |
| 500 | 5 | 2.28E-08 | 1.02E-08 | 5.30E-10 | 1.04E-09 | 1.83E-07 | 4.71E-08 | 2.39E-07 | 5.38E-06 | | 5.89E-06 |
| 502 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 503 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | 0.00E+00 |
| 504 | 5 | 8.76E-09 | 3.91E-09 | 2.04E-10 | 4.00E-10 | 1.55E-07 | 3.99E-08 | 4.70E-07 | 0.00E+00 | | 6.77E-07 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/3/2013
**Project Only Phase 1 in 2022** Mitigation: T6 and T7 MY2010
**Freeway Circulation** **with EMFAC2014**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| FRWY1 | 1.46E-04 |
| FRWY2 | 2.02E-04 |
| FRWY3 | 1.65E-04 |
| FRWY4 | 1.79E-04 |
| FRWY5 | 1.41E-04 |
| FRWY6 | 2.09E-04 |
| FRWY7 | 1.67E-04 |
| FRWY8 | 1.57E-04 |
| FRWY9 | 1.96E-04 |
| FRWY10 | 1.83E-04 |
| FRWY11 | 9.46E-05 |
| FRWY12 | 2.68E-04 |
| FRWY13 | 2.05E-04 |
| FRWY14 | 3.05E-04 |
| FRWY15 | 2.02E-04 |
| FRWY16 | 3.43E-04 |
| FRWY17 | 4.13E-04 |
| FRWY18 | 3.28E-04 |
| FRWY19 | 1.23E-04 |
| FRWY20 | 1.18E-04 |
| FRWY21 | 4.59E-04 |
| FRWY22 | 2.70E-04 |
| FRWY23 | 2.74E-04 |
| FRWY24 | 6.17E-04 |
| FRWY25 | 3.67E-04 |
| FRWY26 | 2.72E-04 |
| FRWY27 | 3.52E-04 |
| FRWY28 | 4.89E-04 |

| | |
|---|---|
| FRWY29 | 4.92E-04 |
| FRWY30 | 4.81E-04 |
| FRWY31 | 1.09E-03 |
| FRWY32 | 3.60E-04 |
| FRWY33 | 7.20E-04 |
| FRWY34 | 6.38E-04 |
| FRWY35 | 6.28E-05 |
| FRWY36 | 4.38E-04 |
| FRWY37 | 1.76E-04 |
| FRWY294 | 2.00E-05 |
| FRWY295 | 7.19E-06 |
| FRWY296 | 1.24E-05 |
| FRWY297 | 1.03E-05 |
| FRWY299 | 1.13E-05 |
| FRWY75 | 1.83E-04 |
| FRWY76 | 1.65E-04 |
| FRWY77 | 2.97E-05 |
| FRWY78 | 9.35E-05 |
| FRWY79 | 1.17E-04 |
| FRWY80 | 1.18E-04 |
| FRWY81 | 1.78E-04 |
| FRWY82 | 1.21E-04 |
| FRWY83 | 1.33E-04 |
| FRWY84 | 8.71E-05 |
| FRWY85 | 1.73E-04 |
| FRWY86 | 5.20E-05 |
| FRWY87 | 9.17E-05 |
| FRWY101 | 6.14E-05 |
| FRWY102 | 3.15E-05 |
| FRWY103 | 6.04E-05 |
| FRWY104 | 1.03E-04 |
| FRWY105 | 3.20E-05 |
| FRWY106 | 4.13E-05 |
| FRWY107 | 4.98E-05 |
| FRWY108 | 1.28E-04 |

| | |
|---|---|
| FRWY109 | 4.84E-05 |
| FRWY110 | 7.81E-05 |
| FRWY111 | 2.16E-04 |
| FRWY112 | 3.85E-05 |
| FRWY113 | 8.19E-05 |
| FRWY114 | 9.01E-05 |
| FRWY129 | 5.92E-05 |
| FRWY130 | 5.35E-05 |
| FRWY131 | 4.44E-05 |
| FRWY132 | 1.80E-05 |
| FRWY133 | 7.12E-05 |
| FRWY167 | 2.40E-05 |
| FRWY168 | 1.99E-05 |
| FRWY169 | 1.06E-04 |
| FRWY171 | 4.95E-05 |
| FRWY172 | 8.11E-05 |
| FRWY173 | 6.90E-05 |
| FRWY174 | 3.15E-05 |
| FRWY175 | 4.85E-05 |
| FRWY176 | 4.36E-05 |
| FRWY134 | 4.03E-05 |
| FRWY135 | 4.76E-05 |
| FRWY136 | 2.83E-05 |
| FRWY137 | 3.76E-05 |
| FRWY138 | 6.03E-05 |
| FRWY139 | 4.67E-05 |
| FRWY140 | 3.84E-05 |
| FRWY141 | 3.22E-05 |
| FRWY142 | 2.04E-05 |
| FRWY143 | 4.03E-05 |
| FRWY144 | 5.39E-05 |
| Total (g/sec) | 1.55E-02 |
| Total (lbs/day) | 2.96E+00 |
| Total VMT | 1.91E+05 |

| | |
|---|---|
| EMFAC201 | 2014/2011 |
| 1.40E-01 | 1.11E-01 |

# TRAFFIC VOLUMES

| ID | Arterial | From | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 530 | 50 | 150 | 1,580 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 450 | 50 | 150 | 1,600 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 470 | 60 | 160 | 1,610 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 510 | 60 | 170 | 1,640 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 550 | 60 | 180 | 1,670 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 580 | 60 | 180 | 1,690 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 610 | 60 | 190 | 1,710 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 630 | 60 | 190 | 1,730 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 680 | 70 | 210 | 1,840 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 700 | 70 | 220 | 1,850 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 730 | 70 | 230 | 1,870 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,080 | 90 | 290 | 2,090 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,160 | 90 | 310 | 2,170 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,190 | 100 | 330 | 2,230 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,190 | 100 | 330 | 2,240 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,280 | 100 | 330 | 2,250 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 1,490 | 110 | 350 | 2,300 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 1,690 | 110 | 370 | 2,320 |
| FRWY19 | SR60 | Market St to Main St | 1,840 | 120 | 400 | 2,400 |
| FRWY20 | SR60 | Main St to SR-91 | 2,220 | 150 | 480 | 2,690 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 3,970 | 230 | 790 | 4,140 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 4,030 | 240 | 830 | 4,220 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 4,080 | 240 | 850 | 4,260 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 4,480 | 260 | 910 | 4,400 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 5,070 | 280 | 970 | 4,510 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 5,390 | 280 | 960 | 4,460 |
| FRWY27 | SR60 | I-215 to Day St | 6,600 | 330 | 1,120 | 5,130 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 6,370 | 340 | 1,150 | 5,130 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 6,570 | 350 | 1,190 | 5,170 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 7,480 | 380 | 1,240 | 5,300 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 8,670 | 430 | 1,340 | 5,490 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 9,240 | 450 | 1,360 | 5,490 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 11,580 | 460 | 1,560 | 6,340 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,500 | 470 | 1,560 | 6,490 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 3,360 | 120 | 380 | 850 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 3,040 | 120 | 320 | 740 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 3,010 | 110 | 300 | 720 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 127 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 127 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 127 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 127 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 127 |
| FRWY75 | SR91 | I-15 to McKinley St | 730 | 50 | 190 | 1,090 |
| FRWY76 | SR91 | McKinley St to Pierce St | 850 | 50 | 210 | 1,120 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 850 | 50 | 210 | 1,120 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 920 | 60 | 220 | 1,140 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,020 | 60 | 230 | 1,150 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,120 | 60 | 240 | 1,170 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,210 | 60 | 250 | 1,190 |
| FRWY82 | SR91 | Adam St to Madison St | 1,270 | 70 | 260 | 1,210 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,300 | 70 | 270 | 1,220 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,360 | 70 | 270 | 1,230 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,340 | 70 | 270 | 1,220 |
| FRWY86 | SR91 | 14th St to University Ave | 1,330 | 60 | 240 | 1,110 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,370 | 60 | 240 | 1,120 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 1,660 | 60 | 190 | 590 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 1,200 | 50 | 160 | 570 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 1,200 | 50 | 160 | 570 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 900 | 40 | 140 | 550 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 730 | 40 | 130 | 540 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY106 | I-10 | 22nd St to S 8th St | 670 | 40 | 130 | 540 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 550 | 30 | 120 | 520 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 470 | 30 | 110 | 510 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 450 | 30 | 90 | 490 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 410 | 30 | 90 | 490 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 400 | 30 | 90 | 490 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 400 | 30 | 80 | 490 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 340 | 20 | 70 | 430 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 340 | 20 | 70 | 430 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 910 | 20 | 90 | 210 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,080 | 20 | 100 | 220 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,220 | 30 | 110 | 230 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,270 | 30 | 110 | 240 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,290 | 30 | 120 | 240 |
| FRWY167 | I-215 | Redlands Ave to D St | 840 | 20 | 90 | 270 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 1,020 | 30 | 110 | 360 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 990 | 30 | 100 | 360 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 580 | 20 | 60 | 410 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 590 | 20 | 80 | 480 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 710 | 20 | 80 | 490 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 700 | 20 | 90 | 490 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 1,060 | 40 | 110 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 1,100 | 40 | 120 | 550 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 580 | 30 | 90 | 470 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 570 | 30 | 80 | 450 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 560 | 30 | 80 | 440 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 490 | 20 | 60 | 410 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 460 | 20 | 60 | 400 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 570 | 20 | 70 | 390 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 620 | 30 | 90 | 400 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 610 | 30 | 70 | 370 |
| FRWY142 | SR-215 | Mill St to 2rd St | 600 | 30 | 70 | 360 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 590 | 20 | 70 | 330 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 540 | 20 | 50 | 290 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **Mitigation: T6 and T7 MY2010**
Project Only Phase 1 in 2022
Freeway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.18% | 0.01% | 0.01% | 0.02% | 20.43% | 6.68% | 81.42% | 98.31% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 2310 | 530 | 50 | 150 | 1,580 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1553 | 1690 | 1653 |
| FRWY2 | 2250 | 450 | 50 | 150 | 1,600 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 10 | 3 | 122 | 1573 | 1710 | 2287 |
| FRWY3 | 2300 | 470 | 60 | 160 | 1,610 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 12 | 4 | 130 | 1583 | 1730 | 1867 |
| FRWY4 | 2380 | 510 | 60 | 170 | 1,640 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 12 | 4 | 138 | 1612 | 1768 | 2029 |
| FRWY5 | 2460 | 550 | 60 | 180 | 1,670 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1642 | 1806 | 1595 |
| FRWY6 | 2510 | 580 | 60 | 180 | 1,690 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 12 | 4 | 147 | 1661 | 1826 | 2367 |
| FRWY7 | 2570 | 610 | 60 | 190 | 1,710 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1681 | 1853 | 1900 |
| FRWY8 | 2610 | 630 | 60 | 190 | 1,730 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 12 | 4 | 155 | 1701 | 1873 | 1788 |
| FRWY9 | 2800 | 680 | 70 | 210 | 1,840 | 1792 | 1.113 | 1 | 0 | 0 | 0 | 14 | 5 | 171 | 1809 | 2000 | 2227 |
| FRWY10 | 2840 | 700 | 70 | 220 | 1,850 | 1665 | 1.034 | 1 | 0 | 0 | 0 | 14 | 5 | 179 | 1819 | 2018 | 2088 |
| FRWY11 | 2900 | 730 | 70 | 230 | 1,870 | 849 | 0.527 | 1 | 0 | 0 | 0 | 14 | 5 | 187 | 1838 | 2046 | 1079 |
| FRWY12 | 3550 | 1,080 | 90 | 290 | 2,090 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 18 | 6 | 236 | 2055 | 2318 | 3310 |
| FRWY13 | 3730 | 1,160 | 90 | 310 | 2,170 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 18 | 6 | 252 | 2133 | 2413 | 2531 |
| FRWY14 | 3850 | 1,190 | 100 | 330 | 2,230 | 2444 | 1.518 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2192 | 2491 | 3782 |
| FRWY15 | 3860 | 1,190 | 100 | 330 | 2,240 | 1608 | 0.999 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2202 | 2501 | 2498 |
| FRWY16 | 3960 | 1,280 | 100 | 330 | 2,250 | 2722 | 1.691 | 2 | 0 | 0 | 0 | 20 | 7 | 269 | 2212 | 2511 | 4245 |
| FRWY17 | 4250 | 1,490 | 110 | 350 | 2,300 | 3198 | 1.987 | 3 | 0 | 0 | 0 | 22 | 7 | 285 | 2261 | 2579 | 5124 |
| FRWY18 | 4490 | 1,690 | 110 | 370 | 2,320 | 2509 | 1.559 | 3 | 0 | 0 | 0 | 22 | 7 | 301 | 2281 | 2616 | 4077 |
| FRWY19 | 4760 | 1,840 | 120 | 400 | 2,400 | 910 | 0.565 | 3 | 0 | 0 | 0 | 25 | 8 | 326 | 2360 | 2722 | 1539 |
| FRWY20 | 5540 | 2,220 | 150 | 480 | 2,690 | 774 | 0.481 | 4 | 0 | 0 | 0 | 31 | 10 | 391 | 2645 | 3081 | 1481 |
| FRWY21 | 9130 | 3,970 | 230 | 790 | 4,140 | 1798 | 1.117 | 7 | 0 | 0 | 1 | 47 | 15 | 643 | 4070 | 4784 | 5344 |
| FRWY22 | 9320 | 4,030 | 240 | 830 | 4,220 | 1035 | 0.643 | 7 | 0 | 0 | 1 | 49 | 16 | 676 | 4149 | 4898 | 3149 |
| FRWY23 | 9430 | 4,080 | 240 | 850 | 4,260 | 1042 | 0.647 | 7 | 0 | 0 | 1 | 49 | 16 | 692 | 4188 | 4954 | 3207 |
| FRWY24 | 10050 | 4,480 | 260 | 910 | 4,400 | 2260 | 1.404 | 8 | 0 | 0 | 1 | 53 | 17 | 741 | 4326 | 5147 | 7226 |
| FRWY25 | 10830 | 5,070 | 280 | 970 | 4,510 | 1305 | 0.811 | 9 | 0 | 0 | 1 | 57 | 19 | 790 | 4434 | 5311 | 4305 |
| FRWY26 | 11090 | 5,390 | 280 | 960 | 4,460 | 977 | 0.607 | 10 | 1 | 1 | 1 | 57 | 19 | 782 | 4385 | 5254 | 3189 |
| FRWY27 | 13180 | 6,600 | 330 | 1,120 | 5,130 | 1186 | 0.737 | 12 | 1 | 1 | 1 | 67 | 22 | 912 | 5043 | 6059 | 4464 |
| FRWY28 | 12990 | 6,370 | 340 | 1,150 | 5,130 | 1642 | 1.020 | 12 | 1 | 1 | 1 | 69 | 23 | 936 | 5043 | 6086 | 6208 |
| FRWY29 | 13280 | 6,570 | 350 | 1,190 | 5,170 | 1636 | 1.016 | 12 | 1 | 1 | 1 | 71 | 23 | 969 | 5083 | 6161 | 6261 |
| FRWY30 | 14400 | 7,480 | 380 | 1,240 | 5,300 | 1555 | 0.966 | 14 | 1 | 1 | 1 | 78 | 25 | 1010 | 5211 | 6339 | 6124 |
| FRWY31 | 15930 | 8,670 | 430 | 1,340 | 5,490 | 3384 | 2.102 | 16 | 1 | 1 | 1 | 88 | 29 | 1091 | 5397 | 6624 | 13924 |
| FRWY32 | 16540 | 9,240 | 450 | 1,360 | 5,490 | 1112 | 0.691 | 17 | 1 | 1 | 1 | 92 | 30 | 1107 | 5397 | 6647 | 4591 |
| FRWY33 | 19940 | 11,580 | 460 | 1,560 | 6,340 | 1935 | 1.202 | 21 | 1 | 1 | 2 | 94 | 31 | 1270 | 6233 | 7653 | 9199 |
| FRWY34 | 21020 | 12,500 | 470 | 1,560 | 6,490 | 1675 | 1.041 | 23 | 1 | 1 | 2 | 96 | 31 | 1270 | 6381 | 7805 | 8121 |
| FRWY35 | 4710 | 3,360 | 120 | 380 | 850 | 1143 | 0.710 | 6 | 0 | 0 | 1 | 25 | 8 | 309 | 836 | 1185 | 841 |
| FRWY36 | 4220 | 3,040 | 120 | 320 | 740 | 9120 | 5.665 | 5 | 0 | 0 | 0 | 25 | 8 | 261 | 728 | 1027 | 5819 |
| FRWY37 | 4140 | 3,010 | 110 | 300 | 720 | 3802 | 2.362 | 5 | 0 | 0 | 0 | 22 | 7 | 244 | 708 | 988 | 2335 |
| FRWY294 | 127 | 0 | 0 | 0 | 127 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 227 |
| FRWY295 | 127 | 0 | 0 | 0 | 127 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| FRWY296 | 127 | 0 | 0 | 0 | 127 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 140 |
| FRWY297 | 127 | 0 | 0 | 0 | 127 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| FRWY299 | 127 | 0 | 0 | 0 | 127 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 128 |
| FRWY75 | 2060 | 730 | 50 | 190 | 1,090 | 2861 | 1.777 | 1 | 0 | 0 | 0 | 10 | 3 | 155 | 1072 | 1241 | 2206 |
| FRWY76 | 2230 | 850 | 50 | 210 | 1,120 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 1999 |
| FRWY77 | 2230 | 850 | 50 | 210 | 1,120 | 450 | 0.280 | 2 | 0 | 0 | 0 | 10 | 3 | 171 | 1101 | 1287 | 360 |
| FRWY78 | 2340 | 920 | 60 | 220 | 1,140 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 12 | 4 | 179 | 1121 | 1318 | 1133 |
| FRWY79 | 2460 | 1,020 | 60 | 230 | 1,150 | 1713 | 1.064 | 2 | 0 | 0 | 0 | 12 | 4 | 187 | 1131 | 1336 | 1422 |
| FRWY80 | 2590 | 1,120 | 60 | 240 | 1,170 | 1703 | 1.058 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1150 | 1364 | 1443 |
| FRWY81 | 2710 | 1,210 | 60 | 250 | 1,190 | 2512 | 1.560 | 2 | 0 | 0 | 0 | 12 | 4 | 204 | 1170 | 1392 | 2173 |
| FRWY82 | 2810 | 1,270 | 70 | 260 | 1,210 | 1674 | 1.040 | 2 | 0 | 0 | 0 | 14 | 5 | 212 | 1190 | 1423 | 1480 |
| FRWY83 | 2860 | 1,300 | 70 | 270 | 1,220 | 1819 | 1.130 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 1628 |
| FRWY84 | 2930 | 1,360 | 70 | 270 | 1,230 | 1182 | 0.734 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1209 | 1451 | 1065 |
| FRWY85 | 2900 | 1,340 | 70 | 270 | 1,220 | 2360 | 1.466 | 2 | 0 | 0 | 0 | 14 | 5 | 220 | 1199 | 1441 | 2113 |
| FRWY86 | 2740 | 1,330 | 60 | 240 | 1,110 | 783 | 0.486 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1091 | 1306 | 635 |
| FRWY87 | 2790 | 1,370 | 60 | 240 | 1,120 | 1370 | 0.851 | 2 | 0 | 0 | 0 | 12 | 4 | 195 | 1101 | 1316 | 1120 |
| FRWY101 | 2500 | 1,660 | 60 | 190 | 590 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 580 | 755 | 798 |
| FRWY102 | 1980 | 1,200 | 50 | 160 | 570 | 925 | 0.575 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 406 |
| FRWY103 | 1980 | 1,200 | 50 | 160 | 570 | 1770 | 1.100 | 2 | 0 | 0 | 0 | 10 | 3 | 130 | 560 | 707 | 777 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY104 | 1630 | 900 | 40 | 140 | 550 | 3182 | 1.977 | 2 | 0 | 0 | 0 | 8 | 3 | 114 | 541 | 667 | 1319 |
| FRWY105 | 1440 | 730 | 40 | 130 | 540 | 1010 | 0.627 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 407 |
| FRWY106 | 1380 | 670 | 40 | 130 | 540 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 8 | 3 | 106 | 531 | 649 | 526 |
| FRWY107 | 1220 | 550 | 30 | 120 | 520 | 1655 | 1.028 | 1 | 0 | 0 | 0 | 6 | 2 | 98 | 511 | 618 | 636 |
| FRWY108 | 1120 | 470 | 30 | 110 | 510 | 4341 | 2.697 | 1 | 0 | 0 | 0 | 6 | 2 | 90 | 501 | 600 | 1618 |
| FRWY109 | 1060 | 450 | 30 | 90 | 490 | 1728 | 1.073 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 606 |
| FRWY110 | 1020 | 410 | 30 | 90 | 490 | 2788 | 1.732 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 977 |
| FRWY111 | 1010 | 400 | 30 | 90 | 490 | 7717 | 4.794 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 482 | 564 | 2704 |
| FRWY112 | 1000 | 400 | 30 | 80 | 490 | 1384 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 482 | 556 | 478 |
| FRWY113 | 860 | 340 | 20 | 70 | 430 | 3380 | 2.100 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1020 |
| FRWY114 | 860 | 340 | 20 | 70 | 430 | 3719 | 2.310 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 423 | 486 | 1123 |
| FRWY129 | 1230 | 910 | 20 | 90 | 210 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 206 | 287 | 798 |
| FRWY130 | 1420 | 1,080 | 20 | 100 | 220 | 3830 | 2.379 | 2 | 0 | 0 | 0 | 4 | 1 | 81 | 216 | 305 | 727 |
| FRWY131 | 1590 | 1,220 | 30 | 110 | 230 | 2967 | 1.843 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 226 | 326 | 602 |
| FRWY132 | 1650 | 1,270 | 30 | 110 | 240 | 1163 | 0.722 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 236 | 336 | 243 |
| FRWY133 | 1680 | 1,290 | 30 | 120 | 240 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 236 | 345 | 972 |
| FRWY167 | 1220 | 840 | 20 | 90 | 270 | 1471 | 0.914 | 2 | 0 | 0 | 0 | 4 | 1 | 73 | 265 | 346 | 316 |
| FRWY168 | 1520 | 1,020 | 30 | 110 | 360 | 916 | 0.569 | 2 | 0 | 0 | 0 | 6 | 2 | 90 | 354 | 454 | 258 |
| FRWY169 | 1480 | 990 | 30 | 100 | 360 | 4924 | 3.059 | 2 | 0 | 0 | 0 | 6 | 2 | 81 | 354 | 446 | 1363 |
| FRWY171 | 1070 | 580 | 20 | 60 | 410 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 459 | 611 |
| FRWY172 | 1170 | 590 | 20 | 80 | 480 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 472 | 544 | 1013 |
| FRWY173 | 1300 | 710 | 20 | 80 | 490 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 4 | 1 | 65 | 482 | 554 | 860 |
| FRWY174 | 1300 | 700 | 20 | 90 | 490 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 482 | 562 | 396 |
| FRWY175 | 1750 | 1,060 | 40 | 110 | 540 | 1547 | 0.961 | 2 | 0 | 0 | 0 | 8 | 3 | 90 | 531 | 634 | 609 |
| FRWY176 | 1810 | 1,100 | 40 | 120 | 550 | 1359 | 0.844 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 541 | 652 | 550 |
| FRWY134 | 1170 | 580 | 30 | 90 | 470 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 462 | 545 | 469 |
| FRWY135 | 1130 | 570 | 30 | 80 | 450 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 442 | 517 | 549 |
| FRWY136 | 1110 | 560 | 30 | 80 | 440 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 433 | 507 | 327 |
| FRWY137 | 980 | 490 | 20 | 60 | 410 | 1516 | 0.942 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 403 | 458 | 432 |
| FRWY138 | 940 | 460 | 20 | 60 | 400 | 2485 | 1.544 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 393 | 449 | 692 |
| FRWY139 | 1050 | 570 | 20 | 70 | 390 | 1950 | 1.211 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 383 | 447 | 542 |
| FRWY140 | 1140 | 620 | 30 | 90 | 400 | 1581 | 0.982 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 393 | 476 | 467 |
| FRWY141 | 1080 | 610 | 30 | 70 | 370 | 1447 | 0.899 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 364 | 430 | 387 |
| FRWY142 | 1060 | 600 | 30 | 70 | 360 | 938 | 0.583 | 1 | 0 | 0 | 0 | 6 | 2 | 57 | 354 | 420 | 245 |
| FRWY143 | 1010 | 590 | 20 | 70 | 330 | 2032 | 1.262 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 324 | 388 | 490 |
| FRWY144 | 900 | 540 | 20 | 50 | 290 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 4 | 1 | 41 | 285 | 332 | 644 |
| | | | | | | | | | | | | | | | | Total | 191204 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1<br>Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2<br>Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0030 | 0.0074 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0034 | 0.0079 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0026 | 0.0073 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0034 | 0.0079 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0032 | 0.0076 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0028 | 0.0068 |

**Segment Emissions**

| Freeway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3 | 9.81E-08 | 4.51E-08 | 2.38E-09 | 4.68E-09 | 2.04E-06 | 5.29E-07 | 4.70E-06 | 1.39E-04 | | 1.46E-04 |
| FRWY2 | 3 | 1.14E-07 | 5.24E-08 | 2.76E-09 | 5.43E-09 | 2.79E-06 | 7.23E-07 | 6.43E-06 | 1.92E-04 | | 2.02E-04 |
| FRWY3 | 3 | 9.60E-08 | 4.42E-08 | 2.33E-09 | 4.58E-09 | 2.70E-06 | 7.00E-07 | 5.53E-06 | 1.56E-04 | | 1.65E-04 |
| FRWY4 | 3 | 1.11E-07 | 5.10E-08 | 2.69E-09 | 5.28E-09 | 2.87E-06 | 7.45E-07 | 6.25E-06 | 1.69E-04 | | 1.79E-04 |
| FRWY5 | 3 | 9.19E-08 | 4.23E-08 | 2.23E-09 | 4.38E-09 | 2.21E-06 | 5.73E-07 | 5.09E-06 | 1.33E-04 | | 1.41E-04 |
| FRWY6 | 3 | 1.42E-07 | 6.55E-08 | 3.45E-09 | 6.78E-09 | 3.24E-06 | 8.42E-07 | 7.48E-06 | 1.97E-04 | | 2.09E-04 |
| FRWY7 | 3 | 1.18E-07 | 5.45E-08 | 2.87E-09 | 5.64E-09 | 2.56E-06 | 6.65E-07 | 6.24E-06 | 1.58E-04 | | 1.67E-04 |
| FRWY8 | 3 | 1.14E-07 | 5.24E-08 | 2.76E-09 | 5.43E-09 | 2.39E-06 | 6.20E-07 | 5.81E-06 | 1.48E-04 | | 1.57E-04 |
| FRWY9 | 3 | 1.43E-07 | 6.59E-08 | 3.47E-09 | 6.83E-09 | 3.25E-06 | 8.43E-07 | 7.49E-06 | 1.84E-04 | | 1.96E-04 |
| FRWY10 | 3 | 1.37E-07 | 6.31E-08 | 3.32E-09 | 6.53E-09 | 3.02E-06 | 7.83E-07 | 7.29E-06 | 1.72E-04 | | 1.83E-04 |
| FRWY11 | 3 | 7.29E-08 | 3.35E-08 | 1.77E-09 | 3.47E-09 | 1.54E-06 | 3.99E-07 | 3.89E-06 | 8.87E-05 | | 9.46E-05 |
| FRWY12 | 2 | 2.88E-07 | 1.41E-07 | 6.50E-09 | 1.33E-08 | 4.72E-06 | 1.21E-06 | 1.16E-05 | 2.50E-04 | | 2.68E-04 |
| FRWY13 | 2 | 2.28E-07 | 1.11E-07 | 5.13E-09 | 1.05E-08 | 3.47E-06 | 8.91E-07 | 9.13E-06 | 1.91E-04 | | 2.05E-04 |
| FRWY14 | 2 | 3.38E-07 | 1.65E-07 | 7.61E-09 | 1.56E-08 | 5.58E-06 | 1.43E-06 | 1.41E-05 | 2.84E-04 | | 3.05E-04 |
| FRWY15 | 2 | 2.22E-07 | 1.09E-07 | 5.01E-09 | 1.02E-08 | 3.67E-06 | 9.43E-07 | 9.26E-06 | 1.87E-04 | | 2.02E-04 |
| FRWY16 | 2 | 4.05E-07 | 1.98E-07 | 9.11E-09 | 1.86E-08 | 6.21E-06 | 1.60E-06 | 1.57E-05 | 3.19E-04 | | 3.43E-04 |
| FRWY17 | 2 | 5.54E-07 | 2.70E-07 | 1.25E-08 | 2.55E-08 | 8.03E-06 | 2.06E-06 | 1.95E-05 | 3.83E-04 | | 4.13E-04 |
| FRWY18 | 2 | 4.93E-07 | 2.41E-07 | 1.11E-08 | 2.27E-08 | 6.30E-06 | 1.62E-06 | 1.62E-05 | 3.03E-04 | | 3.28E-04 |
| FRWY19 | 2 | 1.95E-07 | 9.50E-08 | 4.38E-09 | 8.95E-09 | 2.49E-06 | 6.40E-07 | 6.35E-06 | 1.14E-04 | | 1.23E-04 |
| FRWY20 | 2 | 2.00E-07 | 9.75E-08 | 4.49E-09 | 9.19E-09 | 2.65E-06 | 6.81E-07 | 6.48E-06 | 1.08E-04 | | 1.18E-04 |
| FRWY21 | 3 | 8.39E-07 | 3.86E-07 | 2.04E-08 | 4.00E-08 | 1.07E-05 | 2.78E-06 | 2.83E-05 | 4.16E-04 | | 4.59E-04 |
| FRWY22 | 3 | 4.90E-07 | 2.26E-07 | 1.19E-08 | 2.34E-08 | 6.43E-06 | 1.67E-06 | 1.71E-05 | 2.44E-04 | | 2.70E-04 |
| FRWY23 | 3 | 5.00E-07 | 2.30E-07 | 1.21E-08 | 2.38E-08 | 6.47E-06 | 1.68E-06 | 1.76E-05 | 2.48E-04 | | 2.74E-04 |
| FRWY24 | 3 | 1.19E-06 | 5.48E-07 | 2.89E-08 | 5.67E-08 | 1.52E-05 | 3.95E-06 | 4.09E-05 | 5.55E-04 | | 6.17E-04 |
| FRWY25 | 3 | 7.78E-07 | 3.58E-07 | 1.89E-08 | 3.71E-08 | 9.46E-06 | 2.46E-06 | 2.52E-05 | 3.29E-04 | | 3.67E-04 |
| FRWY26 | 3 | 6.19E-07 | 2.85E-07 | 1.50E-08 | 2.95E-08 | 7.08E-06 | 1.84E-06 | 1.87E-05 | 2.43E-04 | | 2.72E-04 |
| FRWY27 | 2 | 9.09E-07 | 4.44E-07 | 2.05E-08 | 4.19E-08 | 8.93E-06 | 2.29E-06 | 2.32E-05 | 3.17E-04 | | 3.52E-04 |
| FRWY28 | 2 | 1.22E-06 | 5.94E-07 | 2.74E-08 | 5.59E-08 | 1.27E-05 | 3.27E-06 | 3.29E-05 | 4.38E-04 | | 4.89E-04 |
| FRWY29 | 2 | 1.25E-06 | 6.10E-07 | 2.81E-08 | 5.75E-08 | 1.31E-05 | 3.36E-06 | 3.40E-05 | 4.40E-04 | | 4.92E-04 |
| FRWY30 | 2 | 1.35E-06 | 6.60E-07 | 3.04E-08 | 6.22E-08 | 1.35E-05 | 3.46E-06 | 3.36E-05 | 4.29E-04 | | 4.81E-04 |
| FRWY31 | 2 | 3.41E-06 | 1.67E-06 | 7.67E-08 | 1.57E-07 | 3.32E-05 | 8.53E-06 | 7.91E-05 | 9.67E-04 | | 1.09E-03 |
| FRWY32 | 2 | 1.19E-06 | 5.83E-07 | 2.69E-08 | 5.50E-08 | 1.14E-05 | 2.93E-06 | 2.64E-05 | 3.18E-04 | | 3.60E-04 |
| FRWY33 | 2 | 2.60E-06 | 1.27E-06 | 5.86E-08 | 1.20E-07 | 2.03E-05 | 5.22E-06 | 5.27E-05 | 6.38E-04 | | 7.20E-04 |
| FRWY34 | 2 | 2.43E-06 | 1.19E-06 | 5.48E-08 | 1.12E-07 | 1.80E-05 | 4.62E-06 | 4.56E-05 | 5.66E-04 | | 6.38E-04 |
| FRWY35 | 2 | 4.46E-07 | 2.18E-07 | 1.00E-08 | 2.05E-08 | 3.13E-06 | 8.04E-07 | 7.58E-06 | 5.05E-05 | | 6.28E-05 |
| FRWY36 | 2 | 3.22E-06 | 1.57E-06 | 7.25E-08 | 1.48E-07 | 2.50E-05 | 6.42E-06 | 5.09E-05 | 3.51E-04 | | 4.38E-04 |
| FRWY37 | 2 | 1.33E-06 | 6.50E-07 | 2.99E-08 | 6.12E-08 | 9.55E-06 | 2.45E-06 | 1.99E-05 | 1.42E-04 | | 1.76E-04 |
| FRWY294 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.00E-05 | | 2.00E-05 |
| FRWY295 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.19E-06 | | 7.19E-06 |
| FRWY296 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.24E-05 | | 1.24E-05 |
| FRWY297 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.03E-05 | | 1.03E-05 |
| FRWY299 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.13E-05 | | 1.13E-05 |
| FRWY75 | 7 | 2.37E-07 | 1.13E-07 | 5.64E-09 | 1.13E-08 | 3.43E-06 | 8.88E-07 | 1.01E-05 | 1.68E-04 | | 1.83E-04 |
| FRWY76 | 7 | 2.41E-07 | 1.14E-07 | 5.73E-09 | 1.14E-08 | 3.00E-06 | 7.76E-07 | 9.77E-06 | 1.51E-04 | | 1.65E-04 |
| FRWY77 | 7 | 4.34E-08 | 2.06E-08 | 1.03E-09 | 2.06E-09 | 5.39E-07 | 1.40E-07 | 1.76E-06 | 2.72E-05 | | 2.97E-05 |
| FRWY78 | 7 | 1.44E-07 | 6.86E-08 | 3.44E-09 | 6.86E-09 | 1.99E-06 | 5.15E-07 | 5.67E-06 | 8.51E-05 | | 9.35E-05 |
| FRWY79 | 7 | 1.98E-07 | 9.41E-08 | 4.71E-09 | 9.41E-09 | 2.46E-06 | 6.38E-07 | 7.33E-06 | 1.06E-04 | | 1.17E-04 |
| FRWY80 | 7 | 2.16E-07 | 1.03E-07 | 5.15E-09 | 1.03E-08 | 2.45E-06 | 6.34E-07 | 7.61E-06 | 1.07E-04 | | 1.18E-04 |
| FRWY81 | 7 | 3.45E-07 | 1.64E-07 | 8.20E-09 | 1.64E-08 | 3.61E-06 | 9.36E-07 | 1.17E-05 | 1.61E-04 | | 1.78E-04 |
| FRWY82 | 7 | 2.41E-07 | 1.15E-07 | 5.74E-09 | 1.15E-08 | 2.81E-06 | 7.27E-07 | 8.10E-06 | 1.09E-04 | | 1.21E-04 |
| FRWY83 | 7 | 2.68E-07 | 1.27E-07 | 6.38E-09 | 1.27E-08 | 3.05E-06 | 7.90E-07 | 9.14E-06 | 1.20E-04 | | 1.33E-04 |
| FRWY84 | 7 | 1.82E-07 | 8.66E-08 | 4.34E-09 | 8.66E-09 | 1.98E-06 | 5.14E-07 | 5.94E-06 | 7.84E-05 | | 8.71E-05 |
| FRWY85 | 7 | 3.59E-07 | 1.70E-07 | 8.53E-09 | 1.70E-08 | 3.96E-06 | 1.03E-06 | 1.19E-05 | 1.55E-04 | | 1.73E-04 |
| FRWY86 | 7 | 1.18E-07 | 5.61E-08 | 2.81E-09 | 5.61E-09 | 1.13E-06 | 2.92E-07 | 3.50E-06 | 4.69E-05 | | 5.20E-05 |
| FRWY87 | 7 | 2.13E-07 | 1.01E-07 | 5.06E-09 | 1.01E-08 | 1.97E-06 | 5.10E-07 | 6.12E-06 | 8.28E-05 | | 9.17E-05 |
| FRWY101 | 2 | 3.28E-07 | 1.60E-07 | 7.40E-09 | 1.51E-08 | 2.33E-06 | 5.99E-07 | 5.64E-06 | 5.23E-05 | | 6.14E-05 |
| FRWY102 | 2 | 1.29E-07 | 6.30E-08 | 2.90E-09 | 5.94E-09 | 1.06E-06 | 2.71E-07 | 2.58E-06 | 2.74E-05 | | 3.15E-05 |
| FRWY103 | 2 | 2.47E-07 | 1.21E-07 | 5.56E-09 | 1.14E-08 | 2.02E-06 | 5.19E-07 | 4.94E-06 | 5.25E-05 | | 6.04E-05 |
| FRWY104 | 2 | 3.33E-07 | 1.63E-07 | 7.49E-09 | 1.53E-08 | 2.90E-06 | 7.46E-07 | 7.77E-06 | 9.11E-05 | | 1.03E-04 |
| FRWY105 | 2 | 8.57E-08 | 4.19E-08 | 1.93E-09 | 3.94E-09 | 9.22E-07 | 2.37E-07 | 2.29E-06 | 2.84E-05 | | 3.20E-05 |
| FRWY106 | 2 | 1.02E-07 | 4.96E-08 | 2.29E-09 | 4.68E-09 | 1.19E-06 | 3.06E-07 | 2.96E-06 | 3.67E-05 | | 4.13E-05 |
| FRWY107 | 2 | 1.06E-07 | 5.17E-08 | 2.38E-09 | 4.87E-09 | 1.13E-06 | 2.91E-07 | 3.46E-06 | 4.48E-05 | | 4.98E-05 |
| FRWY108 | 2 | 2.37E-07 | 1.16E-07 | 5.34E-09 | 1.09E-08 | 2.97E-06 | 7.64E-07 | 8.33E-06 | 1.15E-04 | | 1.28E-04 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY109 | 2 | 9.03E-08 | 4.41E-08 | 2.03E-09 | 4.16E-09 | 1.18E-06 | 3.04E-07 | 2.71E-06 | 4.41E-05 | | 4.84E-05 |
| FRWY110 | 2 | 1.33E-07 | 6.49E-08 | 2.99E-09 | 6.11E-09 | 1.91E-06 | 4.90E-07 | 4.38E-06 | 7.11E-05 | | 7.81E-05 |
| FRWY111 | 2 | 3.59E-07 | 1.75E-07 | 8.07E-09 | 1.65E-08 | 5.28E-06 | 1.36E-06 | 1.21E-05 | 1.97E-04 | | 2.16E-04 |
| FRWY112 | 2 | 6.43E-08 | 3.14E-08 | 1.45E-09 | 2.96E-09 | 9.48E-07 | 2.43E-07 | 1.93E-06 | 3.53E-05 | | 3.85E-05 |
| FRWY113 | 2 | 1.34E-07 | 6.52E-08 | 3.01E-09 | 6.15E-09 | 1.54E-06 | 3.96E-07 | 4.13E-06 | 7.56E-05 | | 8.19E-05 |
| FRWY114 | 2 | 1.47E-07 | 7.18E-08 | 3.31E-09 | 6.76E-09 | 1.70E-06 | 4.36E-07 | 4.54E-06 | 8.32E-05 | | 9.01E-05 |
| FRWY129 | 2 | 4.73E-07 | 2.31E-07 | 1.07E-08 | 2.18E-08 | 2.04E-06 | 5.25E-07 | 7.03E-06 | 4.89E-05 | | 5.92E-05 |
| FRWY130 | 2 | 4.81E-07 | 2.35E-07 | 1.08E-08 | 2.21E-08 | 1.75E-06 | 4.49E-07 | 6.68E-06 | 4.38E-05 | | 5.35E-05 |
| FRWY131 | 2 | 4.21E-07 | 2.05E-07 | 9.47E-09 | 1.94E-08 | 2.03E-06 | 5.22E-07 | 5.69E-06 | 3.55E-05 | | 4.44E-05 |
| FRWY132 | 2 | 1.72E-07 | 8.38E-08 | 3.86E-09 | 7.90E-09 | 7.96E-07 | 2.05E-07 | 2.23E-06 | 1.45E-05 | | 1.80E-05 |
| FRWY133 | 2 | 6.81E-07 | 3.33E-07 | 1.53E-08 | 3.13E-08 | 3.11E-06 | 7.99E-07 | 9.51E-06 | 5.67E-05 | | 7.12E-05 |
| FRWY167 | 2 | 1.44E-07 | 7.01E-08 | 3.23E-09 | 6.61E-09 | 6.71E-07 | 1.73E-07 | 2.31E-06 | 2.07E-05 | | 2.40E-05 |
| FRWY168 | 2 | 1.09E-07 | 5.30E-08 | 2.44E-09 | 5.00E-09 | 6.27E-07 | 1.61E-07 | 1.76E-06 | 1.72E-05 | | 1.99E-05 |
| FRWY169 | 2 | 5.66E-07 | 2.77E-07 | 1.28E-08 | 2.61E-08 | 3.37E-06 | 8.66E-07 | 8.59E-06 | 9.22E-05 | | 1.06E-04 |
| FRWY171 | 2 | 1.45E-07 | 7.06E-08 | 3.25E-09 | 6.65E-09 | 9.79E-07 | 2.52E-07 | 2.25E-06 | 4.58E-05 | | 4.95E-05 |
| FRWY172 | 2 | 2.06E-07 | 1.00E-07 | 4.63E-09 | 9.47E-09 | 1.37E-06 | 3.52E-07 | 4.19E-06 | 7.49E-05 | | 8.11E-05 |
| FRWY173 | 2 | 2.06E-07 | 1.01E-07 | 4.65E-09 | 9.50E-09 | 1.14E-06 | 2.93E-07 | 3.49E-06 | 6.38E-05 | | 6.90E-05 |
| FRWY174 | 2 | 9.23E-08 | 4.51E-08 | 2.08E-09 | 4.25E-09 | 5.18E-07 | 1.33E-07 | 1.78E-06 | 2.89E-05 | | 3.15E-05 |
| FRWY175 | 2 | 1.91E-07 | 9.31E-08 | 4.29E-09 | 8.77E-09 | 1.41E-06 | 3.63E-07 | 2.97E-06 | 4.35E-05 | | 4.85E-05 |
| FRWY176 | 2 | 1.74E-07 | 8.49E-08 | 3.91E-09 | 7.99E-09 | 1.24E-06 | 3.19E-07 | 2.84E-06 | 3.89E-05 | | 4.36E-05 |
| FRWY134 | 3 | 9.44E-08 | 4.35E-08 | 2.29E-09 | 4.50E-09 | 1.08E-06 | 2.79E-07 | 2.48E-06 | 3.64E-05 | | 4.03E-05 |
| FRWY135 | 3 | 1.15E-07 | 5.28E-08 | 2.78E-09 | 5.47E-09 | 1.33E-06 | 3.45E-07 | 2.72E-06 | 4.30E-05 | | 4.76E-05 |
| FRWY136 | 3 | 6.83E-08 | 3.15E-08 | 1.66E-09 | 3.26E-09 | 8.06E-07 | 2.09E-07 | 1.65E-06 | 2.55E-05 | | 2.83E-05 |
| FRWY137 | 3 | 8.73E-08 | 4.02E-08 | 2.12E-09 | 4.16E-09 | 7.85E-07 | 2.04E-07 | 1.81E-06 | 3.47E-05 | | 3.76E-05 |
| FRWY138 | 3 | 1.34E-07 | 6.19E-08 | 3.26E-09 | 6.41E-09 | 1.29E-06 | 3.34E-07 | 2.97E-06 | 5.55E-05 | | 6.03E-05 |
| FRWY139 | 3 | 1.31E-07 | 6.01E-08 | 3.17E-09 | 6.23E-09 | 1.01E-06 | 2.62E-07 | 2.72E-06 | 4.25E-05 | | 4.67E-05 |
| FRWY140 | 7 | 1.11E-07 | 5.28E-08 | 2.64E-09 | 5.28E-09 | 1.14E-06 | 2.94E-07 | 2.65E-06 | 3.41E-05 | | 3.84E-05 |
| FRWY141 | 7 | 1.00E-07 | 4.76E-08 | 2.38E-09 | 4.76E-09 | 1.04E-06 | 2.69E-07 | 1.89E-06 | 2.89E-05 | | 3.22E-05 |
| FRWY142 | 7 | 6.38E-08 | 3.03E-08 | 1.52E-09 | 3.03E-09 | 6.75E-07 | 1.75E-07 | 1.22E-06 | 1.82E-05 | | 2.04E-05 |
| FRWY143 | 7 | 1.36E-07 | 6.46E-08 | 3.23E-09 | 6.46E-09 | 9.74E-07 | 2.52E-07 | 2.65E-06 | 3.62E-05 | | 4.03E-05 |
| FRWY144 | 7 | 1.91E-07 | 9.07E-08 | 4.54E-09 | 9.07E-09 | 1.50E-06 | 3.87E-07 | 2.90E-06 | 4.88E-05 | | 5.39E-05 |

**World Logistics Center** **2022** **DPM** Based on PB Traffic Results 10/3/2013

**Project Phase 1 Only 2022 (Freeway Segments to Ports)** Mitigation: T6 and T7 DSL Trucks MY2010

**Freeway Segments**

**With EMFAC2014 Emission Factors**

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| 230 | 1.31E-05 |
| 229 | 8.22E-06 |
| 228 | 3.56E-06 |
| 227 | 5.71E-06 |
| 226 | 1.47E-05 |
| 225 | 7.07E-06 |
| 224 | 1.87E-05 |
| 223 | 8.12E-06 |
| 222 | 8.45E-06 |
| 221 | 7.90E-06 |
| 220 | 9.99E-06 |
| 219 | 1.69E-05 |
| 218 | 1.85E-05 |
| 217 | 2.12E-05 |
| 216 | 1.71E-05 |
| 215 | 9.90E-06 |
| 214 | 1.07E-05 |
| 213 | 1.68E-05 |
| 212 | 1.61E-05 |
| 211 | 1.21E-05 |
| 210 | 2.57E-05 |
| 209 | 1.36E-05 |
| 263 | 1.46E-05 |
| 264 | 7.07E-06 |
| 265 | 4.93E-06 |
| 266 | 4.62E-06 |
| 267 | 4.51E-06 |
| 268 | 6.93E-06 |

| | |
|---|---|
| 269 | 1.32E-05 |
| 270 | 1.23E-05 |
| 271 | 7.25E-06 |
| 272 | 4.63E-06 |
| 273 | 1.70E-06 |
| 274 | 1.18E-05 |
| 275 | 1.21E-05 |
| 276 | 1.22E-05 |
| 277 | 7.19E-06 |
| 278 | 1.21E-05 |
| 279 | 1.27E-05 |
| 280 | 1.03E-05 |
| 281 | 1.47E-05 |
| 282 | 7.79E-06 |
| 283 | 1.00E-05 |
| 284 | 1.01E-05 |
| 285 | 1.23E-05 |
| 286 | 1.09E-05 |
| 287 | 8.54E-06 |
| 288 | 1.00E-05 |
| 289 | 1.56E-05 |
| 290 | 3.24E-05 |
| 291 | 2.03E-05 |
| 292 | 3.70E-05 |
| 293 | 1.05E-05 |
| 262 | 2.40E-05 |
| 261 | 1.21E-05 |
| 260 | 1.89E-05 |
| 259 | 3.59E-05 |
| 258 | 3.18E-05 |
| 257 | 2.77E-05 |
| 256 | 2.04E-05 |
| 255 | 1.06E-05 |
| 254 | 1.15E-05 |
| 253 | 2.17E-05 |

| | |
|---|---|
| 252 | 1.65E-05 |
| 251 | 1.53E-05 |
| 250 | 2.45E-05 |
| 249 | 5.12E-06 |
| 248 | 8.59E-06 |
| 247 | 1.49E-05 |

| | |
|---|---|
| Total (g/sec) | 9.44E-04 |
| Total (lbs/day) | 1.80E-01 |
| | |
| Total VMT (mi/day) | 1.06E+04 |

## TRAFFIC VOLUMES

| ID | Arterial | From | Project Only Phase 1 2022 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 127 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 127 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 127 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 127 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 127 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 127 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 127 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 127 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 127 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 127 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 127 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 127 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 127 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 127 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 127 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 127 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 127 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 127 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 127 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 127 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 127 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 127 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 127 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 127 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 127 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 127 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 127 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 127 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 127 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 127 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 127 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 127 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 127 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 127 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 127 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 127 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 127 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 127 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 127 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 127 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 127 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 127 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 127 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 127 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 127 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 127 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 127 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 127 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 127 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 127 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 127 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 127 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 127 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 254 |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 254 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 254 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 254 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 254 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 254 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 254 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 127 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 127 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 127 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 127 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 127 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 127 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 127 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 127 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 127 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2022** **DPM** **Mitigation: T6 and T7 DSL Trucks MY2010**

Project Phase 1 Only 2022 (Freeway Segments to Ports)
Freeways to Ports

Project Operations: 24 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.4% | 6.7% | 81.4% | 98.3% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 127 | 0 | 0 | 0 | 127 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 229 | 127 | 0 | 0 | 0 | 127 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 90 |
| 228 | 127 | 0 | 0 | 0 | 127 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 40 |
| 227 | 127 | 0 | 0 | 0 | 127 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 65 |
| 226 | 127 | 0 | 0 | 0 | 127 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 225 | 127 | 0 | 0 | 0 | 127 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 80 |
| 224 | 127 | 0 | 0 | 0 | 127 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 211 |
| 223 | 127 | 0 | 0 | 0 | 127 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 92 |
| 222 | 127 | 0 | 0 | 0 | 127 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 96 |
| 221 | 127 | 0 | 0 | 0 | 127 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 89 |
| 220 | 127 | 0 | 0 | 0 | 127 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 219 | 127 | 0 | 0 | 0 | 127 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 191 |
| 218 | 127 | 0 | 0 | 0 | 127 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 209 |
| 217 | 127 | 0 | 0 | 0 | 127 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 240 |
| 216 | 127 | 0 | 0 | 0 | 127 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 194 |
| 215 | 127 | 0 | 0 | 0 | 127 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 112 |
| 214 | 127 | 0 | 0 | 0 | 127 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 121 |
| 213 | 127 | 0 | 0 | 0 | 127 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 190 |
| 212 | 127 | 0 | 0 | 0 | 127 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 182 |
| 211 | 127 | 0 | 0 | 0 | 127 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 210 | 127 | 0 | 0 | 0 | 127 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 291 |
| 209 | 127 | 0 | 0 | 0 | 127 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 154 |
| 263 | 127 | 0 | 0 | 0 | 127 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 160 |
| 264 | 127 | 0 | 0 | 0 | 127 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 77 |
| 265 | 127 | 0 | 0 | 0 | 127 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 266 | 127 | 0 | 0 | 0 | 127 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 267 | 127 | 0 | 0 | 0 | 127 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 51 |
| 268 | 127 | 0 | 0 | 0 | 127 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 78 |
| 269 | 127 | 0 | 0 | 0 | 127 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 150 |
| 270 | 127 | 0 | 0 | 0 | 127 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 271 | 127 | 0 | 0 | 0 | 127 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 82 |
| 272 | 127 | 0 | 0 | 0 | 127 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 52 |
| 273 | 127 | 0 | 0 | 0 | 127 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 19 |
| 274 | 127 | 0 | 0 | 0 | 127 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 134 |
| 275 | 127 | 0 | 0 | 0 | 127 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 276 | 127 | 0 | 0 | 0 | 127 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 138 |
| 277 | 127 | 0 | 0 | 0 | 127 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 81 |
| 278 | 127 | 0 | 0 | 0 | 127 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 137 |
| 279 | 127 | 0 | 0 | 0 | 127 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 144 |
| 280 | 127 | 0 | 0 | 0 | 127 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 117 |
| 281 | 127 | 0 | 0 | 0 | 127 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 166 |
| 282 | 127 | 0 | 0 | 0 | 127 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 88 |
| 283 | 127 | 0 | 0 | 0 | 127 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 114 |
| 284 | 127 | 0 | 0 | 0 | 127 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 115 |
| 285 | 127 | 0 | 0 | 0 | 127 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 139 |
| 286 | 127 | 0 | 0 | 0 | 127 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 124 |
| 287 | 127 | 0 | 0 | 0 | 127 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 97 |
| 288 | 127 | 0 | 0 | 0 | 127 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 113 |
| 289 | 127 | 0 | 0 | 0 | 127 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 177 |
| 290 | 127 | 0 | 0 | 0 | 127 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 367 |
| 291 | 127 | 0 | 0 | 0 | 127 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 230 |
| 292 | 127 | 0 | 0 | 0 | 127 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 419 |
| 293 | 127 | 0 | 0 | 0 | 127 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 119 |
| 262 | 254 | 0 | 0 | 0 | 254 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 263 |
| 261 | 254 | 0 | 0 | 0 | 254 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 132 |
| 260 | 254 | 0 | 0 | 0 | 254 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 206 |
| 259 | 254 | 0 | 0 | 0 | 254 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 392 |
| 258 | 254 | 0 | 0 | 0 | 254 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 348 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 257 | 254 | 0 | 0 | 0 | 254 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 303 |
| 256 | 254 | 0 | 0 | 0 | 254 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 250 | 224 |
| 255 | 127 | 0 | 0 | 0 | 127 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 116 |
| 254 | 127 | 0 | 0 | 0 | 127 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 126 |
| 253 | 127 | 0 | 0 | 0 | 127 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 237 |
| 252 | 127 | 0 | 0 | 0 | 127 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 181 |
| 251 | 127 | 0 | 0 | 0 | 127 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 167 |
| 250 | 127 | 0 | 0 | 0 | 127 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 268 |
| 249 | 127 | 0 | 0 | 0 | 127 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 56 |
| 248 | 127 | 0 | 0 | 0 | 127 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 94 |
| 247 | 127 | 0 | 0 | 0 | 127 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 | 163 |
| | | | | | | | | | | | | | | | | Total | 10558.4 |

**Vehicle Fleet Emissions - DSL**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1<br>Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2<br>Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0104 | 0.0894 | 0.0050 | 0.0056 | 0.0196 | 0.0155 | 0.0034 | 0.0079 |
| 2 | 0.0089 | 0.0821 | 0.0039 | 0.0046 | 0.0155 | 0.0122 | 0.0030 | 0.0074 |
| 3 | 0.0090 | 0.0782 | 0.0043 | 0.0048 | 0.0176 | 0.0140 | 0.0034 | 0.0079 |
| 4 | 0.0100 | 0.1007 | 0.0040 | 0.0050 | 0.0153 | 0.0116 | 0.0026 | 0.0073 |
| 5 | 0.0124 | 0.1040 | 0.0056 | 0.0063 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 6 | 0.0095 | 0.0817 | 0.0046 | 0.0051 | 0.0176 | 0.0140 | 0.0034 | 0.0079 |
| 7 | 0.0087 | 0.0779 | 0.0040 | 0.0046 | 0.0163 | 0.0129 | 0.0032 | 0.0076 |
| 8 | 0.0152 | 0.1262 | 0.0064 | 0.0074 | 0.0225 | 0.0177 | 0.0040 | 0.0093 |
| 9 | 0.0094 | 0.0892 | 0.0039 | 0.0047 | 0.0154 | 0.0119 | 0.0028 | 0.0068 |

**Segment Emissions**

| **Freeway Segment** | **Speed Group** | **LDA-DSL (g/sec)** | **LDT1-DSL (g/sec)** | **LDT2-DSL (g/sec)** | **MDT-DSL (g/sec)** | **LHDT1-DSL (g/sec)** | **LHDT2-DSL (g/sec)** | **MHDT-DSL (g/sec)** | **HHDT-DSL (g/sec)** | | **Total (g/sec)** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-05 | | 1.31E-05 |
| 229 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.22E-06 | | 8.22E-06 |
| 228 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.56E-06 | | 3.56E-06 |
| 227 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.71E-06 | | 5.71E-06 |
| 226 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.47E-05 | | 1.47E-05 |
| 225 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.07E-06 | | 7.07E-06 |
| 224 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.87E-05 | | 1.87E-05 |
| 223 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.12E-06 | | 8.12E-06 |
| 222 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.45E-06 | | 8.45E-06 |
| 221 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.90E-06 | | 7.90E-06 |
| 220 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.99E-06 | | 9.99E-06 |
| 219 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.69E-05 | | 1.69E-05 |
| 218 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.85E-05 | | 1.85E-05 |
| 217 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.12E-05 | | 2.12E-05 |
| 216 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-05 | | 1.71E-05 |
| 215 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.90E-06 | | 9.90E-06 |
| 214 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.07E-05 | | 1.07E-05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 213 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-05 | | 1.68E-05 |
| 212 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.61E-05 | | 1.61E-05 |
| 211 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-05 | | 1.21E-05 |
| 210 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.57E-05 | | 2.57E-05 |
| 209 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-05 | | 1.36E-05 |
| 263 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-05 | | 1.46E-05 |
| 264 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.07E-06 | | 7.07E-06 |
| 265 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.93E-06 | | 4.93E-06 |
| 266 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.62E-06 | | 4.62E-06 |
| 267 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.51E-06 | | 4.51E-06 |
| 268 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.93E-06 | | 6.93E-06 |
| 269 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.32E-05 | | 1.32E-05 |
| 270 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-05 | | 1.23E-05 |
| 271 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.25E-06 | | 7.25E-06 |
| 272 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.63E-06 | | 4.63E-06 |
| 273 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-06 | | 1.70E-06 |
| 274 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.18E-05 | | 1.18E-05 |
| 275 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-05 | | 1.21E-05 |
| 276 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.22E-05 | | 1.22E-05 |
| 277 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.19E-06 | | 7.19E-06 |
| 278 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-05 | | 1.21E-05 |
| 279 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-05 | | 1.27E-05 |
| 280 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.03E-05 | | 1.03E-05 |
| 281 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.47E-05 | | 1.47E-05 |
| 282 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.79E-06 | | 7.79E-06 |
| 283 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-05 | | 1.00E-05 |
| 284 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.01E-05 | | 1.01E-05 |
| 285 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.23E-05 | | 1.23E-05 |
| 286 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-05 | | 1.09E-05 |
| 287 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.54E-06 | | 8.54E-06 |
| 288 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-05 | | 1.00E-05 |
| 289 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.56E-05 | | 1.56E-05 |
| 290 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.24E-05 | | 3.24E-05 |
| 291 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.03E-05 | | 2.03E-05 |
| 292 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.70E-05 | | 3.70E-05 |
| 293 | 7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.05E-05 | | 1.05E-05 |
| 262 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-05 | | 2.40E-05 |
| 261 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-05 | | 1.21E-05 |
| 260 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.89E-05 | | 1.89E-05 |
| 259 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.59E-05 | | 3.59E-05 |
| 258 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.18E-05 | | 3.18E-05 |
| 257 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.77E-05 | | 2.77E-05 |
| 256 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.04E-05 | | 2.04E-05 |
| 255 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-05 | | 1.06E-05 |
| 254 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.15E-05 | | 1.15E-05 |
| 253 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.17E-05 | | 2.17E-05 |
| 252 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-05 | | 1.65E-05 |
| 251 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-05 | | 1.53E-05 |
| 250 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.45E-05 | | 2.45E-05 |
| 249 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.12E-06 | | 5.12E-06 |
| 248 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.59E-06 | | 8.59E-06 |
| 247 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E-05 | | 1.49E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 3 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for DPM emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2035** **Phase 1** **2035**

**Vehicle Running Exhaust Emissions** **Pollutant** **DPM**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 1.16E-04 |
| Light Logistics | Phase 1 | 2.35E-07 |
| Utilities Service Station | Phase 1 | 2.21E-07 |
| Gas Station w/Convenience Store | Phase 1 | 2.73E-07 |
| Convenience Store | Phase 1 | 4.29E-07 |
| Fire Station | Phase 1 | 3.10E-10 |
| | | |
| Total | | 1.17E-04 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|
| High Cube | Phase 1 | 4.92E-05 |
| Light Logistics | Phase 1 | 3.01E-07 |
| Utilities Service Station | Phase 1 | 9.78E-07 |
| Gas Station w/Convenience Store | Phase 1 | 1.79E-07 |
| Convenience Store | Phase 1 | 2.76E-07 |
| Fire Station | Phase 1 | 0.00E+00 |
| | | |
| Total | | 5.09E-05 |

**Total Onsite Emission**

| | | |
|---|---|---|
| Runing Exhaust | 1.17E-04 | |
| Idling Emissions | 5.09E-05 | |
| Total Vehicle Emissions | 1.68E-04 | |
| | | |
| Total All Sources | 1.68E-04 | g/sec |
| | | |
| Size of Area Source | 4683563 | m2 |
| **Area Emission Rate** | **3.59E-11** | **g/m2-sec** |

**World Logistics Center** 2035 Phase 1 Mitigation: T6 and T 2035
**Diesel Vehicle Emissions** DPM with EMFAC2014

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** DPM Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.002 | 56 | 330 | 0.21 | 2.30E-02 | 5.06E-05 | 2.66E-07 | |
| | LDT1 | 15 | 0.016 | 3 | 330 | 0.21 | 9.21E-03 | 2.03E-05 | 1.07E-07 | |
| | LDT2 | 15 | 0.007 | 3 | 330 | 0.21 | 4.81E-03 | 1.06E-05 | 5.56E-08 | |
| | MDT | 15 | 0.003 | 5 | 330 | 0.21 | 2.55E-03 | 5.62E-06 | 2.95E-08 | |
| | LHDT1 | 15 | 0.015 | 275 | 330 | 0.21 | 8.54E-01 | 1.88E-03 | 9.89E-06 | |
| | LHDT2 | 15 | 0.014 | 90 | 330 | 0.21 | 2.63E-01 | 5.80E-04 | 3.05E-06 | |
| | MHDT | 15 | 0.004 | 1441 | 330 | 0.21 | 1.18E+00 | 2.60E-03 | 1.37E-05 | |
| | HHDT | 15 | 0.008 | 4652 | 330 | 0.21 | 7.68E+00 | 1.69E-02 | 8.89E-05 | |
| | | | | | | | | | | 1.16E-04 |
| Travel at Light Logistics | LDA | 15 | 0.002 | 0 | 175 | 0.11 | 5.18E-05 | 1.14E-07 | 5.99E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 175 | 0.11 | 2.07E-05 | 4.57E-08 | 2.40E-10 | |
| | LDT2 | 15 | 0.007 | 0 | 175 | 0.11 | 1.08E-05 | 2.38E-08 | 1.25E-10 | |
| | MDT | 15 | 0.003 | 0 | 175 | 0.11 | 5.75E-06 | 1.27E-08 | 6.65E-11 | |
| | LHDT1 | 15 | 0.015 | 2 | 175 | 0.11 | 2.83E-03 | 6.24E-06 | 3.28E-08 | |
| | LHDT2 | 15 | 0.014 | 1 | 175 | 0.11 | 8.74E-04 | 1.92E-06 | 1.01E-08 | |
| | MHDT | 15 | 0.004 | 6 | 175 | 0.11 | 2.58E-03 | 5.68E-06 | 2.99E-08 | |
| | HHDT | 15 | 0.008 | 16 | 175 | 0.11 | 1.39E-02 | 3.07E-05 | 1.61E-07 | 2.35E-07 |
| Travel at Utility | LDA | 15 | 0.002 | 0 | 100 | 0.06 | 4.33E-05 | 9.54E-08 | 5.02E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 100 | 0.06 | 1.74E-05 | 3.82E-08 | 2.01E-10 | |
| | LDT2 | 15 | 0.007 | 0 | 100 | 0.06 | 9.06E-06 | 2.00E-08 | 1.05E-10 | |
| | MDT | 15 | 0.003 | 0 | 100 | 0.06 | 4.81E-06 | 1.06E-08 | 5.57E-11 | |
| | LHDT1 | 15 | 0.015 | 6 | 100 | 0.06 | 5.37E-03 | 1.18E-05 | 6.22E-08 | |
| | LHDT2 | 15 | 0.014 | 2 | 100 | 0.06 | 1.66E-03 | 3.65E-06 | 1.92E-08 | |
| | MHDT | 15 | 0.004 | 5 | 100 | 0.06 | 1.21E-03 | 2.67E-06 | 1.40E-08 | |
| | HHDT | 15 | 0.008 | 22 | 100 | 0.06 | 1.08E-02 | 2.38E-05 | 1.25E-07 | 2.21E-07 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 1.26E-05 | 2.78E-08 | 1.46E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 5.06E-06 | 1.11E-08 | 5.85E-11 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 2.64E-06 | 5.81E-09 | 3.06E-11 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 1.40E-06 | 3.09E-09 | 1.62E-11 | |
| | LHDT1 | 15 | 0.015 | 1 | 50 | 0.03 | 3.79E-04 | 8.35E-07 | 4.39E-09 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 1.17E-04 | 2.57E-07 | 1.35E-09 | |
| | MHDT | 15 | 0.004 | 14 | 50 | 0.03 | 1.73E-03 | 3.81E-06 | 2.00E-08 | |
| | HHDT | 15 | 0.008 | 85 | 50 | 0.03 | 2.14E-02 | 4.71E-05 | 2.47E-07 | 2.73E-07 |
| Travel at Convenience Store | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 2.09E-05 | 4.61E-08 | 2.42E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 8.39E-06 | 1.85E-08 | 9.71E-11 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 4.38E-06 | 9.64E-09 | 5.07E-11 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 2.32E-06 | 5.12E-09 | 2.69E-11 | |
| | LHDT1 | 15 | 0.015 | 1 | 50 | 0.03 | 5.79E-04 | 1.27E-06 | 6.70E-09 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 1.78E-04 | 3.93E-07 | 2.06E-09 | |
| | MHDT | 15 | 0.004 | 23 | 50 | 0.03 | 2.83E-03 | 6.23E-06 | 3.27E-08 | |
| | HHDT | 15 | 0.008 | 134 | 50 | 0.03 | 3.34E-02 | 7.36E-05 | 3.87E-07 | 4.29E-07 |
| Travel at Fire Station | LDA | 15 | 0.002 | 0 | 50 | 0.03 | 1.56E-05 | 3.43E-08 | 1.80E-10 | |
| | LDT1 | 15 | 0.016 | 0 | 50 | 0.03 | 6.24E-06 | 1.37E-08 | 7.22E-11 | |
| | LDT2 | 15 | 0.007 | 0 | 50 | 0.03 | 3.26E-06 | 7.17E-09 | 3.77E-11 | |
| | MDT | 15 | 0.003 | 0 | 50 | 0.03 | 1.73E-06 | 3.81E-09 | 2.00E-11 | |
| | LHDT1 | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 0.004 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 0.008 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-10 |
| Total - All Buildings | LDA | | | 57 | | | 2.31E-02 | 5.09E-05 | 2.68E-07 | |
| | LDT1 | | | 3 | | | 9.27E-03 | 2.04E-05 | 1.07E-07 | |
| | LDT2 | | | 3 | | | 4.84E-03 | 1.07E-05 | 5.60E-08 | |
| | MDT | | | 5 | | | 2.57E-03 | 5.66E-06 | 2.97E-08 | |
| | LHDT1 | | | 284 | | | 8.64E-01 | 1.90E-03 | 9.99E-06 | |
| | LHDT2 | | | 93 | | | 2.66E-01 | 5.86E-04 | 3.08E-06 | |
| | MHDT | | | 1488 | | | 1.19E+00 | 2.62E-03 | 1.38E-05 | |
| | HHDT | | | 4909 | | | 7.76E+00 | 1.71E-02 | 8.98E-05 | |
| | Total | | | 6843 | | | 1.01E+01 | 2.23E-02 | 1.17E-04 | 1.17E-04 |

**Diesel truck Idling Emissions** **DPM Emissions** Idle Time (minutes) 3

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.422 | 3 | 138 | 2.90E+00 | 6.39E-03 | 3.36E-05 | |
| | **LHDT2** | 0.500 | 3 | 45 | 1.13E+00 | 2.48E-03 | 1.30E-05 | |
| | **MHDT** | 0.001 | 3 | 720 | 5.04E-02 | 1.11E-04 | 5.84E-07 | |
| | **HHDT** | 0.002 | 3 | 2326 | 1.74E-01 | 3.84E-04 | 2.02E-06 | |
| | | | | 3229 | 4.25E+00 | 9.36E-03 | 4.92E-05 | 4.92E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.422 | 3 | 1 | 1.82E-02 | 4.00E-05 | 2.10E-07 | |
| | **LHDT2** | 0.500 | 3 | 0 | 7.04E-03 | 1.55E-05 | 8.15E-08 | |
| | **MHDT** | 0.001 | 3 | 3 | 2.08E-04 | 4.58E-07 | 2.40E-09 | |
| | **HHDT** | 0.002 | 3 | 8 | 5.97E-04 | 1.32E-06 | 6.91E-09 | |
| | | | | 12 | 2.60E-02 | 5.73E-05 | 3.01E-07 | 3.01E-07 |
| **Idle at Utility** | **LHDT1** | 0.422 | 3 | 3 | 6.02E-02 | 1.33E-04 | 6.97E-07 | |
| | **LHDT2** | 0.500 | 3 | 1 | 2.33E-02 | 5.14E-05 | 2.70E-07 | |
| | **MHDT** | 0.001 | 3 | 2 | 1.71E-04 | 3.76E-07 | 1.97E-09 | |
| | **HHDT** | 0.002 | 3 | 11 | 8.09E-04 | 1.78E-06 | 9.37E-09 | |
| | | | | 17 | 8.45E-02 | 1.86E-04 | 9.78E-07 | 9.78E-07 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.422 | 3 | 0 | 8.49E-03 | 1.87E-05 | 9.83E-08 | |
| | **LHDT2** | 0.500 | 3 | 0 | 3.29E-03 | 7.25E-06 | 3.81E-08 | |
| | **MHDT** | 0.001 | 3 | 7 | 4.87E-04 | 1.07E-06 | 5.63E-09 | |
| | **HHDT** | 0.002 | 3 | 43 | 3.21E-03 | 7.06E-06 | 3.71E-08 | |
| | | | | 50 | 1.55E-02 | 3.41E-05 | 1.79E-07 | 1.79E-07 |
| **Idle at Convenience Store** | **LHDT1** | 0.422 | 3 | 1 | 1.30E-02 | 2.86E-05 | 1.50E-07 | |
| | **LHDT2** | 0.500 | 3 | 0 | 5.03E-03 | 1.11E-05 | 5.82E-08 | |
| | **MHDT** | 0.001 | 3 | 11 | 7.97E-04 | 1.76E-06 | 9.22E-09 | |
| | **HHDT** | 0.002 | 3 | 67 | 5.01E-03 | 1.10E-05 | 5.80E-08 | |
| | | | | 79 | 2.38E-02 | 5.24E-05 | 2.76E-07 | 2.76E-07 |
| **Idle at Firestation** | **LHDT1** | 0.422 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.500 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 3387 | 4.40E+00 | 9.69E-03 | 5.09E-05 | 5.09E-05 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2014 Emission Factors
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 3 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for DPM emissions
c) Emissions calculated for 2035

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2035** **Phase 2** **Mitigation: T6 and T7 DSL MY2010**

**with EMFAC2014**

**Vehicle Running Exhaust Emissions** **Pollutant** **DPM**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** |
|---|---|---|
| High Cube | Phase 2 | 8.86E-05 |
| Light Logistics | Phase 2 | 7.99E-07 |
| Utilities Service Station | Phase 2 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 |
| Total | | 8.94E-05 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** |
|---|---|---|
| High Cube | Phase 2 | 3.76E-05 |
| Light Logistics | Phase 2 | 1.02E-06 |
| Utilities Service Station | Phase 2 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 |
| Total | | 3.86E-05 |

**Total Onsite Emission**

| | | |
|---|---|---|
| Runing Exhaust | 8.94E-05 | |
| Idling Emissions | 3.86E-05 | |
| Total Vehicle Emissions | 1.28E-04 | |
| Total All Sources | 1.28E-04 | g/sec |
| Size of Area Source | 5152719 | m2 |
| **Area Emission Rate** | **2.48E-11** | **g/m2-sec** |

**World Logistics Center** **2035** **Phase 2** Mitigation: T6 and T7 DSL MY2010
**Diesel Vehicle Emissions** **DPM** **with EMFAC2014**

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 24 **hrs/day, 52weeks/year**

**Onsite Running Exhaust Emissions** **DPM Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/day) | Emissions (lbs/day) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.002 | 43 | 330 | 0.21 | 1.76E-02 | 3.87E-05 | 2.03E-07 | |
| | **LDT1** | 15 | 0.016 | 2 | 330 | 0.21 | 7.04E-03 | 1.55E-05 | 8.14E-08 | |
| | **LDT2** | 15 | 0.007 | 2 | 330 | 0.21 | 3.67E-03 | 8.09E-06 | 4.25E-08 | |
| | **MDT** | 15 | 0.003 | 4 | 330 | 0.21 | 1.95E-03 | 4.30E-06 | 2.26E-08 | |
| | **LHDT1** | 15 | 0.015 | 210 | 330 | 0.21 | 6.53E-01 | 1.44E-03 | 7.56E-06 | |
| | **LHDT2** | 15 | 0.014 | 69 | 330 | 0.21 | 2.01E-01 | 4.43E-04 | 2.33E-06 | |
| | **MHDT** | 15 | 0.004 | 1101 | 330 | 0.21 | 9.05E-01 | 1.99E-03 | 1.05E-05 | |
| | **HHDT** | 15 | 0.008 | 3555 | 330 | 0.21 | 5.87E+00 | 1.29E-02 | 6.79E-05 | |
| | | | | | | | | | | 8.86E-05 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.002 | 1 | 175 | 0.11 | 1.76E-04 | 3.87E-07 | 2.03E-09 | |
| | **LDT1** | 15 | 0.016 | 0 | 175 | 0.11 | 7.04E-05 | 1.55E-07 | 8.15E-10 | |
| | **LDT2** | 15 | 0.007 | 0 | 175 | 0.11 | 3.68E-05 | 8.10E-08 | 4.25E-10 | |
| | **MDT** | 15 | 0.003 | 0 | 175 | 0.11 | 1.95E-05 | 4.30E-08 | 2.26E-10 | |
| | **LHDT1** | 15 | 0.015 | 6 | 175 | 0.11 | 9.62E-03 | 2.12E-05 | 1.11E-07 | |
| | **LHDT2** | 15 | 0.014 | 2 | 175 | 0.11 | 2.97E-03 | 6.54E-06 | 3.43E-08 | |
| | **MHDT** | 15 | 0.004 | 20 | 175 | 0.11 | 8.79E-03 | 1.94E-05 | 1.02E-07 | |
| | **HHDT** | 15 | 0.008 | 54 | 175 | 0.11 | 4.73E-02 | 1.04E-04 | 5.48E-07 | 7.99E-07 |
| **Travel at Utility** | **LDA** | 15 | 0.002 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.016 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.007 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.003 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.015 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.014 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.004 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.008 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.002 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.007 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.003 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.004 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.008 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.002 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.007 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.003 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.004 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.008 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.002 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.016 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.007 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.003 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.015 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.014 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 0.004 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 0.008 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 43 | | | 1.77E-02 | 3.91E-05 | 2.05E-07 | |
| | **LDT1** | | | 2 | | | 7.11E-03 | 1.57E-05 | 8.23E-08 | |
| | **LDT2** | | | 2 | | | 3.71E-03 | 8.17E-06 | 4.29E-08 | |
| | **MDT** | | | 4 | | | 1.97E-03 | 4.34E-06 | 2.28E-08 | |
| | **LHDT1** | | | 216 | | | 6.63E-01 | 1.46E-03 | 7.67E-06 | |
| | **LHDT2** | | | 71 | | | 2.04E-01 | 4.50E-04 | 2.36E-06 | |
| | **MHDT** | | | 1121 | | | 9.14E-01 | 2.01E-03 | 1.06E-05 | |
| | **HHDT** | | | 3609 | | | 5.91E+00 | 1.30E-02 | 6.85E-05 | |
| | **Total** | | | 5069 | | | 7.73E+00 | 1.70E-02 | 8.94E-05 | 8.94E-05 |

**Diesel truck Idling Emissions** **DPM Emissions** Idle Time (minutes) 3

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/day) | Emissions (lb/day) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 0.422 | 3 | 105 | 2.22E+00 | 4.88E-03 | 2.57E-05 | |
| | **LHDT2** | 0.500 | 3 | 34 | 8.60E-01 | 1.89E-03 | 9.95E-06 | |
| | **MHDT** | 0.001 | 3 | 551 | 3.85E-02 | 8.49E-05 | 4.46E-07 | |
| | **HHDT** | 0.002 | 3 | 1778 | 1.33E-01 | 2.94E-04 | 1.54E-06 | |
| | | | | 2468 | 3.25E+00 | 7.16E-03 | 3.76E-05 | 3.76E-05 |
| **Idle at Light Logistics** | **LHDT1** | 0.422 | 3 | 3 | 6.16E-02 | 1.36E-04 | 7.13E-07 | |
| | **LHDT2** | 0.500 | 3 | 1 | 2.39E-02 | 5.26E-05 | 2.77E-07 | |
| | **MHDT** | 0.001 | 3 | 10 | 7.05E-04 | 1.55E-06 | 8.16E-09 | |
| | **HHDT** | 0.002 | 3 | 27 | 2.03E-03 | 4.47E-06 | 2.35E-08 | |
| | | | | 41 | 8.83E-02 | 1.94E-04 | 1.02E-06 | 1.02E-06 |
| **Idle at Utility** | **LHDT1** | 0.422 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.500 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 0.422 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.500 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 0.422 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.500 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 0.422 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 0.500 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 0.001 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 0.002 | 3 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 2509 | 3.34E+00 | 7.35E-03 | 3.86E-05 | 3.86E-05 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013

**Project Phase 1 and Phase 2 Emissions** **REV5** **Mitigation: T6 and T7 DSL MY2010**

**Internal Roadway Circulation**

**WITH EMFAC2014**

| Roadway Segment | Diesel Emissions (g/sec) | |
|---|---|---|
| 1 | 1.43E-04 | |
| 2 | 3.75E-04 | |
| 3 | 4.59E-04 | |
| 5 | 2.39E-05 | |
| 6 | 1.86E-04 | |
| 8 | 3.51E-05 | |
| 11 | 8.18E-07 | |
| 12 | 4.91E-07 | |
| 14 | 9.45E-05 | |
| 18 | 4.48E-05 | |
| 19 | 1.86E-04 | |
| 21 | 1.06E-04 | |
| 24 | 1.87E-04 | |
| ~~26~~ | ~~0.00E+00~~ | |
| 29 | 7.19E-05 | |
| 30 | 3.43E-04 | |
| 31 | 5.58E-05 | |
| | 2.31E-03 | g/sec |
| | 4.40E-01 | lbs/day |

## TRAFFIC VOLUMES

| ID | Arterial | From | To | | 2035 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 18,000 | 886 | 2,512 | 8,368 |
| 2 | Street A | Eucalyptus Ave | Street F | | 21,267 | 1,578 | 2,969 | 9,559 |
| 3 | Street E | west of Street A | | | 8,478 | 627 | 1,143 | 3,613 |
| 5 | Street E | Street D | Street A | | 7,861 | 363 | 748 | 70 |
| 6 | Street A | Street F | Street C | | 8,214 | 536 | 1,069 | 3,112 |
| 8 | Street D | Street E | Cactus Ave | | 11,199 | 540 | 1,087 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 250 | 17 | 17 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 197 | 12 | 18 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 2,894 | 249 | 372 | 1,041 |
| 18 | Street B | Street A | Gilman Springs Rd | | 2,662 | 180 | 289 | 506 |
| 19 | Street F | Street A | Street C | | 2,842 | 205 | 452 | 1,464 |
| 21 | Street C | Street A | Street F | | 8,013 | 418 | 888 | 1,329 |
| 24 | Street C | Street F | Gilman Springs Rd | | 9,679 | 407 | 859 | 1,602 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 5,033 | 237 | 617 | 2,028 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 6,928 | 324 | 797 | 2,238 |
| 31 | Gilman Springs Rd | south of Street C | | | 9,883 | 386 | 746 | 1,030 |

Traffic Volumes Provided by ParsonsBrinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **Mitigation: T6 and T7 DSL MY2010**

Project Phase 1 and Phase 2 Emissions
Internal Roadway Circulation

**WITH EMFAC2014**

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29766 | 18,000 | 886 | 2,512 | 8,368 | 327 | 0.203 | 30 | 2 | 2 | 3 | 180 | 60 | 2048 | 8247 | 10571 |
| 2 | 35373 | 21,267 | 1,578 | 2,969 | 9,559 | 731 | 0.454 | 35 | 2 | 2 | 4 | 320 | 106 | 2421 | 9420 | 12311 |
| 3 | 13861 | 8,478 | 627 | 1,143 | 3,613 | 2352 | 1.461 | 14 | 1 | 1 | 1 | 127 | 42 | 932 | 3561 | 4679 |
| 5 | 9042 | 7,861 | 363 | 748 | 70 | 953 | 0.592 | 13 | 1 | 1 | 1 | 74 | 24 | 610 | 69 | 793 |
| 6 | 12931 | 8,214 | 536 | 1,069 | 3,112 | 1099 | 0.683 | 14 | 1 | 1 | 1 | 109 | 36 | 872 | 3067 | 4100 |
| 8 | 12826 | 11,199 | 540 | 1,087 | 0 | 1091 | 0.678 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 11 | 284 | 250 | 17 | 17 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 3 | 1 | 14 | 0 | 19 |
| 12 | 227 | 197 | 12 | 18 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 18 |
| 14 | 4556 | 2,894 | 249 | 372 | 1,041 | 1618 | 1.005 | 5 | 0 | 0 | 0 | 51 | 17 | 303 | 1026 | 1402 |
| 18 | 3637 | 2,662 | 180 | 289 | 506 | 1412 | 0.877 | 4 | 0 | 0 | 0 | 37 | 12 | 236 | 499 | 788 |
| 19 | 4963 | 2,842 | 205 | 452 | 1,464 | 2386 | 1.482 | 5 | 0 | 0 | 0 | 42 | 14 | 369 | 1443 | 1872 |
| 21 | 10648 | 8,013 | 418 | 888 | 1,329 | 1258 | 0.781 | 13 | 1 | 1 | 1 | 85 | 28 | 724 | 1310 | 2163 |
| 24 | 12547 | 9,679 | 407 | 859 | 1,602 | 1946 | 1.209 | 16 | 1 | 1 | 2 | 83 | 27 | 700 | 1579 | 2409 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 7915 | 5,033 | 237 | 617 | 2,028 | 675 | 0.419 | 8 | 1 | 0 | 1 | 48 | 16 | 503 | 1999 | 2576 |
| 30 | 10287 | 6,928 | 324 | 797 | 2,238 | 2827 | 1.756 | 11 | 1 | 1 | 1 | 66 | 22 | 650 | 2206 | 2957 |
| 31 | 12045 | 9,883 | 386 | 746 | 1,030 | 820 | 0.509 | 16 | 1 | 1 | 2 | 78 | 26 | 608 | 1015 | 1748 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0024 | 0.0047 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0047 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0022 | 0.0043 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 8.02E-08 | 3.15E-08 | 1.80E-08 | 1.07E-08 | 4.54E-06 | 1.45E-06 | 1.57E-05 | 1.21E-04 | 1.43E-04 |
| 2 | 1 | 2.12E-07 | 8.32E-08 | 4.76E-08 | 2.82E-08 | 1.81E-05 | 5.79E-06 | 4.14E-05 | 3.09E-04 | 3.75E-04 |
| 3 | 1 | 2.72E-07 | 1.07E-07 | 6.10E-08 | 3.61E-08 | 2.31E-05 | 7.40E-06 | 5.12E-05 | 3.76E-04 | 4.59E-04 |
| 5 | 1 | 1.02E-07 | 4.01E-08 | 2.29E-08 | 1.36E-08 | 5.42E-06 | 1.74E-06 | 1.36E-05 | 2.95E-06 | 2.39E-05 |
| 6 | 1 | 1.23E-07 | 4.83E-08 | 2.76E-08 | 1.64E-08 | 9.22E-06 | 2.95E-06 | 2.24E-05 | 1.51E-04 | 1.86E-04 |
| 8 | 1 | 1.66E-07 | 6.54E-08 | 3.74E-08 | 2.21E-08 | 9.22E-06 | 2.95E-06 | 2.26E-05 | 0.00E+00 | 3.51E-05 |
| 11 | 1 | 4.09E-09 | 1.61E-09 | 9.19E-10 | 5.44E-10 | 3.20E-07 | 1.02E-07 | 3.89E-07 | 0.00E+00 | 8.18E-07 |
| 12 | 1 | 2.21E-09 | 8.69E-10 | 4.97E-10 | 2.94E-10 | 1.55E-07 | 4.96E-08 | 2.83E-07 | 0.00E+00 | 4.91E-07 |
| 14 | 1 | 6.38E-08 | 2.51E-08 | 1.43E-08 | 8.48E-09 | 6.31E-06 | 2.02E-06 | 1.15E-05 | 7.46E-05 | 9.45E-05 |
| 18 | 1 | 5.12E-08 | 2.01E-08 | 1.15E-08 | 6.81E-09 | 3.98E-06 | 1.27E-06 | 7.77E-06 | 3.16E-05 | 4.48E-05 |
| 19 | 1 | 9.23E-08 | 3.63E-08 | 2.08E-08 | 1.23E-08 | 7.66E-06 | 2.45E-06 | 2.05E-05 | 1.55E-04 | 1.86E-04 |
| 21 | 1 | 1.37E-07 | 5.40E-08 | 3.09E-08 | 1.83E-08 | 8.23E-06 | 2.64E-06 | 2.13E-05 | 7.40E-05 | 1.06E-04 |
| 24 | 1 | 2.56E-07 | 1.01E-07 | 5.77E-08 | 3.41E-08 | 1.24E-05 | 3.97E-06 | 3.18E-05 | 1.38E-04 | 1.87E-04 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 4.63E-08 | 1.82E-08 | 1.04E-08 | 6.16E-09 | 2.50E-06 | 8.02E-07 | 7.94E-06 | 6.06E-05 | 7.19E-05 |
| 30 | 1 | 2.67E-07 | 1.05E-07 | 5.99E-08 | 3.55E-08 | 1.43E-05 | 4.59E-06 | 4.29E-05 | 2.80E-04 | 3.43E-04 |
| 31 | 1 | 1.10E-07 | 4.34E-08 | 2.48E-08 | 1.47E-08 | 4.96E-06 | 1.59E-06 | 1.17E-05 | 3.74E-05 | 5.58E-05 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013
**Phase 1 and Phase 2 Emissions** MitigaTION: T6 and T7 DSL MY2010
**Surface Street Segments** **with EMFAC2014**

| Surface Street Segment | Segment | From | To | Diesel Emissions (g/sec) |
|---|---|---|---|---|
| 9 | John F Kennedy Dr | south of Cactus Ave | | 3.30E-05 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1.58E-06 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1.48E-05 |
| 32 | Cactus Ave | west of Redlands Blvd | | 1.05E-05 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 3.21E-06 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 2.01E-05 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 1.27E-05 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 5.16E-06 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 6.07E-06 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1.65E-04 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 1.17E-05 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 3.60E-06 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 3.84E-06 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 4.43E-06 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 1.29E-05 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 1.06E-07 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 2.30E-05 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 0.00E+00 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 1.77E-06 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 3.47E-08 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 5.83E-06 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1.18E-06 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 2.16E-07 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 3.72E-06 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 1.75E-06 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 8.79E-07 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | 6.09E-06 |
| 65 | Alessandro Blvd | Nason St | Oliver St | 4.58E-06 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 5.02E-06 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0.00E+00 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 1.20E-06 |
| 69 | Cactus Ave | Nason St | Oliver St | 1.99E-06 |

| | | | | |
|---|---|---|---|---|
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 3.89E-06 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 1.09E-06 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0.00E+00 |
| 73 | Iris Ave | Nason St | Oliver St | 1.34E-05 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 1.21E-06 |
| 75 | Ironwood Ave | Graham St | Heacock St | 3.40E-07 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 6.40E-08 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 5.65E-07 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 2.58E-07 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0.00E+00 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 2.00E-06 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 3.29E-07 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0.00E+00 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 8.73E-06 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 2.82E-07 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 2.85E-07 |
| 95 | W 6th St | I-10 | N California Ave | 1.15E-06 |
| 96 | N California Ave | W 6th St | E 8th St | 1.02E-07 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 1.02E-06 |
| 98 | N California Ave | W 6th St | I-10 | 1.32E-08 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 3.80E-07 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 3.41E-07 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 1.91E-06 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0.00E+00 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 2.15E-06 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 2.03E-06 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0.00E+00 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 3.49E-08 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 1.96E-06 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 5.89E-08 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 2.16E-07 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 3.23E-06 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 2.15E-11 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 4.92E-06 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 1.04E-06 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 1.55E-06 |
| 115 | Alessandro Blvd | Frederick St | Graham St | 3.90E-06 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 1.09E-07 |

| | | | | |
|---|---|---|---|---|
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 2.53E-08 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 4.20E-06 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 4.30E-07 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 1.78E-06 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 4.14E-06 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 6.05E-07 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 6.35E-08 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 4.08E-06 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 2.71E-08 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 4.16E-06 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 2.35E-05 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 1.29E-08 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 4.47E-06 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 5.39E-08 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 2.59E-08 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 5.45E-08 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 2.13E-07 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 4.74E-06 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 9.11E-08 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 3.92E-08 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 3.27E-07 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 1.11E-06 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 2.71E-07 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 1.73E-06 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 1.18E-07 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 1.35E-06 |
| 144 | Cactus Ave | Frederick St | Graham St | 1.24E-06 |
| 145 | Cactus Ave | Graham St | Heacock St | 1.28E-06 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 1.33E-08 |
| 147 | Cactus Ave | Heacock St | Indian St | 1.44E-06 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 1.36E-07 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 1.63E-06 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0.00E+00 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 1.81E-06 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 2.20E-05 |
| 153 | Cactus Ave | Kitching St | Lasselle St | 1.97E-06 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 3.93E-11 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 2.12E-06 |

| | | | | |
|---|---|---|---|---|
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 4.10E-07 |
| 157 | Cactus Ave | Morrison St | Nason St | 2.61E-06 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 2.26E-06 |
| 159 | Beaumont Ave | E 6th St | I-10 | 1.72E-07 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0.00E+00 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 4.13E-06 |
| 162 | Iris Ave | Kitching St | Lasselle St | 1.35E-05 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 2.66E-06 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 7.84E-08 |
| 165 | Iris Ave | Lasselle St | Nason St | 3.27E-05 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 1.54E-06 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0.00E+00 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 1.46E-06 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2.37E-06 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 4.52E-06 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | 6.03E-08 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | 5.53E-09 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 3.15E-05 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 1.48E-05 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 6.67E-05 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 1.88E-06 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | 9.25E-06 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | 7.85E-06 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | 0.00E+00 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | 6.74E-06 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | 0.00E+00 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | 3.79E-06 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 2.50E-04 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 1.44E-04 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 4.49E-05 |
| 194 | Crescent Ave | West of Alessandro Rd | | 6.60E-07 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 1.41E-06 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 3.86E-06 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 1.79E-07 |
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 2.32E-07 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 7.23E-06 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 8.30E-06 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 1.43E-05 |

| | | | | |
|---|---|---|---|---|
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 4.71E-07 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 4.17E-07 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 4.98E-06 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 1.03E-06 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 2.03E-06 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 1.00E-07 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 4.25E-07 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 3.36E-07 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 5.93E-11 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 1.71E-06 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0.00E+00 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 7.94E-08 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 3.43E-08 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 2.97E-06 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 2.53E-05 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 1.05E-06 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 1.84E-07 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 2.29E-05 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 9.09E-07 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 1.98E-05 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 1.06E-08 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0.00E+00 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 1.29E-05 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 2.49E-08 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 6.58E-07 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 2.47E-07 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 2.76E-06 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 6.31E-07 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 1.71E-06 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 2.43E-05 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 5.28E-08 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 1.58E-06 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0.00E+00 |
| 260 | Central Ave | Canyon Crest Dr | I-215 | 2.88E-05 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 1.76E-06 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 2.36E-06 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 2.39E-06 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 2.74E-07 |

| | | | | |
|---|---|---|---|---|
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 1.13E-06 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 5.08E-06 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 5.63E-07 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 1.58E-06 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 2.40E-05 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 5.65E-08 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 3.65E-06 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 4.65E-08 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 1.35E-07 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 1.24E-05 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 9.64E-08 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 1.65E-06 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 2.54E-07 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0.00E+00 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 7.23E-07 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 2.47E-06 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0.00E+00 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 1.54E-06 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0.00E+00 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1.88E-06 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 8.81E-07 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 2.70E-07 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 4.52E-06 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 2.71E-07 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 4.86E-06 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 9.69E-06 |
| 294 | Via Del Lago | South of Iris Ave | | 1.33E-08 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 1.15E-07 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 1.45E-07 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 3.56E-05 |
| 304 | Iris Ave | Indian St | Perris Blvd | 6.88E-07 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 2.24E-05 |
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 0.00E+00 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 1.56E-06 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 5.08E-05 |
| 326 | Ramona Expy | Sanderson Ave | State St | 2.05E-05 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 3.73E-06 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0.00E+00 |

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|---|---|---|---|---|
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 0.00E+00 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 0.00E+00 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 1.58E-07 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 5.64E-06 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 1.12E-05 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 2.16E-08 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 3.63E-05 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 7.94E-06 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 7.86E-06 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 2.88E-07 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0.00E+00 |
| 375 | Mid County Pkwy WB On-Ramp | Mid County Pkwy | 3rd St | 4.90E-06 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramp | 6.00E-06 |
| 377 | Mid County Pkwy WB Off-Ramp | Mid County Pkwy | 3rd St | 1.73E-07 |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramp | 1.26E-06 |
| 379 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | 3rd St | 2.93E-06 |
| 380 | Mid County Pkwy EB On-Ramp | 3rd St | Mid County Pkwy | 1.81E-08 |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | 7.40E-07 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 2.73E-06 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 6.93E-05 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0.00E+00 |
| 389 | El Cerrito Dr | South of Central Ave | | 2.59E-08 |
| 390 | Ramona Expy | Webster Ave | Indian St | 2.52E-06 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 2.53E-06 |
| 393 | Indian St | Ramona Expy | Morgan St | 3.47E-06 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 3.13E-05 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 3.71E-05 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 7.88E-07 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2.41E-06 |
| 399 | Ramona Expy | Evans Rd | Rider St | 5.84E-07 |
| 400 | Evans Rd | Ramona Expy | Rider St | 5.62E-06 |
| 401 | Morgan St | Indian St | Perris Blvd | 0.00E+00 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0.00E+00 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0.00E+00 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 2.65E-10 |
| 406 | Ironwood Ave | East of Thedore St | | 5.67E-07 |
| 407 | Rider St | Indian St | Perris Blvd | 1.65E-11 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 0.00E+00 |

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|---|---|---|---|---|
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 2.12E-07 |
| 410 | Rider St | Wilson Ave | Evans Rd | 3.29E-08 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0.00E+00 |
| 412 | Maude St | North of Arlington Ave | | 0.00E+00 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 1.03E-06 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 1.67E-07 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1.09E-05 |
| 416 | Mid County Pkwy WB On-Ramp | Mid County Pkwy | Perris Blvd | 1.81E-06 |
| 417 | Mid County Pkwy WB Off-Ramp | Perris Blvd | Mid County Pkwy | 9.11E-07 |
| 419 | Mid County Pkwy EB Off-Ramp | Mid County Pkwy | Perris Blvd | 1.42E-06 |
| 420 | Mid County Pkwy EB On-Ramp | Perris Blvd | Mid County Pkwy | 4.44E-07 |
| 421 | Via Del Lago | South of Iris Ave | | 0.00E+00 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 2.38E-05 |
| 425 | Mid County Pkwy WB On-Ramp | West of Evan | | 1.20E-08 |
| 426 | Mid County Pkwy WB Off-Ramp | East of Evan | | 4.56E-07 |
| 427 | Day St | south of Alessandro Blvd | | 5.13E-08 |
| 428 | Mid County Pkwy EB Off-Ramp | West of Evan | | 3.60E-08 |
| 429 | Mid County Pkwy EB On-Ramp | East of Evan | | 3.48E-07 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 5.31E-07 |
| 431 | Placentia Ave | Water Ave | Evans Rd | 6.97E-08 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | 2.81E-08 |
| 433 | Evans Rd | Rider St | Orange Ave | 6.67E-06 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 0.00E+00 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 7.79E-08 |
| 436 | Elsworth St | south of Cactus Ave | | 1.27E-11 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0.00E+00 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 9.26E-06 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 2.62E-08 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | 3.53E-06 |
| 452 | San Jacinto Ave | West of Evan Rd | | 1.55E-10 |
| 453 | Evans Rd | North of San Jancito Ave | | 5.64E-06 |
| 454 | San Jacinto Ave | East of Evan Rd | | 2.61E-07 |
| 455 | Evans Rd | South of San Jancito Ave | | 1.19E-06 |
| 458 | Nason St | South of Cactus Ave | | 4.57E-09 |
| 464 | Quincy | South of Eucalyptus | | 1.12E-07 |
| 477 | Ellis Ave | West of Evan Rd | | 4.62E-07 |
| 478 | Evans Rd | North of Ellis Ave | | 1.27E-06 |
| 479 | Oliver St | South of Irris Ave | | 0.00E+00 |

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|---|---|---|---|---|
| 480 | Ellis Ave | Evans Rd | SR-215 | 6.54E-07 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | 1.67E-08 |
| 482 | Ellis Ave | East of SR-215 | | 3.21E-07 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | 1.36E-06 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | 3.03E-08 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | 7.64E-07 |
| 488 | Nason St | North of Iris Ave | | 2.38E-08 |
| 494 | Evans Rd | North of Harley Knox Blvd | | 4.55E-06 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | 5.67E-11 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 1.93E-05 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 1.15E-05 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | 1.86E-11 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | 0.00E+00 |
| 504 | Krameria Ave | west of Perris Blvd | | 8.33E-07 |

1.93E-03 g/sec
3.68E-01 lbs/day

## TRAFFIC VOLUMES

| ID | Segment | From | To | 2035 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 9 | John F Kennedy Dr | south of Cactus Ave | | 7,006 | 301 | 797 | 0 |
| 10 | Redlands Blvd | Alessandro Blvd | Cactus Ave | 1,011 | 43 | 72 | 0 |
| 13 | Redlands Blvd | State Route 60 | Eucalyptus Ave | 1,555 | 60 | 190 | 1,041 |
| 32 | Cactus Ave | west of Redlands Blvd | | 3,010 | 179 | 228 | 0 |
| 33 | Alessandro Blvd | west of Redlands Blvd | | 749 | 24 | 57 | 0 |
| 35 | Redlands Blvd | Ironwood Ave | State Route 60 | 595 | 47 | 127 | 636 |
| 36 | Ironwood Ave | Redlands Blvd | Highland Blvd | 2,377 | 142 | 365 | 0 |
| 37 | San Timoteo Canyon Rd | West Live Oak Canyon | | 388 | 41 | 144 | 587 |
| 38 | Theodore St | State Route 60 | Highland Blvd | 3,045 | 201 | 383 | 7 |
| 42 | Redlands Blvd | Ironwood Ave | San Timoteo Canyon Rd | 1,903 | 143 | 401 | 636 |
| 43 | Moreno Beach Dr | Alessandro Blvd | SR 60 | 350 | 15 | 25 | 110 |
| 46 | Moreno Beach Dr | State Route 60 | Ironwood Ave | 777 | 46 | 109 | 59 |
| 47 | Ironwood Ave | Moreno Beach Dr | Redlands Blvd | 938 | 37 | 88 | 0 |
| 48 | Alessandro Blvd | Lasselle St | Morrison St | 892 | 33 | 74 | 102 |
| 50 | Cactus Ave | Redlands Blvd | Street D | 11,199 | 540 | 1,087 | 0 |
| 51 | Moreno Beach Dr | John F Kennedy Dr | Cactus Ave | 75 | 2 | 5 | 0 |
| 52 | Moreno Beach Dr | John F Kennedy Dr | Oliver St | 7,014 | 299 | 801 | 0 |
| 53 | John F Kennedy Dr | Oliver St | Moreno Beach Dr | 0 | 0 | 0 | 0 |
| 54 | Locust Ave | Moreno Beach Dr | Smiley Blvd | 1,535 | 83 | 247 | 0 |
| 55 | Locust Ave | Moreno Beach Dr | Redlands Blvd | 19 | 1 | 0 | 0 |
| 56 | Moreno Beach Dr | Locust Ave | Ironwood Ave | 1,535 | 83 | 247 | 0 |
| 57 | Live Oak Canyon Rd | North of San Timoteo Canyon | | 1,267 | 86 | 227 | 0 |
| 58 | SR 60 EB Ramps | west of Moreno Beach Dr | | 493 | 26 | 37 | 0 |
| 59 | Eucalyptus Ave | Moreno Beach Dr | Quincy Dr | 974 | 116 | 121 | 0 |
| 60 | SR 60 WB Ramps | east of Redlands Blvd | | 307 | 25 | 66 | 209 |
| 61 | SR 60 EB Ramps | west of Redlands Blvd | | 562 | 30 | 52 | 168 |
| 62 | Fir Ave | Quincy Dr | Redlands Blvd | 1,330 | 199 | 192 | 0 |
| 65 | Alessandro Blvd | Nason St | Oliver St | 1,018 | 37 | 81 | 102 |
| 66 | Alessandro Blvd | Oliver St | Moreno Beach Dr | 1,167 | 47 | 97 | 102 |
| 67 | Oliver St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 68 | Moreno Beach Dr | Alessandro Blvd | Cactus Ave | 731 | 32 | 64 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 69 | Cactus Ave | Nason St | Oliver St | 1,033 | 56 | 91 | 0 |
| 70 | Cactus Ave | Oliver St | Moreno Beach Dr | 2,169 | 130 | 165 | 0 |
| 71 | Oliver St | Cactus Ave | John F Kennedy Dr | 620 | 42 | 25 | 0 |
| 72 | Oliver St | John F Kennedy Dr | Iris Ave | 0 | 0 | 0 | 0 |
| 73 | Iris Ave | Nason St | Oliver St | 6,962 | 297 | 799 | 0 |
| 74 | Heacock St | Manzanita Ave | Ironwood Ave | 560 | 17 | 27 | 1 |
| 75 | Ironwood Ave | Graham St | Heacock St | 114 | 5 | 5 | 5 |
| 76 | Ironwood Ave | Heacock St | Indian Ave | 16 | 1 | 1 | 0 |
| 77 | Heacock St | Ironwood Ave | Hemlock Ave | 661 | 21 | 30 | 6 |
| 80 | Heacock St | Hemlock Ave | SR 60 WB Ramps | 773 | 27 | 40 | 12 |
| 81 | SR 60 WB Ramps | west of Heacock St | | 0 | 0 | 0 | 0 |
| 82 | SR 60 WB Ramps | east of Heacock St | | 976 | 37 | 68 | 93 |
| 83 | Heacock St | SR 60 WB Ramps | SR 60 EB Ramps | 356 | 16 | 27 | 59 |
| 85 | SR 60 WB Onramp | west of Perris Blvd | | 0 | 0 | 0 | 0 |
| 86 | SR 60 WB Offramp | east of Perris Blvd | | 802 | 38 | 60 | 650 |
| 87 | Eucalyptus Ave | Indian St | Perris Blvd | 77 | 5 | 13 | 0 |
| 88 | Eucalyptus Ave | Perris Blvd | Kitching St | 70 | 5 | 13 | 0 |
| 95 | W 6th St | I-10 | N California Ave | 637 | 14 | 36 | 48 |
| 96 | N California Ave | W 6th St | E 8th St | 147 | 2 | 4 | 3 |
| 97 | E 6th St | N California Ave | Beaumont Ave | 468 | 12 | 29 | 41 |
| 98 | N California Ave | W 6th St | I-10 | 13 | 0 | 2 | 1 |
| 99 | Beaumont Ave | E 6th St | E 8th St | 330 | 6 | 12 | 13 |
| 100 | I-215 SB Ramps | north of Alessandro Blvd | | 88 | 3 | 8 | 29 |
| 101 | Alessandro Blvd | Sycamore Canyon Blvd | I-215 SB Ramps | 728 | 24 | 65 | 98 |
| 102 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 103 | I-215 NB Ramps | north of Alessandro Blvd | | 297 | 12 | 31 | 148 |
| 104 | Alessandro Blvd | I-215 NB Ramps | Old 215 Frontage Rd | 535 | 18 | 53 | 82 |
| 105 | I-215 SB Ramps | south of Alessandro Blvd | | 0 | 0 | 0 | 0 |
| 106 | Old 215 Frontage Rd | Eucalyptus Ave | Alessandro Blvd | 13 | 0 | 1 | 0 |
| 107 | Alessandro Blvd | Old 215 Frontage Rd | Day St | 554 | 19 | 56 | 81 |
| 108 | Old 215 Frontage Rd | Alessandro Blvd | Cactus Ave | 12 | 1 | 2 | 0 |
| 109 | Day St | Cottonwood Ave | Alessandro Blvd | 67 | 4 | 10 | 0 |
| 110 | Alessandro Blvd | Day St | Elsworth St | 562 | 19 | 57 | 81 |
| 111 | Elsworth St | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 112 | Alessandro Blvd | Elsworth St | Frederick St | 573 | 21 | 64 | 124 |
| 113 | Elsworth St | Alessandro Blvd | Cactus Ave | 18 | 3 | 10 | 24 |
| 114 | Frederick St | Cottonwood Ave | Alessandro Blvd | 27 | 2 | 8 | 40 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 115 | Alessandro Blvd | Frederick St | Graham St | 590 | 21 | 60 | 87 |
| 116 | Frederick St | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 3 |
| 117 | Graham St | Cottonwood Ave | Alessandro Blvd | 24 | 1 | 1 | 0 |
| 118 | Alessandro Blvd | Graham St | Heacock St | 624 | 23 | 66 | 108 |
| 119 | Graham St | Alessandro Blvd | Cactus Ave | 7 | 1 | 3 | 13 |
| 120 | Heacock St | Cottonwood Ave | Alessandro Blvd | 43 | 3 | 9 | 44 |
| 121 | Alessandro Blvd | Heacock St | Indian St | 656 | 24 | 65 | 95 |
| 122 | Heacock St | Alessandro Blvd | Cactus Ave | 6 | 1 | 3 | 19 |
| 123 | Indian St | Cottonwood Ave | Alessandro Blvd | 33 | 2 | 2 | 0 |
| 124 | Alessandro Blvd | Indian St | Perris Blvd | 701 | 26 | 68 | 95 |
| 125 | Indian St | Alessandro Blvd | Cactus Ave | 12 | 1 | 1 | 0 |
| 126 | Alessandro Blvd | Perris Blvd | Kitching St | 756 | 27 | 70 | 101 |
| 127 | Perris Blvd | Alessandro Blvd | Cactus Ave | 32 | 3 | 11 | 636 |
| 128 | Kitching St | Cottonwood Ave | Alessandro Blvd | 14 | 0 | 1 | 0 |
| 129 | Alessandro Blvd | Kitching St | Lasselle St | 814 | 29 | 72 | 101 |
| 130 | Kitching St | Alessandro Blvd | Cactus Ave | 61 | 3 | 1 | 0 |
| 131 | Lasselle St | Cottonwood Ave | Alessandro Blvd | 27 | 1 | 1 | 0 |
| 133 | Lasselle St | Alessandro Blvd | Cactus Ave | 73 | 4 | 0 | 0 |
| 134 | Morrison St | Cottonwood Ave | Alessandro Blvd | 144 | 6 | 8 | 0 |
| 135 | Alessandro Blvd | Morrison St | Nason St | 1,040 | 39 | 82 | 102 |
| 136 | Nason St | Cottonwood Ave | Alessandro Blvd | 42 | 3 | 4 | 0 |
| 137 | Nason St | Alessandro Blvd | Cactus Ave | 20 | 1 | 2 | 0 |
| 138 | I-215 SB Ramps | north of Cactus Ave | | 6 | 1 | 5 | 25 |
| 139 | Cactus Ave | Meridian Pkwy | I-215 SB Ramps | 251 | 10 | 30 | 32 |
| 140 | I-215 SB Ramps | south of Cactus Ave | | 223 | 8 | 18 | 0 |
| 141 | Cactus Ave | I-215 NB Ramps | Elsworth St | 393 | 15 | 37 | 16 |
| 142 | I-215 NB Ramps | south of Cactus Ave | | 11 | 1 | 4 | 7 |
| 143 | Cactus Ave | Elsworth St | Frederick St | 531 | 22 | 57 | 8 |
| 144 | Cactus Ave | Frederick St | Graham St | 539 | 23 | 62 | 5 |
| 145 | Cactus Ave | Graham St | Heacock St | 556 | 26 | 70 | 1 |
| 146 | Riverside Dr | Cactus Ave | Meyer Dr | 4 | 0 | 1 | 0 |
| 147 | Cactus Ave | Heacock St | Indian St | 605 | 29 | 76 | 2 |
| 148 | Heacock St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 5 |
| 149 | Cactus Ave | Indian St | Perris Blvd | 664 | 33 | 80 | 4 |
| 150 | Indian St | Cactus Ave | John F Kennedy Dr | 0 | 0 | 0 | 0 |
| 151 | Cactus Ave | Perris Blvd | Kitching St | 696 | 35 | 82 | 0 |
| 152 | Perris Blvd | Cactus Ave | John F Kennedy Dr | 25 | 3 | 10 | 629 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 153 | Cactus Ave | Kitching St | Lasselle St | 814 | 40 | 85 | 0 |
| 154 | Kitching St | Cactus Ave | John F Kennedy Dr | 2 | 0 | 0 | 0 |
| 155 | Cactus Ave | Lasselle St | Morrison St | 1,228 | 59 | 106 | 0 |
| 156 | Lasselle St | Cactus Ave | John F Kennedy Dr | 302 | 14 | 18 | 0 |
| 157 | Cactus Ave | Morrison St | Nason St | 1,415 | 73 | 123 | 0 |
| 158 | E 6th St | Beaumont Ave | Pennsylvania Ave | 380 | 10 | 27 | 42 |
| 159 | Beaumont Ave | E 6th St | I-10 | 275 | 5 | 13 | 19 |
| 160 | Kitching St | Gentian Ave | Iris Ave | 0 | 0 | 0 | 0 |
| 161 | Iris Ave | Perris Blvd | Kitching St | 1,520 | 74 | 246 | 0 |
| 162 | Iris Ave | Kitching St | Lasselle St | 3,857 | 189 | 592 | 0 |
| 163 | Kitching St | Iris Ave | Ivory Ave | 2,337 | 115 | 347 | 0 |
| 164 | Lasselle St | Gentian Ave | Iris Ave | 63 | 5 | 5 | 0 |
| 165 | Iris Ave | Lasselle St | Nason St | 6,778 | 286 | 794 | 0 |
| 168 | Krameria Ave | Perris Blvd | Lasselle St | 451 | 24 | 80 | 0 |
| 169 | Krameria Ave | Kitching St | Lasselle St | 0 | 0 | 0 | 0 |
| 170 | Kitching St | Krameria Ave | Lurin Ave | 1,886 | 91 | 267 | 0 |
| 171 | Lasselle St | Cahuilla Dr | Krameria Ave | 2,694 | 82 | 192 | 0 |
| 172 | Lasselle St | Krameria Ave | Arroyo Park Dr | 2,694 | 82 | 192 | 0 |
| 173 | Oleander Ave | Perris Blvd | Lasselle St | 2 | 0 | 0 | 1 |
| 174 | Oleander Ave | Lasselle St | Lake Perris Dr | 21 | 0 | 1 | 0 |
| 177 | San Timoteo Canyon Rd | Alessandro Rd | Live Oak Canyon Rd | 1,655 | 128 | 370 | 587 |
| 178 | Live Oak Canyon Rd | San Timoteo Canyon Rd | I-10 | 168 | 11 | 23 | 44 |
| 179 | San Timoteo Canyon Rd | Live Oak Canyon Rd | Redlands Blvd | 1,823 | 138 | 394 | 631 |
| 180 | San Timoteo Canyon Rd | Redlands Blvd | Woodhouse Rd | 46 | 3 | 6 | 4 |
| 181 | Potrero Blvd | north of SR 60 WB Ramps | | 2,096 | 71 | 179 | 223 |
| 182 | SR 60 WB Onramp | west of Potrero Blvd | | 3,183 | 107 | 286 | 333 |
| 183 | SR 60 WB Offramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 184 | SR 60 EB Offramp | west of Potrero Blvd | | 3,204 | 108 | 284 | 347 |
| 185 | SR 60 EB Onramp | east of Potrero Blvd | | 0 | 0 | 0 | 0 |
| 186 | Potrero Blvd | south of SR 60 EB Ramps | W 4th St | 1,037 | 36 | 102 | 118 |
| 190 | Gilman Springs Rd | Jack Rabbit Trail | Bridge St | 6,955 | 162 | 514 | 815 |
| 191 | Gilman Springs Rd | Bridge St | Beaumont Ave | 5,432 | 131 | 448 | 577 |
| 192 | Bridge St | Gilman Springs Rd | Marvin Rd | 1,521 | 32 | 66 | 248 |
| 194 | Crescent Ave | West of Alessandro Rd | | 305 | 26 | 69 | 0 |
| 195 | Crescent Ave | Alessandro Rd | Center St | 690 | 47 | 134 | 0 |
| 196 | Alessandro Rd | Crescent Ave | Sunset Dr | 996 | 73 | 202 | 0 |
| 198 | Sunset Dr | Crown St | Alessandro Rd | 48 | 3 | 6 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 199 | Sunset Dr | Alessandro Rd | Cameo Dr | 223 | 11 | 20 | 0 |
| 200 | Alessandro Rd | Sunset Dr | San Timoteo Canyon Rd | 1,267 | 86 | 227 | 0 |
| 205 | Reche Canyon Rd | Keissel Rd | Reche Vista Dr | 1,502 | 82 | 254 | 0 |
| 206 | Reche Canyon Rd | Reche Vista Dr | High Country Dr | 1,486 | 81 | 246 | 0 |
| 207 | Reche Vista Dr | Heacock St | Reche Canyon Rd | 18 | 2 | 9 | 0 |
| 215 | Mission Grove Pkwy | Cannon Rd | Alessandro Blvd | 89 | 2 | 2 | 2 |
| 216 | Alessandro Blvd | Trautwein Rd | Vista Grande Dr | 359 | 11 | 36 | 46 |
| 217 | Mission Grove Pkwy | Alessandro Blvd | Northrop Dr | 169 | 6 | 16 | 32 |
| 218 | Alessandro Blvd | Canyon Crest Dr | Trautwein Rd | 241 | 8 | 29 | 33 |
| 219 | Trautwein Rd | Alessandro Blvd | Orange Terrace Pkwy | 14 | 0 | 0 | 1 |
| 221 | Canyon Crest Dr | Central Ave | Alessandro Blvd | 51 | 1 | 2 | 3 |
| 223 | Canyon Crest Dr | Alessandro Blvd | Sandtrack Rd | 194 | 5 | 20 | 14 |
| 225 | Via Vista Dr | Alessandro Blvd | Canyon Crest Dr | 2 | 0 | 0 | 0 |
| 226 | Alessandro Blvd | Century Ave | Canyon Crest Dr | 73 | 3 | 12 | 23 |
| 227 | Via Vista Dr | Alessandro Blvd | Canyon Hill Dr | 0 | 0 | 0 | 0 |
| 229 | Century Ave | Alessandro Blvd | Claridge Dr | 27 | 1 | 1 | 1 |
| 230 | Century Ave | Trafalgar Ave | Alessandro Blvd | 52 | 1 | 1 | 0 |
| 231 | Alessandro Blvd | Victoria Ave | Arlington Ave/Chicago Ave | 152 | 4 | 13 | 33 |
| 232 | Chicago Ave | Alessandro Blvd | Central Ave | 1,025 | 36 | 129 | 345 |
| 233 | Alessandro Blvd | Arlington Ave/Chicago Ave | Century Ave | 70 | 3 | 12 | 24 |
| 236 | Victoria Ave | Central Ave | Arlington Ave | 20 | 1 | 4 | 4 |
| 237 | Arlington Ave | Victoria Ave | Alessandro Blvd | 889 | 35 | 131 | 344 |
| 238 | Victoria Ave | Arlington Ave | Maude St | 136 | 3 | 10 | 16 |
| 239 | Arlington Ave | Maude St | Victoria Ave | 720 | 31 | 117 | 319 |
| 240 | Durango Rd | Laramie Rd | Arlington Ave | 1 | 0 | 0 | 1 |
| 241 | Horace St | Arlington Ave | Victoria Ave | 0 | 0 | 0 | 0 |
| 242 | Arlington Ave | Magnolia Ave | SR-91 WB On-Ramps | 634 | 26 | 94 | 242 |
| 243 | Riverside Dr | SR-91 WB Off-Ramps | Arlington Ave | 23 | 1 | 3 | 7 |
| 244 | SR-91 WB On-Ramps | Arlington Ave | SR-91 | 52 | 6 | 21 | 74 |
| 245 | SR-91 EB On-Ramps | SR-91 | Arlington Ave | 53 | 2 | 9 | 26 |
| 246 | Indiana Ave | Arlington Ave | SR-91 EB Off-Ramps | 187 | 14 | 55 | 198 |
| 247 | Arlington Ave | SR-91 WB On-Ramps | SR-91 EB On-Ramps | 530 | 18 | 63 | 128 |
| 250 | Country Club Dr | Chicago Ave | Canyon Crest Dr | 104 | 3 | 11 | 22 |
| 252 | Central Ave | Chicago Ave | Canyon Crest Dr | 1,032 | 36 | 126 | 339 |
| 254 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 35 | 1 | 2 | 2 |
| 256 | Canyon Crest Dr | Central Ave | Country Club Dr | 367 | 9 | 18 | 33 |
| 258 | El Cerrito Dr | Canyon Crest Dr | Central Ave | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 260 | Central Ave | Canyon Crest Dr | I-215 | 1,346 | 43 | 137 | 354 |
| 261 | Lochmoor Dr | Central Ave | Fair Isle Dr | 162 | 4 | 13 | 26 |
| 262 | Sycamore Canyon Blvd | Central Ave | College Blvd | 254 | 9 | 27 | 46 |
| 263 | Central Ave | Sycamore Canyon Blvd | I-215 SB Ramps | 1,166 | 38 | 120 | 312 |
| 264 | I-215 SB Off-Ramps | I-215 | Central Ave | 14 | 1 | 5 | 25 |
| 265 | Central Ave | I-215 SB Ramps | I-215 NB Ramps | 834 | 27 | 84 | 212 |
| 266 | I-215 SB On-Ramps | Central Ave | I-215 | 1,799 | 64 | 201 | 553 |
| 267 | Watkins Dr | I-215 NB On-Ramp | I-215 NB Off-Ramp | 216 | 10 | 32 | 63 |
| 268 | I-215 NB Off-Ramp | Watkins Dr | I-215 | 818 | 26 | 80 | 178 |
| 269 | Martin Luther King Blvd | SR-91 | Chicago Ave | 482 | 23 | 77 | 219 |
| 270 | Chicago Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 1 | 2 |
| 271 | Martin Luther King Blvd | Chicago Ave | Iowa Ave | 488 | 23 | 78 | 220 |
| 272 | Chicago Ave | Martin Luther King Blvd | Central Ave | 3 | 0 | 0 | 1 |
| 273 | Iowa Ave | University Ave | Martin Luther King Blvd | 10 | 0 | 2 | 4 |
| 274 | Martin Luther King Blvd | Iowa Ave | Canyon Crest Dr | 508 | 23 | 81 | 225 |
| 275 | Canyon Crest Dr | Campus Dr | Martin Luther King Blvd | 25 | 1 | 3 | 4 |
| 276 | Martin Luther King Blvd | Canyon Crest Dr | I-215 SB Ramps | 543 | 25 | 83 | 230 |
| 277 | Canyon Crest Dr | Martin Luther King Blvd | Central Ave | 14 | 1 | 2 | 4 |
| 278 | I-215 SB Off-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 279 | Martin Luther King Blvd | I-215 SB Ramps | I-215 NB Ramps | 227 | 10 | 33 | 85 |
| 280 | I-215 SB On-Ramp | Martin Luther King Blvd | I-215 | 619 | 29 | 98 | 286 |
| 281 | I-215 NB On-Ramp | I-215 | Martin Luther King Blvd | 0 | 0 | 0 | 0 |
| 282 | I-215 NB Off-Ramp | Martin Luther King Blvd | I-215 | 454 | 19 | 66 | 171 |
| 283 | SR-60 EB Off-Ramp | SR-60 | Heacock St | 0 | 0 | 0 | 0 |
| 284 | SR-60 EB On-Ramp | Heacock St | SR-60 | 1,004 | 39 | 62 | 71 |
| 285 | Heacock St | SR-60 EB Ramps | Sunnymead Blvd | 217 | 12 | 25 | 70 |
| 286 | Perris Blvd | Hemlock Ave | SR-60 WB Ramps | 516 | 19 | 28 | 8 |
| 287 | Perris Blvd | SR-60 WB Ramps | Sunnymead Blvd | 439 | 21 | 34 | 325 |
| 288 | Sunnymead Blvd | SR-60 WB Off-Ramp | Perris Blvd | 174 | 9 | 21 | 27 |
| 289 | Sunnymead Blvd | Perris Blvd | SR-60 WB On-Ramp | 519 | 24 | 39 | 357 |
| 290 | Perris Blvd | Sunnymead Blvd | Fir Ave | 227 | 15 | 26 | 649 |
| 294 | Via Del Lago | South of Iris Ave | | 43 | 1 | 0 | 0 |
| 301 | John F. Kennedy Dr | Indian St | Perris Blvd | 41 | 2 | 7 | 0 |
| 302 | John F. Kennedy Dr | Perris Blvd | Kitching St | 83 | 3 | 8 | 0 |
| 303 | Perris Blvd | John F. Kennedy Dr | Iris Ave | 50 | 4 | 11 | 625 |
| 304 | Iris Ave | Indian St | Perris Blvd | 483 | 13 | 44 | 0 |
| 306 | Perris Blvd | Iris Ave | Krameria Ave | 1,019 | 60 | 203 | 620 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 307 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,220 | 59 | 189 | 620 |
| 324 | Ramona Expy | Warren Rd | Sanderson Ave | 86 | 3 | 11 | 9 |
| 325 | Sanderson Ave | Gilman Springs Rd | Ramona Expy | 3,002 | 74 | 268 | 497 |
| 326 | Ramona Expy | Sanderson Ave | State St | 664 | 19 | 81 | 122 |
| 327 | Sanderson Ave | Ramona Expy | Ramona Blvd | 2,251 | 52 | 177 | 365 |
| 340 | Alessandro Blvd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 351 | Live Oak Canyon Rd | South of San Timoteo Canyon Rd | | 0 | 0 | 0 | 0 |
| 358 | Gilman Springs Rd | Bridge St | SR-79 SB Ramps | 5,416 | 130 | 447 | 577 |
| 359 | SR-79 SB Off-Ramp | SR-79 | Gilman Springs Rd | 54 | 2 | 6 | 7 |
| 360 | Gilman Springs Rd | SR-79 SB Ramps | SR-79 NB Ramps | 3,734 | 86 | 281 | 353 |
| 361 | SR-79 SB On-Ramp | Gilman Springs Rd | SR-79 | 3,310 | 85 | 326 | 572 |
| 362 | SR-79 NB On-Ramp | SR-79 | Gilman Springs Rd | 24 | 0 | 1 | 1 |
| 363 | Gilman Springs Rd | SR-79 NB Ramps | Record Rd | 2,313 | 48 | 137 | 100 |
| 364 | SR-79 NB Off-Ramp | Gilman Springs Rd | SR-79 | 2,820 | 76 | 286 | 467 |
| 365 | Alessandro Blvd | Sycamore Canyon Blvd | Vista Grande Dr | 723 | 23 | 64 | 93 |
| 366 | Sycamore Canyon Blvd | Eastridge Ave | Alessandro Blvd | 5 | 0 | 1 | 4 |
| 367 | Meridian Pkwy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 375 | Mid County Pkwy WB On-R | Mid County Pkwy | 3rd St | 678 | 16 | 36 | 262 |
| 376 | 3rd St | Marvin Rd | Mid County Pkwy WB Ramps | 1,331 | 27 | 60 | 245 |
| 377 | Mid County Pkwy WB Off-R | Mid County Pkwy | 3rd St | 68 | 2 | 6 | 8 |
| 378 | 3rd St | Mid County Pkwy EB Ramps | Mid County Pkwy WB Ramps | 957 | 19 | 38 | 109 |
| 379 | Mid County Pkwy EB Off-Ra | Mid County Pkwy | 3rd St | 530 | 12 | 25 | 183 |
| 380 | Mid County Pkwy EB On-Ra | 3rd St | Mid County Pkwy | 24 | 0 | 1 | 1 |
| 381 | 3rd St | Mid County Pkwy EB Ramps | MM Blvd | 681 | 13 | 26 | 18 |
| 386 | Harley Know Blvd | Indian St | Perris Blvd | 230 | 20 | 56 | 57 |
| 387 | Perris Blvd | Krameria Ave | Harley Know Blvd | 1,317 | 58 | 179 | 569 |
| 388 | Krameria Ave | Lasselle St | Spirit Rd | 0 | 0 | 0 | 0 |
| 389 | El Cerrito Dr | South of Central Ave | | 25 | 1 | 1 | 3 |
| 390 | Ramona Expy | Webster Ave | Indian St | 430 | 18 | 44 | 33 |
| 392 | Ramona Expy | Indian St | Perris Blvd | 477 | 28 | 113 | 103 |
| 393 | Indian St | Ramona Expy | Morgan St | 49 | 11 | 70 | 70 |
| 394 | Perris Blvd | Harley Know Blvd | Ramona Expy | 2,613 | 109 | 340 | 451 |
| 396 | Perris Blvd | Ramona Expy | Rider St | 2,125 | 73 | 216 | 293 |
| 397 | Ramona Expy | Perris Blvd | Evans Rd | 203 | 7 | 16 | 4 |
| 398 | Evans Rd | Marbella Gate | Ramona Expy | 2,446 | 73 | 184 | 1 |
| 399 | Ramona Expy | Evans Rd | Rider St | 242 | 4 | 7 | 0 |
| 400 | Evans Rd | Ramona Expy | Rider St | 1,740 | 50 | 140 | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 401 | Morgan St | Indian St | Perris Blvd | 0 | 0 | 0 | 0 |
| 402 | Morgan St | Perris Blvd | Silver Creek Industries | 0 | 0 | 0 | 0 |
| 404 | Morgan St | Morgan Park | Evans Rd | 0 | 0 | 0 | 0 |
| 405 | Morgan St | Evans Rd | Bradley Rd | 11 | 0 | 0 | 0 |
| 406 | Ironwood Ave | East of Thedore St | | 668 | 59 | 18 | 7 |
| 407 | Rider St | Indian St | Perris Blvd | 1 | 0 | 0 | 0 |
| 408 | Rider St | Perris Blvd | Redlands Ave | 0 | 0 | 0 | 0 |
| 409 | Ironwood Ave | Nason St | Moreno Beach Dr | 176 | 7 | 5 | 0 |
| 410 | Rider St | Wilson Ave | Evans Rd | 0 | 0 | 0 | 1 |
| 411 | Rider St | Evans Rd | Ramona Expy | 0 | 0 | 0 | 0 |
| 412 | Maude St | North of Arlington Ave | | 0 | 0 | 0 | 0 |
| 413 | Placentia Ave | Indian St | Perris Blvd | 125 | 6 | 23 | 28 |
| 414 | Placentia Ave | Perris Blvd | Redlands Ave | 7 | 0 | 0 | 5 |
| 415 | Perris Blvd | Placentia Ave | Orange Ave | 1,870 | 62 | 172 | 238 |
| 416 | Mid County Pkwy WB On-R | Mid County Pkwy | Perris Blvd | 626 | 18 | 66 | 107 |
| 417 | Mid County Pkwy WB Off-R | Perris Blvd | Mid County Pkwy | 8 | 0 | 2 | 67 |
| 419 | Mid County Pkwy EB Off-Ra | Mid County Pkwy | Perris Blvd | 367 | 9 | 30 | 76 |
| 420 | Mid County Pkwy EB On-Ra | Perris Blvd | Mid County Pkwy | 3 | 0 | 1 | 33 |
| 421 | Via Del Lago | South of Iris Ave | | 0 | 0 | 0 | 0 |
| 424 | Perris Blvd | Alessandro Blvd | Cottonwood Ave | 101 | 6 | 15 | 640 |
| 425 | Mid County Pkwy WB On-R | West of Evan | | 23 | 1 | 2 | 0 |
| 426 | Mid County Pkwy WB Off-R | East of Evan | | 12 | 1 | 2 | 36 |
| 427 | Day St | south of Alessandro Blvd | | 23 | 1 | 3 | 0 |
| 428 | Mid County Pkwy EB Off-Ra | West of Evan | | 27 | 1 | 3 | 1 |
| 429 | Mid County Pkwy EB On-Ra | East of Evan | | 13 | 1 | 1 | 35 |
| 430 | Alessandro Blvd | SR-215 NB Ramp | SR-215 SB Ramp | 639 | 21 | 58 | 70 |
| 431 | Placentia Ave | Water Ave | Evans Rd | 4 | 0 | 0 | 3 |
| 432 | Placentia Ave | Evans Rd | El Nido Ave | 17 | 0 | 0 | 1 |
| 433 | Evans Rd | Rider St | Orange Ave | 1,581 | 42 | 132 | 22 |
| 434 | Orange Ave | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 435 | Orange Ave | Evans Rd | Foothill Dr | 70 | 1 | 2 | 0 |
| 436 | Elsworth St | south of Cactus Ave | | 3 | 0 | 0 | 0 |
| 441 | Nuevo Rd | Wilson Ave | Evans Rd | 0 | 0 | 0 | 0 |
| 442 | Evans Rd | Orange Ave | Nuevo Rd | 1,444 | 40 | 129 | 30 |
| 443 | Nuevo Rd | Evans Rd | Foothill Dr | 10 | 0 | 1 | 0 |
| 444 | Evans Rd | Nuevo Rd | San Jacinto Ave | 1,403 | 40 | 128 | 30 |
| 452 | San Jacinto Ave | West of Evan Rd | | 8 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 453 | Evans Rd | North of San Jancito Ave | | 1,288 | 34 | 121 | 28 |
| 454 | San Jacinto Ave | East of Evan Rd | | 246 | 5 | 15 | 0 |
| 455 | Evans Rd | South of San Jancito Ave | | 1,034 | 30 | 106 | 27 |
| 458 | Nason St | South of Cactus Ave | | 9 | 0 | 1 | 0 |
| 464 | Quincy | South of Eucalyptus | | 61 | 3 | 5 | 0 |
| 477 | Ellis Ave | West of Evan Rd | | 80 | 4 | 7 | 9 |
| 478 | Evans Rd | North of Ellis Ave | | 1,054 | 36 | 117 | 46 |
| 479 | Oliver St | South of Irris Ave | | 0 | 0 | 0 | 0 |
| 480 | Ellis Ave | Evans Rd | SR-215 | 726 | 15 | 64 | 0 |
| 481 | SR-215 SB Off-ramp | SR-215 | Ellis Ave | 0 | 0 | 0 | 1 |
| 482 | Ellis Ave | East of SR-215 | | 164 | 2 | 10 | 1 |
| 483 | SR-215 SB On-ramp | Ellis Ave | SR-215 | 837 | 22 | 96 | 0 |
| 484 | SR-215 NB On-ramp | Ellis Ave | SR-215 | 1 | 0 | 0 | 1 |
| 485 | SR-215 NB Off-ramp | SR-215 | Ellis Ave | 1,360 | 23 | 99 | 0 |
| 488 | Nason St | North of Iris Ave | | 9 | 0 | 1 | 0 |
| 494 | Evans Rd | North of Harley Knox Blvd | | 2,525 | 76 | 188 | 0 |
| 498 | Morrison St | Alessandro Blvd | Cactus Ave | 3 | 0 | 0 | 0 |
| 499 | Perris Blvd | Eucalyptus Ave | Cottonwood Ave | 170 | 11 | 20 | 645 |
| 500 | Perris Blvd | North of Eucalyptus Ave | | 189 | 12 | 21 | 645 |
| 502 | Quincy | Cottonwood Ave | Alessandro Blvd | 1 | 0 | 0 | 0 |
| 503 | Quincy | Alessandro Blvd | Cactus Ave | 0 | 0 | 0 | 0 |
| 504 | Krameria Ave | west of Perris Blvd | | 251 | 25 | 94 | 0 |

Traffic Volume Data Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **MitigaTION: T6 and T7 DSL MY2010**

Phase 1 and Phase 2 Emissions
Surface Street Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Street Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8104 | 7,006 | 301 | 797 | 0 | 1820 | 1.131 | 12 | 1 | 1 | 1 | 61 | 20 | 650 | 0 | 745 |
| 10 | 1126 | 1,011 | 43 | 72 | 0 | 826 | 0.513 | 2 | 0 | 0 | 0 | 9 | 3 | 59 | 0 | 72 |
| 13 | 2846 | 1,555 | 60 | 190 | 1,041 | 345 | 0.214 | 3 | 0 | 0 | 0 | 12 | 4 | 155 | 1026 | 1200 |
| 32 | 3417 | 3,010 | 179 | 228 | 0 | 1551 | 0.964 | 5 | 0 | 0 | 1 | 36 | 12 | 186 | 0 | 240 |
| 33 | 830 | 749 | 24 | 57 | 0 | 2006 | 1.246 | 1 | 0 | 0 | 0 | 5 | 2 | 46 | 0 | 54 |
| 35 | 1405 | 595 | 47 | 127 | 636 | 801 | 0.498 | 1 | 0 | 0 | 0 | 10 | 3 | 104 | 627 | 744 |
| 36 | 2884 | 2,377 | 142 | 365 | 0 | 1627 | 1.011 | 4 | 0 | 0 | 0 | 29 | 10 | 298 | 0 | 341 |
| 37 | 1160 | 388 | 41 | 144 | 587 | 219 | 0.136 | 1 | 0 | 0 | 0 | 8 | 3 | 117 | 578 | 708 |
| 38 | 3636 | 3,045 | 201 | 383 | 7 | 659 | 0.409 | 5 | 0 | 0 | 1 | 41 | 14 | 312 | 7 | 380 |
| 42 | 3083 | 1,903 | 143 | 401 | 636 | 5338 | 3.316 | 3 | 0 | 0 | 0 | 29 | 10 | 327 | 627 | 996 |
| 43 | 500 | 350 | 15 | 25 | 110 | 2598 | 1.614 | 1 | 0 | 0 | 0 | 3 | 1 | 20 | 108 | 134 |
| 46 | 991 | 777 | 46 | 109 | 59 | 806 | 0.501 | 1 | 0 | 0 | 0 | 9 | 3 | 89 | 58 | 161 |
| 47 | 1063 | 938 | 37 | 88 | 0 | 1995 | 1.239 | 2 | 0 | 0 | 0 | 8 | 2 | 72 | 0 | 84 |
| 48 | 1101 | 892 | 33 | 74 | 102 | 795 | 0.494 | 1 | 0 | 0 | 0 | 7 | 2 | 60 | 101 | 172 |
| 50 | 12826 | 11,199 | 540 | 1,087 | 0 | 479 | 0.298 | 19 | 1 | 1 | 2 | 110 | 36 | 886 | 0 | 1055 |
| 51 | 82 | 75 | 2 | 5 | 0 | 975 | 0.606 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 5 |
| 52 | 8114 | 7,014 | 299 | 801 | 0 | 1269 | 0.788 | 12 | 1 | 1 | 1 | 61 | 20 | 653 | 0 | 748 |
| 53 | 0 | 0 | 0 | 0 | 0 | 795 | 0.494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 1865 | 1,535 | 83 | 247 | 0 | 325 | 0.202 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 |
| 55 | 20 | 19 | 1 | 0 | 0 | 2042 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1865 | 1,535 | 83 | 247 | 0 | 1152 | 0.716 | 3 | 0 | 0 | 0 | 17 | 6 | 201 | 0 | 227 |
| 57 | 1580 | 1,267 | 86 | 227 | 0 | 246 | 0.153 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 |
| 58 | 556 | 493 | 26 | 37 | 0 | 172 | 0.107 | 1 | 0 | 0 | 0 | 5 | 2 | 30 | 0 | 38 |
| 59 | 1211 | 974 | 116 | 121 | 0 | 786 | 0.488 | 2 | 0 | 0 | 0 | 24 | 8 | 99 | 0 | 132 |
| 60 | 607 | 307 | 25 | 66 | 209 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 206 | 267 |
| 61 | 812 | 562 | 30 | 52 | 168 | 97 | 0.060 | 1 | 0 | 0 | 0 | 6 | 2 | 42 | 166 | 217 |
| 62 | 1721 | 1,330 | 199 | 192 | 0 | 781 | 0.485 | 2 | 0 | 0 | 0 | 40 | 13 | 157 | 0 | 213 |
| 65 | 1238 | 1,018 | 37 | 81 | 102 | 795 | 0.494 | 2 | 0 | 0 | 0 | 8 | 2 | 66 | 101 | 179 |
| 66 | 1413 | 1,167 | 47 | 97 | 102 | 812 | 0.504 | 2 | 0 | 0 | 0 | 10 | 3 | 79 | 101 | 195 |
| 67 | 0 | 0 | 0 | 0 | 0 | 778 | 0.483 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 827 | 731 | 32 | 64 | 0 | 814 | 0.506 | 1 | 0 | 0 | 0 | 6 | 2 | 52 | 0 | 62 |
| 69 | 1180 | 1,033 | 56 | 91 | 0 | 819 | 0.509 | 2 | 0 | 0 | 0 | 11 | 4 | 74 | 0 | 91 |
| 70 | 2464 | 2,169 | 130 | 165 | 0 | 795 | 0.494 | 4 | 0 | 0 | 0 | 26 | 9 | 135 | 0 | 174 |
| 71 | 687 | 620 | 42 | 25 | 0 | 803 | 0.499 | 1 | 0 | 0 | 0 | 9 | 3 | 20 | 0 | 33 |
| 72 | 0 | 0 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 73 | 8058 | 6,962 | 297 | 799 | 0 | 742 | 0.461 | 12 | 1 | 1 | 1 | 60 | 20 | 651 | 0 | 746 |
| 74 | 605 | 560 | 17 | 27 | 1 | 1573 | 0.977 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 1 | 29 |
| 75 | 129 | 114 | 5 | 5 | 5 | 805 | 0.500 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 5 | 11 |
| 76 | 18 | 16 | 1 | 1 | 0 | 1597 | 0.992 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 77 | 718 | 661 | 21 | 30 | 6 | 438 | 0.272 | 1 | 0 | 0 | 0 | 4 | 1 | 24 | 6 | 37 |
| 80 | 852 | 773 | 27 | 40 | 12 | 138 | 0.086 | 1 | 0 | 0 | 0 | 5 | 2 | 33 | 12 | 53 |
| 81 | 0 | 0 | 0 | 0 | 0 | 407 | 0.253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82 | 1174 | 976 | 37 | 68 | 93 | 322 | 0.200 | 2 | 0 | 0 | 0 | 8 | 2 | 55 | 92 | 159 |
| 83 | 458 | 356 | 16 | 27 | 59 | 95 | 0.059 | 1 | 0 | 0 | 0 | 3 | 1 | 22 | 58 | 85 |
| 85 | 0 | 0 | 0 | 0 | 0 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 86 | 1550 | 802 | 38 | 60 | 650 | 284 | 0.176 | 1 | 0 | 0 | 0 | 8 | 3 | 49 | 641 | 701 |
| 87 | 95 | 77 | 5 | 13 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 |
| 88 | 88 | 70 | 5 | 13 | 0 | 809 | 0.503 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 12 |
| 95 | 735 | 637 | 14 | 36 | 48 | 439 | 0.273 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 47 | 82 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 156 | 147 | 2 | 4 | 3 | 399 | 0.248 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 |
| 97 | 550 | 468 | 12 | 29 | 41 | 389 | 0.242 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 40 | 68 |
| 98 | 16 | 13 | 0 | 2 | 1 | 160 | 0.099 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 |
| 99 | 361 | 330 | 6 | 12 | 13 | 405 | 0.252 | 1 | 0 | 0 | 0 | 1 | 0 | 10 | 13 | 25 |
| 100 | 128 | 88 | 3 | 8 | 29 | 227 | 0.141 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 29 | 36 |
| 101 | 915 | 728 | 24 | 65 | 98 | 313 | 0.194 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 97 | 158 |
| 102 | 0 | 0 | 0 | 0 | 0 | 246 | 0.153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 488 | 297 | 12 | 31 | 148 | 291 | 0.181 | 0 | 0 | 0 | 0 | 2 | 1 | 25 | 146 | 175 |
| 104 | 688 | 535 | 18 | 53 | 82 | 404 | 0.251 | 1 | 0 | 0 | 0 | 4 | 1 | 43 | 81 | 130 |
| 105 | 0 | 0 | 0 | 0 | 0 | 195 | 0.121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 106 | 14 | 13 | 0 | 1 | 0 | 1803 | 1.120 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 107 | 710 | 554 | 19 | 56 | 81 | 388 | 0.241 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 132 |
| 108 | 15 | 12 | 1 | 2 | 0 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 109 | 81 | 67 | 4 | 10 | 0 | 787 | 0.489 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 9 |
| 110 | 719 | 562 | 19 | 57 | 81 | 756 | 0.470 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 80 | 133 |
| 111 | 1 | 1 | 0 | 0 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 112 | 782 | 573 | 21 | 64 | 124 | 817 | 0.508 | 1 | 0 | 0 | 0 | 4 | 1 | 52 | 122 | 181 |
| 113 | 55 | 18 | 3 | 10 | 24 | 791 | 0.491 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 24 | 33 |
| 114 | 77 | 27 | 2 | 8 | 40 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 39 | 47 |
| 115 | 758 | 590 | 21 | 60 | 87 | 851 | 0.529 | 1 | 0 | 0 | 0 | 4 | 1 | 49 | 86 | 142 |
| 116 | 3 | 0 | 0 | 0 | 3 | 819 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 117 | 26 | 24 | 1 | 1 | 0 | 757 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 118 | 821 | 624 | 23 | 66 | 108 | 765 | 0.475 | 1 | 0 | 0 | 0 | 5 | 2 | 54 | 106 | 168 |
| 119 | 24 | 7 | 1 | 3 | 13 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 16 |
| 120 | 99 | 43 | 3 | 9 | 44 | 814 | 0.506 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 43 | 52 |
| 121 | 840 | 656 | 24 | 65 | 95 | 825 | 0.513 | 1 | 0 | 0 | 0 | 5 | 2 | 53 | 94 | 154 |
| 122 | 29 | 6 | 1 | 3 | 19 | 782 | 0.486 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 19 | 21 |
| 123 | 37 | 33 | 2 | 2 | 0 | 791 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 124 | 890 | 701 | 26 | 68 | 95 | 800 | 0.497 | 1 | 0 | 0 | 0 | 5 | 2 | 55 | 94 | 158 |
| 125 | 14 | 12 | 1 | 1 | 0 | 817 | 0.508 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 126 | 954 | 756 | 27 | 70 | 101 | 774 | 0.481 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 100 | 165 |
| 127 | 682 | 32 | 3 | 11 | 636 | 825 | 0.513 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 627 | 637 |
| 128 | 15 | 14 | 0 | 1 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 129 | 1016 | 814 | 29 | 72 | 101 | 823 | 0.511 | 1 | 0 | 0 | 0 | 6 | 2 | 59 | 100 | 168 |
| 130 | 65 | 61 | 3 | 1 | 0 | 800 | 0.497 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 131 | 29 | 27 | 1 | 1 | 0 | 775 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 133 | 77 | 73 | 4 | 0 | 0 | 804 | 0.499 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 134 | 158 | 144 | 6 | 8 | 0 | 760 | 0.472 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 |
| 135 | 1263 | 1,040 | 39 | 82 | 102 | 816 | 0.507 | 2 | 0 | 0 | 0 | 8 | 3 | 67 | 101 | 180 |
| 136 | 49 | 42 | 3 | 4 | 0 | 786 | 0.488 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 4 |
| 137 | 23 | 20 | 1 | 2 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 138 | 37 | 6 | 1 | 5 | 25 | 267 | 0.166 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 |
| 139 | 323 | 251 | 10 | 30 | 32 | 504 | 0.313 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 32 | 59 |
| 140 | 249 | 223 | 8 | 18 | 0 | 527 | 0.327 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 17 |
| 141 | 461 | 393 | 15 | 37 | 16 | 1001 | 0.622 | 1 | 0 | 0 | 0 | 3 | 1 | 30 | 16 | 51 |
| 142 | 23 | 11 | 1 | 4 | 7 | 291 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 10 |
| 143 | 618 | 531 | 22 | 57 | 8 | 845 | 0.525 | 1 | 0 | 0 | 0 | 4 | 1 | 46 | 8 | 61 |
| 144 | 629 | 539 | 23 | 62 | 5 | 783 | 0.486 | 1 | 0 | 0 | 0 | 5 | 2 | 51 | 5 | 63 |
| 145 | 653 | 556 | 26 | 70 | 1 | 787 | 0.489 | 1 | 0 | 0 | 0 | 5 | 2 | 57 | 1 | 66 |
| 146 | 5 | 4 | 0 | 1 | 0 | 814 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 147 | 712 | 605 | 29 | 76 | 2 | 798 | 0.496 | 1 | 0 | 0 | 0 | 6 | 2 | 62 | 2 | 73 |
| 148 | 5 | 0 | 0 | 0 | 5 | 731 | 0.454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| 149 | 781 | 664 | 33 | 80 | 4 | 808 | 0.502 | 1 | 0 | 0 | 0 | 7 | 2 | 65 | 4 | 79 |
| 150 | 0 | 0 | 0 | 0 | 0 | 793 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 151 | 813 | 696 | 35 | 82 | 0 | 787 | 0.489 | 1 | 0 | 0 | 0 | 7 | 2 | 67 | 0 | 78 |
| 152 | 667 | 25 | 3 | 10 | 629 | 782 | 0.486 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 620 | 629 |
| 153 | 939 | 814 | 40 | 85 | 0 | 798 | 0.496 | 1 | 0 | 0 | 0 | 8 | 3 | 69 | 0 | 82 |
| 154 | 2 | 2 | 0 | 0 | 0 | 901 | 0.560 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155 | 1393 | 1,228 | 59 | 106 | 0 | 775 | 0.481 | 2 | 0 | 0 | 0 | 12 | 4 | 86 | 0 | 105 |
| 156 | 334 | 302 | 14 | 18 | 0 | 771 | 0.479 | 1 | 0 | 0 | 0 | 3 | 1 | 15 | 0 | 19 |
| 157 | 1611 | 1,415 | 73 | 123 | 0 | 804 | 0.499 | 2 | 0 | 0 | 0 | 15 | 5 | 100 | 0 | 123 |
| 158 | 459 | 380 | 10 | 27 | 42 | 1039 | 0.645 | 1 | 0 | 0 | 0 | 2 | 1 | 22 | 41 | 67 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159 | 312 | 275 | 5 | 13 | 19 | 170 | 0.106 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 19 | 31 |
| 160 | 0 | 0 | 0 | 0 | 0 | 717 | 0.445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 161 | 1840 | 1,520 | 74 | 246 | 0 | 784 | 0.487 | 3 | 0 | 0 | 0 | 15 | 5 | 201 | 0 | 224 |
| 162 | 4638 | 3,857 | 189 | 592 | 0 | 1052 | 0.654 | 6 | 0 | 0 | 1 | 38 | 13 | 483 | 0 | 542 |
| 163 | 2799 | 2,337 | 115 | 347 | 0 | 350 | 0.217 | 4 | 0 | 0 | 0 | 23 | 8 | 283 | 0 | 319 |
| 164 | 73 | 63 | 5 | 5 | 0 | 473 | 0.294 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 |
| 165 | 7858 | 6,778 | 286 | 794 | 0 | 1541 | 0.957 | 11 | 1 | 1 | 1 | 58 | 19 | 647 | 0 | 738 |
| 168 | 555 | 451 | 24 | 80 | 0 | 758 | 0.471 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 0 | 73 |
| 169 | 0 | 0 | 0 | 0 | 0 | 931 | 0.578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170 | 2244 | 1,886 | 91 | 267 | 0 | 248 | 0.154 | 3 | 0 | 0 | 0 | 18 | 6 | 218 | 0 | 246 |
| 171 | 2968 | 2,694 | 82 | 192 | 0 | 522 | 0.324 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 |
| 172 | 2968 | 2,694 | 82 | 192 | 0 | 993 | 0.617 | 4 | 0 | 0 | 0 | 17 | 6 | 157 | 0 | 184 |
| 173 | 3 | 2 | 0 | 0 | 1 | 1615 | 1.003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 174 | 22 | 21 | 0 | 1 | 0 | 330 | 0.205 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 177 | 2740 | 1,655 | 128 | 370 | 587 | 1110 | 0.690 | 3 | 0 | 0 | 0 | 26 | 9 | 302 | 578 | 918 |
| 178 | 246 | 168 | 11 | 23 | 44 | 7132 | 4.430 | 0 | 0 | 0 | 0 | 2 | 1 | 19 | 43 | 65 |
| 179 | 2986 | 1,823 | 138 | 394 | 631 | 2189 | 1.360 | 3 | 0 | 0 | 0 | 28 | 9 | 321 | 622 | 984 |
| 180 | 59 | 46 | 3 | 6 | 4 | 6725 | 4.178 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 4 | 10 |
| 181 | 2569 | 2,096 | 71 | 179 | 223 | 625 | 0.388 | 3 | 0 | 0 | 0 | 14 | 5 | 146 | 220 | 389 |
| 182 | 3909 | 3,183 | 107 | 286 | 333 | 349 | 0.217 | 5 | 0 | 0 | 1 | 22 | 7 | 233 | 328 | 597 |
| 183 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 184 | 3943 | 3,204 | 108 | 284 | 347 | 292 | 0.181 | 5 | 0 | 0 | 1 | 22 | 7 | 232 | 342 | 609 |
| 185 | 0 | 0 | 0 | 0 | 0 | 287 | 0.178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 186 | 1293 | 1,037 | 36 | 102 | 118 | 477 | 0.296 | 2 | 0 | 0 | 0 | 7 | 2 | 83 | 116 | 211 |
| 190 | 8446 | 6,955 | 162 | 514 | 815 | 6368 | 3.956 | 12 | 1 | 1 | 1 | 33 | 11 | 419 | 803 | 1280 |
| 191 | 6588 | 5,432 | 131 | 448 | 577 | 4906 | 3.048 | 9 | 1 | 1 | 1 | 27 | 9 | 365 | 569 | 980 |
| 192 | 1867 | 1,521 | 32 | 66 | 248 | 4358 | 2.707 | 3 | 0 | 0 | 0 | 6 | 2 | 54 | 244 | 310 |
| 194 | 400 | 305 | 26 | 69 | 0 | 355 | 0.221 | 1 | 0 | 0 | 0 | 5 | 2 | 56 | 0 | 64 |
| 195 | 871 | 690 | 47 | 134 | 0 | 397 | 0.247 | 1 | 0 | 0 | 0 | 10 | 3 | 109 | 0 | 123 |
| 196 | 1271 | 996 | 73 | 202 | 0 | 716 | 0.445 | 2 | 0 | 0 | 0 | 15 | 5 | 165 | 0 | 186 |
| 198 | 57 | 48 | 3 | 6 | 0 | 1009 | 0.627 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 6 |
| 199 | 254 | 223 | 11 | 20 | 0 | 378 | 0.235 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 20 |
| 200 | 1580 | 1,267 | 86 | 227 | 0 | 1403 | 0.872 | 2 | 0 | 0 | 0 | 17 | 6 | 185 | 0 | 211 |
| 205 | 1838 | 1,502 | 82 | 254 | 0 | 1501 | 0.932 | 2 | 0 | 0 | 0 | 17 | 6 | 207 | 0 | 232 |
| 206 | 1813 | 1,486 | 81 | 246 | 0 | 2658 | 1.651 | 2 | 0 | 0 | 0 | 16 | 5 | 201 | 0 | 225 |
| 207 | 29 | 18 | 2 | 9 | 0 | 2611 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 8 |
| 215 | 95 | 89 | 2 | 2 | 2 | 2937 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 216 | 452 | 359 | 11 | 36 | 46 | 2000 | 1.242 | 1 | 0 | 0 | 0 | 2 | 1 | 29 | 45 | 78 |
| 217 | 223 | 169 | 6 | 16 | 32 | 663 | 0.412 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 32 | 47 |
| 218 | 311 | 241 | 8 | 29 | 33 | 1167 | 0.725 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 33 | 59 |
| 219 | 15 | 14 | 0 | 0 | 1 | 2672 | 1.660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 221 | 57 | 51 | 1 | 2 | 3 | 2622 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 |
| 223 | 233 | 194 | 5 | 20 | 14 | 359 | 0.223 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 14 | 32 |
| 225 | 2 | 2 | 0 | 0 | 0 | 1243 | 0.772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 226 | 111 | 73 | 3 | 12 | 23 | 1643 | 1.021 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 23 | 33 |
| 227 | 0 | 0 | 0 | 0 | 0 | 1154 | 0.717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 229 | 30 | 27 | 1 | 1 | 1 | 1122 | 0.697 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 230 | 54 | 52 | 1 | 1 | 0 | 1007 | 0.626 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 231 | 202 | 152 | 4 | 13 | 33 | 1968 | 1.223 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 33 | 45 |
| 232 | 1535 | 1,025 | 36 | 129 | 345 | 1719 | 1.068 | 2 | 0 | 0 | 0 | 7 | 2 | 105 | 340 | 457 |
| 233 | 109 | 70 | 3 | 12 | 24 | 976 | 0.606 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 24 | 34 |
| 236 | 29 | 20 | 1 | 4 | 4 | 794 | 0.493 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 8 |
| 237 | 1399 | 889 | 35 | 131 | 344 | 1556 | 0.967 | 1 | 0 | 0 | 0 | 7 | 2 | 107 | 339 | 457 |
| 238 | 165 | 136 | 3 | 10 | 16 | 1120 | 0.696 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 16 | 25 |
| 239 | 1187 | 720 | 31 | 117 | 319 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 95 | 314 | 420 |
| 240 | 2 | 1 | 0 | 0 | 1 | 240 | 0.149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 241 | 0 | 0 | 0 | 0 | 0 | 843 | 0.524 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 242 | 996 | 634 | 26 | 94 | 242 | 989 | 0.614 | 1 | 0 | 0 | 0 | 5 | 2 | 77 | 238 | 323 |
| 243 | 34 | 23 | 1 | 3 | 7 | 64 | 0.040 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 10 |
| 244 | 153 | 52 | 6 | 21 | 74 | 173 | 0.107 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 73 | 92 |
| 245 | 90 | 53 | 2 | 9 | 26 | 181 | 0.112 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 26 | 34 |
| 246 | 454 | 187 | 14 | 55 | 198 | 273 | 0.170 | 0 | 0 | 0 | 0 | 3 | 1 | 45 | 195 | 244 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 247 | 739 | 530 | 18 | 63 | 128 | 87 | 0.054 | 1 | 0 | 0 | 0 | 4 | 1 | 51 | 126 | 183 |
| 250 | 140 | 104 | 3 | 11 | 22 | 1366 | 0.849 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 22 | 32 |
| 252 | 1533 | 1,032 | 36 | 126 | 339 | 1588 | 0.986 | 2 | 0 | 0 | 0 | 7 | 2 | 103 | 334 | 449 |
| 254 | 40 | 35 | 1 | 2 | 2 | 424 | 0.263 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| 256 | 427 | 367 | 9 | 18 | 33 | 943 | 0.586 | 1 | 0 | 0 | 0 | 2 | 1 | 15 | 33 | 50 |
| 258 | 0 | 0 | 0 | 0 | 0 | 472 | 0.293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260 | 1880 | 1,346 | 43 | 137 | 354 | 1783 | 1.108 | 2 | 0 | 0 | 0 | 9 | 3 | 112 | 349 | 475 |
| 261 | 205 | 162 | 4 | 13 | 26 | 1181 | 0.734 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 26 | 38 |
| 262 | 336 | 254 | 9 | 27 | 46 | 860 | 0.534 | 0 | 0 | 0 | 0 | 2 | 1 | 22 | 45 | 70 |
| 263 | 1636 | 1,166 | 38 | 120 | 312 | 141 | 0.088 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 307 | 418 |
| 264 | 45 | 14 | 1 | 5 | 25 | 224 | 0.139 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 29 |
| 265 | 1157 | 834 | 27 | 84 | 212 | 98 | 0.061 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 209 | 286 |
| 266 | 2617 | 1,799 | 64 | 201 | 553 | 171 | 0.106 | 3 | 0 | 0 | 0 | 13 | 4 | 164 | 545 | 730 |
| 267 | 321 | 216 | 10 | 32 | 63 | 156 | 0.097 | 0 | 0 | 0 | 0 | 2 | 1 | 26 | 62 | 91 |
| 268 | 1102 | 818 | 26 | 80 | 178 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 65 | 175 | 249 |
| 269 | 801 | 482 | 23 | 77 | 219 | 2450 | 1.522 | 1 | 0 | 0 | 0 | 5 | 2 | 63 | 216 | 286 |
| 270 | 13 | 10 | 0 | 1 | 2 | 620 | 0.385 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 271 | 809 | 488 | 23 | 78 | 220 | 370 | 0.230 | 1 | 0 | 0 | 0 | 5 | 2 | 64 | 217 | 288 |
| 272 | 4 | 3 | 0 | 0 | 1 | 1246 | 0.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 273 | 16 | 10 | 0 | 2 | 4 | 625 | 0.388 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| 274 | 837 | 508 | 23 | 81 | 225 | 1231 | 0.765 | 1 | 0 | 0 | 0 | 5 | 2 | 66 | 222 | 295 |
| 275 | 33 | 25 | 1 | 3 | 4 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 7 |
| 276 | 881 | 543 | 25 | 83 | 230 | 159 | 0.099 | 1 | 0 | 0 | 0 | 5 | 2 | 68 | 227 | 302 |
| 277 | 21 | 14 | 1 | 2 | 4 | 1074 | 0.667 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| 278 | 0 | 0 | 0 | 0 | 0 | 239 | 0.148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 279 | 355 | 227 | 10 | 33 | 85 | 157 | 0.098 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 84 | 114 |
| 280 | 1032 | 619 | 29 | 98 | 286 | 163 | 0.101 | 1 | 0 | 0 | 0 | 6 | 2 | 80 | 282 | 371 |
| 281 | 0 | 0 | 0 | 0 | 0 | 280 | 0.174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 282 | 710 | 454 | 19 | 66 | 171 | 167 | 0.104 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 169 | 228 |
| 283 | 0 | 0 | 0 | 0 | 0 | 405 | 0.252 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 284 | 1176 | 1,004 | 39 | 62 | 71 | 365 | 0.227 | 2 | 0 | 0 | 0 | 8 | 3 | 51 | 70 | 133 |
| 285 | 324 | 217 | 12 | 25 | 70 | 230 | 0.143 | 0 | 0 | 0 | 0 | 2 | 1 | 20 | 69 | 93 |
| 286 | 571 | 516 | 19 | 28 | 8 | 209 | 0.130 | 1 | 0 | 0 | 0 | 4 | 1 | 23 | 8 | 37 |
| 287 | 819 | 439 | 21 | 34 | 325 | 292 | 0.181 | 1 | 0 | 0 | 0 | 4 | 1 | 28 | 320 | 355 |
| 288 | 231 | 174 | 9 | 21 | 27 | 152 | 0.094 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 27 | 47 |
| 289 | 939 | 519 | 24 | 39 | 357 | 285 | 0.177 | 1 | 0 | 0 | 0 | 5 | 2 | 32 | 352 | 391 |
| 290 | 917 | 227 | 15 | 26 | 649 | 328 | 0.204 | 0 | 0 | 0 | 0 | 3 | 1 | 21 | 640 | 665 |
| 294 | 44 | 43 | 1 | 0 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 301 | 50 | 41 | 2 | 7 | 0 | 774 | 0.481 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| 302 | 94 | 83 | 3 | 8 | 0 | 796 | 0.494 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 8 |
| 303 | 690 | 50 | 4 | 11 | 625 | 1514 | 0.941 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 616 | 626 |
| 304 | 540 | 483 | 13 | 44 | 0 | 729 | 0.453 | 1 | 0 | 0 | 0 | 3 | 1 | 36 | 0 | 40 |
| 306 | 1902 | 1,019 | 60 | 203 | 620 | 818 | 0.508 | 2 | 0 | 0 | 0 | 12 | 4 | 166 | 611 | 795 |
| 307 | 2088 | 1,220 | 59 | 189 | 620 | 0 | 0.000 | 2 | 0 | 0 | 0 | 12 | 4 | 154 | 611 | 784 |
| 324 | 109 | 86 | 3 | 11 | 9 | 2925 | 1.817 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 9 | 19 |
| 325 | 3841 | 3,002 | 74 | 268 | 497 | 2224 | 1.382 | 5 | 0 | 0 | 1 | 15 | 5 | 219 | 490 | 734 |
| 326 | 886 | 664 | 19 | 81 | 122 | 3506 | 2.178 | 1 | 0 | 0 | 0 | 4 | 1 | 66 | 120 | 193 |
| 327 | 2845 | 2,251 | 52 | 177 | 365 | 227 | 0.141 | 4 | 0 | 0 | 0 | 11 | 3 | 144 | 360 | 523 |
| 340 | 0 | 0 | 0 | 0 | 0 | 292 | 0.181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 358 | 6570 | 5,416 | 130 | 447 | 577 | 0 | 0.000 | 9 | 1 | 1 | 1 | 26 | 9 | 364 | 569 | 979 |
| 359 | 69 | 54 | 2 | 6 | 7 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 12 |
| 360 | 4454 | 3,734 | 86 | 281 | 353 | 247 | 0.153 | 6 | 0 | 0 | 1 | 17 | 6 | 229 | 348 | 608 |
| 361 | 4293 | 3,310 | 85 | 326 | 572 | 337 | 0.209 | 5 | 0 | 0 | 1 | 17 | 6 | 266 | 564 | 859 |
| 362 | 26 | 24 | 0 | 1 | 1 | 338 | 0.210 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 363 | 2598 | 2,313 | 48 | 137 | 100 | 4495 | 2.792 | 4 | 0 | 0 | 0 | 10 | 3 | 112 | 99 | 228 |
| 364 | 3649 | 2,820 | 76 | 286 | 467 | 286 | 0.178 | 5 | 0 | 0 | 0 | 15 | 5 | 233 | 460 | 720 |
| 365 | 903 | 723 | 23 | 64 | 93 | 1602 | 0.995 | 1 | 0 | 0 | 0 | 5 | 2 | 52 | 92 | 152 |
| 366 | 10 | 5 | 0 | 1 | 4 | 1742 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 |
| 367 | 0 | 0 | 0 | 0 | 0 | 1054 | 0.655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 375 | 992 | 678 | 16 | 36 | 262 | 388 | 0.241 | 1 | 0 | 0 | 0 | 3 | 1 | 29 | 258 | 293 |
| 376 | 1663 | 1,331 | 27 | 60 | 245 | 477 | 0.296 | 2 | 0 | 0 | 0 | 5 | 2 | 49 | 241 | 300 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 377 | 84 | 68 | 2 | 6 | 8 | 339 | 0.211 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 8 | 13 |
| 378 | 1123 | 957 | 19 | 38 | 109 | 212 | 0.132 | 2 | 0 | 0 | 0 | 4 | 1 | 31 | 107 | 145 |
| 379 | 750 | 530 | 12 | 25 | 183 | 331 | 0.206 | 1 | 0 | 0 | 0 | 2 | 1 | 20 | 180 | 205 |
| 380 | 26 | 24 | 0 | 1 | 1 | 283 | 0.176 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 381 | 738 | 681 | 13 | 26 | 18 | 469 | 0.291 | 1 | 0 | 0 | 0 | 3 | 1 | 21 | 18 | 44 |
| 386 | 363 | 230 | 20 | 56 | 57 | 810 | 0.503 | 0 | 0 | 0 | 0 | 4 | 1 | 46 | 56 | 108 |
| 387 | 2123 | 1,317 | 58 | 179 | 569 | 2761 | 1.715 | 2 | 0 | 0 | 0 | 12 | 4 | 146 | 561 | 725 |
| 388 | 0 | 0 | 0 | 0 | 0 | 175 | 0.109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 30 | 25 | 1 | 1 | 3 | 189 | 0.117 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| 390 | 525 | 430 | 18 | 44 | 33 | 1189 | 0.739 | 1 | 0 | 0 | 0 | 4 | 1 | 36 | 33 | 74 |
| 392 | 721 | 477 | 28 | 113 | 103 | 436 | 0.271 | 1 | 0 | 0 | 0 | 6 | 2 | 92 | 102 | 202 |
| 393 | 200 | 49 | 11 | 70 | 70 | 934 | 0.580 | 0 | 0 | 0 | 0 | 2 | 1 | 57 | 69 | 129 |
| 394 | 3513 | 2,613 | 109 | 340 | 451 | 1292 | 0.803 | 4 | 0 | 0 | 0 | 22 | 7 | 277 | 444 | 756 |
| 396 | 2707 | 2,125 | 73 | 216 | 293 | 2366 | 1.470 | 4 | 0 | 0 | 0 | 15 | 5 | 176 | 289 | 489 |
| 397 | 230 | 203 | 7 | 16 | 4 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 4 | 19 |
| 398 | 2704 | 2,446 | 73 | 184 | 1 | 560 | 0.348 | 4 | 0 | 0 | 0 | 15 | 5 | 150 | 1 | 176 |
| 399 | 253 | 242 | 4 | 7 | 0 | 3389 | 2.105 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 7 |
| 400 | 1934 | 1,740 | 50 | 140 | 4 | 1704 | 1.059 | 3 | 0 | 0 | 0 | 10 | 3 | 114 | 4 | 135 |
| 401 | 0 | 0 | 0 | 0 | 0 | 790 | 0.491 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 402 | 0 | 0 | 0 | 0 | 0 | 1199 | 0.745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 404 | 0 | 0 | 0 | 0 | 0 | 768 | 0.477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 405 | 11 | 11 | 0 | 0 | 0 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 406 | 752 | 668 | 59 | 18 | 7 | 395 | 0.245 | 1 | 0 | 0 | 0 | 12 | 4 | 15 | 7 | 39 |
| 407 | 1 | 1 | 0 | 0 | 0 | 756 | 0.470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 408 | 0 | 0 | 0 | 0 | 0 | 1072 | 0.666 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 409 | 188 | 176 | 7 | 5 | 0 | 1137 | 0.706 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 6 |
| 410 | 1 | 0 | 0 | 0 | 1 | 884 | 0.549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 411 | 0 | 0 | 0 | 0 | 0 | 2332 | 1.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 412 | 0 | 0 | 0 | 0 | 0 | 141 | 0.088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 413 | 182 | 125 | 6 | 23 | 28 | 678 | 0.421 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 28 | 48 |
| 414 | 12 | 7 | 0 | 0 | 5 | 895 | 0.556 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| 415 | 2342 | 1,870 | 62 | 172 | 238 | 855 | 0.531 | 3 | 0 | 0 | 0 | 13 | 4 | 140 | 235 | 395 |
| 416 | 817 | 626 | 18 | 66 | 107 | 284 | 0.176 | 1 | 0 | 0 | 0 | 4 | 1 | 54 | 105 | 165 |
| 417 | 77 | 8 | 0 | 2 | 67 | 303 | 0.188 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 66 | 68 |
| 419 | 482 | 367 | 9 | 30 | 76 | 343 | 0.213 | 1 | 0 | 0 | 0 | 2 | 1 | 24 | 75 | 103 |
| 420 | 37 | 3 | 0 | 1 | 33 | 300 | 0.186 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 33 | 33 |
| 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 424 | 762 | 101 | 6 | 15 | 640 | 828 | 0.514 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 631 | 645 |
| 425 | 26 | 23 | 1 | 2 | 0 | 203 | 0.126 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 426 | 51 | 12 | 1 | 2 | 36 | 276 | 0.171 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 35 | 37 |
| 427 | 27 | 23 | 1 | 3 | 0 | 654 | 0.406 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| 428 | 32 | 27 | 1 | 3 | 1 | 293 | 0.182 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 4 |
| 429 | 50 | 13 | 1 | 1 | 35 | 219 | 0.136 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 34 | 36 |
| 430 | 788 | 639 | 21 | 58 | 70 | 114 | 0.071 | 1 | 0 | 0 | 0 | 4 | 1 | 47 | 69 | 123 |
| 431 | 7 | 4 | 0 | 0 | 3 | 524 | 0.326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 432 | 18 | 17 | 0 | 0 | 1 | 629 | 0.391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 433 | 1777 | 1,581 | 42 | 132 | 22 | 1802 | 1.119 | 3 | 0 | 0 | 0 | 9 | 3 | 108 | 22 | 144 |
| 434 | 0 | 0 | 0 | 0 | 0 | 1269 | 0.788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 435 | 73 | 70 | 1 | 2 | 0 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 436 | 3 | 3 | 0 | 0 | 0 | 178 | 0.111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 1192 | 0.740 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 442 | 1643 | 1,444 | 40 | 129 | 30 | 2365 | 1.469 | 2 | 0 | 0 | 0 | 8 | 3 | 105 | 30 | 148 |
| 443 | 11 | 10 | 0 | 1 | 0 | 1588 | 0.986 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 444 | 1601 | 1,403 | 40 | 128 | 30 | 905 | 0.562 | 2 | 0 | 0 | 0 | 8 | 3 | 104 | 30 | 148 |
| 452 | 8 | 8 | 0 | 0 | 0 | 815 | 0.506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 453 | 1471 | 1,288 | 34 | 121 | 28 | 1563 | 0.971 | 2 | 0 | 0 | 0 | 7 | 2 | 99 | 28 | 138 |
| 454 | 266 | 246 | 5 | 15 | 0 | 661 | 0.411 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 14 |
| 455 | 1197 | 1,034 | 30 | 106 | 27 | 366 | 0.227 | 2 | 0 | 0 | 0 | 6 | 2 | 86 | 27 | 123 |
| 458 | 10 | 9 | 0 | 1 | 0 | 237 | 0.147 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 464 | 69 | 61 | 3 | 5 | 0 | 702 | 0.436 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 5 |
| 477 | 100 | 80 | 4 | 7 | 9 | 750 | 0.466 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 9 | 16 |
| 478 | 1253 | 1,054 | 36 | 117 | 46 | 253 | 0.157 | 2 | 0 | 0 | 0 | 7 | 2 | 95 | 45 | 153 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 479 | 0 | 0 | 0 | 0 | 0 | 461 | 0.286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480 | 805 | 726 | 15 | 64 | 0 | 500 | 0.311 | 1 | 0 | 0 | 0 | 3 | 1 | 52 | 0 | 58 |
| 481 | 1 | 0 | 0 | 0 | 1 | 377 | 0.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 482 | 177 | 164 | 2 | 10 | 1 | 1353 | 0.841 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 10 |
| 483 | 955 | 837 | 22 | 96 | 0 | 589 | 0.366 | 1 | 0 | 0 | 0 | 4 | 1 | 78 | 0 | 86 |
| 484 | 2 | 1 | 0 | 0 | 1 | 684 | 0.425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 485 | 1482 | 1,360 | 23 | 99 | 0 | 319 | 0.198 | 2 | 0 | 0 | 0 | 5 | 2 | 81 | 0 | 90 |
| 488 | 10 | 9 | 0 | 1 | 0 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 494 | 2789 | 2,525 | 76 | 188 | 0 | 1039 | 0.645 | 4 | 0 | 0 | 0 | 15 | 5 | 153 | 0 | 179 |
| 498 | 3 | 3 | 0 | 0 | 0 | 792 | 0.492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 499 | 846 | 170 | 11 | 20 | 645 | 660 | 0.410 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 636 | 655 |
| 500 | 867 | 189 | 12 | 21 | 645 | 395 | 0.245 | 0 | 0 | 0 | 0 | 2 | 1 | 17 | 636 | 656 |
| 502 | 1 | 1 | 0 | 0 | 0 | 855 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 503 | 0 | 0 | 0 | 0 | 0 | 820 | 0.509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 504 | 370 | 251 | 25 | 94 | 0 | 360 | 0.224 | 0 | 0 | 0 | 0 | 5 | 2 | 77 | 0 | 84 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6 Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7 Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8 Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9 Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0024 | 0.0047 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0053 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0022 | 0.0043 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0053 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0026 | 0.0050 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0023 | 0.0045 |

**Segment Emissions**

| | **Speed** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|---|
| **Street Segment** | **Group** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** |
| 9 | 6 | 1.59E-07 | 6.20E-08 | 3.58E-08 | 2.12E-08 | 6.89E-06 | 2.20E-06 | 2.36E-05 | 0.00E+00 |
| 10 | 3 | 9.69E-09 | 3.81E-09 | 2.17E-09 | 1.29E-09 | 4.47E-07 | 1.43E-07 | 9.69E-07 | 0.00E+00 |
| 13 | 6 | 6.69E-09 | 2.61E-09 | 1.51E-09 | 8.91E-10 | 2.60E-07 | 8.31E-08 | 1.07E-06 | 1.34E-05 |
| 32 | 3 | 5.42E-08 | 2.13E-08 | 1.22E-08 | 7.20E-09 | 3.49E-06 | 1.11E-06 | 5.76E-06 | 0.00E+00 |

| **Total** |
|---|
| **(g/sec)** |
| 3.30E-05 |
| 1.58E-06 |
| 1.48E-05 |
| 1.05E-05 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 | 1 | 2.05E-08 | 8.04E-09 | 4.60E-09 | 2.72E-09 | 7.54E-07 | 2.41E-07 | 2.18E-06 | 0.00E+00 | 3.21E-06 |
| 35 | 7 | 5.18E-09 | 2.05E-09 | 1.16E-09 | 6.88E-10 | 4.37E-07 | 1.39E-07 | 1.55E-06 | 1.80E-05 | 2.01E-05 |
| 36 | 7 | 4.21E-08 | 1.67E-08 | 9.41E-09 | 5.58E-09 | 2.68E-06 | 8.52E-07 | 9.05E-06 | 0.00E+00 | 1.27E-05 |
| 37 | 7 | 9.24E-10 | 3.66E-10 | 2.07E-10 | 1.23E-10 | 1.04E-07 | 3.31E-08 | 4.81E-07 | 4.55E-06 | 5.16E-06 |
| 38 | 7 | 2.18E-08 | 8.64E-09 | 4.88E-09 | 2.89E-09 | 1.54E-06 | 4.88E-07 | 3.85E-06 | 1.63E-07 | 6.07E-06 |
| 42 | 7 | 1.10E-07 | 4.38E-08 | 2.47E-08 | 1.47E-08 | 8.86E-06 | 2.81E-06 | 3.26E-05 | 1.20E-04 | 1.65E-04 |
| 43 | 7 | 9.89E-09 | 3.92E-09 | 2.21E-09 | 1.31E-09 | 4.52E-07 | 1.44E-07 | 9.90E-07 | 1.01E-05 | 1.17E-05 |
| 46 | 7 | 6.81E-09 | 2.70E-09 | 1.52E-09 | 9.03E-10 | 4.30E-07 | 1.37E-07 | 1.34E-06 | 1.68E-06 | 3.60E-06 |
| 47 | 7 | 2.04E-08 | 8.06E-09 | 4.55E-09 | 2.70E-09 | 8.56E-07 | 2.72E-07 | 2.68E-06 | 0.00E+00 | 3.84E-06 |
| 48 | 6 | 8.85E-09 | 3.45E-09 | 1.99E-09 | 1.18E-09 | 3.30E-07 | 1.05E-07 | 9.59E-07 | 3.02E-06 | 4.43E-06 |
| 50 | 3 | 6.22E-08 | 2.45E-08 | 1.40E-08 | 8.27E-09 | 3.25E-06 | 1.04E-06 | 8.49E-06 | 0.00E+00 | 1.29E-05 |
| 51 | 7 | 7.95E-10 | 3.15E-10 | 1.78E-10 | 1.05E-10 | 2.26E-08 | 7.19E-09 | 7.43E-08 | 0.00E+00 | 1.06E-07 |
| 52 | 3 | 1.03E-07 | 4.06E-08 | 2.32E-08 | 1.37E-08 | 4.77E-06 | 1.52E-06 | 1.66E-05 | 0.00E+00 | 2.30E-05 |
| 53 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 54 | 6 | 6.22E-09 | 2.42E-09 | 1.40E-09 | 8.28E-10 | 3.39E-07 | 1.08E-07 | 1.31E-06 | 0.00E+00 | 1.77E-06 |
| 55 | 6 | 4.84E-10 | 1.89E-10 | 1.09E-10 | 6.44E-11 | 2.57E-08 | 8.20E-09 | 0.00E+00 | 0.00E+00 | 3.47E-08 |
| 56 | 7 | 1.92E-08 | 7.62E-09 | 4.30E-09 | 2.55E-09 | 1.11E-06 | 3.52E-07 | 4.34E-06 | 0.00E+00 | 5.83E-06 |
| 57 | 7 | 3.39E-09 | 1.34E-09 | 7.58E-10 | 4.50E-10 | 2.45E-07 | 7.80E-08 | 8.51E-07 | 0.00E+00 | 1.18E-06 |
| 58 | 1 | 1.15E-09 | 4.54E-10 | 2.60E-10 | 1.54E-10 | 7.00E-08 | 2.24E-08 | 1.21E-07 | 0.00E+00 | 2.16E-07 |
| 59 | 1 | 1.04E-08 | 4.10E-09 | 2.34E-09 | 1.39E-09 | 1.43E-06 | 4.57E-07 | 1.81E-06 | 0.00E+00 | 3.72E-06 |
| 60 | 1 | 6.65E-10 | 2.61E-10 | 1.49E-10 | 8.84E-11 | 6.22E-08 | 1.99E-08 | 2.00E-07 | 1.47E-06 | 1.75E-06 |
| 61 | 1 | 7.42E-10 | 2.92E-10 | 1.67E-10 | 9.88E-11 | 4.56E-08 | 1.46E-08 | 9.61E-08 | 7.22E-07 | 8.79E-07 |
| 62 | 1 | 1.41E-08 | 5.56E-09 | 3.18E-09 | 1.88E-09 | 2.43E-06 | 7.80E-07 | 2.86E-06 | 0.00E+00 | 6.09E-06 |
| 65 | 3 | 9.39E-09 | 3.70E-09 | 2.11E-09 | 1.25E-09 | 3.70E-07 | 1.18E-07 | 1.05E-06 | 3.02E-06 | 4.58E-06 |
| 66 | 3 | 1.10E-08 | 4.33E-09 | 2.47E-09 | 1.46E-09 | 4.80E-07 | 1.53E-07 | 1.28E-06 | 3.09E-06 | 5.02E-06 |
| 67 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 68 | 7 | 6.47E-09 | 2.56E-09 | 1.45E-09 | 8.58E-10 | 3.02E-07 | 9.60E-08 | 7.94E-07 | 0.00E+00 | 1.20E-06 |
| 69 | 3 | 9.82E-09 | 3.86E-09 | 2.20E-09 | 1.30E-09 | 5.77E-07 | 1.84E-07 | 1.21E-06 | 0.00E+00 | 1.99E-06 |
| 70 | 3 | 2.00E-08 | 7.87E-09 | 4.49E-09 | 2.66E-09 | 1.30E-06 | 4.15E-07 | 2.14E-06 | 0.00E+00 | 3.89E-06 |
| 71 | 1 | 6.78E-09 | 2.67E-09 | 1.52E-09 | 9.02E-10 | 5.28E-07 | 1.69E-07 | 3.82E-07 | 0.00E+00 | 1.09E-06 |
| 72 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 73 | 3 | 5.99E-08 | 2.36E-08 | 1.34E-08 | 7.97E-09 | 2.77E-06 | 8.85E-07 | 9.66E-06 | 0.00E+00 | 1.34E-05 |
| 74 | 6 | 1.10E-08 | 4.28E-09 | 2.47E-09 | 1.46E-09 | 3.36E-07 | 1.07E-07 | 6.92E-07 | 5.86E-08 | 1.21E-06 |
| 75 | 1 | 1.25E-09 | 4.91E-10 | 2.81E-10 | 1.66E-10 | 6.30E-08 | 2.02E-08 | 7.67E-08 | 1.78E-07 | 3.40E-07 |
| 76 | 1 | 3.48E-10 | 1.37E-10 | 7.82E-11 | 4.63E-11 | 2.50E-08 | 8.01E-09 | 3.04E-08 | 0.00E+00 | 6.40E-08 |
| 77 | 5 | 4.39E-09 | 1.82E-09 | 9.82E-10 | 5.83E-10 | 1.44E-07 | 4.61E-08 | 2.50E-07 | 1.16E-07 | 5.65E-07 |
| 80 | 5 | 1.62E-09 | 6.72E-10 | 3.62E-10 | 2.15E-10 | 5.83E-08 | 1.87E-08 | 1.05E-07 | 7.33E-08 | 2.58E-07 |
| 81 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 82 | 1 | 4.28E-09 | 1.68E-09 | 9.62E-10 | 5.69E-10 | 1.87E-07 | 5.98E-08 | 4.17E-07 | 1.33E-06 | 2.00E-06 |
| 83 | 5 | 5.13E-10 | 2.13E-10 | 1.15E-10 | 6.81E-11 | 2.38E-08 | 7.62E-09 | 4.89E-08 | 2.48E-07 | 3.29E-07 |
| 85 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 86 | 1 | 3.10E-09 | 1.22E-09 | 6.97E-10 | 4.13E-10 | 1.69E-07 | 5.41E-08 | 3.25E-07 | 8.18E-06 | 8.73E-06 |
| 87 | 1 | 8.39E-10 | 3.30E-10 | 1.89E-10 | 1.12E-10 | 6.26E-08 | 2.01E-08 | 1.98E-07 | 0.00E+00 | 2.82E-07 |
| 88 | 1 | 7.71E-10 | 3.03E-10 | 1.73E-10 | 1.03E-10 | 6.33E-08 | 2.03E-08 | 2.00E-07 | 0.00E+00 | 2.85E-07 |
| 95 | 6 | 3.49E-09 | 1.36E-09 | 7.85E-10 | 4.64E-10 | 7.73E-08 | 2.47E-08 | 2.58E-07 | 7.85E-07 | 1.15E-06 |
| 96 | 8 | 1.01E-09 | 4.44E-10 | 2.25E-10 | 1.34E-10 | 1.25E-08 | 4.00E-09 | 3.04E-08 | 5.30E-08 | 1.02E-07 |
| 97 | 5 | 2.76E-09 | 1.15E-09 | 6.18E-10 | 3.67E-10 | 7.31E-08 | 2.34E-08 | 2.15E-07 | 7.06E-07 | 1.02E-06 |
| 98 | 5 | 3.16E-11 | 1.31E-11 | 7.06E-12 | 4.19E-12 | 0.00E+00 | 0.00E+00 | 6.10E-09 | 7.09E-09 | 1.32E-08 |
| 99 | 5 | 2.03E-09 | 8.42E-10 | 4.54E-10 | 2.69E-10 | 3.80E-08 | 1.22E-08 | 9.26E-08 | 2.33E-07 | 3.80E-07 |
| 100 | 1 | 2.72E-10 | 1.07E-10 | 6.11E-11 | 3.62E-11 | 1.07E-08 | 3.42E-09 | 3.46E-08 | 2.92E-07 | 3.41E-07 |
| 101 | 1 | 3.10E-09 | 1.22E-09 | 6.97E-10 | 4.13E-10 | 1.18E-07 | 3.77E-08 | 3.88E-07 | 1.36E-06 | 1.91E-06 |
| 102 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 103 | 1 | 1.18E-09 | 4.63E-10 | 2.65E-10 | 1.57E-10 | 5.47E-08 | 1.75E-08 | 1.72E-07 | 1.91E-06 | 2.15E-06 |
| 104 | 1 | 2.94E-09 | 1.16E-09 | 6.62E-10 | 3.92E-10 | 1.14E-07 | 3.65E-08 | 4.08E-07 | 1.47E-06 | 2.03E-06 |
| 105 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 106 | 1 | 3.19E-10 | 1.25E-10 | 7.17E-11 | 4.25E-11 | 0.00E+00 | 0.00E+00 | 3.44E-08 | 0.00E+00 | 3.49E-08 |
| 107 | 1 | 2.93E-09 | 1.15E-09 | 6.58E-10 | 3.89E-10 | 1.15E-07 | 3.70E-08 | 4.14E-07 | 1.39E-06 | 1.96E-06 |
| 108 | 1 | 1.63E-10 | 6.41E-11 | 3.66E-11 | 2.17E-11 | 1.56E-08 | 5.00E-09 | 3.80E-08 | 0.00E+00 | 5.89E-08 |
| 109 | 5 | 8.00E-10 | 3.32E-10 | 1.79E-10 | 1.06E-10 | 4.93E-08 | 1.58E-08 | 1.50E-07 | 0.00E+00 | 2.16E-07 |
| 110 | 6 | 5.30E-09 | 2.06E-09 | 1.19E-09 | 7.05E-10 | 1.81E-07 | 5.77E-08 | 7.02E-07 | 2.28E-06 | 3.23E-06 |
| 111 | 5 | 1.21E-11 | 5.04E-12 | 2.71E-12 | 1.61E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.15E-11 |
| 112 | 6 | 5.84E-09 | 2.27E-09 | 1.31E-09 | 7.77E-10 | 2.16E-07 | 6.89E-08 | 8.52E-07 | 3.78E-06 | 4.92E-06 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 113 | 5 | 2.16E-10 | 8.97E-11 | 4.83E-11 | 2.87E-11 | 3.72E-08 | 1.19E-08 | 1.51E-07 | 8.41E-07 | 1.04E-06 |
| 114 | 1 | 2.91E-10 | 1.14E-10 | 6.54E-11 | 3.87E-11 | 2.48E-08 | 7.93E-09 | 1.21E-07 | 1.40E-06 | 1.55E-06 |
| 115 | 6 | 6.26E-09 | 2.44E-09 | 1.41E-09 | 8.34E-10 | 2.25E-07 | 7.18E-08 | 8.32E-07 | 2.76E-06 | 3.90E-06 |
| 116 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-07 | 1.09E-07 |
| 117 | 6 | 2.27E-10 | 8.83E-11 | 5.10E-11 | 3.02E-11 | 9.52E-09 | 3.04E-09 | 1.23E-08 | 0.00E+00 | 2.53E-08 |
| 118 | 6 | 5.95E-09 | 2.32E-09 | 1.34E-09 | 7.93E-10 | 2.21E-07 | 7.06E-08 | 8.23E-07 | 3.08E-06 | 4.20E-06 |
| 119 | 6 | 6.83E-11 | 2.66E-11 | 1.54E-11 | 9.09E-12 | 9.83E-09 | 3.14E-09 | 3.82E-08 | 3.79E-07 | 4.30E-07 |
| 120 | 1 | 4.77E-10 | 1.87E-10 | 1.07E-10 | 6.34E-11 | 3.82E-08 | 1.22E-08 | 1.40E-07 | 1.59E-06 | 1.78E-06 |
| 121 | 6 | 6.75E-09 | 2.63E-09 | 1.52E-09 | 8.99E-10 | 2.49E-07 | 7.95E-08 | 8.74E-07 | 2.92E-06 | 4.14E-06 |
| 122 | 3 | 5.44E-11 | 2.14E-11 | 1.22E-11 | 7.24E-12 | 9.83E-09 | 3.14E-09 | 3.82E-08 | 5.54E-07 | 6.05E-07 |
| 123 | 1 | 3.55E-10 | 1.40E-10 | 7.99E-11 | 4.73E-11 | 2.48E-08 | 7.93E-09 | 3.01E-08 | 0.00E+00 | 6.35E-08 |
| 124 | 6 | 7.00E-09 | 2.72E-09 | 1.57E-09 | 9.31E-10 | 2.62E-07 | 8.35E-08 | 8.87E-07 | 2.83E-06 | 4.08E-06 |
| 125 | 6 | 1.22E-10 | 4.76E-11 | 2.75E-11 | 1.63E-11 | 1.03E-08 | 3.28E-09 | 1.33E-08 | 0.00E+00 | 2.71E-08 |
| 126 | 6 | 7.30E-09 | 2.84E-09 | 1.64E-09 | 9.72E-10 | 2.63E-07 | 8.39E-08 | 8.83E-07 | 2.91E-06 | 4.16E-06 |
| 127 | 1 | 3.59E-10 | 1.41E-10 | 8.08E-11 | 4.78E-11 | 3.87E-08 | 1.24E-08 | 1.73E-07 | 2.32E-05 | 2.35E-05 |
| 128 | 6 | 1.35E-10 | 5.26E-11 | 3.04E-11 | 1.80E-11 | 0.00E+00 | 0.00E+00 | 1.26E-08 | 0.00E+00 | 1.29E-08 |
| 129 | 6 | 8.36E-09 | 3.25E-09 | 1.88E-09 | 1.11E-09 | 3.00E-07 | 9.58E-08 | 9.66E-07 | 3.10E-06 | 4.47E-06 |
| 130 | 6 | 6.09E-10 | 2.37E-10 | 1.37E-10 | 8.10E-11 | 3.02E-08 | 9.64E-09 | 1.30E-08 | 0.00E+00 | 5.39E-08 |
| 131 | 6 | 2.61E-10 | 1.02E-10 | 5.87E-11 | 3.47E-11 | 9.74E-09 | 3.11E-09 | 1.26E-08 | 0.00E+00 | 2.59E-08 |
| 133 | 3 | 6.81E-10 | 2.68E-10 | 1.53E-10 | 9.05E-11 | 4.04E-08 | 1.29E-08 | 0.00E+00 | 0.00E+00 | 5.45E-08 |
| 134 | 1 | 1.49E-09 | 5.86E-10 | 3.35E-10 | 1.98E-10 | 7.14E-08 | 2.29E-08 | 1.16E-07 | 0.00E+00 | 2.13E-07 |
| 135 | 3 | 9.85E-09 | 3.88E-09 | 2.21E-09 | 1.31E-09 | 4.00E-07 | 1.28E-07 | 1.09E-06 | 3.10E-06 | 4.74E-06 |
| 136 | 6 | 4.12E-10 | 1.60E-10 | 9.27E-11 | 5.48E-11 | 2.96E-08 | 9.47E-09 | 5.12E-08 | 0.00E+00 | 9.11E-08 |
| 137 | 6 | 1.97E-10 | 7.68E-11 | 4.43E-11 | 2.62E-11 | 9.93E-09 | 3.17E-09 | 2.58E-08 | 0.00E+00 | 3.92E-08 |
| 138 | 1 | 2.18E-11 | 8.58E-12 | 4.90E-12 | 2.90E-12 | 4.18E-09 | 1.34E-09 | 2.54E-08 | 2.96E-07 | 3.27E-07 |
| 139 | 1 | 1.72E-09 | 6.77E-10 | 3.87E-10 | 2.29E-10 | 7.89E-08 | 2.53E-08 | 2.88E-07 | 7.14E-07 | 1.11E-06 |
| 140 | 1 | 1.60E-09 | 6.29E-10 | 3.60E-10 | 2.13E-10 | 6.60E-08 | 2.11E-08 | 1.81E-07 | 0.00E+00 | 2.71E-07 |
| 141 | 1 | 5.36E-09 | 2.11E-09 | 1.20E-09 | 7.13E-10 | 2.35E-07 | 7.53E-08 | 7.06E-07 | 7.09E-07 | 1.73E-06 |
| 142 | 1 | 4.36E-11 | 1.71E-11 | 9.80E-12 | 5.80E-12 | 4.56E-09 | 1.46E-09 | 2.22E-08 | 9.02E-08 | 1.18E-07 |
| 143 | 3 | 5.21E-09 | 2.05E-09 | 1.17E-09 | 6.92E-10 | 2.34E-07 | 7.46E-08 | 7.85E-07 | 2.52E-07 | 1.35E-06 |
| 144 | 3 | 4.90E-09 | 1.93E-09 | 1.10E-09 | 6.51E-10 | 2.26E-07 | 7.23E-08 | 7.91E-07 | 1.46E-07 | 1.24E-06 |
| 145 | 3 | 5.08E-09 | 2.00E-09 | 1.14E-09 | 6.75E-10 | 2.57E-07 | 8.22E-08 | 8.98E-07 | 2.93E-08 | 1.28E-06 |
| 146 | 6 | 4.06E-11 | 1.58E-11 | 9.14E-12 | 5.41E-12 | 0.00E+00 | 0.00E+00 | 1.33E-08 | 0.00E+00 | 1.33E-08 |
| 147 | 6 | 6.02E-09 | 2.35E-09 | 1.35E-09 | 8.02E-10 | 2.91E-07 | 9.29E-08 | 9.88E-07 | 5.95E-08 | 1.44E-06 |
| 148 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.36E-07 | 1.36E-07 |
| 149 | 6 | 6.69E-09 | 2.61E-09 | 1.51E-09 | 8.91E-10 | 3.35E-07 | 1.07E-07 | 1.05E-06 | 1.20E-07 | 1.63E-06 |
| 150 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 151 | 1 | 7.46E-09 | 2.93E-09 | 1.68E-09 | 9.92E-10 | 4.31E-07 | 1.38E-07 | 1.23E-06 | 0.00E+00 | 1.81E-06 |
| 152 | 1 | 2.66E-10 | 1.05E-10 | 5.98E-11 | 3.54E-11 | 3.67E-08 | 1.18E-08 | 1.49E-07 | 2.18E-05 | 2.20E-05 |
| 153 | 1 | 8.85E-09 | 3.48E-09 | 1.99E-09 | 1.18E-09 | 5.00E-07 | 1.60E-07 | 1.29E-06 | 0.00E+00 | 1.97E-06 |
| 154 | 6 | 2.25E-11 | 8.76E-12 | 5.06E-12 | 2.99E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.93E-11 |
| 155 | 3 | 1.10E-08 | 4.35E-09 | 2.48E-09 | 1.47E-09 | 5.75E-07 | 1.84E-07 | 1.34E-06 | 0.00E+00 | 2.12E-06 |
| 156 | 3 | 2.70E-09 | 1.06E-09 | 6.06E-10 | 3.59E-10 | 1.36E-07 | 4.33E-08 | 2.26E-07 | 0.00E+00 | 4.10E-07 |
| 157 | 3 | 1.32E-08 | 5.20E-09 | 2.96E-09 | 1.75E-09 | 7.38E-07 | 2.36E-07 | 1.61E-06 | 0.00E+00 | 2.61E-06 |
| 158 | 6 | 4.92E-09 | 1.92E-09 | 1.11E-09 | 6.56E-10 | 1.31E-07 | 4.17E-08 | 4.57E-07 | 1.63E-06 | 2.26E-06 |
| 159 | 6 | 5.83E-10 | 2.27E-10 | 1.31E-10 | 7.76E-11 | 1.07E-08 | 3.41E-09 | 3.60E-08 | 1.20E-07 | 1.72E-07 |
| 160 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 161 | 3 | 1.38E-08 | 5.44E-09 | 3.10E-09 | 1.84E-09 | 7.29E-07 | 2.33E-07 | 3.14E-06 | 0.00E+00 | 4.13E-06 |
| 162 | 3 | 4.71E-08 | 1.85E-08 | 1.06E-08 | 6.26E-09 | 2.50E-06 | 7.98E-07 | 1.01E-05 | 0.00E+00 | 1.35E-05 |
| 163 | 3 | 9.49E-09 | 3.74E-09 | 2.13E-09 | 1.26E-09 | 5.06E-07 | 1.62E-07 | 1.98E-06 | 0.00E+00 | 2.66E-06 |
| 164 | 3 | 3.46E-10 | 1.36E-10 | 7.76E-11 | 4.60E-11 | 2.97E-08 | 9.50E-09 | 3.85E-08 | 0.00E+00 | 7.84E-08 |
| 165 | 1 | 1.42E-07 | 5.59E-08 | 3.20E-08 | 1.89E-08 | 6.90E-06 | 2.21E-06 | 2.33E-05 | 0.00E+00 | 3.27E-05 |
| 168 | 1 | 4.66E-09 | 1.83E-09 | 1.05E-09 | 6.19E-10 | 2.85E-07 | 9.12E-08 | 1.16E-06 | 0.00E+00 | 1.54E-06 |
| 169 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 170 | 3 | 5.43E-09 | 2.14E-09 | 1.22E-09 | 7.21E-10 | 2.84E-07 | 9.06E-08 | 1.08E-06 | 0.00E+00 | 1.46E-06 |
| 171 | 3 | 1.63E-08 | 6.42E-09 | 3.66E-09 | 2.17E-09 | 5.38E-07 | 1.72E-07 | 1.63E-06 | 0.00E+00 | 2.37E-06 |
| 172 | 6 | 3.34E-08 | 1.30E-08 | 7.51E-09 | 4.44E-09 | 1.02E-06 | 3.27E-07 | 3.11E-06 | 0.00E+00 | 4.52E-06 |
| 173 | 6 | 4.03E-11 | 1.57E-11 | 9.07E-12 | 5.36E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.02E-08 | 6.03E-08 |
| 174 | 6 | 8.64E-11 | 3.37E-11 | 1.94E-11 | 1.15E-11 | 0.00E+00 | 0.00E+00 | 5.38E-09 | 0.00E+00 | 5.53E-09 |
| 177 | 7 | 2.00E-08 | 7.91E-09 | 4.47E-09 | 2.65E-09 | 1.65E-06 | 5.24E-07 | 6.26E-06 | 2.30E-05 | 3.15E-05 |
| 178 | 7 | 1.30E-08 | 5.16E-09 | 2.92E-09 | 1.73E-09 | 9.10E-07 | 2.89E-07 | 2.50E-06 | 1.11E-05 | 1.48E-05 |
| 179 | 7 | 4.34E-08 | 1.72E-08 | 9.71E-09 | 5.76E-09 | 3.50E-06 | 1.11E-06 | 1.31E-05 | 4.88E-05 | 6.67E-05 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 180 | 7 | 3.36E-09 | 1.33E-09 | 7.53E-10 | 4.46E-10 | 2.34E-07 | 7.44E-08 | 6.15E-07 | 9.51E-07 | 1.88E-06 |
| 181 | 1 | 1.78E-08 | 7.01E-09 | 4.01E-09 | 2.37E-09 | 6.95E-07 | 2.23E-07 | 2.13E-06 | 6.17E-06 | 9.25E-06 |
| 182 | 1 | 1.51E-08 | 5.95E-09 | 3.40E-09 | 2.01E-09 | 5.85E-07 | 1.87E-07 | 1.90E-06 | 5.15E-06 | 7.85E-06 |
| 183 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 184 | 1 | 1.27E-08 | 5.01E-09 | 2.86E-09 | 1.70E-09 | 4.94E-07 | 1.58E-07 | 1.58E-06 | 4.49E-06 | 6.74E-06 |
| 185 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 186 | 1 | 6.74E-09 | 2.65E-09 | 1.51E-09 | 8.96E-10 | 2.69E-07 | 8.61E-08 | 9.27E-07 | 2.49E-06 | 3.79E-06 |
| 190 | 7 | 4.82E-07 | 1.91E-07 | 1.08E-07 | 6.39E-08 | 1.20E-05 | 3.80E-06 | 4.99E-05 | 1.84E-04 | 2.50E-04 |
| 191 | 7 | 2.90E-07 | 1.15E-07 | 6.48E-08 | 3.84E-08 | 7.46E-06 | 2.37E-06 | 3.35E-05 | 1.00E-04 | 1.44E-04 |
| 192 | 7 | 7.21E-08 | 2.86E-08 | 1.61E-08 | 9.56E-09 | 1.62E-06 | 5.14E-07 | 4.38E-06 | 3.82E-05 | 4.49E-05 |
| 194 | 5 | 1.64E-09 | 6.82E-10 | 3.67E-10 | 2.18E-10 | 1.45E-07 | 4.63E-08 | 4.67E-07 | 0.00E+00 | 6.60E-07 |
| 195 | 5 | 4.16E-09 | 1.73E-09 | 9.30E-10 | 5.52E-10 | 2.92E-07 | 9.36E-08 | 1.01E-06 | 0.00E+00 | 1.41E-06 |
| 196 | 5 | 1.08E-08 | 4.49E-09 | 2.42E-09 | 1.44E-09 | 8.18E-07 | 2.62E-07 | 2.76E-06 | 0.00E+00 | 3.86E-06 |
| 198 | 5 | 7.35E-10 | 3.05E-10 | 1.64E-10 | 9.76E-11 | 4.74E-08 | 1.52E-08 | 1.15E-07 | 0.00E+00 | 1.79E-07 |
| 199 | 5 | 1.28E-09 | 5.31E-10 | 2.86E-10 | 1.70E-10 | 6.51E-08 | 2.09E-08 | 1.44E-07 | 0.00E+00 | 2.32E-07 |
| 200 | 6 | 2.22E-08 | 8.64E-09 | 4.99E-09 | 2.95E-09 | 1.52E-06 | 4.84E-07 | 5.19E-06 | 0.00E+00 | 7.23E-06 |
| 205 | 6 | 2.81E-08 | 1.10E-08 | 6.33E-09 | 3.74E-09 | 1.55E-06 | 4.94E-07 | 6.21E-06 | 0.00E+00 | 8.30E-06 |
| 206 | 6 | 4.93E-08 | 1.92E-08 | 1.11E-08 | 6.56E-09 | 2.71E-06 | 8.64E-07 | 1.07E-05 | 0.00E+00 | 1.43E-05 |
| 207 | 6 | 5.86E-10 | 2.28E-10 | 1.32E-10 | 7.80E-11 | 6.57E-08 | 2.10E-08 | 3.83E-07 | 0.00E+00 | 4.71E-07 |
| 215 | 3 | 3.03E-09 | 1.19E-09 | 6.80E-10 | 4.03E-10 | 7.39E-08 | 2.36E-08 | 9.57E-08 | 2.19E-07 | 4.17E-07 |
| 216 | 6 | 8.96E-09 | 3.49E-09 | 2.02E-09 | 1.19E-09 | 2.77E-07 | 8.83E-08 | 1.17E-06 | 3.43E-06 | 4.98E-06 |
| 217 | 3 | 1.30E-09 | 5.12E-10 | 2.92E-10 | 1.73E-10 | 5.00E-08 | 1.60E-08 | 1.73E-07 | 7.91E-07 | 1.03E-06 |
| 218 | 7 | 3.06E-09 | 1.21E-09 | 6.84E-10 | 4.06E-10 | 1.08E-07 | 3.44E-08 | 5.16E-07 | 1.36E-06 | 2.03E-06 |
| 219 | 6 | 4.67E-10 | 1.82E-10 | 1.05E-10 | 6.21E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.96E-08 | 1.00E-07 |
| 221 | 6 | 1.67E-09 | 6.50E-10 | 3.75E-10 | 2.22E-10 | 3.30E-08 | 1.05E-08 | 8.55E-08 | 2.93E-07 | 4.25E-07 |
| 223 | 6 | 8.69E-10 | 3.38E-10 | 1.95E-10 | 1.16E-10 | 2.26E-08 | 7.21E-09 | 1.17E-07 | 1.87E-07 | 3.36E-07 |
| 225 | 1 | 3.39E-11 | 1.33E-11 | 7.61E-12 | 4.50E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.93E-11 |
| 226 | 7 | 1.30E-09 | 5.17E-10 | 2.92E-10 | 1.73E-10 | 5.72E-08 | 1.82E-08 | 3.01E-07 | 1.34E-06 | 1.71E-06 |
| 227 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 229 | 6 | 3.78E-10 | 1.47E-10 | 8.50E-11 | 5.03E-11 | 1.41E-08 | 4.51E-09 | 1.83E-08 | 4.18E-08 | 7.94E-08 |
| 230 | 6 | 6.53E-10 | 2.54E-10 | 1.47E-10 | 8.69E-11 | 1.27E-08 | 4.04E-09 | 1.64E-08 | 0.00E+00 | 3.43E-08 |
| 231 | 6 | 3.73E-09 | 1.45E-09 | 8.40E-10 | 4.97E-10 | 9.90E-08 | 3.16E-08 | 4.17E-07 | 2.42E-06 | 2.97E-06 |
| 232 | 7 | 1.92E-08 | 7.59E-09 | 4.29E-09 | 2.54E-09 | 7.18E-07 | 2.28E-07 | 3.38E-06 | 2.10E-05 | 2.53E-05 |
| 233 | 7 | 7.43E-10 | 2.94E-10 | 1.66E-10 | 9.86E-11 | 3.40E-08 | 1.08E-08 | 1.79E-07 | 8.28E-07 | 1.05E-06 |
| 236 | 6 | 1.98E-10 | 7.72E-11 | 4.46E-11 | 2.64E-11 | 9.98E-09 | 3.19E-09 | 5.18E-08 | 1.18E-07 | 1.84E-07 |
| 237 | 7 | 1.50E-08 | 5.96E-09 | 3.37E-09 | 2.00E-09 | 6.32E-07 | 2.01E-07 | 3.11E-06 | 1.89E-05 | 2.29E-05 |
| 238 | 6 | 1.90E-09 | 7.40E-10 | 4.27E-10 | 2.53E-10 | 4.22E-08 | 1.35E-08 | 1.83E-07 | 6.68E-07 | 9.09E-07 |
| 239 | 6 | 1.24E-08 | 4.85E-09 | 2.80E-09 | 1.66E-09 | 5.40E-07 | 1.72E-07 | 2.64E-06 | 1.65E-05 | 1.98E-05 |
| 240 | 8 | 4.14E-12 | 1.82E-12 | 9.21E-13 | 5.49E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.06E-08 | 1.06E-08 |
| 241 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 242 | 1 | 8.54E-09 | 3.36E-09 | 1.92E-09 | 1.14E-09 | 4.03E-07 | 1.29E-07 | 1.77E-06 | 1.06E-05 | 1.29E-05 |
| 243 | 1 | 2.00E-11 | 7.88E-12 | 4.51E-12 | 2.67E-12 | 1.00E-09 | 3.21E-10 | 3.66E-09 | 1.98E-08 | 2.49E-08 |
| 244 | 1 | 1.23E-10 | 4.82E-11 | 2.75E-11 | 1.63E-11 | 1.63E-08 | 5.21E-09 | 6.92E-08 | 5.67E-07 | 6.58E-07 |
| 245 | 1 | 1.31E-10 | 5.14E-11 | 2.94E-11 | 1.74E-11 | 5.67E-09 | 1.82E-09 | 3.10E-08 | 2.08E-07 | 2.47E-07 |
| 246 | 1 | 6.95E-10 | 2.73E-10 | 1.56E-10 | 9.25E-11 | 5.98E-08 | 1.92E-08 | 2.86E-07 | 2.39E-06 | 2.76E-06 |
| 247 | 1 | 6.28E-10 | 2.47E-10 | 1.41E-10 | 8.35E-11 | 2.45E-08 | 7.85E-09 | 1.04E-07 | 4.93E-07 | 6.31E-07 |
| 250 | 5 | 2.16E-09 | 8.95E-10 | 4.82E-10 | 2.86E-10 | 6.42E-08 | 2.06E-08 | 2.86E-07 | 1.33E-06 | 1.71E-06 |
| 252 | 6 | 2.04E-08 | 7.96E-09 | 4.60E-09 | 2.72E-09 | 7.19E-07 | 2.30E-07 | 3.26E-06 | 2.01E-05 | 2.43E-05 |
| 254 | 6 | 1.85E-10 | 7.21E-11 | 4.16E-11 | 2.46E-11 | 5.33E-09 | 1.70E-09 | 1.38E-08 | 3.16E-08 | 5.28E-08 |
| 256 | 6 | 4.32E-09 | 1.68E-09 | 9.71E-10 | 5.75E-10 | 1.07E-07 | 3.41E-08 | 2.77E-07 | 1.16E-06 | 1.58E-06 |
| 258 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 260 | 3 | 2.78E-08 | 1.10E-08 | 6.25E-09 | 3.70E-09 | 9.64E-07 | 3.08E-07 | 3.98E-06 | 2.35E-05 | 2.88E-05 |
| 261 | 5 | 2.90E-09 | 1.21E-09 | 6.49E-10 | 3.86E-10 | 7.40E-08 | 2.37E-08 | 2.93E-07 | 1.36E-06 | 1.76E-06 |
| 262 | 1 | 2.97E-09 | 1.17E-09 | 6.69E-10 | 3.96E-10 | 1.21E-07 | 3.88E-08 | 4.42E-07 | 1.75E-06 | 2.36E-06 |
| 263 | 1 | 2.24E-09 | 8.80E-10 | 5.03E-10 | 2.98E-10 | 8.39E-08 | 2.69E-08 | 3.22E-07 | 1.95E-06 | 2.39E-06 |
| 264 | 1 | 4.27E-11 | 1.68E-11 | 9.60E-12 | 5.68E-12 | 3.51E-09 | 1.12E-09 | 2.13E-08 | 2.48E-07 | 2.74E-07 |
| 265 | 1 | 1.11E-09 | 4.38E-10 | 2.50E-10 | 1.48E-10 | 4.14E-08 | 1.33E-08 | 1.57E-07 | 9.20E-07 | 1.13E-06 |
| 266 | 1 | 4.19E-09 | 1.65E-09 | 9.42E-10 | 5.57E-10 | 1.71E-07 | 5.49E-08 | 6.55E-07 | 4.19E-06 | 5.08E-06 |
| 267 | 1 | 4.59E-10 | 1.80E-10 | 1.03E-10 | 6.11E-11 | 2.44E-08 | 7.82E-09 | 9.51E-08 | 4.35E-07 | 5.63E-07 |
| 268 | 1 | 1.77E-09 | 6.96E-10 | 3.98E-10 | 2.36E-10 | 6.47E-08 | 2.07E-08 | 2.42E-07 | 1.25E-06 | 1.58E-06 |
| 269 | 6 | 1.47E-08 | 5.74E-09 | 3.31E-09 | 1.96E-09 | 7.09E-07 | 2.26E-07 | 3.07E-06 | 2.00E-05 | 2.40E-05 |
| 270 | 6 | 7.73E-11 | 3.01E-11 | 1.74E-11 | 1.03E-11 | 0.00E+00 | 0.00E+00 | 1.01E-08 | 4.62E-08 | 5.65E-08 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 271 | 6 | 2.25E-09 | 8.77E-10 | 5.07E-10 | 3.00E-10 | 1.07E-07 | 3.42E-08 | 4.70E-07 | 3.03E-06 | 3.65E-06 |
| 272 | 6 | 4.66E-11 | 1.82E-11 | 1.05E-11 | 6.21E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.64E-08 | 4.65E-08 |
| 273 | 1 | 8.51E-11 | 3.35E-11 | 1.91E-11 | 1.13E-11 | 0.00E+00 | 0.00E+00 | 2.38E-08 | 1.11E-07 | 1.35E-07 |
| 274 | 6 | 7.80E-09 | 3.04E-09 | 1.76E-09 | 1.04E-09 | 3.56E-07 | 1.14E-07 | 1.63E-06 | 1.03E-05 | 1.24E-05 |
| 275 | 1 | 1.28E-10 | 5.05E-11 | 2.88E-11 | 1.71E-11 | 5.90E-09 | 1.89E-09 | 2.15E-08 | 6.68E-08 | 9.64E-08 |
| 276 | 6 | 1.08E-09 | 4.19E-10 | 2.42E-10 | 1.43E-10 | 5.00E-08 | 1.60E-08 | 2.15E-07 | 1.36E-06 | 1.65E-06 |
| 277 | 1 | 2.05E-10 | 8.05E-11 | 4.60E-11 | 2.72E-11 | 1.68E-08 | 5.39E-09 | 4.09E-08 | 1.90E-07 | 2.54E-07 |
| 278 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 279 | 1 | 4.85E-10 | 1.91E-10 | 1.09E-10 | 6.46E-11 | 2.46E-08 | 7.87E-09 | 9.87E-08 | 5.91E-07 | 7.23E-07 |
| 280 | 1 | 1.37E-09 | 5.40E-10 | 3.09E-10 | 1.83E-10 | 7.40E-08 | 2.37E-08 | 3.04E-07 | 2.06E-06 | 2.47E-06 |
| 281 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 282 | 1 | 1.03E-09 | 4.06E-10 | 2.32E-10 | 1.37E-10 | 4.97E-08 | 1.59E-08 | 2.10E-07 | 1.26E-06 | 1.54E-06 |
| 283 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 284 | 1 | 4.99E-09 | 1.96E-09 | 1.12E-09 | 6.64E-10 | 2.23E-07 | 7.14E-08 | 4.31E-07 | 1.15E-06 | 1.88E-06 |
| 285 | 1 | 6.80E-10 | 2.67E-10 | 1.53E-10 | 9.04E-11 | 4.32E-08 | 1.38E-08 | 1.10E-07 | 7.13E-07 | 8.81E-07 |
| 286 | 1 | 1.47E-09 | 5.77E-10 | 3.30E-10 | 1.95E-10 | 6.22E-08 | 1.99E-08 | 1.11E-07 | 7.40E-08 | 2.70E-07 |
| 287 | 1 | 1.75E-09 | 6.86E-10 | 3.92E-10 | 2.32E-10 | 9.60E-08 | 3.08E-08 | 1.89E-07 | 4.20E-06 | 4.52E-06 |
| 288 | 1 | 3.60E-10 | 1.42E-10 | 8.10E-11 | 4.79E-11 | 2.14E-08 | 6.86E-09 | 6.08E-08 | 1.82E-07 | 2.71E-07 |
| 289 | 1 | 2.01E-09 | 7.92E-10 | 4.53E-10 | 2.68E-10 | 1.07E-07 | 3.43E-08 | 2.12E-07 | 4.51E-06 | 4.86E-06 |
| 290 | 1 | 1.01E-09 | 3.99E-10 | 2.28E-10 | 1.35E-10 | 7.70E-08 | 2.47E-08 | 1.62E-07 | 9.43E-06 | 9.69E-06 |
| 294 | 7 | 3.85E-10 | 1.53E-10 | 8.62E-11 | 5.11E-11 | 9.56E-09 | 3.04E-09 | 0.00E+00 | 0.00E+00 | 1.33E-08 |
| 301 | 6 | 3.96E-10 | 1.54E-10 | 8.91E-11 | 5.27E-11 | 1.95E-08 | 6.22E-09 | 8.83E-08 | 0.00E+00 | 1.15E-07 |
| 302 | 6 | 8.24E-10 | 3.21E-10 | 1.85E-10 | 1.10E-10 | 3.00E-08 | 9.59E-09 | 1.04E-07 | 0.00E+00 | 1.45E-07 |
| 303 | 6 | 9.44E-10 | 3.68E-10 | 2.12E-10 | 1.26E-10 | 7.61E-08 | 2.43E-08 | 2.71E-07 | 3.53E-05 | 3.56E-05 |
| 304 | 6 | 4.39E-09 | 1.71E-09 | 9.88E-10 | 5.85E-10 | 1.19E-07 | 3.81E-08 | 5.23E-07 | 0.00E+00 | 6.88E-07 |
| 306 | 6 | 1.04E-08 | 4.05E-09 | 2.34E-09 | 1.38E-09 | 6.17E-07 | 1.97E-07 | 2.71E-06 | 1.89E-05 | 2.24E-05 |
| 307 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 324 | 7 | 2.74E-09 | 1.08E-09 | 6.12E-10 | 3.63E-10 | 1.02E-07 | 3.23E-08 | 4.90E-07 | 9.31E-07 | 1.56E-06 |
| 325 | 7 | 7.26E-08 | 2.88E-08 | 1.62E-08 | 9.63E-09 | 1.91E-06 | 6.07E-07 | 9.09E-06 | 3.91E-05 | 5.08E-05 |
| 326 | 7 | 2.53E-08 | 1.00E-08 | 5.66E-09 | 3.36E-09 | 7.73E-07 | 2.46E-07 | 4.33E-06 | 1.51E-05 | 2.05E-05 |
| 327 | 7 | 5.56E-09 | 2.20E-09 | 1.24E-09 | 7.37E-10 | 1.37E-07 | 4.35E-08 | 6.12E-07 | 2.93E-06 | 3.73E-06 |
| 340 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 351 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 358 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 359 | 1 | 2.49E-10 | 9.80E-11 | 5.60E-11 | 3.32E-11 | 1.06E-08 | 3.40E-09 | 3.88E-08 | 1.05E-07 | 1.58E-07 |
| 360 | 1 | 1.26E-08 | 4.94E-09 | 2.82E-09 | 1.67E-09 | 3.33E-07 | 1.07E-07 | 1.32E-06 | 3.86E-06 | 5.64E-06 |
| 361 | 1 | 1.52E-08 | 5.97E-09 | 3.41E-09 | 2.02E-09 | 4.48E-07 | 1.44E-07 | 2.09E-06 | 8.54E-06 | 1.12E-05 |
| 362 | 1 | 1.10E-10 | 4.34E-11 | 2.48E-11 | 1.47E-11 | 0.00E+00 | 0.00E+00 | 6.44E-09 | 1.50E-08 | 2.16E-08 |
| 363 | 1 | 1.42E-07 | 5.57E-08 | 3.18E-08 | 1.88E-08 | 3.38E-06 | 1.08E-06 | 1.17E-05 | 1.99E-05 | 3.63E-05 |
| 364 | 1 | 1.10E-08 | 4.32E-09 | 2.47E-09 | 1.46E-09 | 3.40E-07 | 1.09E-07 | 1.56E-06 | 5.91E-06 | 7.94E-06 |
| 365 | 6 | 1.44E-08 | 5.63E-09 | 3.25E-09 | 1.92E-09 | 4.63E-07 | 1.48E-07 | 1.67E-06 | 5.55E-06 | 7.86E-06 |
| 366 | 6 | 1.09E-10 | 4.23E-11 | 2.44E-11 | 1.45E-11 | 0.00E+00 | 0.00E+00 | 2.84E-08 | 2.60E-07 | 2.88E-07 |
| 367 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 375 | 1 | 3.58E-09 | 1.41E-09 | 8.05E-10 | 4.77E-10 | 9.72E-08 | 3.11E-08 | 2.66E-07 | 4.50E-06 | 4.90E-06 |
| 376 | 1 | 8.65E-09 | 3.40E-09 | 1.94E-09 | 1.15E-09 | 2.02E-07 | 6.46E-08 | 5.45E-07 | 5.18E-06 | 6.00E-06 |
| 377 | 1 | 3.14E-10 | 1.23E-10 | 7.06E-11 | 4.18E-11 | 1.06E-08 | 3.40E-09 | 3.88E-08 | 1.20E-07 | 1.73E-07 |
| 378 | 1 | 2.76E-09 | 1.09E-09 | 6.21E-10 | 3.68E-10 | 6.31E-08 | 2.02E-08 | 1.53E-07 | 1.02E-06 | 1.26E-06 |
| 379 | 1 | 2.39E-09 | 9.39E-10 | 5.37E-10 | 3.18E-10 | 6.22E-08 | 1.99E-08 | 1.58E-07 | 2.68E-06 | 2.93E-06 |
| 380 | 1 | 9.25E-11 | 3.64E-11 | 2.08E-11 | 1.23E-11 | 0.00E+00 | 0.00E+00 | 5.39E-09 | 1.25E-08 | 1.81E-08 |
| 381 | 1 | 4.35E-09 | 1.71E-09 | 9.78E-10 | 5.79E-10 | 9.55E-08 | 3.06E-08 | 2.32E-07 | 3.74E-07 | 7.40E-07 |
| 386 | 6 | 2.32E-09 | 9.05E-10 | 5.23E-10 | 3.09E-10 | 2.04E-07 | 6.50E-08 | 7.39E-07 | 1.72E-06 | 2.73E-06 |
| 387 | 3 | 4.22E-08 | 1.66E-08 | 9.47E-09 | 5.61E-09 | 2.01E-06 | 6.43E-07 | 8.05E-06 | 5.86E-05 | 6.93E-05 |
| 388 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 389 | 7 | 5.14E-11 | 2.04E-11 | 1.15E-11 | 6.82E-12 | 2.19E-09 | 6.97E-10 | 2.88E-09 | 2.00E-08 | 2.59E-08 |
| 390 | 7 | 5.56E-09 | 2.20E-09 | 1.24E-09 | 7.38E-10 | 2.48E-07 | 7.89E-08 | 7.97E-07 | 1.39E-06 | 2.52E-06 |
| 392 | 7 | 2.26E-09 | 8.96E-10 | 5.06E-10 | 3.00E-10 | 1.42E-07 | 4.50E-08 | 7.51E-07 | 1.59E-06 | 2.53E-06 |
| 393 | 7 | 4.98E-10 | 1.97E-10 | 1.11E-10 | 6.60E-11 | 1.19E-07 | 3.79E-08 | 9.97E-07 | 2.31E-06 | 3.47E-06 |
| 394 | 3 | 3.92E-08 | 1.54E-08 | 8.79E-09 | 5.21E-09 | 1.77E-06 | 5.65E-07 | 7.16E-06 | 2.17E-05 | 3.13E-05 |
| 396 | 3 | 5.83E-08 | 2.30E-08 | 1.31E-08 | 7.75E-09 | 2.17E-06 | 6.93E-07 | 8.33E-06 | 2.58E-05 | 3.71E-05 |
| 397 | 7 | 3.51E-09 | 1.39E-09 | 7.84E-10 | 4.65E-10 | 1.29E-07 | 4.10E-08 | 3.87E-07 | 2.25E-07 | 7.88E-07 |
| 398 | 6 | 1.71E-08 | 6.66E-09 | 3.84E-09 | 2.27E-09 | 5.14E-07 | 1.64E-07 | 1.68E-06 | 2.09E-08 | 2.41E-06 |
| 399 | 7 | 8.92E-09 | 3.53E-09 | 2.00E-09 | 1.18E-09 | 1.57E-07 | 5.00E-08 | 3.62E-07 | 0.00E+00 | 5.84E-07 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 6 | 3.70E-08 | 1.44E-08 | 8.32E-09 | 4.92E-09 | 1.07E-06 | 3.42E-07 | 3.89E-06 | 2.54E-07 | 5.62E-06 |
| 401 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 402 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 404 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 405 | 1 | 1.51E-10 | 5.95E-11 | 3.40E-11 | 2.01E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-10 |
| 406 | 7 | 2.87E-09 | 1.14E-09 | 6.42E-10 | 3.81E-10 | 2.70E-07 | 8.59E-08 | 1.08E-07 | 9.78E-08 | 5.67E-07 |
| 407 | 6 | 9.43E-12 | 3.67E-12 | 2.12E-12 | 1.26E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-11 |
| 408 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 409 | 7 | 2.18E-09 | 8.62E-10 | 4.87E-10 | 2.89E-10 | 9.23E-08 | 2.93E-08 | 8.67E-08 | 0.00E+00 | 2.12E-07 |
| 410 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.29E-08 | 3.29E-08 |
| 411 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 412 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 413 | 6 | 1.06E-09 | 4.12E-10 | 2.38E-10 | 1.41E-10 | 5.11E-08 | 1.63E-08 | 2.54E-07 | 7.08E-07 | 1.03E-06 |
| 414 | 6 | 7.81E-11 | 3.04E-11 | 1.76E-11 | 1.04E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.67E-07 | 1.67E-07 |
| 415 | 3 | 1.86E-08 | 7.30E-09 | 4.16E-09 | 2.47E-09 | 6.67E-07 | 2.13E-07 | 2.40E-06 | 7.58E-06 | 1.09E-05 |
| 416 | 1 | 2.42E-09 | 9.52E-10 | 5.44E-10 | 3.22E-10 | 8.00E-08 | 2.56E-08 | 3.57E-07 | 1.35E-06 | 1.81E-06 |
| 417 | 1 | 3.30E-11 | 1.30E-11 | 7.42E-12 | 4.39E-12 | 0.00E+00 | 0.00E+00 | 1.15E-08 | 8.99E-07 | 9.11E-07 |
| 419 | 1 | 1.71E-09 | 6.74E-10 | 3.85E-10 | 2.28E-10 | 4.83E-08 | 1.55E-08 | 1.96E-07 | 1.15E-06 | 1.42E-06 |
| 420 | 1 | 1.23E-11 | 4.82E-12 | 2.75E-12 | 1.63E-12 | 0.00E+00 | 0.00E+00 | 5.72E-09 | 4.38E-07 | 4.44E-07 |
| 421 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 424 | 1 | 1.14E-09 | 4.48E-10 | 2.56E-10 | 1.52E-10 | 7.78E-08 | 2.49E-08 | 2.37E-07 | 2.35E-05 | 2.38E-05 |
| 425 | 1 | 6.36E-11 | 2.50E-11 | 1.43E-11 | 8.46E-12 | 3.18E-09 | 1.02E-09 | 7.74E-09 | 0.00E+00 | 1.20E-08 |
| 426 | 1 | 4.51E-11 | 1.77E-11 | 1.01E-11 | 6.00E-12 | 4.32E-09 | 1.38E-09 | 1.05E-08 | 4.40E-07 | 4.56E-07 |
| 427 | 5 | 2.28E-10 | 9.48E-11 | 5.10E-11 | 3.03E-11 | 1.02E-08 | 3.28E-09 | 3.74E-08 | 0.00E+00 | 5.13E-08 |
| 428 | 1 | 1.08E-10 | 4.24E-11 | 2.42E-11 | 1.43E-11 | 4.59E-09 | 1.47E-09 | 1.67E-08 | 1.30E-08 | 3.60E-08 |
| 429 | 1 | 3.88E-11 | 1.52E-11 | 8.71E-12 | 5.16E-12 | 3.43E-09 | 1.10E-09 | 4.17E-09 | 3.39E-07 | 3.48E-07 |
| 430 | 1 | 9.92E-10 | 3.90E-10 | 2.23E-10 | 1.32E-10 | 3.75E-08 | 1.20E-08 | 1.26E-07 | 3.53E-07 | 5.31E-07 |
| 431 | 1 | 2.85E-11 | 1.12E-11 | 6.42E-12 | 3.80E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.96E-08 | 6.97E-08 |
| 432 | 1 | 1.46E-10 | 5.73E-11 | 3.27E-11 | 1.94E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-08 | 2.81E-08 |
| 433 | 6 | 3.55E-08 | 1.38E-08 | 8.00E-09 | 4.73E-09 | 9.52E-07 | 3.04E-07 | 3.88E-06 | 1.48E-06 | 6.67E-06 |
| 434 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 435 | 6 | 1.34E-09 | 5.23E-10 | 3.02E-10 | 1.79E-10 | 1.93E-08 | 6.17E-09 | 5.01E-08 | 0.00E+00 | 7.79E-08 |
| 436 | 1 | 7.27E-12 | 2.86E-12 | 1.63E-12 | 9.68E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-11 |
| 441 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 442 | 6 | 4.26E-08 | 1.66E-08 | 9.58E-09 | 5.67E-09 | 1.19E-06 | 3.80E-07 | 4.97E-06 | 2.64E-06 | 9.26E-06 |
| 443 | 6 | 1.98E-10 | 7.72E-11 | 4.46E-11 | 2.64E-11 | 0.00E+00 | 0.00E+00 | 2.59E-08 | 0.00E+00 | 2.62E-08 |
| 444 | 6 | 1.58E-08 | 6.17E-09 | 3.56E-09 | 2.11E-09 | 4.55E-07 | 1.45E-07 | 1.89E-06 | 1.01E-06 | 3.53E-06 |
| 452 | 1 | 8.88E-11 | 3.49E-11 | 2.00E-11 | 1.18E-11 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-10 |
| 453 | 6 | 2.51E-08 | 9.78E-09 | 5.65E-09 | 3.34E-09 | 6.68E-07 | 2.13E-07 | 3.08E-06 | 1.63E-06 | 5.64E-06 |
| 454 | 1 | 2.21E-09 | 8.71E-10 | 4.98E-10 | 2.95E-10 | 5.17E-08 | 1.66E-08 | 1.89E-07 | 0.00E+00 | 2.61E-07 |
| 455 | 6 | 4.72E-09 | 1.84E-09 | 1.06E-09 | 6.28E-10 | 1.38E-07 | 4.41E-08 | 6.32E-07 | 3.68E-07 | 1.19E-06 |
| 458 | 1 | 2.90E-11 | 1.14E-11 | 6.53E-12 | 3.86E-12 | 0.00E+00 | 0.00E+00 | 4.52E-09 | 0.00E+00 | 4.57E-09 |
| 464 | 5 | 6.50E-10 | 2.70E-10 | 1.45E-10 | 8.63E-11 | 3.30E-08 | 1.06E-08 | 6.69E-08 | 0.00E+00 | 1.12E-07 |
| 477 | 1 | 8.17E-10 | 3.21E-10 | 1.84E-10 | 1.09E-10 | 4.70E-08 | 1.50E-08 | 1.00E-07 | 2.99E-07 | 4.62E-07 |
| 478 | 1 | 3.63E-09 | 1.43E-09 | 8.16E-10 | 4.83E-10 | 1.43E-07 | 4.57E-08 | 5.64E-07 | 5.15E-07 | 1.27E-06 |
| 479 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 480 | 6 | 4.53E-09 | 1.76E-09 | 1.02E-09 | 6.03E-10 | 9.43E-08 | 3.01E-08 | 5.22E-07 | 0.00E+00 | 6.54E-07 |
| 481 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.67E-08 | 1.67E-08 |
| 482 | 6 | 2.77E-09 | 1.08E-09 | 6.23E-10 | 3.68E-10 | 3.40E-08 | 1.09E-08 | 2.21E-07 | 5.04E-08 | 3.21E-07 |
| 483 | 1 | 6.71E-09 | 2.64E-09 | 1.51E-09 | 8.93E-10 | 2.03E-07 | 6.50E-08 | 1.08E-06 | 0.00E+00 | 1.36E-06 |
| 484 | 1 | 9.31E-12 | 3.66E-12 | 2.09E-12 | 1.24E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-08 | 3.03E-08 |
| 485 | 1 | 5.91E-09 | 2.32E-09 | 1.33E-09 | 7.86E-10 | 1.15E-07 | 3.68E-08 | 6.02E-07 | 0.00E+00 | 7.64E-07 |
| 488 | 6 | 1.62E-10 | 6.30E-11 | 3.64E-11 | 2.15E-11 | 0.00E+00 | 0.00E+00 | 2.35E-08 | 0.00E+00 | 2.38E-08 |
| 494 | 6 | 3.27E-08 | 1.27E-08 | 7.36E-09 | 4.36E-09 | 9.93E-07 | 3.17E-07 | 3.18E-06 | 0.00E+00 | 4.55E-06 |
| 498 | 1 | 3.24E-11 | 1.27E-11 | 7.27E-12 | 4.30E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.67E-11 |
| 499 | 1 | 1.53E-09 | 6.01E-10 | 3.43E-10 | 2.03E-10 | 1.14E-07 | 3.64E-08 | 2.52E-07 | 1.89E-05 | 1.93E-05 |
| 500 | 1 | 1.02E-09 | 4.00E-10 | 2.29E-10 | 1.35E-10 | 7.42E-08 | 2.38E-08 | 1.58E-07 | 1.13E-05 | 1.15E-05 |
| 502 | 6 | 1.07E-11 | 4.15E-12 | 2.40E-12 | 1.42E-12 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.86E-11 |
| 503 | 6 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 504 | 1 | 1.23E-09 | 4.84E-10 | 2.77E-10 | 1.64E-10 | 1.41E-07 | 4.51E-08 | 6.45E-07 | 0.00E+00 | 8.33E-07 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and Phase 2 Emissions** With EMFAC2014 Emission Factors
**Freeway Segments** Mitigation: T6 and T7 DSL MY2010 with Revised Vehicle Speeds

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| FRWY1 | 1.51E-04 |
| FRWY2 | 2.10E-04 |
| FRWY3 | 1.72E-04 |
| FRWY4 | 1.87E-04 |
| FRWY5 | 1.47E-04 |
| FRWY6 | 2.17E-04 |
| FRWY7 | 1.72E-04 |
| FRWY8 | 1.62E-04 |
| FRWY9 | 2.03E-04 |
| FRWY10 | 1.91E-04 |
| FRWY11 | 9.79E-05 |
| FRWY12 | 2.82E-04 |
| FRWY13 | 2.16E-04 |
| FRWY14 | 3.24E-04 |
| FRWY15 | 2.14E-04 |
| FRWY16 | 3.64E-04 |
| FRWY17 | 4.65E-04 |
| FRWY18 | 3.71E-04 |
| FRWY19 | 1.39E-04 |
| FRWY20 | 1.27E-04 |
| FRWY21 | 5.12E-04 |
| FRWY22 | 3.02E-04 |
| FRWY23 | 3.07E-04 |
| FRWY24 | 6.90E-04 |
| FRWY25 | 4.20E-04 |
| FRWY26 | 2.96E-04 |
| FRWY27 | 3.91E-04 |
| FRWY28 | 5.44E-04 |

| | |
|---|---|
| FRWY29 | 5.45E-04 |
| FRWY30 | 5.25E-04 |
| FRWY31 | 1.23E-03 |
| FRWY32 | 4.06E-04 |
| FRWY33 | 7.20E-04 |
| FRWY34 | 5.98E-04 |
| FRWY35 | 1.19E-04 |
| FRWY36 | 6.23E-04 |
| FRWY37 | 2.53E-04 |
| FRWY294 | 4.29E-05 |
| FRWY295 | 1.54E-05 |
| FRWY296 | 2.65E-05 |
| FRWY297 | 2.20E-05 |
| FRWY299 | 2.42E-05 |
| FRWY75 | 2.34E-04 |
| FRWY76 | 2.14E-04 |
| FRWY77 | 3.85E-05 |
| FRWY78 | 1.19E-04 |
| FRWY79 | 1.49E-04 |
| FRWY80 | 1.50E-04 |
| FRWY81 | 2.25E-04 |
| FRWY82 | 1.52E-04 |
| FRWY83 | 1.66E-04 |
| FRWY84 | 9.77E-05 |
| FRWY85 | 1.94E-04 |
| FRWY86 | 5.97E-05 |
| FRWY87 | 1.06E-04 |
| FRWY101 | 7.61E-05 |
| FRWY102 | 3.99E-05 |
| FRWY103 | 7.64E-05 |
| FRWY104 | 1.33E-04 |
| FRWY105 | 4.01E-05 |
| FRWY106 | 5.11E-05 |
| FRWY107 | 6.31E-05 |
| FRWY108 | 1.63E-04 |

| | |
|---|---|
| FRWY109 | 6.15E-05 |
| FRWY110 | 9.93E-05 |
| FRWY111 | 2.72E-04 |
| FRWY112 | 4.86E-05 |
| FRWY113 | 1.03E-04 |
| FRWY114 | 1.13E-04 |
| FRWY129 | 4.99E-05 |
| FRWY130 | 4.39E-05 |
| FRWY131 | 3.60E-05 |
| FRWY132 | 1.47E-05 |
| FRWY133 | 5.39E-05 |
| FRWY167 | 1.75E-05 |
| FRWY168 | 1.42E-05 |
| FRWY169 | 7.47E-05 |
| FRWY171 | 2.67E-05 |
| FRWY172 | 4.41E-05 |
| FRWY173 | 4.14E-05 |
| FRWY174 | 1.92E-05 |
| FRWY175 | 3.24E-05 |
| FRWY176 | 3.11E-05 |
| FRWY134 | 4.82E-05 |
| FRWY135 | 5.86E-05 |
| FRWY136 | 3.55E-05 |
| FRWY137 | 4.80E-05 |
| FRWY138 | 7.78E-05 |
| FRWY139 | 6.44E-05 |
| FRWY140 | 5.34E-05 |
| FRWY141 | 4.35E-05 |
| FRWY142 | 2.79E-05 |
| FRWY143 | 5.48E-05 |
| FRWY144 | 7.51E-05 |

| | |
|---|---|
| 1.74E-02 | g/sec |
| 3.30E+00 | lbs/day |

## TRAFFIC VOLUMES

| ID | Arterial | From | 2031 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 830 | 80 | 210 | 2,450 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 650 | 80 | 220 | 2,490 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 680 | 80 | 230 | 2,520 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 740 | 90 | 240 | 2,570 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 770 | 90 | 250 | 2,620 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 790 | 90 | 260 | 2,630 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 810 | 90 | 260 | 2,640 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 830 | 90 | 270 | 2,670 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 920 | 100 | 310 | 2,860 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 950 | 100 | 310 | 2,890 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 1,030 | 100 | 320 | 2,910 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 1,440 | 130 | 420 | 3,230 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 1,500 | 140 | 460 | 3,360 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 1,540 | 140 | 480 | 3,480 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 1,540 | 140 | 480 | 3,490 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 1,610 | 150 | 490 | 3,500 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 2,230 | 180 | 590 | 3,780 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 2,490 | 190 | 620 | 3,830 |
| FRWY19 | SR60 | Market St to Main St | 2,630 | 200 | 670 | 3,950 |
| FRWY20 | SR60 | Main St to SR-91 | 3,010 | 230 | 760 | 4,200 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 5,080 | 340 | 1,200 | 6,960 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 5,210 | 350 | 1,250 | 7,120 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 5,350 | 360 | 1,290 | 7,190 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 5,890 | 380 | 1,370 | 7,420 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 7,110 | 430 | 1,510 | 7,770 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 7,720 | 400 | 1,420 | 7,330 |
| FRWY27 | SR60 | I-215 to Day St | 8,150 | 460 | 1,650 | 8,410 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 8,170 | 490 | 1,720 | 8,410 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 8,130 | 510 | 1,770 | 8,440 |
| FRWY30 | SR60 | Heacock St to Perris Blvd | 9,210 | 540 | 1,830 | 8,520 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 10,110 | 590 | 1,900 | 9,200 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 10,910 | 630 | 1,940 | 9,200 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 12,070 | 690 | 2,070 | 9,320 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 12,650 | 690 | 2,030 | 8,920 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 6,820 | 300 | 820 | 2,470 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 6,830 | 230 | 670 | 1,540 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 6,800 | 220 | 640 | 1,510 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 393 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 393 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 393 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 393 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 393 |
| FRWY75 | SR91 | I-15 to McKinley St | 1,160 | 90 | 330 | 2,010 |
| FRWY76 | SR91 | McKinley St to Pierce St | 1,320 | 100 | 360 | 2,090 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 1,320 | 100 | 360 | 2,090 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 1,410 | 100 | 370 | 2,100 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 1,530 | 100 | 390 | 2,120 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 1,610 | 100 | 400 | 2,150 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 1,680 | 110 | 410 | 2,170 |
| FRWY82 | SR91 | Adam St to Madison St | 1,730 | 110 | 430 | 2,200 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 1,740 | 110 | 430 | 2,210 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 1,660 | 90 | 380 | 2,010 |
| FRWY85 | SR91 | Central Ave to 14th St | 1,640 | 90 | 380 | 2,000 |
| FRWY86 | SR91 | 14th St to University Ave | 1,660 | 80 | 340 | 1,860 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 1,790 | 90 | 350 | 1,880 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 2,930 | 100 | 300 | 1,090 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 2,520 | 90 | 280 | 1,060 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 2,040 | 70 | 250 | 1,040 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 1,610 | 60 | 220 | 1,000 |
| FRWY106 | I-10 | 22nd St to S 8th St | 1,500 | 60 | 210 | 990 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY107 | I-10 | S 8th St to S Hargrave St | 1,410 | 50 | 200 | 970 |
| FRWY108 | I-10 | S Hargrave St to Field Rd | 1,330 | 50 | 190 | 960 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 1,230 | 50 | 150 | 920 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 1,230 | 50 | 150 | 920 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 1,210 | 50 | 150 | 910 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 1,200 | 40 | 150 | 910 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 1,020 | 40 | 120 | 790 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 1,020 | 40 | 120 | 790 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 1,390 | 20 | 130 | 250 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 1,620 | 30 | 140 | 250 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 1,800 | 30 | 160 | 260 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 1,850 | 40 | 160 | 270 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 1,440 | 30 | 120 | 270 |
| FRWY167 | I-215 | Redlands Ave to D St | 480 | 10 | 50 | 310 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 620 | 20 | 70 | 400 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 590 | 20 | 70 | 390 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 320 | 10 | 40 | 330 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 330 | 10 | 50 | 390 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 750 | 30 | 80 | 420 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 470 | 20 | 70 | 440 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 710 | 30 | 90 | 540 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 760 | 30 | 100 | 590 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 380 | 30 | 90 | 880 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 370 | 20 | 90 | 870 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 340 | 20 | 90 | 870 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 300 | 20 | 70 | 810 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 270 | 20 | 70 | 800 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 1,200 | 60 | 180 | 780 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 1,140 | 60 | 180 | 800 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 1,070 | 60 | 160 | 710 |
| FRWY142 | SR-215 | Mill St to 2rd St | 1,080 | 60 | 160 | 700 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 1,020 | 50 | 140 | 640 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 890 | 40 | 110 | 580 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **Mitigation: T6 and T7 DSL MY2010**

Project Phase 1 and Phase 2 Emissions
Freeway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 3570 | 830 | 80 | 210 | 2,450 | 1574 | 0.978 | 1 | 0 | 0 | 0 | 16 | 5 | 171 | 2414 | 2609 |
| FRWY2 | 3440 | 650 | 80 | 220 | 2,490 | 2153 | 1.337 | 1 | 0 | 0 | 0 | 16 | 5 | 179 | 2454 | 2656 |
| FRWY3 | 3510 | 680 | 80 | 230 | 2,520 | 1737 | 1.079 | 1 | 0 | 0 | 0 | 16 | 5 | 188 | 2483 | 2694 |
| FRWY4 | 3640 | 740 | 90 | 240 | 2,570 | 1847 | 1.147 | 1 | 0 | 0 | 0 | 18 | 6 | 196 | 2533 | 2754 |
| FRWY5 | 3730 | 770 | 90 | 250 | 2,620 | 1422 | 0.883 | 1 | 0 | 0 | 0 | 18 | 6 | 204 | 2582 | 2812 |
| FRWY6 | 3770 | 790 | 90 | 260 | 2,630 | 2087 | 1.296 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2592 | 2830 |
| FRWY7 | 3800 | 810 | 90 | 260 | 2,640 | 1650 | 1.025 | 1 | 0 | 0 | 0 | 18 | 6 | 212 | 2602 | 2840 |
| FRWY8 | 3860 | 830 | 90 | 270 | 2,670 | 1537 | 0.955 | 1 | 0 | 0 | 0 | 18 | 6 | 220 | 2631 | 2877 |
| FRWY9 | 4190 | 920 | 100 | 310 | 2,860 | 1792 | 1.113 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2819 | 3100 |
| FRWY10 | 4250 | 950 | 100 | 310 | 2,890 | 1665 | 1.034 | 2 | 0 | 0 | 0 | 20 | 7 | 253 | 2848 | 3130 |
| FRWY11 | 4360 | 1,030 | 100 | 320 | 2,910 | 849 | 0.527 | 2 | 0 | 0 | 0 | 20 | 7 | 261 | 2868 | 3158 |
| FRWY12 | 5220 | 1,440 | 130 | 420 | 3,230 | 2299 | 1.428 | 2 | 0 | 0 | 0 | 26 | 9 | 342 | 3183 | 3564 |
| FRWY13 | 5460 | 1,500 | 140 | 460 | 3,360 | 1689 | 1.049 | 2 | 0 | 0 | 0 | 28 | 9 | 375 | 3311 | 3727 |
| FRWY14 | 5640 | 1,540 | 140 | 480 | 3,480 | 2444 | 1.518 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3430 | 3862 |
| FRWY15 | 5650 | 1,540 | 140 | 480 | 3,490 | 1608 | 0.999 | 3 | 0 | 0 | 0 | 28 | 9 | 391 | 3439 | 3872 |
| FRWY16 | 5750 | 1,610 | 150 | 490 | 3,500 | 2722 | 1.691 | 3 | 0 | 0 | 0 | 30 | 10 | 400 | 3449 | 3893 |
| FRWY17 | 6780 | 2,230 | 180 | 590 | 3,780 | 3198 | 1.987 | 4 | 0 | 0 | 0 | 37 | 12 | 481 | 3725 | 4259 |
| FRWY18 | 7130 | 2,490 | 190 | 620 | 3,830 | 2509 | 1.559 | 4 | 0 | 0 | 0 | 39 | 13 | 506 | 3774 | 4336 |
| FRWY19 | 7450 | 2,630 | 200 | 670 | 3,950 | 910 | 0.565 | 4 | 0 | 0 | 0 | 41 | 13 | 546 | 3893 | 4498 |
| FRWY20 | 8200 | 3,010 | 230 | 760 | 4,200 | 774 | 0.481 | 5 | 0 | 0 | 1 | 47 | 15 | 620 | 4139 | 4827 |
| FRWY21 | 13580 | 5,080 | 340 | 1,200 | 6,960 | 1798 | 1.117 | 8 | 1 | 0 | 1 | 69 | 23 | 978 | 6859 | 7940 |
| FRWY22 | 13930 | 5,210 | 350 | 1,250 | 7,120 | 1035 | 0.643 | 9 | 1 | 1 | 1 | 71 | 24 | 1019 | 7017 | 8141 |
| FRWY23 | 14190 | 5,350 | 360 | 1,290 | 7,190 | 1042 | 0.647 | 9 | 1 | 1 | 1 | 73 | 24 | 1052 | 7086 | 8246 |
| FRWY24 | 15060 | 5,890 | 380 | 1,370 | 7,420 | 2260 | 1.404 | 10 | 1 | 1 | 1 | 77 | 26 | 1117 | 7312 | 8544 |
| FRWY25 | 16820 | 7,110 | 430 | 1,510 | 7,770 | 1305 | 0.811 | 12 | 1 | 1 | 1 | 87 | 29 | 1231 | 7657 | 9019 |
| FRWY26 | 16870 | 7,720 | 400 | 1,420 | 7,330 | 977 | 0.607 | 13 | 1 | 1 | 1 | 81 | 27 | 1158 | 7224 | 8505 |
| FRWY27 | 18670 | 8,150 | 460 | 1,650 | 8,410 | 1186 | 0.737 | 14 | 1 | 1 | 1 | 93 | 31 | 1345 | 8288 | 9774 |
| FRWY28 | 18790 | 8,170 | 490 | 1,720 | 8,410 | 1642 | 1.020 | 14 | 1 | 1 | 1 | 99 | 33 | 1402 | 8288 | 9840 |
| FRWY29 | 18850 | 8,130 | 510 | 1,770 | 8,440 | 1636 | 1.016 | 13 | 1 | 1 | 1 | 103 | 34 | 1443 | 8318 | 9915 |
| FRWY30 | 20100 | 9,210 | 540 | 1,830 | 8,520 | 1555 | 0.966 | 15 | 1 | 1 | 2 | 110 | 36 | 1492 | 8397 | 10053 |
| FRWY31 | 21800 | 10,110 | 590 | 1,900 | 9,200 | 3384 | 2.102 | 17 | 1 | 1 | 2 | 120 | 40 | 1549 | 9067 | 10796 |
| FRWY32 | 22680 | 10,910 | 630 | 1,940 | 9,200 | 1112 | 0.691 | 18 | 1 | 1 | 2 | 128 | 42 | 1582 | 9067 | 10841 |
| FRWY33 | 24150 | 12,070 | 690 | 2,070 | 9,320 | 1935 | 1.202 | 20 | 1 | 1 | 2 | 140 | 46 | 1688 | 9185 | 11084 |
| FRWY34 | 24290 | 12,650 | 690 | 2,030 | 8,920 | 1675 | 1.041 | 21 | 1 | 1 | 2 | 140 | 46 | 1655 | 8791 | 10658 |
| FRWY35 | 10410 | 6,820 | 300 | 820 | 2,470 | 1143 | 0.710 | 11 | 1 | 1 | 1 | 61 | 20 | 669 | 2434 | 3198 |
| FRWY36 | 9270 | 6,830 | 230 | 670 | 1,540 | 9120 | 5.665 | 11 | 1 | 1 | 1 | 47 | 15 | 546 | 1518 | 2140 |
| FRWY37 | 9170 | 6,800 | 220 | 640 | 1,510 | 3802 | 2.362 | 11 | 1 | 1 | 1 | 45 | 15 | 522 | 1488 | 2083 |
| FRWY294 | 393 | 0 | 0 | 0 | 393 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY295 | 393 | 0 | 0 | 0 | 393 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY296 | 393 | 0 | 0 | 0 | 393 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY297 | 393 | 0 | 0 | 0 | 393 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY299 | 393 | 0 | 0 | 0 | 393 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| FRWY75 | 3590 | 1,160 | 90 | 330 | 2,010 | 2861 | 1.777 | 2 | 0 | 0 | 0 | 18 | 6 | 269 | 1981 | 2277 |
| FRWY76 | 3870 | 1,320 | 100 | 360 | 2,090 | 2500 | 1.553 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 |
| FRWY77 | 3870 | 1,320 | 100 | 360 | 2,090 | 450 | 0.280 | 2 | 0 | 0 | 0 | 20 | 7 | 294 | 2060 | 2383 |
| FRWY78 | 3980 | 1,410 | 100 | 370 | 2,100 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 20 | 7 | 302 | 2070 | 2401 |
| FRWY79 | 4140 | 1,530 | 100 | 390 | 2,120 | 1713 | 1.064 | 3 | 0 | 0 | 0 | 20 | 7 | 318 | 2089 | 2437 |
| FRWY80 | 4260 | 1,610 | 100 | 400 | 2,150 | 1703 | 1.058 | 3 | 0 | 0 | 0 | 20 | 7 | 326 | 2119 | 2475 |
| FRWY81 | 4370 | 1,680 | 110 | 410 | 2,170 | 2512 | 1.560 | 3 | 0 | 0 | 0 | 22 | 7 | 334 | 2139 | 2506 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY82 | 4470 | 1,730 | 110 | 430 | 2,200 | 1674 | 1.040 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2168 | 2552 |
| FRWY83 | 4490 | 1,740 | 110 | 430 | 2,210 | 1819 | 1.130 | 3 | 0 | 0 | 0 | 22 | 7 | 351 | 2178 | 2562 |
| FRWY84 | 4140 | 1,660 | 90 | 380 | 2,010 | 1182 | 0.734 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1981 | 2318 |
| FRWY85 | 4110 | 1,640 | 90 | 380 | 2,000 | 2360 | 1.466 | 3 | 0 | 0 | 0 | 18 | 6 | 310 | 1971 | 2308 |
| FRWY86 | 3940 | 1,660 | 80 | 340 | 1,860 | 783 | 0.486 | 3 | 0 | 0 | 0 | 16 | 5 | 277 | 1833 | 2135 |
| FRWY87 | 4110 | 1,790 | 90 | 350 | 1,880 | 1370 | 0.851 | 3 | 0 | 0 | 0 | 18 | 6 | 285 | 1853 | 2166 |
| FRWY101 | 4420 | 2,930 | 100 | 300 | 1,090 | 1703 | 1.058 | 5 | 0 | 0 | 1 | 20 | 7 | 245 | 1074 | 1352 |
| FRWY102 | 3950 | 2,520 | 90 | 280 | 1,060 | 925 | 0.575 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 |
| FRWY103 | 3950 | 2,520 | 90 | 280 | 1,060 | 1770 | 1.100 | 4 | 0 | 0 | 0 | 18 | 6 | 228 | 1045 | 1302 |
| FRWY104 | 3400 | 2,040 | 70 | 250 | 1,040 | 3182 | 1.977 | 3 | 0 | 0 | 0 | 14 | 5 | 204 | 1025 | 1252 |
| FRWY105 | 2890 | 1,610 | 60 | 220 | 1,000 | 1010 | 0.627 | 3 | 0 | 0 | 0 | 12 | 4 | 179 | 986 | 1184 |
| FRWY106 | 2760 | 1,500 | 60 | 210 | 990 | 1305 | 0.811 | 2 | 0 | 0 | 0 | 12 | 4 | 171 | 976 | 1166 |
| FRWY107 | 2630 | 1,410 | 50 | 200 | 970 | 1655 | 1.028 | 2 | 0 | 0 | 0 | 10 | 3 | 163 | 956 | 1135 |
| FRWY108 | 2530 | 1,330 | 50 | 190 | 960 | 4341 | 2.697 | 2 | 0 | 0 | 0 | 10 | 3 | 155 | 946 | 1117 |
| FRWY109 | 2350 | 1,230 | 50 | 150 | 920 | 1728 | 1.073 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 |
| FRWY110 | 2350 | 1,230 | 50 | 150 | 920 | 2788 | 1.732 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 907 | 1045 |
| FRWY111 | 2320 | 1,210 | 50 | 150 | 910 | 7717 | 4.794 | 2 | 0 | 0 | 0 | 10 | 3 | 122 | 897 | 1035 |
| FRWY112 | 2300 | 1,200 | 40 | 150 | 910 | 1384 | 0.860 | 2 | 0 | 0 | 0 | 8 | 3 | 122 | 897 | 1032 |
| FRWY113 | 1970 | 1,020 | 40 | 120 | 790 | 3380 | 2.100 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 |
| FRWY114 | 1970 | 1,020 | 40 | 120 | 790 | 3719 | 2.310 | 2 | 0 | 0 | 0 | 8 | 3 | 98 | 779 | 889 |
| FRWY129 | 1790 | 1,390 | 20 | 130 | 250 | 4476 | 2.781 | 2 | 0 | 0 | 0 | 4 | 1 | 106 | 246 | 361 |
| FRWY130 | 2040 | 1,620 | 30 | 140 | 250 | 3830 | 2.379 | 3 | 0 | 0 | 0 | 6 | 2 | 114 | 246 | 372 |
| FRWY131 | 2250 | 1,800 | 30 | 160 | 260 | 2967 | 1.843 | 3 | 0 | 0 | 0 | 6 | 2 | 130 | 256 | 398 |
| FRWY132 | 2320 | 1,850 | 40 | 160 | 270 | 1163 | 0.722 | 3 | 0 | 0 | 0 | 8 | 3 | 130 | 266 | 411 |
| FRWY133 | 1860 | 1,440 | 30 | 120 | 270 | 4541 | 2.821 | 2 | 0 | 0 | 0 | 6 | 2 | 98 | 266 | 375 |
| FRWY167 | 850 | 480 | 10 | 50 | 310 | 1471 | 0.914 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 306 | 350 |
| FRWY168 | 1110 | 620 | 20 | 70 | 400 | 916 | 0.569 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 394 | 458 |
| FRWY169 | 1070 | 590 | 20 | 70 | 390 | 4924 | 3.059 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 384 | 448 |
| FRWY171 | 700 | 320 | 10 | 40 | 330 | 2145 | 1.333 | 1 | 0 | 0 | 0 | 2 | 1 | 33 | 325 | 361 |
| FRWY172 | 780 | 330 | 10 | 50 | 390 | 3000 | 1.864 | 1 | 0 | 0 | 0 | 2 | 1 | 41 | 384 | 428 |
| FRWY173 | 1280 | 750 | 30 | 80 | 420 | 2501 | 1.554 | 1 | 0 | 0 | 0 | 6 | 2 | 65 | 414 | 489 |
| FRWY174 | 1000 | 470 | 20 | 70 | 440 | 1135 | 0.705 | 1 | 0 | 0 | 0 | 4 | 1 | 57 | 434 | 497 |
| FRWY175 | 1370 | 710 | 30 | 90 | 540 | 1547 | 0.961 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 532 | 615 |
| FRWY176 | 1480 | 760 | 30 | 100 | 590 | 1359 | 0.844 | 1 | 0 | 0 | 0 | 6 | 2 | 82 | 581 | 673 |
| FRWY134 | 1380 | 380 | 30 | 90 | 880 | 1385 | 0.860 | 1 | 0 | 0 | 0 | 6 | 2 | 73 | 867 | 950 |
| FRWY135 | 1350 | 370 | 20 | 90 | 870 | 1711 | 1.063 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 |
| FRWY136 | 1320 | 340 | 20 | 90 | 870 | 1038 | 0.645 | 1 | 0 | 0 | 0 | 4 | 1 | 73 | 857 | 937 |
| FRWY137 | 1200 | 300 | 20 | 70 | 810 | 1516 | 0.942 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 798 | 861 |
| FRWY138 | 1160 | 270 | 20 | 70 | 800 | 2485 | 1.544 | 0 | 0 | 0 | 0 | 4 | 1 | 57 | 788 | 851 |
| FRWY139 | 2220 | 1,200 | 60 | 180 | 780 | 1950 | 1.211 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 769 | 934 |
| FRWY140 | 2180 | 1,140 | 60 | 180 | 800 | 1581 | 0.982 | 2 | 0 | 0 | 0 | 12 | 4 | 147 | 788 | 954 |
| FRWY141 | 2000 | 1,070 | 60 | 160 | 710 | 1447 | 0.899 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 700 | 849 |
| FRWY142 | 2000 | 1,080 | 60 | 160 | 700 | 938 | 0.583 | 2 | 0 | 0 | 0 | 12 | 4 | 130 | 690 | 839 |
| FRWY143 | 1850 | 1,020 | 50 | 140 | 640 | 2032 | 1.262 | 2 | 0 | 0 | 0 | 10 | 3 | 114 | 631 | 760 |
| FRWY144 | 1620 | 890 | 40 | 110 | 580 | 3119 | 1.938 | 1 | 0 | 0 | 0 | 8 | 3 | 90 | 572 | 674 |

**Vehicle Fleet Emissions - Non-Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0024 | 0.0047 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0053 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0022 | 0.0043 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0053 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0026 | 0.0050 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0023 | 0.0045 |

**Segment Emissions**

| Freeway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 6 | 1.63E-08 | 6.35E-09 | 3.67E-09 | 2.17E-09 | 1.58E-06 | 5.06E-07 | 5.39E-06 | 1.44E-04 | | 1.51E-04 |
| FRWY2 | 6 | 1.75E-08 | 6.80E-09 | 3.93E-09 | 2.32E-09 | 2.17E-06 | 6.92E-07 | 7.72E-06 | 2.00E-04 | | 2.10E-04 |
| FRWY3 | 6 | 1.47E-08 | 5.74E-09 | 3.32E-09 | 1.96E-09 | 1.75E-06 | 5.58E-07 | 6.51E-06 | 1.63E-04 | | 1.72E-04 |
| FRWY4 | 6 | 1.70E-08 | 6.64E-09 | 3.84E-09 | 2.27E-09 | 2.09E-06 | 6.67E-07 | 7.22E-06 | 1.77E-04 | | 1.87E-04 |
| FRWY5 | 6 | 1.37E-08 | 5.32E-09 | 3.07E-09 | 1.82E-09 | 1.61E-06 | 5.14E-07 | 5.79E-06 | 1.39E-04 | | 1.47E-04 |
| FRWY6 | 6 | 2.06E-08 | 8.01E-09 | 4.63E-09 | 2.74E-09 | 2.36E-06 | 7.54E-07 | 8.84E-06 | 2.05E-04 | | 2.17E-04 |
| FRWY7 | 6 | 1.67E-08 | 6.49E-09 | 3.75E-09 | 2.22E-09 | 1.87E-06 | 5.96E-07 | 6.99E-06 | 1.62E-04 | | 1.72E-04 |
| FRWY8 | 6 | 1.59E-08 | 6.20E-09 | 3.58E-09 | 2.12E-09 | 1.74E-06 | 5.55E-07 | 6.76E-06 | 1.53E-04 | | 1.62E-04 |
| FRWY9 | 6 | 2.06E-08 | 8.01E-09 | 4.63E-09 | 2.74E-09 | 2.25E-06 | 7.20E-07 | 9.05E-06 | 1.91E-04 | | 2.03E-04 |
| FRWY10 | 6 | 1.97E-08 | 7.69E-09 | 4.44E-09 | 2.63E-09 | 2.09E-06 | 6.69E-07 | 8.41E-06 | 1.79E-04 | | 1.91E-04 |
| FRWY11 | 6 | 1.09E-08 | 4.25E-09 | 2.45E-09 | 1.45E-09 | 1.07E-06 | 3.41E-07 | 4.43E-06 | 9.21E-05 | | 9.79E-05 |
| FRWY12 | 7 | 3.60E-08 | 1.43E-08 | 8.06E-09 | 4.78E-09 | 3.47E-06 | 1.10E-06 | 1.47E-05 | 2.63E-04 | | 2.82E-04 |
| FRWY13 | 7 | 2.76E-08 | 1.09E-08 | 6.16E-09 | 3.65E-09 | 2.74E-06 | 8.72E-07 | 1.18E-05 | 2.01E-04 | | 2.16E-04 |
| FRWY14 | 7 | 4.09E-08 | 1.62E-08 | 9.16E-09 | 5.43E-09 | 3.97E-06 | 1.26E-06 | 1.79E-05 | 3.01E-04 | | 3.24E-04 |
| FRWY15 | 7 | 2.69E-08 | 1.07E-08 | 6.03E-09 | 3.57E-09 | 2.61E-06 | 8.30E-07 | 1.18E-05 | 1.98E-04 | | 2.14E-04 |
| FRWY16 | 7 | 4.77E-08 | 1.89E-08 | 1.07E-08 | 6.32E-09 | 4.74E-06 | 1.50E-06 | 2.03E-05 | 3.37E-04 | | 3.64E-04 |
| FRWY17 | 7 | 7.76E-08 | 3.07E-08 | 1.74E-08 | 1.03E-08 | 6.68E-06 | 2.12E-06 | 2.88E-05 | 4.27E-04 | | 4.65E-04 |
| FRWY18 | 7 | 6.80E-08 | 2.69E-08 | 1.52E-08 | 9.01E-09 | 5.53E-06 | 1.76E-06 | 2.37E-05 | 3.40E-04 | | 3.71E-04 |
| FRWY19 | 7 | 2.60E-08 | 1.03E-08 | 5.82E-09 | 3.45E-09 | 2.11E-06 | 6.71E-07 | 9.29E-06 | 1.27E-04 | | 1.39E-04 |
| FRWY20 | 7 | 2.53E-08 | 1.00E-08 | 5.67E-09 | 3.36E-09 | 2.07E-06 | 6.56E-07 | 8.97E-06 | 1.15E-04 | | 1.27E-04 |
| FRWY21 | 6 | 1.14E-07 | 4.44E-08 | 2.56E-08 | 1.52E-08 | 7.69E-06 | 2.45E-06 | 3.52E-05 | 4.66E-04 | | 5.12E-04 |
| FRWY22 | 6 | 6.73E-08 | 2.62E-08 | 1.51E-08 | 8.95E-09 | 4.55E-06 | 1.45E-06 | 2.11E-05 | 2.75E-04 | | 3.02E-04 |
| FRWY23 | 6 | 6.95E-08 | 2.71E-08 | 1.56E-08 | 9.26E-09 | 4.72E-06 | 1.51E-06 | 2.19E-05 | 2.79E-04 | | 3.07E-04 |
| FRWY24 | 6 | 1.66E-07 | 6.47E-08 | 3.74E-08 | 2.21E-08 | 1.08E-05 | 3.45E-06 | 5.05E-05 | 6.25E-04 | | 6.90E-04 |
| FRWY25 | 6 | 1.16E-07 | 4.51E-08 | 2.60E-08 | 1.54E-08 | 7.06E-06 | 2.25E-06 | 3.21E-05 | 3.78E-04 | | 4.20E-04 |
| FRWY26 | 6 | 9.41E-08 | 3.66E-08 | 2.12E-08 | 1.25E-08 | 4.91E-06 | 1.57E-06 | 2.26E-05 | 2.67E-04 | | 2.96E-04 |
| FRWY27 | 7 | 1.05E-07 | 4.16E-08 | 2.35E-08 | 1.39E-08 | 6.33E-06 | 2.01E-06 | 2.98E-05 | 3.53E-04 | | 3.91E-04 |
| FRWY28 | 7 | 1.46E-07 | 5.78E-08 | 3.26E-08 | 1.94E-08 | 9.33E-06 | 2.97E-06 | 4.30E-05 | 4.88E-04 | | 5.44E-04 |
| FRWY29 | 7 | 1.45E-07 | 5.73E-08 | 3.24E-08 | 1.92E-08 | 9.68E-06 | 3.08E-06 | 4.41E-05 | 4.88E-04 | | 5.45E-04 |
| FRWY30 | 7 | 1.56E-07 | 6.17E-08 | 3.48E-08 | 2.07E-08 | 9.74E-06 | 3.10E-06 | 4.34E-05 | 4.68E-04 | | 5.25E-04 |
| FRWY31 | 7 | 3.72E-07 | 1.47E-07 | 8.32E-08 | 4.94E-08 | 2.32E-05 | 7.36E-06 | 9.80E-05 | 1.10E-03 | | 1.23E-03 |
| FRWY32 | 7 | 1.32E-07 | 5.23E-08 | 2.95E-08 | 1.75E-08 | 8.13E-06 | 2.58E-06 | 3.29E-05 | 3.62E-04 | | 4.06E-04 |
| FRWY33 | 7 | 2.54E-07 | 1.01E-07 | 5.68E-08 | 3.37E-08 | 1.55E-05 | 4.92E-06 | 6.11E-05 | 6.38E-04 | | 7.20E-04 |
| FRWY34 | 7 | 2.30E-07 | 9.13E-08 | 5.16E-08 | 3.06E-08 | 1.34E-05 | 4.26E-06 | 5.18E-05 | 5.28E-04 | | 5.98E-04 |
| FRWY35 | 7 | 8.48E-08 | 3.36E-08 | 1.90E-08 | 1.12E-08 | 3.98E-06 | 1.26E-06 | 1.43E-05 | 9.98E-05 | | 1.19E-04 |
| FRWY36 | 7 | 6.78E-07 | 2.68E-07 | 1.52E-07 | 8.99E-08 | 2.43E-05 | 7.73E-06 | 9.31E-05 | 4.97E-04 | | 6.23E-04 |
| FRWY37 | 7 | 2.81E-07 | 1.11E-07 | 6.29E-08 | 3.73E-08 | 9.70E-06 | 3.08E-06 | 3.71E-05 | 2.03E-04 | | 2.53E-04 |
| FRWY294 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.29E-05 | | 4.29E-05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY295 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.54E-05 | | 1.54E-05 |
| FRWY296 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.65E-05 | | 2.65E-05 |
| FRWY297 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-05 | | 2.20E-05 |
| FRWY299 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.42E-05 | | 2.42E-05 |
| FRWY75 | 3 | 3.85E-08 | 1.52E-08 | 8.64E-09 | 5.12E-09 | 3.24E-06 | 1.03E-06 | 1.54E-05 | 2.14E-04 | | 2.34E-04 |
| FRWY76 | 3 | 3.83E-08 | 1.51E-08 | 8.59E-09 | 5.09E-09 | 3.14E-06 | 1.00E-06 | 1.47E-05 | 1.95E-04 | | 2.14E-04 |
| FRWY77 | 3 | 6.89E-09 | 2.71E-09 | 1.55E-09 | 9.16E-10 | 5.66E-07 | 1.81E-07 | 2.64E-06 | 3.51E-05 | | 3.85E-05 |
| FRWY78 | 3 | 2.26E-08 | 8.91E-09 | 5.08E-09 | 3.01E-09 | 1.74E-06 | 5.56E-07 | 8.35E-06 | 1.08E-04 | | 1.19E-04 |
| FRWY79 | 3 | 3.04E-08 | 1.20E-08 | 6.82E-09 | 4.04E-09 | 2.15E-06 | 6.88E-07 | 1.09E-05 | 1.35E-04 | | 1.49E-04 |
| FRWY80 | 3 | 3.18E-08 | 1.25E-08 | 7.14E-09 | 4.23E-09 | 2.14E-06 | 6.84E-07 | 1.11E-05 | 1.36E-04 | | 1.50E-04 |
| FRWY81 | 3 | 4.90E-08 | 1.93E-08 | 1.10E-08 | 6.51E-09 | 3.47E-06 | 1.11E-06 | 1.68E-05 | 2.03E-04 | | 2.25E-04 |
| FRWY82 | 3 | 3.36E-08 | 1.32E-08 | 7.54E-09 | 4.47E-09 | 2.32E-06 | 7.39E-07 | 1.17E-05 | 1.37E-04 | | 1.52E-04 |
| FRWY83 | 3 | 3.67E-08 | 1.45E-08 | 8.24E-09 | 4.88E-09 | 2.52E-06 | 8.03E-07 | 1.27E-05 | 1.50E-04 | | 1.66E-04 |
| FRWY84 | 3 | 2.28E-08 | 8.96E-09 | 5.11E-09 | 3.03E-09 | 1.34E-06 | 4.27E-07 | 7.32E-06 | 8.85E-05 | | 9.77E-05 |
| FRWY85 | 3 | 4.49E-08 | 1.77E-08 | 1.01E-08 | 5.97E-09 | 2.67E-06 | 8.53E-07 | 1.46E-05 | 1.76E-04 | | 1.94E-04 |
| FRWY86 | 3 | 1.51E-08 | 5.94E-09 | 3.38E-09 | 2.00E-09 | 7.88E-07 | 2.52E-07 | 4.34E-06 | 5.43E-05 | | 5.97E-05 |
| FRWY87 | 3 | 2.85E-08 | 1.12E-08 | 6.38E-09 | 3.78E-09 | 1.55E-06 | 4.95E-07 | 7.81E-06 | 9.60E-05 | | 1.06E-04 |
| FRWY101 | 7 | 5.43E-08 | 2.15E-08 | 1.21E-08 | 7.20E-09 | 1.98E-06 | 6.28E-07 | 7.79E-06 | 6.56E-05 | | 7.61E-05 |
| FRWY102 | 7 | 2.54E-08 | 1.00E-08 | 5.67E-09 | 3.36E-09 | 9.66E-07 | 3.07E-07 | 3.95E-06 | 3.47E-05 | | 3.99E-05 |
| FRWY103 | 7 | 4.85E-08 | 1.92E-08 | 1.09E-08 | 6.43E-09 | 1.85E-06 | 5.87E-07 | 7.55E-06 | 6.63E-05 | | 7.64E-05 |
| FRWY104 | 7 | 7.06E-08 | 2.80E-08 | 1.58E-08 | 9.36E-09 | 2.58E-06 | 8.21E-07 | 1.21E-05 | 1.17E-04 | | 1.33E-04 |
| FRWY105 | 7 | 1.77E-08 | 7.01E-09 | 3.96E-09 | 2.35E-09 | 7.03E-07 | 2.23E-07 | 3.39E-06 | 3.57E-05 | | 4.01E-05 |
| FRWY106 | 7 | 2.13E-08 | 8.43E-09 | 4.76E-09 | 2.82E-09 | 9.08E-07 | 2.89E-07 | 4.18E-06 | 4.57E-05 | | 5.11E-05 |
| FRWY107 | 7 | 2.54E-08 | 1.01E-08 | 5.68E-09 | 3.37E-09 | 9.60E-07 | 3.05E-07 | 5.05E-06 | 5.68E-05 | | 6.31E-05 |
| FRWY108 | 7 | 6.28E-08 | 2.49E-08 | 1.40E-08 | 8.33E-09 | 2.52E-06 | 8.00E-07 | 1.26E-05 | 1.47E-04 | | 1.63E-04 |
| FRWY109 | 7 | 2.31E-08 | 9.16E-09 | 5.17E-09 | 3.07E-09 | 1.00E-06 | 3.18E-07 | 3.95E-06 | 5.62E-05 | | 6.15E-05 |
| FRWY110 | 7 | 3.73E-08 | 1.48E-08 | 8.34E-09 | 4.95E-09 | 1.62E-06 | 5.14E-07 | 6.37E-06 | 9.07E-05 | | 9.93E-05 |
| FRWY111 | 7 | 1.02E-07 | 4.02E-08 | 2.27E-08 | 1.35E-08 | 4.48E-06 | 1.42E-06 | 1.76E-05 | 2.48E-04 | | 2.72E-04 |
| FRWY112 | 7 | 1.81E-08 | 7.15E-09 | 4.04E-09 | 2.40E-09 | 6.42E-07 | 2.04E-07 | 3.16E-06 | 4.45E-05 | | 4.86E-05 |
| FRWY113 | 7 | 3.75E-08 | 1.49E-08 | 8.39E-09 | 4.97E-09 | 1.57E-06 | 4.98E-07 | 6.18E-06 | 9.44E-05 | | 1.03E-04 |
| FRWY114 | 7 | 4.13E-08 | 1.63E-08 | 9.23E-09 | 5.47E-09 | 1.73E-06 | 5.48E-07 | 6.80E-06 | 1.04E-04 | | 1.13E-04 |
| FRWY129 | 7 | 6.77E-08 | 2.68E-08 | 1.51E-08 | 8.98E-09 | 1.04E-06 | 3.30E-07 | 8.87E-06 | 3.96E-05 | | 4.99E-05 |
| FRWY130 | 7 | 6.75E-08 | 2.67E-08 | 1.51E-08 | 8.95E-09 | 1.33E-06 | 4.24E-07 | 8.17E-06 | 3.39E-05 | | 4.39E-05 |
| FRWY131 | 7 | 5.81E-08 | 2.30E-08 | 1.30E-08 | 7.70E-09 | 1.03E-06 | 3.28E-07 | 7.24E-06 | 2.73E-05 | | 3.60E-05 |
| FRWY132 | 7 | 2.34E-08 | 9.27E-09 | 5.24E-09 | 3.10E-09 | 5.40E-07 | 1.71E-07 | 2.84E-06 | 1.11E-05 | | 1.47E-05 |
| FRWY133 | 7 | 7.11E-08 | 2.82E-08 | 1.59E-08 | 9.43E-09 | 1.58E-06 | 5.02E-07 | 8.31E-06 | 4.34E-05 | | 5.39E-05 |
| FRWY167 | 7 | 7.68E-09 | 3.04E-09 | 1.72E-09 | 1.02E-09 | 1.71E-07 | 5.42E-08 | 1.12E-06 | 1.61E-05 | | 1.75E-05 |
| FRWY168 | 7 | 6.18E-09 | 2.45E-09 | 1.38E-09 | 8.19E-10 | 2.13E-07 | 6.75E-08 | 9.77E-07 | 1.30E-05 | | 1.42E-05 |
| FRWY169 | 7 | 3.16E-08 | 1.25E-08 | 7.07E-09 | 4.19E-09 | 1.14E-06 | 3.63E-07 | 5.25E-06 | 6.79E-05 | | 7.47E-05 |
| FRWY171 | 7 | 7.47E-09 | 2.96E-09 | 1.67E-09 | 9.90E-10 | 2.49E-07 | 7.91E-08 | 1.31E-06 | 2.50E-05 | | 2.67E-05 |
| FRWY172 | 7 | 1.08E-08 | 4.27E-09 | 2.41E-09 | 1.43E-09 | 3.48E-07 | 1.11E-07 | 2.29E-06 | 4.14E-05 | | 4.41E-05 |
| FRWY173 | 7 | 2.04E-08 | 8.08E-09 | 4.56E-09 | 2.71E-09 | 8.70E-07 | 2.77E-07 | 3.05E-06 | 3.71E-05 | | 4.14E-05 |
| FRWY174 | 7 | 5.80E-09 | 2.30E-09 | 1.30E-09 | 7.70E-10 | 2.63E-07 | 8.37E-08 | 1.21E-06 | 1.77E-05 | | 1.92E-05 |
| FRWY175 | 7 | 1.19E-08 | 4.73E-09 | 2.67E-09 | 1.58E-09 | 5.38E-07 | 1.71E-07 | 2.12E-06 | 2.95E-05 | | 3.24E-05 |
| FRWY176 | 7 | 1.12E-08 | 4.45E-09 | 2.51E-09 | 1.49E-09 | 4.73E-07 | 1.50E-07 | 2.07E-06 | 2.84E-05 | | 3.11E-05 |
| FRWY134 | 6 | 6.56E-09 | 2.56E-09 | 1.48E-09 | 8.74E-10 | 5.22E-07 | 1.67E-07 | 2.03E-06 | 4.54E-05 | | 4.82E-05 |
| FRWY135 | 6 | 7.90E-09 | 3.08E-09 | 1.78E-09 | 1.05E-09 | 4.30E-07 | 1.37E-07 | 2.51E-06 | 5.55E-05 | | 5.86E-05 |
| FRWY136 | 6 | 4.40E-09 | 1.71E-09 | 9.90E-10 | 5.86E-10 | 2.61E-07 | 8.34E-08 | 1.52E-06 | 3.37E-05 | | 3.55E-05 |
| FRWY137 | 6 | 5.67E-09 | 2.21E-09 | 1.28E-09 | 7.55E-10 | 3.81E-07 | 1.22E-07 | 1.73E-06 | 4.58E-05 | | 4.80E-05 |
| FRWY138 | 6 | 8.37E-09 | 3.26E-09 | 1.88E-09 | 1.11E-09 | 6.25E-07 | 2.00E-07 | 2.83E-06 | 7.41E-05 | | 7.78E-05 |
| FRWY139 | 6 | 2.92E-08 | 1.14E-08 | 6.57E-09 | 3.89E-09 | 1.47E-06 | 4.70E-07 | 5.72E-06 | 5.67E-05 | | 6.44E-05 |
| FRWY140 | 3 | 2.09E-08 | 8.23E-09 | 4.69E-09 | 2.78E-09 | 1.19E-06 | 3.81E-07 | 4.64E-06 | 4.71E-05 | | 5.34E-05 |
| FRWY141 | 3 | 1.80E-08 | 7.07E-09 | 4.03E-09 | 2.39E-09 | 1.09E-06 | 3.49E-07 | 3.77E-06 | 3.83E-05 | | 4.35E-05 |
| FRWY142 | 3 | 1.18E-08 | 4.63E-09 | 2.64E-09 | 1.56E-09 | 7.08E-07 | 2.26E-07 | 2.45E-06 | 2.45E-05 | | 2.79E-05 |
| FRWY143 | 3 | 2.41E-08 | 9.46E-09 | 5.40E-09 | 3.20E-09 | 1.28E-06 | 4.08E-07 | 4.64E-06 | 4.85E-05 | | 5.48E-05 |
| FRWY144 | 3 | 3.22E-08 | 1.27E-08 | 7.23E-09 | 4.28E-09 | 1.57E-06 | 5.01E-07 | 5.59E-06 | 6.74E-05 | | 7.51E-05 |

**World Logistics Center** **2035** **DPM** Based on PB Traffic Results 10/3/2013
**Project Phase 1 and Phase 2 Emissions** **with EMFAC2014 Emission Factors**
**Freeway to Ports Segments** Mitigation: T6 and T7 DSL MY2010

| Freeeway Segment | Diesel Emissions (g/sec) |
|---|---|
| 230 | 2.44E-05 |
| 229 | 1.52E-05 |
| 228 | 6.46E-06 |
| 227 | 1.03E-05 |
| 226 | 2.66E-05 |
| 225 | 1.28E-05 |
| 224 | 3.39E-05 |
| 223 | 1.47E-05 |
| 222 | 1.53E-05 |
| 221 | 1.43E-05 |
| 220 | 1.81E-05 |
| 219 | 3.06E-05 |
| 218 | 3.35E-05 |
| 217 | 3.84E-05 |
| 216 | 3.11E-05 |
| 215 | 1.79E-05 |
| 214 | 1.94E-05 |
| 213 | 3.05E-05 |
| 212 | 2.91E-05 |
| 211 | 2.19E-05 |
| 210 | 4.66E-05 |
| 209 | 2.47E-05 |
| 263 | 2.71E-05 |
| 264 | 1.31E-05 |
| 265 | 8.94E-06 |
| 266 | 8.38E-06 |
| 267 | 8.18E-06 |
| 268 | 1.26E-05 |

| | |
|---|---|
| 269 | 2.40E-05 |
| 270 | 2.23E-05 |
| 271 | 1.31E-05 |
| 272 | 8.40E-06 |
| 273 | 3.08E-06 |
| 274 | 2.14E-05 |
| 275 | 2.19E-05 |
| 276 | 2.21E-05 |
| 277 | 1.30E-05 |
| 278 | 2.19E-05 |
| 279 | 2.30E-05 |
| 280 | 1.88E-05 |
| 281 | 2.66E-05 |
| 282 | 1.41E-05 |
| 283 | 1.82E-05 |
| 284 | 1.84E-05 |
| 285 | 2.23E-05 |
| 286 | 1.98E-05 |
| 287 | 1.55E-05 |
| 288 | 1.82E-05 |
| 289 | 2.84E-05 |
| 290 | 5.87E-05 |
| 291 | 3.68E-05 |
| 292 | 6.71E-05 |
| 293 | 1.90E-05 |
| 262 | 4.46E-05 |
| 261 | 2.24E-05 |
| 260 | 3.50E-05 |
| 259 | 6.65E-05 |
| 258 | 5.90E-05 |
| 257 | 5.14E-05 |
| 256 | 3.79E-05 |
| 255 | 1.97E-05 |
| 254 | 2.14E-05 |
| 253 | 4.02E-05 |

| | |
|---|---|
| 252 | 3.06E-05 |
| 251 | 2.83E-05 |
| 250 | 4.54E-05 |
| 249 | 9.49E-06 |
| 248 | 1.59E-05 |
| 247 | 2.76E-05 |

| | |
|---|---|
| 1.73E-03 | g/sec |
| 3.28E-01 | lbs/day |

## TRAFFIC VOLUMES

| ID | Arterial | From | 2031 Project Phase 1 and 2 - Daily | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 393 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 393 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 393 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 393 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 393 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 393 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 393 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 393 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 393 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 393 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 393 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 393 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 393 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 393 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 393 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 393 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 393 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 393 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 393 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 393 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 393 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 393 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 393 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 393 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 393 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 393 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 393 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 393 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 393 |
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 393 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 393 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 393 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 393 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 393 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 393 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 393 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 393 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 393 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 393 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 393 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 393 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 393 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 393 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 393 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 393 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 393 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 393 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 393 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 393 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 393 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 393 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 393 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 393 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 786 |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 786 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 786 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 786 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 786 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 786 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 786 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 393 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 393 |
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 393 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 393 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 393 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 393 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 393 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 393 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 393 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2035** **DPM** **Mitigation: T6 and T7 DSL MY2010**

Project Phase 1 and Phase 2 Emissions
Freeway Circulation

Project Operations: 24 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.29% | 6.73% | 81.54% | 98.55% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 393 | 0 | 0 | 0 | 393 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 229 | 393 | 0 | 0 | 0 | 393 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 228 | 393 | 0 | 0 | 0 | 393 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 227 | 393 | 0 | 0 | 0 | 393 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 226 | 393 | 0 | 0 | 0 | 393 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 225 | 393 | 0 | 0 | 0 | 393 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 224 | 393 | 0 | 0 | 0 | 393 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 223 | 393 | 0 | 0 | 0 | 393 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 222 | 393 | 0 | 0 | 0 | 393 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 221 | 393 | 0 | 0 | 0 | 393 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 220 | 393 | 0 | 0 | 0 | 393 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 219 | 393 | 0 | 0 | 0 | 393 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 218 | 393 | 0 | 0 | 0 | 393 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 217 | 393 | 0 | 0 | 0 | 393 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 216 | 393 | 0 | 0 | 0 | 393 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 215 | 393 | 0 | 0 | 0 | 393 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 214 | 393 | 0 | 0 | 0 | 393 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 213 | 393 | 0 | 0 | 0 | 393 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 212 | 393 | 0 | 0 | 0 | 393 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 211 | 393 | 0 | 0 | 0 | 393 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 210 | 393 | 0 | 0 | 0 | 393 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 209 | 393 | 0 | 0 | 0 | 393 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 263 | 393 | 0 | 0 | 0 | 393 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 264 | 393 | 0 | 0 | 0 | 393 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 265 | 393 | 0 | 0 | 0 | 393 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 266 | 393 | 0 | 0 | 0 | 393 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 267 | 393 | 0 | 0 | 0 | 393 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 268 | 393 | 0 | 0 | 0 | 393 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 269 | 393 | 0 | 0 | 0 | 393 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 270 | 393 | 0 | 0 | 0 | 393 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 271 | 393 | 0 | 0 | 0 | 393 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 272 | 393 | 0 | 0 | 0 | 393 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 273 | 393 | 0 | 0 | 0 | 393 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 274 | 393 | 0 | 0 | 0 | 393 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 275 | 393 | 0 | 0 | 0 | 393 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 276 | 393 | 0 | 0 | 0 | 393 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 277 | 393 | 0 | 0 | 0 | 393 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 278 | 393 | 0 | 0 | 0 | 393 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 279 | 393 | 0 | 0 | 0 | 393 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 280 | 393 | 0 | 0 | 0 | 393 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 281 | 393 | 0 | 0 | 0 | 393 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 282 | 393 | 0 | 0 | 0 | 393 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 283 | 393 | 0 | 0 | 0 | 393 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 284 | 393 | 0 | 0 | 0 | 393 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 285 | 393 | 0 | 0 | 0 | 393 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 286 | 393 | 0 | 0 | 0 | 393 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 287 | 393 | 0 | 0 | 0 | 393 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 288 | 393 | 0 | 0 | 0 | 393 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 289 | 393 | 0 | 0 | 0 | 393 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 290 | 393 | 0 | 0 | 0 | 393 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 291 | 393 | 0 | 0 | 0 | 393 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 292 | 393 | 0 | 0 | 0 | 393 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 293 | 393 | 0 | 0 | 0 | 393 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 262 | 786 | 0 | 0 | 0 | 786 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 261 | 786 | 0 | 0 | 0 | 786 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 260 | 786 | 0 | 0 | 0 | 786 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 259 | 786 | 0 | 0 | 0 | 786 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 258 | 786 | 0 | 0 | 0 | 786 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 257 | 786 | 0 | 0 | 0 | 786 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 256 | 786 | 0 | 0 | 0 | 786 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 775 | 775 |
| 255 | 393 | 0 | 0 | 0 | 393 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 254 | 393 | 0 | 0 | 0 | 393 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 253 | 393 | 0 | 0 | 0 | 393 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 252 | 393 | 0 | 0 | 0 | 393 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 251 | 393 | 0 | 0 | 0 | 393 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 250 | 393 | 0 | 0 | 0 | 393 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 249 | 393 | 0 | 0 | 0 | 393 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 248 | 393 | 0 | 0 | 0 | 393 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |
| 247 | 393 | 0 | 0 | 0 | 393 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 387 |

**Vehicle Fleet Emissions - Non-Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1<br>Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2<br>Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.0011 | 0.0071 | 0.0043 | 0.0015 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 2 | 0.0009 | 0.0057 | 0.0033 | 0.0011 | 0.0075 | 0.0071 | 0.0024 | 0.0047 |
| 3 | 0.0010 | 0.0061 | 0.0037 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0053 |
| 4 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0068 | 0.0063 | 0.0022 | 0.0043 |
| 5 | 0.0013 | 0.0084 | 0.0048 | 0.0016 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 6 | 0.0010 | 0.0065 | 0.0040 | 0.0013 | 0.0086 | 0.0083 | 0.0028 | 0.0053 |
| 7 | 0.0009 | 0.0057 | 0.0035 | 0.0012 | 0.0080 | 0.0076 | 0.0026 | 0.0050 |
| 8 | 0.0014 | 0.0101 | 0.0054 | 0.0019 | 0.0107 | 0.0104 | 0.0033 | 0.0063 |
| 9 | 0.0008 | 0.0059 | 0.0032 | 0.0011 | 0.0071 | 0.0066 | 0.0023 | 0.0045 |

**Segment Emissions**

| | **Speed** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** | | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Freeway Segment** | **Group** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | **(g/sec)** | | **(g/sec)** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.44E-05 | | 2.44E-05 |
| 229 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.52E-05 | | 1.52E-05 |
| 228 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.46E-06 | | 6.46E-06 |
| 227 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.03E-05 | | 1.03E-05 |
| 226 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-05 | | 2.66E-05 |
| 225 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.28E-05 | | 1.28E-05 |
| 224 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.39E-05 | | 3.39E-05 |
| 223 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.47E-05 | | 1.47E-05 |
| 222 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-05 | | 1.53E-05 |
| 221 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.43E-05 | | 1.43E-05 |
| 220 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.81E-05 | | 1.81E-05 |
| 219 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.06E-05 | | 3.06E-05 |
| 218 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.35E-05 | | 3.35E-05 |
| 217 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.84E-05 | | 3.84E-05 |
| 216 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.11E-05 | | 3.11E-05 |
| 215 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.79E-05 | | 1.79E-05 |
| 214 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.94E-05 | | 1.94E-05 |
| 213 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.05E-05 | | 3.05E-05 |
| 212 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-05 | | 2.91E-05 |
| 211 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-05 | | 2.19E-05 |
| 210 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.66E-05 | | 4.66E-05 |
| 209 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-05 | | 2.47E-05 |
| 263 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.71E-05 | | 2.71E-05 |
| 264 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-05 | | 1.31E-05 |
| 265 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.94E-06 | | 8.94E-06 |
| 266 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.38E-06 | | 8.38E-06 |
| 267 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.18E-06 | | 8.18E-06 |
| 268 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.26E-05 | | 1.26E-05 |
| 269 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-05 | | 2.40E-05 |
| 270 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-05 | | 2.23E-05 |
| 271 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.31E-05 | | 1.31E-05 |
| 272 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.40E-06 | | 8.40E-06 |
| 273 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.08E-06 | | 3.08E-06 |
| 274 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-05 | | 2.14E-05 |
| 275 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-05 | | 2.19E-05 |
| 276 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.21E-05 | | 2.21E-05 |
| 277 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.30E-05 | | 1.30E-05 |
| 278 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.19E-05 | | 2.19E-05 |
| 279 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.30E-05 | | 2.30E-05 |
| 280 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.88E-05 | | 1.88E-05 |
| 281 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.66E-05 | | 2.66E-05 |
| 282 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.41E-05 | | 1.41E-05 |
| 283 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-05 | | 1.82E-05 |
| 284 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.84E-05 | | 1.84E-05 |
| 285 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.23E-05 | | 2.23E-05 |
| 286 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.98E-05 | | 1.98E-05 |
| 287 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-05 | | 1.55E-05 |
| 288 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.82E-05 | | 1.82E-05 |
| 289 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.84E-05 | | 2.84E-05 |
| 290 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.87E-05 | | 5.87E-05 |
| 291 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.68E-05 | | 3.68E-05 |
| 292 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.71E-05 | | 6.71E-05 |
| 293 | 9 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.90E-05 | | 1.90E-05 |
| 262 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.46E-05 | | 4.46E-05 |
| 261 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.24E-05 | | 2.24E-05 |
| 260 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.50E-05 | | 3.50E-05 |
| 259 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.65E-05 | | 6.65E-05 |
| 258 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.90E-05 | | 5.90E-05 |
| 257 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.14E-05 | | 5.14E-05 |
| 256 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.79E-05 | | 3.79E-05 |
| 255 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.97E-05 | | 1.97E-05 |
| 254 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-05 | | 2.14E-05 |
| 253 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.02E-05 | | 4.02E-05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 252 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.06E-05 | | 3.06E-05 |
| 251 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.83E-05 | | 2.83E-05 |
| 250 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.54E-05 | | 4.54E-05 |
| 249 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.49E-06 | | 9.49E-06 |
| 248 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-05 | | 1.59E-05 |
| 247 | 2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.76E-05 | | 2.76E-05 |

# G.3 - Project Construction and Operational AERMOD Model Output

**Appendix G-3 contains the AERMOD project files for all construction and operational diesel particulate matter year calculation years for unmitigated and mitigated emissions:**

**Construction: 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, and 2030**

**Operation: 2022 and 2035 including onsite emissions, local surface street emissions, freeway emissions, and freeway to ports emissions.**

**The AERMOD project files are not included to reduce paper consumption but project files are available on a separate CD.**

# G.4 - Project Operational, Construction Diesel PM and Cancer Risk Summary (Without Mitigation)

**Appendix G-4 contains the calculated annual unmitigated diesel particulate matter air concentrations, cancer risks for sensitive receptors, cancer risks for school site receptors, cancer risks for worker receptors, cancer burden, ono-cancer chronic hazard index, and morbidity/mortality estimates.**

**Cancer risks and burden are based on the "Current OEHHA Guidance" for estimating cancer risks.**

**OEHHA Cancer Risk Methodology**

**Cancer Risk = DPM x CPF x ASF x DBR x ED x EF x TAH / AT**

Cancer Risk = probability of an individual contracting cancer out of a population of 1 million people over a lifetime exposure duration of 30 years

DPM = long-term average concentration of diesel PM as predicted by the air dispersion model (ug/m3)

CPF = cancer potency factor for DPM

ASF = age sensitivity factors that are dependent on the age of the exposed individual

DBR = daily breathing rates that are dependent on the age of the exposed individual (liters/kg-day)

ED = exposure duration (years)

EF = exposure frequency (days/year)

TAH = time at home factors that are dependent on the age of the exposed individual (%)

AT = averaging time over the lifetime of an individual

WAF = worker adjustment factor

Cancer Risk Equation Values as recommended by the California Office of Environmental Health Hazards Assessment

Sensitive Receptors

| | | |
|---|---|---|
| CPF | 1.1 | |
| Exposure Duration | 350 | days |
| Averaging Time | 25550 | days |

ASF, DBR, TAH Age Factors

| Age Group | ASF | 95th %DBR | TAH |
|---|---|---|---|
| 3rd Trimester | 10 | 361 | 0.85 |
| 0-2 years | 10 | 1090 | 0.85 |
| 3-16 years | 3 | 745 | 0.72 |
| >16 years | 1 | 290 | 0.73 |

School Receptors

| | | |
|---|---|---|
| CPF | 1.1 | |
| Exposure Duration | 9 | years |
| Averaging Time | 25550 | days |
| Daily Breathing Rate | 745 | liters/kg-day |
| Exposure Frequency | 180 | days/year |
| Age Factor | 3 | |
| TAH | 1 | |

Worker Receptors

| | | |
|---|---|---|
| CPF | 1.1 | |
| Exposure Duration | 25 | years |
| Averaging Time | 25550 | days |
| Daily Breathing Rate | 230 | liters/kg-day |
| Exposure Frequency | 250 | days/year |
| Age Factor | 1 | |
| TAH | 1 | |
| Worker Adjustment Factor | 1 | assumes the project operates 24/7 |

**World Logistics Center** **with EMFAC2014** **Sample Output**
**Project Operational and Construction Cancer Risks** **No Mitigation**

| X (m) | Y (m) | Max Risk 187.46 30 year Risk (/million) |
|---|---|---|
| 461553 | 3741938 | 0.48823 |
| 462553 | 3741938 | 0.35627 |
| 463553 | 3741938 | 0.33879 |
| 464553 | 3741938 | 0.34836 |
| 465553 | 3741938 | 0.34464 |
| 466553 | 3741938 | 0.36776 |
| 467553 | 3741938 | 0.36564 |
| 468553 | 3741938 | 0.34993 |
| 469553 | 3741938 | 0.37453 |
| 470553 | 3741938 | 0.35478 |
| 471553 | 3741938 | 0.35137 |
| 472553 | 3741938 | 0.36415 |
| 473553 | 3741938 | 0.41776 |
| 474553 | 3741938 | 0.42818 |
| 475553 | 3741938 | 0.44769 |
| 476553 | 3741938 | 0.76690 |
| 477553 | 3741938 | 0.98883 |
| 478553 | 3741938 | 1.03380 |
| 479553 | 3741938 | 1.08241 |
| 480553 | 3741938 | 1.12207 |
| 481553 | 3741938 | 1.20780 |
| 482553 | 3741938 | 1.23577 |
| 483553 | 3741938 | 1.20957 |
| 484553 | 3741938 | 1.23553 |
| 485553 | 3741938 | 1.21404 |
| 486553 | 3741938 | 1.22949 |

**World Logistics Center** **No Mitigation**

**Estimates of Project Annual Average DPM Concentrations During Construction**

| X (m) | Y (m) | 2015 (ug/m3) | 2016 (ug/m3) | 2017 (ug/m3) | 2018 (ug/m3) | 2019 (ug/m3) | 2020 (ug/m3) | 2021 (ug/m3) | 2022 (ug/m3) | 2023 (ug/m3) | 2024 (ug/m3) | 2025 (ug/m3) | 2026 (ug/m3) | 2027 (ug/m3) | 2028 (ug/m3) | 2029 (ug/m3) | 2030 (ug/m3) | 2031 (ug/m3) | 2032 (ug/m3) | 2033 (ug/m3) | 2034 (ug/m3) | 2035 (ug/m3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 461553 | 3741938 | 0.00038 | 0.00058 | 0.00076 | 0.0006 | 0.00078 | 0.00062 | 0.00067 | 0.00462 | 0.00064 | 0.00057 | 0.00061 | 0.00056 | 0.00019 | 0.00018 | 0.00016 | 0.00014 | 0 | 0 | 0 | 0 | 0 |
| 462553 | 3741938 | 0.00031 | 0.00037 | 0.00041 | 0.00033 | 0.00045 | 0.00035 | 0.0004 | 0.00399 | 0.00039 | 0.00036 | 0.00036 | 0.00033 | 0.00012 | 0.00012 | 0.0001 | 0.00014 | 0 | 0 | 0 | 0 | 0 |
| 463553 | 3741938 | 0.0003 | 0.00034 | 0.0004 | 0.00032 | 0.00043 | 0.00033 | 0.00039 | 0.00384 | 0.00037 | 0.00033 | 0.00034 | 0.00031 | 0.00012 | 0.00012 | 0.0001 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 464553 | 3741938 | 0.00033 | 0.00036 | 0.00043 | 0.00034 | 0.00044 | 0.00034 | 0.00042 | 0.00375 | 0.00036 | 0.00034 | 0.00034 | 0.00031 | 0.00012 | 0.00012 | 0.0001 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 465553 | 3741938 | 0.00035 | 0.00037 | 0.00044 | 0.00035 | 0.00044 | 0.00034 | 0.00042 | 0.0036 | 0.00033 | 0.00036 | 0.00032 | 0.00029 | 0.00011 | 0.00011 | 0.00009 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 466553 | 3741938 | 0.00039 | 0.00039 | 0.00051 | 0.0004 | 0.0005 | 0.00039 | 0.00045 | 0.00362 | 0.00037 | 0.00039 | 0.00035 | 0.00032 | 0.00011 | 0.00011 | 0.0001 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 467553 | 3741938 | 0.00038 | 0.00037 | 0.00053 | 0.00041 | 0.00053 | 0.00041 | 0.00044 | 0.00359 | 0.00039 | 0.00039 | 0.00037 | 0.00034 | 0.00012 | 0.0001 | 0.00009 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 468553 | 3741938 | 0.00033 | 0.00034 | 0.00049 | 0.00039 | 0.00052 | 0.00041 | 0.0004 | 0.00357 | 0.00041 | 0.00036 | 0.00038 | 0.00035 | 0.00012 | 0.0001 | 0.00009 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 469553 | 3741938 | 0.00032 | 0.00036 | 0.00053 | 0.00042 | 0.00056 | 0.00046 | 0.00042 | 0.00369 | 0.00048 | 0.00039 | 0.00045 | 0.00041 | 0.00014 | 0.00012 | 0.0001 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 470553 | 3741938 | 0.00026 | 0.00032 | 0.0005 | 0.00039 | 0.00053 | 0.00043 | 0.00038 | 0.00364 | 0.00048 | 0.00036 | 0.00045 | 0.00041 | 0.00015 | 0.00013 | 0.00011 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 471553 | 3741938 | 0.00023 | 0.0003 | 0.00047 | 0.00037 | 0.00053 | 0.00043 | 0.00036 | 0.0036 | 0.00048 | 0.00035 | 0.00045 | 0.00042 | 0.00015 | 0.00014 | 0.00013 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 472553 | 3741938 | 0.00026 | 0.00032 | 0.00044 | 0.00035 | 0.00053 | 0.00042 | 0.00039 | 0.00355 | 0.00048 | 0.00033 | 0.00045 | 0.00042 | 0.00015 | 0.00015 | 0.00014 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 473553 | 3741938 | 0.00035 | 0.00044 | 0.00046 | 0.00036 | 0.00051 | 0.0004 | 0.00049 | 0.00351 | 0.00047 | 0.0004 | 0.00044 | 0.00041 | 0.00015 | 0.00015 | 0.00014 | 0.0002 | 0 | 0 | 0 | 0 | 0 |
| 474553 | 3741938 | 0.00038 | 0.00045 | 0.00051 | 0.0004 | 0.0005 | 0.00039 | 0.00055 | 0.00339 | 0.00043 | 0.0004 | 0.00041 | 0.00038 | 0.00015 | 0.00015 | 0.00014 | 0.00018 | 0 | 0 | 0 | 0 | 0 |
| 475553 | 3741938 | 0.00043 | 0.00051 | 0.0006 | 0.00047 | 0.00055 | 0.00042 | 0.00066 | 0.00337 | 0.00042 | 0.00044 | 0.00039 | 0.00035 | 0.00014 | 0.00014 | 0.00013 | 0.00013 | 0 | 0 | 0 | 0 | 0 |
| 476553 | 3741938 | 0.00073 | 0.00122 | 0.00142 | 0.00112 | 0.00106 | 0.00084 | 0.00137 | 0.00397 | 0.00054 | 0.00115 | 0.00075 | 0.00069 | 0.00024 | 0.00014 | 0.00013 | 0.00027 | 0 | 0 | 0 | 0 | 0 |
| 477553 | 3741938 | 0.00076 | 0.00127 | 0.00172 | 0.00135 | 0.0016 | 0.00131 | 0.00153 | 0.0055 | 0.00138 | 0.00119 | 0.00123 | 0.00115 | 0.00036 | 0.00035 | 0.00033 | 0.00028 | 0 | 0 | 0 | 0 | 0 |
| 478553 | 3741938 | 0.00081 | 0.00135 | 0.00183 | 0.00144 | 0.00171 | 0.0014 | 0.00163 | 0.00603 | 0.00148 | 0.00126 | 0.0013 | 0.00121 | 0.00038 | 0.00036 | 0.00034 | 0.0003 | 0 | 0 | 0 | 0 | 0 |
| 479553 | 3741938 | 0.00088 | 0.00144 | 0.00197 | 0.00155 | 0.00185 | 0.00151 | 0.00174 | 0.00663 | 0.00161 | 0.00135 | 0.00141 | 0.00131 | 0.00041 | 0.00039 | 0.00036 | 0.00032 | 0 | 0 | 0 | 0 | 0 |
| 480553 | 3741938 | 0.00094 | 0.00152 | 0.00212 | 0.00167 | 0.00201 | 0.00164 | 0.00185 | 0.0071 | 0.00176 | 0.00145 | 0.00152 | 0.00142 | 0.00044 | 0.00042 | 0.00039 | 0.00034 | 0 | 0 | 0 | 0 | 0 |
| 481553 | 3741938 | 0.00098 | 0.0016 | 0.00226 | 0.00177 | 0.00218 | 0.00177 | 0.00193 | 0.0074 | 0.00192 | 0.00155 | 0.00166 | 0.00154 | 0.00048 | 0.00046 | 0.00043 | 0.00037 | 0 | 0 | 0 | 0 | 0 |
| 482553 | 3741938 | 0.00101 | 0.00167 | 0.00239 | 0.00188 | 0.00237 | 0.00193 | 0.00198 | 0.00774 | 0.00211 | 0.00166 | 0.00182 | 0.00169 | 0.00053 | 0.00051 | 0.00048 | 0.00039 | 0 | 0 | 0 | 0 | 0 |
| 483553 | 3741938 | 0.00101 | 0.00172 | 0.00241 | 0.0019 | 0.00235 | 0.00188 | 0.002 | 0.00705 | 0.00186 | 0.00175 | 0.00175 | 0.00161 | 0.00055 | 0.00042 | 0.00038 | 0.00041 | 0 | 0 | 0 | 0 | 0 |
| 484553 | 3741938 | 0.00095 | 0.00164 | 0.00237 | 0.00186 | 0.00248 | 0.00202 | 0.00192 | 0.00786 | 0.00223 | 0.0017 | 0.00202 | 0.00188 | 0.00062 | 0.0006 | 0.00056 | 0.0004 | 0 | 0 | 0 | 0 | 0 |
| 485553 | 3741938 | 0.00091 | 0.00159 | 0.0023 | 0.0018 | 0.00242 | 0.00198 | 0.00185 | 0.00799 | 0.00219 | 0.00165 | 0.00203 | 0.00188 | 0.00064 | 0.00063 | 0.00059 | 0.00039 | 0 | 0 | 0 | 0 | 0 |
| 486553 | 3741938 | 0.00092 | 0.00158 | 0.00228 | 0.00179 | 0.00237 | 0.00195 | 0.00187 | 0.00863 | 0.00216 | 0.00163 | 0.00203 | 0.00189 | 0.00065 | 0.00065 | 0.00061 | 0.00038 | 0 | 0 | 0 | 0 | 0 |
| 487553 | 3741938 | 0.00095 | 0.00161 | 0.00231 | 0.00181 | 0.00236 | 0.00194 | 0.0019 | 0.00961 | 0.00215 | 0.00163 | 0.00202 | 0.00188 | 0.00065 | 0.00065 | 0.00062 | 0.00038 | 0 | 0 | 0 | 0 | 0 |
| 488553 | 3741938 | 0.00099 | 0.00163 | 0.00233 | 0.00183 | 0.0024 | 0.00197 | 0.00192 | 0.0109 | 0.00218 | 0.00166 | 0.00201 | 0.00187 | 0.00064 | 0.00065 | 0.00062 | 0.00039 | 0 | 0 | 0 | 0 | 0 |
| 489553 | 3741938 | 0.00104 | 0.00165 | 0.00237 | 0.00186 | 0.00246 | 0.00201 | 0.00198 | 0.01248 | 0.00227 | 0.00169 | 0.00204 | 0.0019 | 0.00064 | 0.00063 | 0.00059 | 0.0004 | 0 | 0 | 0 | 0 | 0 |
| 490553 | 3741938 | 0.00109 | 0.00168 | 0.0024 | 0.00189 | 0.00264 | 0.00214 | 0.00202 | 0.01453 | 0.00285 | 0.00171 | 0.00215 | 0.002 | 0.00065 | 0.00071 | 0.00067 | 0.0004 | 0 | 0 | 0 | 0 | 0 |
| 491553 | 3741938 | 0.00146 | 0.0024 | 0.003 | 0.00236 | 0.00377 | 0.00301 | 0.0022 | 0.01585 | 0.00304 | 0.00257 | 0.0024 | 0.00224 | 0.00065 | 0.00064 | 0.0006 | 0.00059 | 0 | 0 | 0 | 0 | 0 |
| 492553 | 3741938 | 0.00106 | 0.00174 | 0.00233 | 0.00183 | 0.00293 | 0.00236 | 0.00205 | 0.01661 | 0.0022 | 0.00235 | 0.00275 | 0.00253 | 0.00069 | 0.00068 | 0.00063 | 0.00061 | 0 | 0 | 0 | 0 | 0 |
| 493553 | 3741938 | 0.00106 | 0.00155 | 0.00222 | 0.00174 | 0.00223 | 0.00177 | 0.00197 | 0.01761 | 0.00198 | 0.00161 | 0.00214 | 0.00197 | 0.00081 | 0.00071 | 0.00065 | 0.00041 | 0 | 0 | 0 | 0 | 0 |
| 494553 | 3741938 | 0.00112 | 0.00162 | 0.00242 | 0.0019 | 0.00233 | 0.00183 | 0.00217 | 0.01862 | 0.00215 | 0.00155 | 0.00174 | 0.0016 | 0.00068 | 0.00065 | 0.00059 | 0.00037 | 0 | 0 | 0 | 0 | 0 |
| 495553 | 3741938 | 0.00137 | 0.0018 | 0.00315 | 0.00248 | 0.00335 | 0.00271 | 0.00246 | 0.02069 | 0.00315 | 0.00186 | 0.00261 | 0.00242 | 0.00085 | 0.00081 | 0.00077 | 0.00044 | 0 | 0 | 0 | 0 | 0 |
| 496553 | 3741938 | 0.00136 | 0.00173 | 0.00248 | 0.00195 | 0.00275 | 0.00212 | 0.00217 | 0.01968 | 0.0024 | 0.00178 | 0.00211 | 0.00193 | 0.00071 | 0.0007 | 0.00062 | 0.00042 | 0 | 0 | 0 | 0 | 0 |
| 497553 | 3741938 | 0.00143 | 0.00175 | 0.00252 | 0.00198 | 0.00282 | 0.00216 | 0.00221 | 0.01912 | 0.00245 | 0.00181 | 0.00214 | 0.00195 | 0.00073 | 0.00071 | 0.00063 | 0.00043 | 0 | 0 | 0 | 0 | 0 |
| 498553 | 3741938 | 0.0015 | 0.00178 | 0.00256 | 0.00201 | 0.0029 | 0.00221 | 0.00225 | 0.01833 | 0.0025 | 0.00185 | 0.00218 | 0.00198 | 0.00075 | 0.00073 | 0.00064 | 0.00044 | 0 | 0 | 0 | 0 | 0 |
| 499553 | 3741938 | 0.00157 | 0.00181 | 0.00259 | 0.00204 | 0.00298 | 0.00225 | 0.00229 | 0.01747 | 0.00254 | 0.00188 | 0.00222 | 0.00202 | 0.00077 | 0.00076 | 0.00066 | 0.00045 | 0 | 0 | 0 | 0 | 0 |
| 500553 | 3741938 | 0.00163 | 0.00184 | 0.00263 | 0.00206 | 0.00306 | 0.0023 | 0.00232 | 0.01676 | 0.00258 | 0.00193 | 0.00228 | 0.00206 | 0.0008 | 0.00078 | 0.00067 | 0.00046 | 0 | 0 | 0 | 0 | 0 |

**World Logistics Center** **No Mitigation** **Rev 5** **Sample Output** **with EMFAC2014**

**Estimates of Project Annual Average DPM Concentrations During Operations**

| X | Y | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | (m) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) |
| 461553 | 3741938 | 0 | 4.02E-05 | 7.26E-05 | 0.000117 | 0.000158 | 0.00023 | 0.000293 | 0.00033 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 462553 | 3741938 | 0 | 3.41E-05 | 6.16E-05 | 9.9E-05 | 0.000134 | 0.000195 | 0.000248 | 0.00028 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 463553 | 3741938 | 0 | 3.29E-05 | 5.94E-05 | 9.54E-05 | 0.00013 | 0.000188 | 0.000239 | 0.00027 | 0.000109 | 0.000116 | 0.000127 | 0.000139 | 0.00015 | 0.000162 | 0.00017 | 0.000178 | 0.00018 | 0.00018 | 0.00018 | 0.00018 | 0.00018 |
| 464553 | 3741938 | 0 | 3.29E-05 | 5.94E-05 | 9.54E-05 | 0.00013 | 0.000188 | 0.000239 | 0.00027 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 465553 | 3741938 | 0 | 3.17E-05 | 5.72E-05 | 9.19E-05 | 0.000125 | 0.000181 | 0.000231 | 0.00026 | 0.000109 | 0.000116 | 0.000127 | 0.000139 | 0.00015 | 0.000162 | 0.00017 | 0.000178 | 0.00018 | 0.00018 | 0.00018 | 0.00018 | 0.00018 |
| 466553 | 3741938 | 0 | 3.41E-05 | 6.16E-05 | 9.9E-05 | 0.000134 | 0.000195 | 0.000248 | 0.00028 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 467553 | 3741938 | 0 | 3.41E-05 | 6.16E-05 | 9.9E-05 | 0.000134 | 0.000195 | 0.000248 | 0.00028 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 468553 | 3741938 | 0 | 3.29E-05 | 5.94E-05 | 9.54E-05 | 0.00013 | 0.000188 | 0.000239 | 0.00027 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 469553 | 3741938 | 0 | 3.9E-05 | 7.04E-05 | 0.000113 | 0.000154 | 0.000223 | 0.000284 | 0.00032 | 0.000127 | 0.000136 | 0.000148 | 0.000162 | 0.000176 | 0.000189 | 0.000198 | 0.000207 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00021 |
| 470553 | 3741938 | 0 | 3.9E-05 | 7.04E-05 | 0.000113 | 0.000154 | 0.000223 | 0.000284 | 0.00032 | 0.000127 | 0.000136 | 0.000148 | 0.000162 | 0.000176 | 0.000189 | 0.000198 | 0.000207 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00021 |
| 471553 | 3741938 | 0 | 4.15E-05 | 7.48E-05 | 0.00012 | 0.000163 | 0.000236 | 0.000302 | 0.00034 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 472553 | 3741938 | 0 | 4.51E-05 | 8.14E-05 | 0.000131 | 0.000178 | 0.000257 | 0.000328 | 0.00037 | 0.000151 | 0.000162 | 0.000176 | 0.000193 | 0.000209 | 0.000225 | 0.000236 | 0.000247 | 0.00025 | 0.00025 | 0.00025 | 0.00025 | 0.00025 |
| 473553 | 3741938 | 0 | 5.49E-05 | 9.9E-05 | 0.000159 | 0.000216 | 0.000313 | 0.000399 | 0.00045 | 0.000182 | 0.000194 | 0.000211 | 0.000231 | 0.000251 | 0.00027 | 0.000283 | 0.000296 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 |
| 474553 | 3741938 | 0 | 5.85E-05 | 0.000106 | 0.00017 | 0.00023 | 0.000334 | 0.000426 | 0.00048 | 0.000194 | 0.000207 | 0.000225 | 0.000246 | 0.000267 | 0.000288 | 0.000302 | 0.000316 | 0.00032 | 0.00032 | 0.00032 | 0.00032 | 0.00032 |
| 475553 | 3741938 | 0 | 5.85E-05 | 0.000106 | 0.00017 | 0.00023 | 0.000334 | 0.000426 | 0.00048 | 0.000188 | 0.0002 | 0.000218 | 0.000239 | 0.000259 | 0.000279 | 0.000293 | 0.000306 | 0.00031 | 0.00031 | 0.00031 | 0.00031 | 0.00031 |
| 476553 | 3741938 | 0 | 7.93E-05 | 0.000143 | 0.00023 | 0.000312 | 0.000452 | 0.000577 | 0.00065 | 0.00026 | 0.000278 | 0.000303 | 0.000331 | 0.000359 | 0.000388 | 0.000406 | 0.000425 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 |
| 477553 | 3741938 | 0 | 0.000124 | 0.000224 | 0.000361 | 0.00049 | 0.000709 | 0.000905 | 0.00102 | 0.000369 | 0.000394 | 0.00043 | 0.00047 | 0.00051 | 0.00055 | 0.000576 | 0.000602 | 0.00061 | 0.00061 | 0.00061 | 0.00061 | 0.00061 |
| 478553 | 3741938 | 0 | 0.000113 | 0.000205 | 0.000329 | 0.000446 | 0.000647 | 0.000825 | 0.00093 | 0.000376 | 0.000401 | 0.000437 | 0.000477 | 0.000518 | 0.000559 | 0.000586 | 0.000612 | 0.00062 | 0.00062 | 0.00062 | 0.00062 | 0.00062 |
| 479553 | 3741938 | 0 | 9.63E-05 | 0.000174 | 0.000279 | 0.000379 | 0.000549 | 0.000701 | 0.00079 | 0.000369 | 0.000394 | 0.00043 | 0.00047 | 0.00051 | 0.00055 | 0.000576 | 0.000602 | 0.00061 | 0.00061 | 0.00061 | 0.00061 | 0.00061 |
| 480553 | 3741938 | 0 | 8.9E-05 | 0.000161 | 0.000258 | 0.00035 | 0.000508 | 0.000647 | 0.00073 | 0.000321 | 0.000343 | 0.000373 | 0.000408 | 0.000443 | 0.000478 | 0.000501 | 0.000523 | 0.00053 | 0.00053 | 0.00053 | 0.00053 | 0.00053 |
| 481553 | 3741938 | 0 | 8.9E-05 | 0.000161 | 0.000258 | 0.00035 | 0.000508 | 0.000647 | 0.00073 | 0.000412 | 0.000439 | 0.000479 | 0.000524 | 0.000568 | 0.000613 | 0.000642 | 0.000672 | 0.00068 | 0.00068 | 0.00068 | 0.00068 | 0.00068 |
| 482553 | 3741938 | 0 | 8.78E-05 | 0.000158 | 0.000254 | 0.000346 | 0.000501 | 0.000639 | 0.00072 | 0.000327 | 0.000349 | 0.00038 | 0.000416 | 0.000451 | 0.000487 | 0.00051 | 0.000533 | 0.00054 | 0.00054 | 0.00054 | 0.00054 | 0.00054 |
| 483553 | 3741938 | 0 | 8.66E-05 | 0.000156 | 0.000251 | 0.000341 | 0.000494 | 0.00063 | 0.00071 | 0.000315 | 0.000336 | 0.000366 | 0.0004 | 0.000435 | 0.000469 | 0.000491 | 0.000514 | 0.00052 | 0.00052 | 0.00052 | 0.00052 | 0.00052 |
| 484553 | 3741938 | 0 | 8.29E-05 | 0.00015 | 0.00024 | 0.000326 | 0.000473 | 0.000603 | 0.00068 | 0.000303 | 0.000323 | 0.000352 | 0.000385 | 0.000418 | 0.000451 | 0.000472 | 0.000494 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| 485553 | 3741938 | 0 | 8.05E-05 | 0.000145 | 0.000233 | 0.000317 | 0.000459 | 0.000585 | 0.00066 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 486553 | 3741938 | 0 | 8.05E-05 | 0.000145 | 0.000233 | 0.000317 | 0.000459 | 0.000585 | 0.00066 | 0.000303 | 0.000323 | 0.000352 | 0.000385 | 0.000418 | 0.000451 | 0.000472 | 0.000494 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| 487553 | 3741938 | 0 | 7.93E-05 | 0.000143 | 0.00023 | 0.000312 | 0.000452 | 0.000577 | 0.00065 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 488553 | 3741938 | 0 | 7.93E-05 | 0.000143 | 0.00023 | 0.000312 | 0.000452 | 0.000577 | 0.00065 | 0.000303 | 0.000323 | 0.000352 | 0.000385 | 0.000418 | 0.000451 | 0.000472 | 0.000494 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| 489553 | 3741938 | 0 | 8.05E-05 | 0.000145 | 0.000233 | 0.000317 | 0.000459 | 0.000585 | 0.00066 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 490553 | 3741938 | 0 | 7.8E-05 | 0.000141 | 0.000226 | 0.000307 | 0.000445 | 0.000568 | 0.00064 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 491553 | 3741938 | 0 | 7.68E-05 | 0.000139 | 0.000223 | 0.000302 | 0.000438 | 0.000559 | 0.00063 | 0.000291 | 0.00031 | 0.000338 | 0.00037 | 0.000401 | 0.000433 | 0.000453 | 0.000474 | 0.00048 | 0.00048 | 0.00048 | 0.00048 | 0.00048 |
| 492553 | 3741938 | 0 | 6.95E-05 | 0.000125 | 0.000201 | 0.000274 | 0.000396 | 0.000506 | 0.00057 | 0.000266 | 0.000284 | 0.00031 | 0.000339 | 0.000368 | 0.000397 | 0.000416 | 0.000435 | 0.00044 | 0.00044 | 0.00044 | 0.00044 | 0.00044 |
| 493553 | 3741938 | 0 | 5.85E-05 | 0.000106 | 0.00017 | 0.00023 | 0.000334 | 0.000426 | 0.00048 | 0.00023 | 0.000246 | 0.000268 | 0.000293 | 0.000318 | 0.000343 | 0.000359 | 0.000375 | 0.00038 | 0.00038 | 0.00038 | 0.00038 | 0.00038 |
| 494553 | 3741938 | 0 | 5.61E-05 | 0.000101 | 0.000163 | 0.000221 | 0.00032 | 0.000408 | 0.00046 | 0.000224 | 0.000239 | 0.000261 | 0.000285 | 0.000309 | 0.000334 | 0.00035 | 0.000365 | 0.00037 | 0.00037 | 0.00037 | 0.00037 | 0.00037 |
| 495553 | 3741938 | 0 | 7.68E-05 | 0.000139 | 0.000223 | 0.000302 | 0.000438 | 0.000559 | 0.00063 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 496553 | 3741938 | 0 | 7.32E-05 | 0.000132 | 0.000212 | 0.000288 | 0.000417 | 0.000532 | 0.0006 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 497553 | 3741938 | 0 | 7.07E-05 | 0.000128 | 0.000205 | 0.000278 | 0.000403 | 0.000514 | 0.00058 | 0.000285 | 0.000304 | 0.000331 | 0.000362 | 0.000393 | 0.000424 | 0.000444 | 0.000464 | 0.00047 | 0.00047 | 0.00047 | 0.00047 | 0.00047 |
| 498553 | 3741938 | 0 | 7.19E-05 | 0.00013 | 0.000209 | 0.000283 | 0.00041 | 0.000523 | 0.00059 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 499553 | 3741938 | 0 | 7.07E-05 | 0.000128 | 0.000205 | 0.000278 | 0.000403 | 0.000514 | 0.00058 | 0.000321 | 0.000343 | 0.000373 | 0.000408 | 0.000443 | 0.000478 | 0.000501 | 0.000523 | 0.00053 | 0.00053 | 0.00053 | 0.00053 | 0.00053 |
| 500553 | 3741938 | 0 | 6.95E-05 | 0.000125 | 0.000201 | 0.000274 | 0.000396 | 0.000506 | 0.00057 | 0.000382 | 0.000407 | 0.000444 | 0.000485 | 0.000527 | 0.000568 | 0.000595 | 0.000622 | 0.00063 | 0.00063 | 0.00063 | 0.00063 | 0.00063 |
| 501553 | 3741938 | 0 | 6.95E-05 | 0.000125 | 0.000201 | 0.000274 | 0.000396 | 0.000506 | 0.00057 | 0.000315 | 0.000336 | 0.000366 | 0.0004 | 0.000435 | 0.000469 | 0.000491 | 0.000514 | 0.00052 | 0.00052 | 0.00052 | 0.00052 | 0.00052 |
| 502553 | 3741938 | 0 | 0.000102 | 0.000185 | 0.000297 | 0.000403 | 0.000584 | 0.000745 | 0.00084 | 0.000491 | 0.000523 | 0.00057 | 0.000624 | 0.000677 | 0.00073 | 0.000765 | 0.0008 | 0.00081 | 0.00081 | 0.00081 | 0.00081 | 0.00081 |

**World Logistics Center** **Without Mitigation** **with EMFAC2014** **Sample Output**

**Estimates of Project-Related Operational Annual Average DPM Concentrations - School Receptors** **Max Risk 3.2**

| | | | | Annual Average Diesel PM Concentrations | | | | | | | | | Average DPM | Risk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | X | Y | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2015-2023 | 2015-2023 |
| School | Address | (m) | (m) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | |
| Alessandro School | 23311 Dracaea Ave | 478392 | 3754185 | 0.00191 | 0.002999 | 0.004149 | 0.003856 | 0.00497 | 0.004914 | 0.0063 | 0.03006 | 0.004451 | 0.00706762 | 1.10 |
| Armada ES | 25201 John F Kennedy Drive | 479405 | 3751398 | 0.00169 | 0.002863 | 0.004065 | 0.003509 | 0.00412 | 0.003817 | 0.005082 | 0.0263 | 0.003704 | 0.006127789 | 0.96 |
| Badger Springs MS | 24750 Delphinium Avenue | 478494 | 3751846 | 0.00158 | 0.002592 | 0.003653 | 0.003185 | 0.003835 | 0.00357 | 0.004663 | 0.02509 | 0.003319 | 0.005720859 | 0.89 |
| Bear Valley ES | 26125 Fir Ave | 480772 | 3755009 | 0.00336 | 0.005637 | 0.008981 | 0.008361 | 0.009351 | 0.009711 | 0.013667 | 0.04784 | 0.007751 | 0.012739954 | 1.99 |
| Box Springs ES | 11900 Athens Dr | 474430 | 3756438 | 0.0014 | 0.002393 | 0.003273 | 0.003196 | 0.004056 | 0.004273 | 0.005518 | 0.02368 | 0.003309 | 0.00567759 | 0.89 |
| Butterfield ES | 13400 Kitching Street, | 479887 | 3754007 | 0.00239 | 0.003767 | 0.00511 | 0.004572 | 0.005643 | 0.005389 | 0.007281 | 0.03536 | 0.00523 | 0.008304655 | 1.29 |
| Chaparral Hills ES | 24850 Delphinium Avenue | 478608 | 3752008 | 0.00163 | 0.002682 | 0.00376 | 0.003283 | 0.003944 | 0.003686 | 0.004844 | 0.02588 | 0.003504 | 0.005912541 | 0.92 |
| Cloverdale ES | 12050 Kitching St. | 479889 | 3756222 | 0.00308 | 0.005216 | 0.00633 | 0.00566 | 0.006624 | 0.006447 | 0.009198 | 0.04028 | 0.004957 | 0.009754587 | 1.52 |
| Creekside ES | 13563 Heacock Street | 476896 | 3753840 | 0.00155 | 0.002443 | 0.003378 | 0.003163 | 0.004189 | 0.004154 | 0.005172 | 0.02514 | 0.00365 | 0.005871094 | 0.92 |
| Edgemont ES | 21790 Eucalyptus Ave. | 473862 | 3754637 | 0.00116 | 0.001934 | 0.002775 | 0.00281 | 0.00372 | 0.004 | 0.004987 | 0.02064 | 0.00301 | 0.005004159 | 0.78 |
| Hendrick Ranch ES | 25570 Brodiaea Ave., | 479989 | 3752645 | 0.00214 | 0.00352 | 0.004878 | 0.004213 | 0.004862 | 0.004501 | 0.006299 | 0.03203 | 0.004533 | 0.007441898 | 1.16 |
| Honey Hollow ES | 11765 Honey Hollow St. | 476389 | 3756633 | 0.00173 | 0.0026 | 0.003971 | 0.003719 | 0.004654 | 0.004691 | 0.005909 | 0.02783 | 0.003732 | 0.006537523 | 1.02 |
| La Jolla ES | 14745 Willowgrove Place | 483279 | 3751798 | 0.00381 | 0.00717 | 0.011151 | 0.009135 | 0.008304 | 0.007346 | 0.013028 | 0.04819 | 0.007976 | 0.012901093 | 2.01 |
| Landmark MS | 15261 Legendary Dr | 483231 | 3751205 | 0.00332 | 0.006353 | 0.01008 | 0.008265 | 0.007737 | 0.006878 | 0.011304 | 0.03938 | 0.007446 | 0.011195909 | 1.75 |
| Lasselle ES | 26446 Krameria Avenue | 481211 | 3749473 | 0.00176 | 0.003312 | 0.004898 | 0.004117 | 0.004545 | 0.004146 | 0.005552 | 0.0184 | 0.004024 | 0.005639277 | 0.88 |
| March Mountain HS | 24551 Dracaea Avenue, | 478397 | 3754182 | 0.00191 | 0.002999 | 0.004149 | 0.003856 | 0.00497 | 0.004914 | 0.0063 | 0.03007 | 0.004451 | 0.007068731 | 1.10 |
| Midland ES | 11440 Davis St. | 477866 | 3757292 | 0.00219 | 0.003301 | 0.004278 | 0.003765 | 0.004666 | 0.004364 | 0.005689 | 0.03124 | 0.003466 | 0.006995407 | 1.09 |
| Moreno ES | 26700 Cottonwood Ave, | 481754 | 3753876 | 0.0036 | 0.005867 | 0.00865 | 0.007352 | 0.008243 | 0.007489 | 0.011071 | 0.04773 | 0.007528 | 0.011947722 | 1.86 |
| Moreno Valley HS | 23300 Cottonwood Avenue | 476374 | 3753819 | 0.00145 | 0.00229 | 0.003166 | 0.002978 | 0.003901 | 0.003895 | 0.004894 | 0.02375 | 0.003348 | 0.005519075 | 0.86 |
| Mt View MS | 13130 Morrison St | 481560 | 3754548 | 0.00363 | 0.005737 | 0.009688 | 0.008427 | 0.009075 | 0.008633 | 0.012492 | 0.05011 | 0.007775 | 0.012840845 | 2.00 |
| North Ridge ES | 25101 Kalmia Ave. | 479234 | 3757080 | 0.00267 | 0.004247 | 0.004614 | 0.004006 | 0.005003 | 0.004578 | 0.006281 | 0.03523 | 0.00347 | 0.007788774 | 1.21 |
| Palm MS | 11900 Slawson Avenue | 480276 | 3756365 | 0.00327 | 0.005409 | 0.006064 | 0.005329 | 0.006353 | 0.005973 | 0.008588 | 0.04118 | 0.004496 | 0.009629171 | 1.50 |
| Ramona ES | 24801 Bay Ave. | 478776 | 3753511 | 0.00192 | 0.003058 | 0.004144 | 0.003723 | 0.004643 | 0.004445 | 0.005875 | 0.02951 | 0.004315 | 0.006848089 | 1.07 |
| Ridgecrest ES | 28500 John F. Kennedy Dr | 484625 | 3751748 | 0.00605 | 0.011629 | 0.021064 | 0.017044 | 0.013186 | 0.011618 | 0.023715 | 0.06547 | 0.014911 | 0.020520784 | 3.20 |
| Seneca ES | 11615 Wordsworth | 472645 | 3756846 | 0.00115 | 0.002173 | 0.003202 | 0.003604 | 0.004865 | 0.00568 | 0.007131 | 0.02318 | 0.003898 | 0.006098015 | 0.95 |
| Serrano ES | 24100 Delphinium Ave. | 477617 | 3751854 | 0.00142 | 0.002327 | 0.003261 | 0.002889 | 0.003554 | 0.003358 | 0.004309 | 0.02311 | 0.002953 | 0.00524238 | 0.82 |
| Sunnymead ES | 24050 Dracaea Ave | 476294 | 3754669 | 0.0015 | 0.002487 | 0.003575 | 0.00356 | 0.004737 | 0.005013 | 0.00624 | 0.0261 | 0.004037 | 0.006361087 | 0.99 |
| Sunnymead MS | 23996 Eucalyptus Ave. | 477395 | 3754708 | 0.00172 | 0.002802 | 0.004061 | 0.003963 | 0.005204 | 0.005417 | 0.006806 | 0.02904 | 0.004482 | 0.007055025 | 1.10 |
| Towngate ES | 22480 Dracaea Avenue | 475017 | 3754229 | 0.00128 | 0.002056 | 0.00289 | 0.00281 | 0.00368 | 0.003817 | 0.004791 | 0.02174 | 0.003099 | 0.005129142 | 0.80 |
| Valley Christian School | 26755 Alessandro Bovd | 481867 | 3752785 | 0.00319 | 0.005408 | 0.007601 | 0.006386 | 0.006634 | 0.005976 | 0.009592 | 0.04312 | 0.006507 | 0.010490553 | 1.64 |
| Valley View HS | 13135 Nason Street | 481845 | 3754457 | 0.0039 | 0.006192 | 0.010739 | 0.009221 | 0.009593 | 0.009013 | 0.013507 | 0.05235 | 0.008135 | 0.013627614 | 2.12 |
| Victoriano ES | 25650 Los Cabos Dr | 480165 | 3750195 | 0.00169 | 0.003017 | 0.004199 | 0.003563 | 0.004006 | 0.003669 | 0.005026 | 0.02236 | 0.003654 | 0.00568702 | 0.89 |
| Vista del Lago HS | 15150 Lasselle Street | 480678 | 3751306 | 0.00207 | 0.003582 | 0.004995 | 0.004227 | 0.004727 | 0.004295 | 0.006082 | 0.02961 | 0.004247 | 0.007092746 | 1.11 |

**World Logistics Center** **No Mitigation** **Sample Output**

**Estimates of Project-Related Construction and Operational Annual Average DPM Concentrations**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **OEHHA Guidance** | | | **Max Chronic HI** | | | **Mortality** | **Chronic Bronchitis** | **Hospital COPD** | **Hospital Pneumonia** | **Hospital Cardio** | **Hospital Asthma** | **Emergy Asthma** |
| | | **Max Offsite Risk** | **4.1** | | **at a Residence** | **0.1** | | **Cumulative** | **Cumulative** | **Cumulative** | **Cumulative** | **Cumulative** | **Cumulative** | **Cumulative** |
| | | **25-year** | **25-year** | | **Chronic** | | **Census Tract** | **0.2231** | **0.9896** | **0.0019** | **0.0027** | **0.0047** | **0.0011** | **0.0035** |
| | | **Average** | **Average** | | **Non-Cancer** | | **Population** | **Max Location** | **Max Location** | **Max Location** | **Max Location** | **Max Location** | **Max Location** | **Max Location** |
| X | Y | **DPM** | **Risk** | | **Hazard Index** | | | **0.00222** | **0.009859841** | **1.87427E-05** | **2.68318E-05** | **4.72189E-05** | **1.13033E-05** | **3.44872E-05** |
| (m) | (m) | **(ug/m3)** | | | | | | | | | | | | |
| 461553.03 | 3741938 | 0.000674 | 0.04169 | | 0.000990 | | | | | | | | | |
| 462553.03 | 3741938 | 0.0005 | 0.03096 | | 0.000854 | | | | | | | | | |
| 463553.03 | 3741938 | 0.000477 | 0.02950 | | 0.000822 | | | | | | | | | |
| 464553.03 | 3741938 | 0.000485 | 0.03003 | | 0.000804 | | | | | | | | | |
| 465553.03 | 3741938 | 0.00047 | 0.02911 | | 0.000772 | | | | | | | | | |
| 466553.03 | 3741938 | 0.000499 | 0.03086 | | 0.000780 | | | | | | | | | |
| 467553.03 | 3741938 | 0.000501 | 0.03101 | | 0.000774 | | | | | | | | | |
| 468553.03 | 3741938 | 0.000492 | 0.03042 | | 0.000768 | | | | | | | | | |
| 469553.03 | 3741938 | 0.000535 | 0.03311 | | 0.000802 | | | | | | | | | |
| 470553.03 | 3741938 | 0.000523 | 0.03234 | | 0.000792 | | | | | | | | | |
| 471553.03 | 3741938 | 0.000532 | 0.03295 | | 0.000788 | | | | | | | | | |
| 472553.03 | 3741938 | 0.000548 | 0.03394 | | 0.000784 | | | | | | | | | |
| 473553.03 | 3741938 | 0.000608 | 0.03760 | | 0.000792 | | | | | | | | | |
| 474553.03 | 3741938 | 0.000622 | 0.03847 | | 0.000774 | | | | | | | | | |
| 475553.03 | 3741938 | 0.000629 | 0.03893 | | 0.000770 | | | | | | | | | |
| 476553.03 | 3741938 | 0.000988 | 0.06115 | | 0.000924 | | | | | | | | | |
| 477553.03 | 3741938 | 0.001381 | 0.08549 | | 0.001304 | | | | | | | | | |
| 478553.03 | 3741938 | 0.001435 | 0.08880 | | 0.001392 | | | | | | | | | |
| 479553.03 | 3741938 | 0.001484 | 0.09182 | | 0.001484 | | | | | | | | | |
| 480553.03 | 3741938 | 0.0015 | 0.09282 | | 0.001566 | | | | | | | | | |
| 481553.03 | 3741938 | 0.00166 | 0.10277 | | 0.001626 | | | | | | | | | |
| 482553.03 | 3741938 | 0.001647 | 0.10194 | | 0.001692 | | | | | | | | | |
| 483553.03 | 3741938 | 0.001589 | 0.09834 | | 0.001552 | | | | | | | | | |
| 484553.03 | 3741938 | 0.001655 | 0.10240 | | 0.001708 | | | | | | | | | |
| 485553.03 | 3741938 | 0.001635 | 0.10116 | | 0.001730 | | | | | | | | | |
| 486553.03 | 3741938 | 0.001663 | 0.10290 | | 0.001858 | | | | | | | | | |
| 487553.03 | 3741938 | 0.001698 | 0.10510 | | 0.002052 | | | | | | | | | |
| 488553.03 | 3741938 | 0.001765 | 0.10925 | | 0.002310 | | | | | | | | | |
| 489553.03 | 3741938 | 0.001841 | 0.11396 | | 0.002628 | | | | | | | | | |
| 490553.03 | 3741938 | 0.001979 | 0.12249 | | 0.003034 | | | | | | | | | |
| 491553.03 | 3741938 | 0.002261 | 0.13996 | | 0.003296 | | | | | | | | | |
| 492553.03 | 3741938 | 0.002091 | 0.12939 | | 0.003436 | | | | | | | | | |
| 493553.03 | 3741938 | 0.001923 | 0.11903 | | 0.003618 | | | | | | | | | |
| 494553.03 | 3741938 | 0.001951 | 0.12072 | | 0.003816 | | | | | | | | | |
| 495553.03 | 3741938 | 0.002433 | 0.15059 | | 0.004264 | | | | | | | | | |
| 496553.03 | 3741938 | 0.002188 | 0.13543 | | 0.004056 | | | | | | | | | |

**World Logistics Center** **Cancer Burden Calculation** **No Mitigation** **Sample Output**

**Estimates of Project Annual Average DPM Concentrations During Construction and Operation with Age-Specific Age Factors, Breathing rates, and Time at Home factors**

| Max 30-year Cancer Risk | 187.5 | | | Total Census Tract Population | 70-year Burden | 70-year Burden Population > 1 in a million |
|---|---|---|---|---|---|---|
| | | OEHHA 30 year Age-Weighted | 70 year | 10929101 | 1.58 | 879867 |
| X | Y | Risk | Risk | | @1 in a million | |
| (m) | (m) | (/million) | (/million) | | | |
| 461553.03 | 3741938.3 | 0.48823 | 0.51757 | | | |
| 462553.03 | 3741938.3 | 0.35627 | 0.38051 | | | |
| 463553.03 | 3741938.3 | 0.33879 | 0.36176 | | | |
| 464553.03 | 3741938.3 | 0.34836 | 0.37260 | | | |
| 465553.03 | 3741938.3 | 0.34464 | 0.36760 | | | |
| 466553.03 | 3741938.3 | 0.36776 | 0.39201 | | | |
| 467553.03 | 3741938.3 | 0.36564 | 0.38988 | | | |
| 468553.03 | 3741938.3 | 0.34993 | 0.37418 | | | |
| 469553.03 | 3741938.3 | 0.37453 | 0.40133 | | | |
| 470553.03 | 3741938.3 | 0.35478 | 0.38158 | | | |
| 471553.03 | 3741938.3 | 0.35137 | 0.38072 | | | |
| 472553.03 | 3741938.3 | 0.36415 | 0.39605 | | | |
| 473553.03 | 3741938.3 | 0.41776 | 0.45604 | | | |
| 474553.03 | 3741938.3 | 0.42818 | 0.46901 | | | |
| 475553.03 | 3741938.3 | 0.44769 | 0.48725 | | | |
| 476553.03 | 3741938.3 | 0.76690 | 0.82176 | | | |
| 477553.03 | 3741938.3 | 0.98883 | 1.06667 | | | |
| 478553.03 | 3741938.3 | 1.03380 | 1.11291 | | | |
| 479553.03 | 3741938.3 | 1.08241 | 1.16025 | | | |
| 480553.03 | 3741938.3 | 1.12207 | 1.18969 | | | |
| 481553.03 | 3741938.3 | 1.20780 | 1.29457 | | | |
| 482553.03 | 3741938.3 | 1.23577 | 1.30467 | | | |
| 483553.03 | 3741938.3 | 1.20957 | 1.27592 | | | |
| 484553.03 | 3741938.3 | 1.23553 | 1.29933 | | | |
| 485553.03 | 3741938.3 | 1.21404 | 1.27656 | | | |
| 486553.03 | 3741938.3 | 1.22949 | 1.29329 | | | |
| 487553.03 | 3741938.3 | 1.25989 | 1.32242 | | | |
| 488553.03 | 3741938.3 | 1.30613 | 1.36993 | | | |
| 489553.03 | 3741938.3 | 1.36282 | 1.42534 | | | |
| 490553.03 | 3741938.3 | 1.45588 | 1.51840 | | | |
| 491553.03 | 3741938.3 | 1.75865 | 1.81990 | | | |
| 492553.03 | 3741938.3 | 1.53427 | 1.59041 | | | |
| 493553.03 | 3741938.3 | 1.42009 | 1.46858 | | | |

| | | | |
|---|---|---|---|
| 494553.03 | 3741938.3 | 1.45375 | 1.50096 |
| 495553.03 | 3741938.3 | 1.78039 | 1.84292 |
| 496553.03 | 3741938.3 | 1.62216 | 1.68469 |
| 497553.03 | 3741938.3 | 1.62556 | 1.68553 |
| 498553.03 | 3741938.3 | 1.63737 | 1.69990 |

# G.5 - Project Operational, Construction Diesel PM and Cancer Risk Summary (with Project Mitigation)

**Appendix G-5 contains the calculated annual mitigated diesel particulate matter air concentrations, cancer risks for sensitive receptors, cancer risks for school site receptors, cancer risks for worker receptors, cancer burden, non-cancer chronic hazard index, and morbidity/mortality estimates.**

**Cancer risks and burden are based on the "Current OEHHA Guidance" for estimating cancer risks.**

OEHHA Cancer Risk Methodology

Cancer Risk = DPM x CPF x ASF x DBR x ED x EF x TAH / AT

Cancer Risk = probability of an individual contracting cancer out of a population of 1 million people over a lifetime exposure duration of 30 years

DPM = long-term average concentration of diesel PM as predicted by the air dispersion model (ug/m3)

CPF = cancer potency factor for DPM

ASF = age sensitivity factors that are dependent on the age of the exposed individual

DBR = daily breathing rates that are dependent on the age of the exposed individual (liters/kg-day)

ED = exposure duration (years)

EF = exposure frequency (days/year)

TAH = time at home factors that are dependent on the age of the exposed individual (%)

AT = averaging time over the lifetime of an individual

WAF = worker adjustment factor

Cancer Risk Equation Values as recommended by the California Office of Environmental Health Hazards Assessment

Sensitive Receptors

| | | |
|---|---|---|
| CPF | 1.1 | |
| Exposure Duration | 350 | days |
| Averaging Time | 25550 | days |

ASF, DBR, TAH Age Factors

| Age Group | ASF | 95th %DBR | TAH |
|---|---|---|---|
| 3rd Trimester | 10 | 361 | 0.85 |
| 0-2 years | 10 | 1090 | 0.85 |
| 3-16 years | 3 | 745 | 0.72 |
| >16 years | 1 | 290 | 0.73 |

School Receptors

| | | |
|---|---|---|
| CPF | 1.1 | |
| Exposure Duration | 9 | years |
| Averaging Time | 25550 | days |
| Daily Breathing Rate | 745 | liters/kg-day |
| Exposure Frequency | 180 | days/year |
| Age Factor | 3 | |
| TAH | 1 | |

Worker Receptors

| | | |
|---|---|---|
| CPF | 1.1 | |
| Exposure Duration | 25 | years |
| Averaging Time | 25550 | days |
| Daily Breathing Rate | 230 | liters/kg-day |
| Exposure Frequency | 250 | days/year |
| Age Factor | 1 | |
| TAH | 1 | |
| Worker Adjustment Factor | 1 | assumes the project operates 24/7 |

**World Logistics Center** **with EMFAC2014** **With Mitigation**

**Project Operational and Construction Cancer Risks**

**Rev 5** **Sample Output**

**Max 30-year Risk** **16.98**

| X (m) | Y (m) | 30 year Risk (/million) |
|---|---|---|
| 461553 | 3741938 | 0.07822 |
| 462553 | 3741938 | 0.06555 |
| 463553 | 3741938 | 0.06050 |
| 464553 | 3741938 | 0.06226 |
| 465553 | 3741938 | 0.05675 |
| 466553 | 3741938 | 0.06501 |
| 467553 | 3741938 | 0.06477 |
| 468553 | 3741938 | 0.06123 |
| 469553 | 3741938 | 0.06935 |
| 470553 | 3741938 | 0.06911 |
| 471553 | 3741938 | 0.07416 |
| 472553 | 3741938 | 0.08249 |
| 473553 | 3741938 | 0.09881 |
| 474553 | 3741938 | 0.10291 |
| 475553 | 3741938 | 0.10800 |
| 476553 | 3741938 | 0.14969 |
| 477553 | 3741938 | 0.20821 |
| 478553 | 3741938 | 0.21341 |
| 479553 | 3741938 | 0.20809 |
| 480553 | 3741938 | 0.19210 |
| 481553 | 3741938 | 0.22589 |
| 482553 | 3741938 | 0.20210 |
| 483553 | 3741938 | 0.19600 |
| 484553 | 3741938 | 0.19136 |
| 485553 | 3741938 | 0.18621 |
| 486553 | 3741938 | 0.18468 |

**World Logistics Center** **With Mitigation including Tier IV in all years and 5 day work week**

**Estimates of Project Annual Average DPM Concentrations During Construction**

| X | Y | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | (m) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) |
| 461553 | 3741938 | 0.00002 | 0.00003 | 0.00004 | 0.00004 | 0.00005 | 0.00004 | 0.00004 | 0.00003 | 0.00004 | 0.00003 | 0.00002 | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0.00003 | 0 | 0 | 0 | 0 | 0 |
| 462553 | 3741938 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00003 | 0 | 0 | 0 | 0 | 0 |
| 463553 | 3741938 | 0.00001 | 0.00002 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 464553 | 3741938 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 465553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 466553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 467553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 468553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 469553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 470553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 471553 | 3741938 | 0.00001 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 472553 | 3741938 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0 | 0 | 0 | 0 | 0 |
| 473553 | 3741938 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00004 | 0 | 0 | 0 | 0 | 0 |
| 474553 | 3741938 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00004 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00004 | 0 | 0 | 0 | 0 | 0 |
| 475553 | 3741938 | 0.00003 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00003 | 0.00005 | 0.00004 | 0.00003 | 0.00007 | 0.00005 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0 | 0 | 0 | 0 | 0 |
| 476553 | 3741938 | 0.00004 | 0.00007 | 0.00008 | 0.00007 | 0.00006 | 0.00005 | 0.00008 | 0.00008 | 0.00004 | 0.00007 | 0.00007 | 0.00004 | 0.00004 | 0.00003 | 0.00002 | 0.00006 | 0 | 0 | 0 | 0 | 0 |
| 477553 | 3741938 | 0.00004 | 0.00007 | 0.00009 | 0.00008 | 0.00009 | 0.00008 | 0.00009 | 0.00009 | 0.00009 | 0.00008 | 0.00008 | 0.00007 | 0.00007 | 0.00007 | 0.00006 | 0.00006 | 0 | 0 | 0 | 0 | 0 |
| 478553 | 3741938 | 0.00005 | 0.00008 | 0.0001 | 0.00009 | 0.0001 | 0.00008 | 0.0001 | 0.00009 | 0.00009 | 0.00008 | 0.00009 | 0.00007 | 0.00007 | 0.00007 | 0.00006 | 0.00007 | 0 | 0 | 0 | 0 | 0 |
| 479553 | 3741938 | 0.00005 | 0.00009 | 0.0001 | 0.00009 | 0.00011 | 0.00009 | 0.00011 | 0.0001 | 0.0001 | 0.00009 | 0.00009 | 0.00008 | 0.00007 | 0.00007 | 0.00006 | 0.00007 | 0 | 0 | 0 | 0 | 0 |
| 480553 | 3741938 | 0.00005 | 0.00009 | 0.00011 | 0.0001 | 0.00012 | 0.0001 | 0.00011 | 0.00011 | 0.00011 | 0.0001 | 0.0001 | 0.00009 | 0.00008 | 0.00008 | 0.00007 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 481553 | 3741938 | 0.00006 | 0.0001 | 0.00012 | 0.00011 | 0.00013 | 0.0001 | 0.00012 | 0.00013 | 0.00012 | 0.00011 | 0.00011 | 0.00009 | 0.00009 | 0.00009 | 0.00008 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 482553 | 3741938 | 0.00006 | 0.0001 | 0.00013 | 0.00012 | 0.00014 | 0.00011 | 0.00012 | 0.00012 | 0.00013 | 0.00011 | 0.00012 | 0.0001 | 0.0001 | 0.0001 | 0.00008 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 483553 | 3741938 | 0.00006 | 0.0001 | 0.00013 | 0.00012 | 0.00014 | 0.00011 | 0.00012 | 0.00013 | 0.00012 | 0.00011 | 0.00013 | 0.00011 | 0.0001 | 0.00009 | 0.00007 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 484553 | 3741938 | 0.00006 | 0.0001 | 0.00012 | 0.00011 | 0.00014 | 0.00012 | 0.00011 | 0.00013 | 0.00014 | 0.0001 | 0.00013 | 0.00012 | 0.00011 | 0.00011 | 0.0001 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 485553 | 3741938 | 0.00005 | 0.00009 | 0.00012 | 0.00011 | 0.00014 | 0.00011 | 0.00011 | 0.00012 | 0.00014 | 0.0001 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00011 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 486553 | 3741938 | 0.00005 | 0.00009 | 0.00012 | 0.00011 | 0.00014 | 0.00011 | 0.00011 | 0.00012 | 0.00013 | 0.0001 | 0.00012 | 0.00011 | 0.00012 | 0.00012 | 0.00011 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 487553 | 3741938 | 0.00005 | 0.00009 | 0.00012 | 0.00011 | 0.00013 | 0.00011 | 0.00011 | 0.00013 | 0.00013 | 0.0001 | 0.00012 | 0.00011 | 0.00012 | 0.00012 | 0.00011 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 488553 | 3741938 | 0.00006 | 0.00009 | 0.00012 | 0.00011 | 0.00014 | 0.00011 | 0.00012 | 0.00013 | 0.00013 | 0.0001 | 0.00012 | 0.00011 | 0.00012 | 0.00012 | 0.00011 | 0.00008 | 0 | 0 | 0 | 0 | 0 |
| 489553 | 3741938 | 0.00006 | 0.0001 | 0.00013 | 0.00012 | 0.00014 | 0.00012 | 0.00012 | 0.00017 | 0.00014 | 0.00011 | 0.00013 | 0.00011 | 0.00011 | 0.00012 | 0.0001 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 490553 | 3741938 | 0.00006 | 0.0001 | 0.00013 | 0.00012 | 0.00015 | 0.00013 | 0.00013 | 0.00019 | 0.00018 | 0.00017 | 0.00015 | 0.00012 | 0.00012 | 0.00013 | 0.00012 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 491553 | 3741938 | 0.00009 | 0.00014 | 0.00016 | 0.00014 | 0.00023 | 0.00018 | 0.00013 | 0.00013 | 0.0002 | 0.00015 | 0.00018 | 0.00013 | 0.00012 | 0.00012 | 0.00011 | 0.00013 | 0 | 0 | 0 | 0 | 0 |
| 492553 | 3741938 | 0.00006 | 0.0001 | 0.00013 | 0.00012 | 0.00018 | 0.00014 | 0.00013 | 0.00013 | 0.00014 | 0.00011 | 0.00014 | 0.00017 | 0.00013 | 0.00013 | 0.00012 | 0.00014 | 0 | 0 | 0 | 0 | 0 |
| 493553 | 3741938 | 0.00006 | 0.0001 | 0.00013 | 0.00012 | 0.00014 | 0.00011 | 0.00013 | 0.00014 | 0.00013 | 0.00011 | 0.00011 | 0.00013 | 0.00015 | 0.00014 | 0.00012 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 494553 | 3741938 | 0.00007 | 0.0001 | 0.00014 | 0.00013 | 0.00015 | 0.00012 | 0.00014 | 0.00019 | 0.00015 | 0.00013 | 0.00016 | 0.00011 | 0.00013 | 0.00013 | 0.00011 | 0.00009 | 0 | 0 | 0 | 0 | 0 |
| 495553 | 3741938 | 0.00008 | 0.00012 | 0.00018 | 0.00016 | 0.0002 | 0.00016 | 0.00016 | 0.00016 | 0.0002 | 0.00013 | 0.00015 | 0.00015 | 0.00015 | 0.00015 | 0.00013 | 0.0001 | 0 | 0 | 0 | 0 | 0 |
| 496553 | 3741938 | 0.00008 | 0.00011 | 0.00016 | 0.00014 | 0.00018 | 0.00014 | 0.00015 | 0.00017 | 0.00017 | 0.00013 | 0.00015 | 0.00013 | 0.00013 | 0.00014 | 0.00012 | 0.0001 | 0 | 0 | 0 | 0 | 0 |
| 497553 | 3741938 | 0.00008 | 0.00012 | 0.00016 | 0.00015 | 0.00018 | 0.00015 | 0.00016 | 0.00018 | 0.00018 | 0.00013 | 0.00016 | 0.00014 | 0.00014 | 0.00014 | 0.00013 | 0.0001 | 0 | 0 | 0 | 0 | 0 |
| 498553 | 3741938 | 0.00009 | 0.00012 | 0.00017 | 0.00015 | 0.00019 | 0.00015 | 0.00016 | 0.00018 | 0.00019 | 0.00014 | 0.00016 | 0.00014 | 0.00014 | 0.00015 | 0.00013 | 0.00011 | 0 | 0 | 0 | 0 | 0 |
| 499553 | 3741938 | 0.00009 | 0.00013 | 0.00017 | 0.00016 | 0.0002 | 0.00016 | 0.00017 | 0.00019 | 0.00019 | 0.00014 | 0.00017 | 0.00015 | 0.00015 | 0.00015 | 0.00013 | 0.00011 | 0 | 0 | 0 | 0 | 0 |
| 500553 | 3741938 | 0.0001 | 0.00013 | 0.00018 | 0.00016 | 0.0002 | 0.00016 | 0.00017 | 0.00019 | 0.0002 | 0.00015 | 0.00018 | 0.00015 | 0.00015 | 0.00016 | 0.00014 | 0.00012 | 0 | 0 | 0 | 0 | 0 |
| 501553 | 3741938 | 0.0001 | 0.00013 | 0.00018 | 0.00016 | 0.00021 | 0.00017 | 0.00017 | 0.00019 | 0.0002 | 0.00015 | 0.00018 | 0.00016 | 0.00016 | 0.00017 | 0.00014 | 0.00012 | 0 | 0 | 0 | 0 | 0 |
| 502553 | 3741938 | 0.0001 | 0.00013 | 0.00018 | 0.00016 | 0.00022 | 0.00017 | 0.00017 | 0.00019 | 0.0002 | 0.00016 | 0.00019 | 0.00016 | 0.00016 | 0.00017 | 0.00015 | 0.00012 | 0 | 0 | 0 | 0 | 0 |
| 503553 | 3741938 | 0.0001 | 0.00014 | 0.00019 | 0.00017 | 0.00022 | 0.00017 | 0.00018 | 0.00017 | 0.0002 | 0.00015 | 0.00017 | 0.00017 | 0.00017 | 0.00018 | 0.00015 | 0.00013 | 0 | 0 | 0 | 0 | 0 |
| 504553 | 3741938 | 0.0001 | 0.00013 | 0.00017 | 0.00015 | 0.0002 | 0.00016 | 0.00016 | 0.00013 | 0.00018 | 0.00012 | 0.00013 | 0.00015 | 0.00016 | 0.00016 | 0.00014 | 0.00013 | 0 | 0 | 0 | 0 | 0 |
| 505553 | 3741938 | 0.00008 | 0.0001 | 0.00013 | 0.00012 | 0.00016 | 0.00012 | 0.00013 | 0.00004 | 0.00014 | 0.00004 | 0.00004 | 0.00012 | 0.00012 | 0.00012 | 0.00011 | 0.0001 | 0 | 0 | 0 | 0 | 0 |
| 461553 | 3742938 | 0.00002 | 0.00003 | 0.00004 | 0.00004 | 0.00005 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0.00003 | 0 | 0 | 0 | 0 | 0 |
| 462553 | 3742938 | 0.00002 | 0.00004 | 0.00004 | 0.00004 | 0.00005 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0 | 0 | 0 | 0 | 0 |
| 463553 | 3742938 | 0.00002 | 0.00004 | 0.00005 | 0.00004 | 0.00005 | 0.00004 | 0.00005 | 0.00003 | 0.00005 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0 | 0 | 0 | 0 | 0 |
| 464553 | 3742938 | 0.00003 | 0.00004 | 0.00005 | 0.00004 | 0.00005 | 0.00004 | 0.00005 | 0.00003 | 0.00003 | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00004 | 0 | 0 | 0 | 0 | 0 |
| 465553 | 3742938 | 0.00003 | 0.00004 | 0.00005 | 0.00004 | 0.00004 | 0.00004 | 0.00005 | 0.00003 | 0.00003 | 0.00005 | 0.00003 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00004 | 0 | 0 | 0 | 0 | 0 |
| 466553 | 3742938 | 0.00003 | 0.00004 | 0.00004 | 0.00003 | 0.00004 | 0.00003 | 0.00004 | 0.00004 | 0.00003 | 0.00005 | 0.00005 | 0.00003 | 0.00003 | 0.00003 | 0.00002 | 0.00004 | 0 | 0 | 0 | 0 | 0 |
| 467553 | 3742938 | 0.00003 | 0.00005 | 0.00006 | 0.00005 | 0.00006 | 0.00005 | 0.00006 | 0.00003 | 0.00004 | 0.00004 | 0.00003 | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0.00004 | 0 | 0 | 0 | 0 | 0 |

**World Logistics Center** **With Mitigation** **Rev 5** **Sample Output** **with EMFAC2014**

**Estimates of Project Annual Average DPM Concentrations During Operations**

| X | Y | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | (m) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) | (ug/m3) |
| 461553 | 3741938 | 0 | 2.19E-05 | 3.96E-05 | 6.36E-05 | 8.64E-05 | 0.000125 | 0.00016 | 0.00018 | 0.000121 | 0.000129 | 0.000141 | 0.000154 | 0.000167 | 0.00018 | 0.000189 | 0.000198 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 |
| 462553 | 3741938 | 0 | 1.83E-05 | 3.3E-05 | 5.3E-05 | 7.2E-05 | 0.000104 | 0.000133 | 0.00015 | 0.000109 | 0.000116 | 0.000127 | 0.000139 | 0.00015 | 0.000162 | 0.00017 | 0.000178 | 0.00018 | 0.00018 | 0.00018 | 0.00018 | 0.00018 |
| 463553 | 3741938 | 0 | 1.71E-05 | 3.08E-05 | 4.95E-05 | 6.72E-05 | 9.74E-05 | 0.000124 | 0.00014 | 0.000103 | 0.00011 | 0.00012 | 0.000131 | 0.000142 | 0.000153 | 0.000161 | 0.000168 | 0.00017 | 0.00017 | 0.00017 | 0.00017 | 0.00017 |
| 464553 | 3741938 | 0 | 1.71E-05 | 3.08E-05 | 4.95E-05 | 6.72E-05 | 9.74E-05 | 0.000124 | 0.00014 | 0.000103 | 0.00011 | 0.00012 | 0.000131 | 0.000142 | 0.000153 | 0.000161 | 0.000168 | 0.00017 | 0.00017 | 0.00017 | 0.00017 | 0.00017 |
| 465553 | 3741938 | 0 | 1.71E-05 | 3.08E-05 | 4.95E-05 | 6.72E-05 | 9.74E-05 | 0.000124 | 0.00014 | 9.08E-05 | 9.69E-05 | 0.000106 | 0.000116 | 0.000125 | 0.000135 | 0.000142 | 0.000148 | 0.00015 | 0.00015 | 0.00015 | 0.00015 | 0.00015 |
| 466553 | 3741938 | 0 | 1.83E-05 | 3.3E-05 | 5.3E-05 | 7.2E-05 | 0.000104 | 0.000133 | 0.00015 | 0.000109 | 0.000116 | 0.000127 | 0.000139 | 0.00015 | 0.000162 | 0.00017 | 0.000178 | 0.00018 | 0.00018 | 0.00018 | 0.00018 | 0.00018 |
| 467553 | 3741938 | 0 | 1.83E-05 | 3.3E-05 | 5.3E-05 | 7.2E-05 | 0.000104 | 0.000133 | 0.00015 | 0.000109 | 0.000116 | 0.000127 | 0.000139 | 0.00015 | 0.000162 | 0.00017 | 0.000178 | 0.00018 | 0.00018 | 0.00018 | 0.00018 | 0.00018 |
| 468553 | 3741938 | 0 | 1.71E-05 | 3.08E-05 | 4.95E-05 | 6.72E-05 | 9.74E-05 | 0.000124 | 0.00014 | 0.000103 | 0.00011 | 0.00012 | 0.000131 | 0.000142 | 0.000153 | 0.000161 | 0.000168 | 0.00017 | 0.00017 | 0.00017 | 0.00017 | 0.00017 |
| 469553 | 3741938 | 0 | 2.07E-05 | 3.74E-05 | 6.01E-05 | 8.16E-05 | 0.000118 | 0.000151 | 0.00017 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 470553 | 3741938 | 0 | 2.07E-05 | 3.74E-05 | 6.01E-05 | 8.16E-05 | 0.000118 | 0.000151 | 0.00017 | 0.000115 | 0.000123 | 0.000134 | 0.000146 | 0.000159 | 0.000171 | 0.000179 | 0.000188 | 0.00019 | 0.00019 | 0.00019 | 0.00019 | 0.00019 |
| 471553 | 3741938 | 0 | 2.19E-05 | 3.96E-05 | 6.36E-05 | 8.64E-05 | 0.000125 | 0.00016 | 0.00018 | 0.000127 | 0.000136 | 0.000148 | 0.000162 | 0.000176 | 0.000189 | 0.000198 | 0.000207 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00021 |
| 472553 | 3741938 | 0 | 2.44E-05 | 4.4E-05 | 7.07E-05 | 9.6E-05 | 0.000139 | 0.000177 | 0.0002 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 473553 | 3741938 | 0 | 2.93E-05 | 5.28E-05 | 8.48E-05 | 0.000115 | 0.000167 | 0.000213 | 0.00024 | 0.00017 | 0.000181 | 0.000197 | 0.000216 | 0.000234 | 0.000252 | 0.000264 | 0.000277 | 0.00028 | 0.00028 | 0.00028 | 0.00028 | 0.00028 |
| 474553 | 3741938 | 0 | 3.17E-05 | 5.72E-05 | 9.19E-05 | 0.000125 | 0.000181 | 0.000231 | 0.00026 | 0.000176 | 0.000187 | 0.000204 | 0.000223 | 0.000242 | 0.000261 | 0.000274 | 0.000286 | 0.00029 | 0.00029 | 0.00029 | 0.00029 | 0.00029 |
| 475553 | 3741938 | 0 | 3.17E-05 | 5.72E-05 | 9.19E-05 | 0.000125 | 0.000181 | 0.000231 | 0.00026 | 0.000176 | 0.000187 | 0.000204 | 0.000223 | 0.000242 | 0.000261 | 0.000274 | 0.000286 | 0.00029 | 0.00029 | 0.00029 | 0.00029 | 0.00029 |
| 476553 | 3741938 | 0 | 4.27E-05 | 7.7E-05 | 0.000124 | 0.000168 | 0.000243 | 0.00031 | 0.00035 | 0.000236 | 0.000252 | 0.000275 | 0.0003 | 0.000326 | 0.000352 | 0.000368 | 0.000385 | 0.00039 | 0.00039 | 0.00039 | 0.00039 | 0.00039 |
| 477553 | 3741938 | 0 | 6.71E-05 | 0.000121 | 0.000194 | 0.000264 | 0.000383 | 0.000488 | 0.00055 | 0.000327 | 0.000349 | 0.00038 | 0.000416 | 0.000451 | 0.000487 | 0.00051 | 0.000533 | 0.00054 | 0.00054 | 0.00054 | 0.00054 | 0.00054 |
| 478553 | 3741938 | 0 | 6.34E-05 | 0.000114 | 0.000184 | 0.00025 | 0.000362 | 0.000461 | 0.00052 | 0.000339 | 0.000362 | 0.000394 | 0.000431 | 0.000468 | 0.000505 | 0.000529 | 0.000553 | 0.00056 | 0.00056 | 0.00056 | 0.00056 | 0.00056 |
| 479553 | 3741938 | 0 | 5.36E-05 | 9.68E-05 | 0.000156 | 0.000211 | 0.000306 | 0.00039 | 0.00044 | 0.000339 | 0.000362 | 0.000394 | 0.000431 | 0.000468 | 0.000505 | 0.000529 | 0.000553 | 0.00056 | 0.00056 | 0.00056 | 0.00056 | 0.00056 |
| 480553 | 3741938 | 0 | 5E-05 | 9.02E-05 | 0.000145 | 0.000197 | 0.000285 | 0.000364 | 0.00041 | 0.000291 | 0.00031 | 0.000338 | 0.00037 | 0.000401 | 0.000433 | 0.000453 | 0.000474 | 0.00048 | 0.00048 | 0.00048 | 0.00048 | 0.00048 |
| 481553 | 3741938 | 0 | 5E-05 | 9.02E-05 | 0.000145 | 0.000197 | 0.000285 | 0.000364 | 0.00041 | 0.000376 | 0.000401 | 0.000437 | 0.000477 | 0.000518 | 0.000559 | 0.000586 | 0.000612 | 0.00062 | 0.00062 | 0.00062 | 0.00062 | 0.00062 |
| 482553 | 3741938 | 0 | 5E-05 | 9.02E-05 | 0.000145 | 0.000197 | 0.000285 | 0.000364 | 0.00041 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 483553 | 3741938 | 0 | 4.76E-05 | 8.58E-05 | 0.000138 | 0.000187 | 0.000271 | 0.000346 | 0.00039 | 0.000285 | 0.000304 | 0.000331 | 0.000362 | 0.000393 | 0.000424 | 0.000444 | 0.000464 | 0.00047 | 0.00047 | 0.00047 | 0.00047 | 0.00047 |
| 484553 | 3741938 | 0 | 4.51E-05 | 8.14E-05 | 0.000131 | 0.000178 | 0.000257 | 0.000328 | 0.00037 | 0.000273 | 0.000291 | 0.000317 | 0.000347 | 0.000376 | 0.000406 | 0.000425 | 0.000444 | 0.00045 | 0.00045 | 0.00045 | 0.00045 | 0.00045 |
| 485553 | 3741938 | 0 | 4.51E-05 | 8.14E-05 | 0.000131 | 0.000178 | 0.000257 | 0.000328 | 0.00037 | 0.000266 | 0.000284 | 0.00031 | 0.000339 | 0.000368 | 0.000397 | 0.000416 | 0.000435 | 0.00044 | 0.00044 | 0.00044 | 0.00044 | 0.00044 |
| 486553 | 3741938 | 0 | 4.39E-05 | 7.92E-05 | 0.000127 | 0.000173 | 0.00025 | 0.000319 | 0.00036 | 0.000266 | 0.000284 | 0.00031 | 0.000339 | 0.000368 | 0.000397 | 0.000416 | 0.000435 | 0.00044 | 0.00044 | 0.00044 | 0.00044 | 0.00044 |
| 487553 | 3741938 | 0 | 4.39E-05 | 7.92E-05 | 0.000127 | 0.000173 | 0.00025 | 0.000319 | 0.00036 | 0.000266 | 0.000284 | 0.00031 | 0.000339 | 0.000368 | 0.000397 | 0.000416 | 0.000435 | 0.00044 | 0.00044 | 0.00044 | 0.00044 | 0.00044 |
| 488553 | 3741938 | 0 | 4.51E-05 | 8.14E-05 | 0.000131 | 0.000178 | 0.000257 | 0.000328 | 0.00037 | 0.000273 | 0.000291 | 0.000317 | 0.000347 | 0.000376 | 0.000406 | 0.000425 | 0.000444 | 0.00045 | 0.00045 | 0.00045 | 0.00045 | 0.00045 |
| 489553 | 3741938 | 0 | 4.51E-05 | 8.14E-05 | 0.000131 | 0.000178 | 0.000257 | 0.000328 | 0.00037 | 0.000273 | 0.000291 | 0.000317 | 0.000347 | 0.000376 | 0.000406 | 0.000425 | 0.000444 | 0.00045 | 0.00045 | 0.00045 | 0.00045 | 0.00045 |
| 490553 | 3741938 | 0 | 4.51E-05 | 8.14E-05 | 0.000131 | 0.000178 | 0.000257 | 0.000328 | 0.00037 | 0.000273 | 0.000291 | 0.000317 | 0.000347 | 0.000376 | 0.000406 | 0.000425 | 0.000444 | 0.00045 | 0.00045 | 0.00045 | 0.00045 | 0.00045 |
| 491553 | 3741938 | 0 | 4.39E-05 | 7.92E-05 | 0.000127 | 0.000173 | 0.00025 | 0.000319 | 0.00036 | 0.00026 | 0.000278 | 0.000303 | 0.000331 | 0.000359 | 0.000388 | 0.000406 | 0.000425 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 |
| 492553 | 3741938 | 0 | 3.9E-05 | 7.04E-05 | 0.000113 | 0.000154 | 0.000223 | 0.000284 | 0.00032 | 0.000242 | 0.000259 | 0.000282 | 0.000308 | 0.000334 | 0.000361 | 0.000378 | 0.000395 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 |
| 493553 | 3741938 | 0 | 3.29E-05 | 5.94E-05 | 9.54E-05 | 0.00013 | 0.000188 | 0.000239 | 0.00027 | 0.000212 | 0.000226 | 0.000246 | 0.00027 | 0.000293 | 0.000316 | 0.000331 | 0.000346 | 0.00035 | 0.00035 | 0.00035 | 0.00035 | 0.00035 |
| 494553 | 3741938 | 0 | 3.17E-05 | 5.72E-05 | 9.19E-05 | 0.000125 | 0.000181 | 0.000231 | 0.00026 | 0.000206 | 0.00022 | 0.000239 | 0.000262 | 0.000284 | 0.000307 | 0.000321 | 0.000336 | 0.00034 | 0.00034 | 0.00034 | 0.00034 | 0.00034 |
| 495553 | 3741938 | 0 | 4.39E-05 | 7.92E-05 | 0.000127 | 0.000173 | 0.00025 | 0.000319 | 0.00036 | 0.000279 | 0.000297 | 0.000324 | 0.000354 | 0.000384 | 0.000415 | 0.000435 | 0.000454 | 0.00046 | 0.00046 | 0.00046 | 0.00046 | 0.00046 |
| 496553 | 3741938 | 0 | 4.27E-05 | 7.7E-05 | 0.000124 | 0.000168 | 0.000243 | 0.00031 | 0.00035 | 0.000279 | 0.000297 | 0.000324 | 0.000354 | 0.000384 | 0.000415 | 0.000435 | 0.000454 | 0.00046 | 0.00046 | 0.00046 | 0.00046 | 0.00046 |
| 497553 | 3741938 | 0 | 4.02E-05 | 7.26E-05 | 0.000117 | 0.000158 | 0.00023 | 0.000293 | 0.00033 | 0.000273 | 0.000291 | 0.000317 | 0.000347 | 0.000376 | 0.000406 | 0.000425 | 0.000444 | 0.00045 | 0.00045 | 0.00045 | 0.00045 | 0.00045 |
| 498553 | 3741938 | 0 | 4.15E-05 | 7.48E-05 | 0.00012 | 0.000163 | 0.000236 | 0.000302 | 0.00034 | 0.000279 | 0.000297 | 0.000324 | 0.000354 | 0.000384 | 0.000415 | 0.000435 | 0.000454 | 0.00046 | 0.00046 | 0.00046 | 0.00046 | 0.00046 |
| 499553 | 3741938 | 0 | 4.27E-05 | 7.7E-05 | 0.000124 | 0.000168 | 0.000243 | 0.00031 | 0.00035 | 0.000303 | 0.000323 | 0.000352 | 0.000385 | 0.000418 | 0.000451 | 0.000472 | 0.000494 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| 500553 | 3741938 | 0 | 4.15E-05 | 7.48E-05 | 0.00012 | 0.000163 | 0.000236 | 0.000302 | 0.00034 | 0.000357 | 0.000381 | 0.000416 | 0.000454 | 0.000493 | 0.000532 | 0.000557 | 0.000583 | 0.00059 | 0.00059 | 0.00059 | 0.00059 | 0.00059 |
| 501553 | 3741938 | 0 | 4.27E-05 | 7.7E-05 | 0.000124 | 0.000168 | 0.000243 | 0.00031 | 0.00035 | 0.000297 | 0.000317 | 0.000345 | 0.000377 | 0.00041 | 0.000442 | 0.000463 | 0.000484 | 0.00049 | 0.00049 | 0.00049 | 0.00049 | 0.00049 |
| 502553 | 3741938 | 0 | 7.56E-05 | 0.000136 | 0.000219 | 0.000298 | 0.000431 | 0.00055 | 0.00062 | 0.000478 | 0.000511 | 0.000556 | 0.000608 | 0.00066 | 0.000712 | 0.000746 | 0.00078 | 0.00079 | 0.00079 | 0.00079 | 0.00079 | 0.00079 |
| 503553 | 3741938 | 0 | 3.9E-05 | 7.04E-05 | 0.000113 | 0.000154 | 0.000223 | 0.000284 | 0.00032 | 0.000266 | 0.000284 | 0.00031 | 0.000339 | 0.000368 | 0.000397 | 0.000416 | 0.000435 | 0.00044 | 0.00044 | 0.00044 | 0.00044 | 0.00044 |
| 504553 | 3741938 | 0 | 3.29E-05 | 5.94E-05 | 9.54E-05 | 0.00013 | 0.000188 | 0.000239 | 0.00027 | 0.0002 | 0.000213 | 0.000232 | 0.000254 | 0.000276 | 0.000297 | 0.000312 | 0.000326 | 0.00033 | 0.00033 | 0.00033 | 0.00033 | 0.00033 |
| 505553 | 3741938 | 0 | 2.07E-05 | 3.74E-05 | 6.01E-05 | 8.16E-05 | 0.000118 | 0.000151 | 0.00017 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 461553 | 3742938 | 0 | 2.44E-05 | 4.4E-05 | 7.07E-05 | 9.6E-05 | 0.000139 | 0.000177 | 0.0002 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 462553 | 3742938 | 0 | 2.44E-05 | 4.4E-05 | 7.07E-05 | 9.6E-05 | 0.000139 | 0.000177 | 0.0002 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 463553 | 3742938 | 0 | 2.44E-05 | 4.4E-05 | 7.07E-05 | 9.6E-05 | 0.000139 | 0.000177 | 0.0002 | 0.000145 | 0.000155 | 0.000169 | 0.000185 | 0.000201 | 0.000216 | 0.000227 | 0.000237 | 0.00024 | 0.00024 | 0.00024 | 0.00024 | 0.00024 |
| 464553 | 3742938 | 0 | 2.44E-05 | 4.4E-05 | 7.07E-05 | 9.6E-05 | 0.000139 | 0.000177 | 0.0002 | 0.000139 | 0.000149 | 0.000162 | 0.000177 | 0.000192 | 0.000207 | 0.000217 | 0.000227 | 0.00023 | 0.00023 | 0.00023 | 0.00023 | 0.00023 |
| 465553 | 3742938 | 0 | 2.56E-05 | 4.62E-05 | 7.42E-05 | 0.000101 | 0.000146 | 0.000186 | 0.00021 | 0.000145 | 0.000155 | 0.000169 | 0.000185 | 0.000201 | 0.000216 | 0.000227 | 0.000237 | 0.00024 | 0.00024 | 0.00024 | 0.00024 | 0.00024 |
| 466553 | 3742938 | 0 | 2.56E-05 | 4.62E-05 | 7.42E-05 | 0.000101 | 0.000146 | 0.000186 | 0.00021 | 0.000145 | 0.000155 | 0.000169 | 0.000185 | 0.000201 | 0.000216 | 0.000227 | 0.000237 | 0.00024 | 0.00024 | 0.00024 | 0.00024 | 0.00024 |

**World Logistics Center** **With Mitigation** **Sample Output** **with EMFAC2014**

**Estimates of Project-Related Operational Annual Average DPM Concentrations - School Site Receptors** **Max Risk 0.34**

| School | Address | X (m) | Y (m) | 2015 (ug/m3) | 2016 (ug/m3) | 2017 (ug/m3) | 2018 (ug/m3) | 2019 (ug/m3) | 2020 (ug/m3) | 2021 (ug/m3) | 2022 (ug/m3) | 2023 (ug/m3) | Average DPM 2015-2023 (ug/m3) | Risk 2015-2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ridgecrest ES | 28500 John F. Kennedy Dr | 484625 | 3751748 | 0.00036 | 0.000841 | 0.001373 | 0.001513 | 0.001472 | 0.001708 | 0.002693 | 0.00208 | 0.00196 | 0.001555583 | 0.24 |
| La Jolla ES | 14745 Willowgrove Place | 483279 | 3751798 | 0.00022 | 0.000531 | 0.000805 | 0.00092 | 0.000987 | 0.001157 | 0.001679 | 0.00156 | 0.001266 | 0.001013839 | 0.16 |
| Landmark MS | 15261 Legendary Dr | 483231 | 3751205 | 0.00019 | 0.000484 | 0.000732 | 0.000839 | 0.000928 | 0.001085 | 0.001526 | 0.00128 | 0.001165 | 0.00091428 | 0.14 |
| Victoriano ES | 25650 Los Cabos Dr | 480165 | 3750195 | 0.0001 | 0.000274 | 0.000397 | 0.00049 | 0.000608 | 0.000751 | 0.000974 | 0.00105 | 0.00082 | 0.000607111 | 0.09 |
| Lasselle ES | 26446 Krameria Avenue | 481211 | 3749473 | 0.0001 | 0.000291 | 0.00044 | 0.000532 | 0.000657 | 0.000813 | 0.001057 | 0.00127 | 0.000834 | 0.000665935 | 0.10 |
| Valley Christian School | 26755 Alessandro Bovd | 481867 | 3752785 | 0.00019 | 0.000466 | 0.000682 | 0.000812 | 0.000954 | 0.00116 | 0.001595 | 0.0015 | 0.001282 | 0.000960266 | 0.15 |
| Vista del Lago HS | 15150 Lasselle Street | 480678 | 3751306 | 0.00012 | 0.000315 | 0.000457 | 0.000562 | 0.000691 | 0.000844 | 0.001114 | 0.00118 | 0.000906 | 0.000687616 | 0.11 |
| Hendrick Ranch ES | 25570 Brodiaea Ave., | 479989 | 3752645 | 0.00013 | 0.000348 | 0.000516 | 0.000658 | 0.000821 | 0.001032 | 0.001353 | 0.00139 | 0.001134 | 0.000820131 | 0.13 |
| Armada ES | 25201 John F Kennedy Drive | 479405 | 3751398 | 0.0001 | 0.000288 | 0.000441 | 0.000561 | 0.000704 | 0.00089 | 0.001151 | 0.00123 | 0.000989 | 0.000706127 | 0.11 |
| Chaparral Hills ES | 24850 Delphinium Avenue | 478608 | 3752008 | 0.0001 | 0.000277 | 0.000419 | 0.000538 | 0.000689 | 0.000873 | 0.001122 | 0.00121 | 0.000947 | 0.00068613 | 0.11 |
| Badger Springs MS | 24750 Delphinium Avenue | 478494 | 3751846 | 0.00009 | 0.000271 | 0.000408 | 0.00052 | 0.000665 | 0.000839 | 0.001078 | 0.00114 | 0.000889 | 0.000655425 | 0.10 |
| Serrano ES | 24100 Delphinium Ave. | 477617 | 3751854 | 0.00008 | 0.000256 | 0.000397 | 0.000514 | 0.000664 | 0.000856 | 0.001084 | 0.00124 | 0.000796 | 0.000654051 | 0.10 |
| Ramona ES | 24801 Bay Ave. | 478776 | 3753511 | 0.00011 | 0.000347 | 0.000529 | 0.000703 | 0.000906 | 0.001179 | 0.001516 | 0.00168 | 0.001298 | 0.00091854 | 0.14 |
| Cloverdale ES | 12050 Kitching St. | 479889 | 3756222 | 0.00018 | 0.000539 | 0.000769 | 0.001001 | 0.001269 | 0.001659 | 0.002179 | 0.00221 | 0.001645 | 0.001272334 | 0.20 |
| North Ridge ES | 25101 Kalmia Ave. | 479234 | 3757080 | 0.00016 | 0.000389 | 0.000501 | 0.000633 | 0.000797 | 0.000993 | 0.001301 | 0.00135 | 0.000965 | 0.000787679 | 0.12 |
| Palm MS | 11900 Slawson Avenue | 480276 | 3756365 | 0.00019 | 0.000515 | 0.000689 | 0.000874 | 0.001106 | 0.001408 | 0.00186 | 0.00185 | 0.001375 | 0.001096419 | 0.17 |
| Midland ES | 11440 Davis St. | 477866 | 3757292 | 0.00013 | 0.000345 | 0.000492 | 0.000621 | 0.000801 | 0.001008 | 0.001305 | 0.00135 | 0.000992 | 0.000782594 | 0.12 |
| Honey Hollow ES | 11765 Honey Hollow St. | 476389 | 3756633 | 0.00011 | 0.000362 | 0.000573 | 0.000785 | 0.001025 | 0.00136 | 0.001743 | 0.00199 | 0.001351 | 0.001033286 | 0.16 |
| Butterfield ES | 13400 Kitching Street, | 479887 | 3754007 | 0.00014 | 0.000416 | 0.000642 | 0.000837 | 0.001071 | 0.001385 | 0.001799 | 0.00199 | 0.001481 | 0.001084663 | 0.17 |
| Bear Valley ES | 26125 Fir Ave | 480772 | 3755009 | 0.0002 | 0.000768 | 0.001255 | 0.001727 | 0.002203 | 0.002961 | 0.003866 | 0.00396 | 0.002942 | 0.002209154 | 0.34 |
| Edgemont ES | 21790 Eucalyptus Ave. | 473862 | 3754637 | 0.00007 | 0.000323 | 0.000532 | 0.000757 | 0.001008 | 0.001383 | 0.001753 | 0.002 | 0.001307 | 0.00101487 | 0.16 |
| Creekside ES | 13563 Heacock Street | 476896 | 3753840 | 0.00009 | 0.000315 | 0.000504 | 0.000687 | 0.00091 | 0.001207 | 0.001528 | 0.00188 | 0.001197 | 0.000924371 | 0.14 |
| Mt View MS | 13130 Morrison St | 481560 | 3754548 | 0.00021 | 0.000616 | 0.001024 | 0.001299 | 0.001586 | 0.00203 | 0.002695 | 0.00261 | 0.002049 | 0.001568991 | 0.24 |
| Sunnymead MS | 23996 Eucalyptus Ave. | 477395 | 3754708 | 0.0001 | 0.000429 | 0.000694 | 0.000979 | 0.001299 | 0.001753 | 0.002231 | 0.00249 | 0.001722 | 0.001299738 | 0.20 |
| Alessandro School | 23311 Dracaea Ave | 478392 | 3754185 | 0.00011 | 0.000386 | 0.000599 | 0.000816 | 0.00107 | 0.001401 | 0.0018 | 0.00193 | 0.001446 | 0.001061869 | 0.17 |
| Sunnymead ES | 24050 Dracaea Ave | 476294 | 3754669 | 0.00009 | 0.000398 | 0.000654 | 0.000928 | 0.001236 | 0.00167 | 0.002121 | 0.0024 | 0.001654 | 0.001238998 | 0.19 |
| March Mountain HS | 24551 Dracaea Avenue, | 478397 | 3754182 | 0.00011 | 0.000386 | 0.000599 | 0.000816 | 0.00107 | 0.001401 | 0.0018 | 0.00216 | 0.001439 | 0.001086751 | 0.17 |
| Valley View HS | 13135 Nason Street | 481845 | 3754457 | 0.00023 | 0.000638 | 0.001059 | 0.001324 | 0.001583 | 0.002011 | 0.002693 | 0.00274 | 0.002021 | 0.001588824 | 0.25 |
| Moreno ES | 26700 Cottonwood Ave, | 481754 | 3753876 | 0.00021 | 0.000537 | 0.000834 | 0.001011 | 0.001236 | 0.001522 | 0.002038 | 0.00185 | 0.001563 | 0.001200122 | 0.19 |
| Moreno Valley HS | 23300 Cottonwood Avenue | 476374 | 3753819 | 0.00009 | 0.000297 | 0.000479 | 0.000653 | 0.000866 | 0.001139 | 0.001456 | 0.00158 | 0.001135 | 0.000854877 | 0.13 |
| Towngate ES | 22480 Dracaea Avenue | 475017 | 3754229 | 0.00008 | 0.000304 | 0.00049 | 0.000682 | 0.000903 | 0.001226 | 0.00155 | 0.00172 | 0.001194 | 0.000905413 | 0.14 |
| Box Springs ES | 11900 Athens Dr | 474430 | 3756438 | 0.00009 | 0.000351 | 0.000548 | 0.00077 | 0.001019 | 0.001379 | 0.001765 | 0.00192 | 0.001376 | 0.001024126 | 0.16 |
| Seneca ES | 11615 Wordsworth | 472645 | 3756846 | 0.00007 | 0.000474 | 0.000795 | 0.001195 | 0.001604 | 0.002235 | 0.002853 | 0.00308 | 0.002209 | 0.001612879 | 0.25 |

**World Logistics Center** **With Mitigation**

**Estimates of Project-Related Construction and Operational Annual Average DPM Concentrations**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **OEHHA Guidance** | | **Max Chronic HI** | | | | **Mortality** | **Chronic Bronchitis** | **Hospital COPD** | **Hospital Pneumonia** | **Hospital Cardio** | **Hospital Asthma** | **Emergy Asthma** |
| | | **Max Offsite Risk** | **0.5** | **at a Residence** | **0.01** | | | **0.0124** | **0.0549** | **0.0001** | **0.0001** | **0.0003** | **0.0001** | **0.0002** |
| | | **25-year** | **25-year** | | | **Census Tract** | | **Max** | **Max** | **Max** | **Max** | **Max** | **Max** | **Max** |
| | | **Average** | **Average** | **Chronic** | | **Population** | | **0.00025** | **0.001096768** | **2.08444E-06** | **2.98478E-06** | **5.25401E-06** | **1.25739E-06** | **3.83454E-06** |
| **X** | **Y** | **DPM** | **Risk** | **Non-Cancer** | | | | | | | | | | |
| **(m)** | **(m)** | **(ug/m3)** | | **Hazard Index** | | | | | | | | | | |
| 461553 | 3741938 | 0.000172 | 0.0107 | 0.000046 | | | | | | | | | | |
| 462553 | 3741938 | 0.000148 | 0.0092 | 0.000042 | | | | | | | | | | |
| 463553 | 3741938 | 0.000139 | 0.0086 | 0.000038 | | | | | | | | | | |
| 464553 | 3741938 | 0.00014 | 0.0087 | 0.000038 | | | | | | | | | | |
| 465553 | 3741938 | 0.000127 | 0.0079 | 0.000034 | | | | | | | | | | |
| 466553 | 3741938 | 0.000149 | 0.0092 | 0.000040 | | | | | | | | | | |
| 467553 | 3741938 | 0.000149 | 0.0092 | 0.000040 | | | | | | | | | | |
| 468553 | 3741938 | 0.000141 | 0.0087 | 0.000038 | | | | | | | | | | |
| 469553 | 3741938 | 0.000159 | 0.0098 | 0.000042 | | | | | | | | | | |
| 470553 | 3741938 | 0.000159 | 0.0098 | 0.000042 | | | | | | | | | | |
| 471553 | 3741938 | 0.000172 | 0.0107 | 0.000045 | | | | | | | | | | |
| 472553 | 3741938 | 0.000189 | 0.0117 | 0.000049 | | | | | | | | | | |
| 473553 | 3741938 | 0.000228 | 0.0141 | 0.000063 | | | | | | | | | | |
| 474553 | 3741938 | 0.000237 | 0.0147 | 0.000065 | | | | | | | | | | |
| 475553 | 3741938 | 0.000241 | 0.0149 | 0.000063 | | | | | | | | | | |
| 476553 | 3741938 | 0.000329 | 0.0203 | 0.000089 | | | | | | | | | | |
| 477553 | 3741938 | 0.000464 | 0.0287 | 0.000128 | | | | | | | | | | |
| 478553 | 3741938 | 0.000475 | 0.0294 | 0.000125 | | | | | | | | | | |
| 479553 | 3741938 | 0.000466 | 0.0288 | 0.000125 | | | | | | | | | | |
| 480553 | 3741938 | 0.000417 | 0.0258 | 0.000111 | | | | | | | | | | |
| 481553 | 3741938 | 0.000509 | 0.0315 | 0.000138 | | | | | | | | | | |
| 482553 | 3741938 | 0.000433 | 0.0268 | 0.000115 | | | | | | | | | | |
| 483553 | 3741938 | 0.000417 | 0.0258 | 0.000111 | | | | | | | | | | |
| 484553 | 3741938 | 0.000404 | 0.0250 | 0.000107 | | | | | | | | | | |
| 485553 | 3741938 | 0.000397 | 0.0246 | 0.000105 | | | | | | | | | | |
| 486553 | 3741938 | 0.000395 | 0.0244 | 0.000105 | | | | | | | | | | |
| 487553 | 3741938 | 0.000395 | 0.0244 | 0.000105 | | | | | | | | | | |
| 488553 | 3741938 | 0.000404 | 0.0250 | 0.000107 | | | | | | | | | | |
| 489553 | 3741938 | 0.000408 | 0.0252 | 0.000108 | | | | | | | | | | |
| 490553 | 3741938 | 0.000416 | 0.0258 | 0.000112 | | | | | | | | | | |
| 491553 | 3741938 | 0.000413 | 0.0255 | 0.000111 | | | | | | | | | | |
| 492553 | 3741938 | 0.000377 | 0.0233 | 0.000107 | | | | | | | | | | |
| 493553 | 3741938 | 0.000333 | 0.0206 | 0.000091 | | | | | | | | | | |
| 494553 | 3741938 | 0.00033 | 0.0205 | 0.000090 | | | | | | | | | | |
| 495553 | 3741938 | 0.000433 | 0.0268 | 0.000113 | | | | | | | | | | |
| 496553 | 3741938 | 0.000424 | 0.0262 | 0.000111 | | | | | | | | | | |
| 497553 | 3741938 | 0.000419 | 0.0259 | 0.000111 | | | | | | | | | | |
| 498553 | 3741938 | 0.000429 | 0.0266 | 0.000113 | | | | | | | | | | |
| 499553 | 3741938 | 0.000459 | 0.0284 | 0.000121 | | | | | | | | | | |
| 500553 | 3741938 | 0.000516 | 0.0319 | 0.000141 | | | | | | | | | | |
| 501553 | 3741938 | 0.000458 | 0.0283 | 0.000122 | | | | | | | | | | |
| 502553 | 3741938 | 0.000685 | 0.0424 | 0.000180 | | | | | | | | | | |
| 503553 | 3741938 | 0.000425 | 0.0263 | 0.000115 | | | | | | | | | | |
| 504553 | 3741938 | 0.000339 | 0.0210 | 0.000091 | | | | | | | | | | |
| 505553 | 3741938 | 0.000234 | 0.0145 | 0.000065 | | | | | | | | | | |

**World Logistics Center** **With Mitigation**

**Estimates of Project Annual Average DPM Concentrations During Construction and Operation with Age-Specific Age Factors, Breathing rates, and Time at Home factors**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Max 30-year Cancer Risk** | | **16.98** | | | | |
| | | | | | | **70-year Burden** |
| | | **OEHHA 30 year** | | **Census Tract** | **70 year Burden** | **Popu;ation >1 in a million** |
| | | **Age-Weighted** | **70 year** | **Population** | **0.108673978** | **78685** |
| **X** | **Y** | **Risk** | **Risk** | **10929101** | **@1 in a million** | |
| **(m)** | **(m)** | | | | | |
| 461553.03 | 3741938.31 | 0.07822 | 0.10374 | | | |
| 462553.03 | 3741938.31 | 0.06555 | 0.08852 | | | |
| 463553.03 | 3741938.31 | 0.06050 | 0.08220 | | | |
| 464553.03 | 3741938.31 | 0.06226 | 0.08395 | | | |
| 465553.03 | 3741938.31 | 0.05675 | 0.07589 | | | |
| 466553.03 | 3741938.31 | 0.06501 | 0.08798 | | | |
| 467553.03 | 3741938.31 | 0.06477 | 0.08773 | | | |
| 468553.03 | 3741938.31 | 0.06123 | 0.08292 | | | |
| 469553.03 | 3741938.31 | 0.06935 | 0.09360 | | | |
| 470553.03 | 3741938.31 | 0.06911 | 0.09335 | | | |
| 471553.03 | 3741938.31 | 0.07416 | 0.10095 | | | |
| 472553.03 | 3741938.31 | 0.08249 | 0.11184 | | | |
| 473553.03 | 3741938.31 | 0.09881 | 0.13454 | | | |
| 474553.03 | 3741938.31 | 0.10291 | 0.13992 | | | |
| 475553.03 | 3741938.31 | 0.10800 | 0.14501 | | | |
| 476553.03 | 3741938.31 | 0.14969 | 0.19946 | | | |
| 477553.03 | 3741938.31 | 0.20821 | 0.27711 | | | |
| 478553.03 | 3741938.31 | 0.21341 | 0.28487 | | | |
| 479553.03 | 3741938.31 | 0.20809 | 0.27954 | | | |
| 480553.03 | 3741938.31 | 0.19210 | 0.25335 | | | |
| 481553.03 | 3741938.31 | 0.22589 | 0.30500 | | | |
| 482553.03 | 3741938.31 | 0.20210 | 0.26463 | | | |
| 483553.03 | 3741938.31 | 0.19600 | 0.25598 | | | |
| 484553.03 | 3741938.31 | 0.19136 | 0.24878 | | | |
| 485553.03 | 3741938.31 | 0.18621 | 0.24236 | | | |
| 486553.03 | 3741938.31 | 0.18468 | 0.24082 | | | |
| 487553.03 | 3741938.31 | 0.18468 | 0.24082 | | | |
| 488553.03 | 3741938.31 | 0.18972 | 0.24714 | | | |
| 489553.03 | 3741938.31 | 0.19330 | 0.25072 | | | |
| 490553.03 | 3741938.31 | 0.19863 | 0.25605 | | | |
| 491553.03 | 3741938.31 | 0.20807 | 0.26294 | | | |
| 492553.03 | 3741938.31 | 0.18290 | 0.23394 | | | |
| 493553.03 | 3741938.31 | 0.16378 | 0.20844 | | | |

# G.6 - Relative Toxicity of Diesel PM and Gasoline Emissions

**Appendix G-6 contains a comparison of the project's operational toxicity-weighted emissions from diesel-fueled motor vehicles to toxicity-weighted emissions from the project's operational motor vehicle gasoline fueled motor vehicles.**

## World Logistics Center

**Year: 2035**

### Relative Importance of the Project's TAC Emissions from Gasoline Vehicles Compared to the Project's DPM Emissions in Cancer Risk Estimates

**Total Organic Gas Emissions from the Project's Gasoline Vehicles (tons/year)**

| Emission Source | Emissions (tons/year) |
|---|---|
| Freeway + Ports | 8.700 |
| Surface Street | 3.622 |
| Internal Roadways | 4.000 |
| Onsite | 1.111 |
| **Total** | **17.433** |

**Total Organic Gas Speciation (speciation profile taken from BAAQMD 2012)**

| Compound | % TOG by Weight | Emission (tons/year) |
|---|---|---|
| Acetaldehyde | 0.28% | 0.0488 |
| Benzene | 2.47% | 0.4306 |
| 1.3 Butadiene | 0.55% | 0.0959 |
| Ethylbenzene | 1.05% | 0.1831 |
| Formaldehyde | 1.58% | 0.2754 |
| Naphthalene | 0.05% | 0.0087 |
| Total | | 1.0425 |

**Total Diesel Particulate Matter Emissions from the Project's Diesel Vehicles**

| Emission Source | Emissions (g/sec) |
|---|---|
| Freeway + Ports | 0.745 |
| Surface Street | 0.135 |
| Internal Roadways | 0.128 |
| Onsite | 0.027 |
| **Total** | **1.035** |

**Potency Weighted Estimated Toxic Air Emissions from Use of Gasoline from Project Vehicles**

| Compound | Cancer Potency Factor | Weighted Factor Relative to Diesel | Estimated Emissions (tons/year) | Potency Weighted Emissions (tons/year) |
|---|---|---|---|---|
| Diesel | 1.1 | 1.00 | - | - |
| Acetaldehyde | 0.01 | 0.01 | 0.0488 | 0.000 |
| Benzene | 0.1 | 0.09 | 0.4306 | 0.039 |
| 1.3 Butadiene | 0.6 | 0.55 | 0.0959 | 0.052 |
| Ethylbenzene | 0.0087 | 0.01 | 0.1831 | 0.001 |
| Formaldehyde | 0.021 | 0.02 | 0.2754 | 0.005 |
| Naphthalene | 0.12 | 0.11 | 0.0087 | 0.001 |
| Total (non-DPM) | | | 1.043 | 0.100 |

Gasoline potency-weighted TOC emissions from the Project are estimated to be 10 % of the project's DPM emissions or about 10% of the cancer risk from DPM

Reference: BAAQMD 2012: Recommended Methods for Screening and Modeling Local Risks and Hazards.

# G.7 - Project-Related TOG Emissions and Acute Non-cancer Hazard Index Summary

**Appendix G-7 contains an estimate of the project's emissions of total organic gases and resulting acute non-cancer hazard index for both diesel-fueled vehicles and gasoline vehicles. The emissions and impacts are for the unmitigated emissions during the Project Phase 1 and Phase 2 in 2012.**

**World Logistics Center** **REV5** **Gasoline Vehicles** **With EMFAC2014**
**With Adjusted Vehicle Speeds** **Sample Output**
**Estimation of Acute Non-Cancer Hazard Index** **No Mitigation** **Max** **Max**
**Condition: 2012 + Project Phase 1 and 2** **8.76031** **0.007271057**

| X (m) | Y (m) | TOGG from Freeways to Ports (ug/m3) | TOGG from All Other Roadways (ug/m3) | TOGG from All Roadways (ug/m3) | Acute Non-Cancer HI |
|---|---|---|---|---|---|
| 461553 | 3741938 | 0.0028 | 0.30448 | 0.30728 | 0.000255042 |
| 462553 | 3741938 | 0.0026 | 0.54002 | 0.54262 | 0.000450375 |
| 463553 | 3741938 | 0.00251 | 0.64504 | 0.64755 | 0.000537467 |
| 464553 | 3741938 | 0.00244 | 0.66857 | 0.67101 | 0.000556938 |
| 465553 | 3741938 | 0.00222 | 0.73347 | 0.73569 | 0.000610623 |
| 466553 | 3741938 | 0.00229 | 0.79068 | 0.79297 | 0.000658165 |
| 467553 | 3741938 | 0.00222 | 0.78386 | 0.78608 | 0.000652446 |
| 468553 | 3741938 | 0.00202 | 0.7212 | 0.72322 | 0.000600273 |
| 469553 | 3741938 | 0.00201 | 0.87629 | 0.8783 | 0.000728989 |
| 470553 | 3741938 | 0.00182 | 0.83518 | 0.837 | 0.00069471 |
| 471553 | 3741938 | 0.00176 | 0.71974 | 0.7215 | 0.000598845 |
| 472553 | 3741938 | 0.00172 | 0.50878 | 0.5105 | 0.000423715 |
| 473553 | 3741938 | 0.00169 | 0.59631 | 0.598 | 0.00049634 |
| 474553 | 3741938 | 0.00163 | 0.81363 | 0.81526 | 0.000676666 |
| 475553 | 3741938 | 0.00156 | 0.87137 | 0.87293 | 0.000724532 |
| 476553 | 3741938 | 0.00157 | 0.72064 | 0.72221 | 0.000599434 |
| 477553 | 3741938 | 0.00158 | 0.8328 | 0.83438 | 0.000692535 |
| 478553 | 3741938 | 0.00156 | 0.65702 | 0.65858 | 0.000546621 |
| 479553 | 3741938 | 0.00151 | 0.63144 | 0.63295 | 0.000525349 |
| 480553 | 3741938 | 0.00147 | 0.65634 | 0.65781 | 0.000545982 |
| 481553 | 3741938 | 0.00142 | 0.71942 | 0.72084 | 0.000598297 |
| 482553 | 3741938 | 0.00133 | 0.7064 | 0.70773 | 0.000587416 |
| 483553 | 3741938 | 0.00125 | 0.71086 | 0.71211 | 0.000591051 |
| 484553 | 3741938 | 0.00127 | 0.58556 | 0.58683 | 0.000487069 |
| 485553 | 3741938 | 0.00126 | 0.62502 | 0.62628 | 0.000519812 |
| 486553 | 3741938 | 0.00123 | 0.6166 | 0.61783 | 0.000512799 |

**World Logistics Center** **REV5** **Diesel Vehicles** **Sample Output**
**With EMFAC2014**
**Estimation of Acute Non-Cancer Hazard Index** **No Mitigation** **Max** **Max**
**Condition: 2012 + Project Phase 1 and 2** **23.34767** **0.06654086**

| X (m) | Y (m) | TOGD from Freeways to Ports (ug/m3) | TOGD from All Other Roadways (ug/m3) | TOGD from All Roadways (ug/m3) | Acute Non-Cancer HI |
|---|---|---|---|---|---|
| 461553 | 3741938 | 0.0347 | 0.80674 | 0.84144 | 0.002398104 |
| 462553 | 3741938 | 0.03223 | 0.85573 | 0.88796 | 0.002530686 |
| 463553 | 3741938 | 0.03102 | 0.98253 | 1.01355 | 0.002888618 |
| 464553 | 3741938 | 0.03016 | 1.04789 | 1.07805 | 0.003072443 |
| 465553 | 3741938 | 0.02743 | 1.18604 | 1.21347 | 0.00345839 |
| 466553 | 3741938 | 0.02837 | 1.17993 | 1.2083 | 0.003443655 |
| 467553 | 3741938 | 0.0274 | 1.07276 | 1.10016 | 0.003135456 |
| 468553 | 3741938 | 0.025 | 1.1592 | 1.1842 | 0.00337497 |
| 469553 | 3741938 | 0.02489 | 1.27215 | 1.29704 | 0.003696564 |
| 470553 | 3741938 | 0.02264 | 1.08114 | 1.10378 | 0.003145773 |
| 471553 | 3741938 | 0.02189 | 0.91413 | 0.93602 | 0.002667657 |
| 472553 | 3741938 | 0.0214 | 0.88237 | 0.90377 | 0.002575745 |
| 473553 | 3741938 | 0.02096 | 1.08453 | 1.10549 | 0.003150647 |
| 474553 | 3741938 | 0.02019 | 1.18255 | 1.20274 | 0.003427809 |
| 475553 | 3741938 | 0.01936 | 1.29935 | 1.31871 | 0.003758324 |
| 476553 | 3741938 | 0.01949 | 1.44308 | 1.46257 | 0.004168325 |
| 477553 | 3741938 | 0.01961 | 1.74058 | 1.76019 | 0.005016542 |
| 478553 | 3741938 | 0.01932 | 1.80655 | 1.82587 | 0.00520373 |
| 479553 | 3741938 | 0.01878 | 1.71213 | 1.73091 | 0.004933094 |
| 480553 | 3741938 | 0.01828 | 1.60371 | 1.62199 | 0.004622672 |
| 481553 | 3741938 | 0.0176 | 1.75139 | 1.76899 | 0.005041622 |
| 482553 | 3741938 | 0.01649 | 1.70855 | 1.72504 | 0.004916364 |
| 483553 | 3741938 | 0.01557 | 1.90019 | 1.91576 | 0.005459916 |
| 484553 | 3741938 | 0.01579 | 1.67008 | 1.68587 | 0.00480473 |
| 485553 | 3741938 | 0.01566 | 1.54948 | 1.56514 | 0.004460649 |
| 486553 | 3741938 | 0.01522 | 1.55691 | 1.57213 | 0.004480571 |

**World Logistics Center** **No Mitigation** **REV5**
**With EMFAC2014** **Sample Output**
**Estimation of Acute Non-Cancer Hazard Index** **Max Acute HI**
**Condition: Project Full Build Out (2012)** **0.074**
**Gasoline + Diesel**

| X (m) | Y (m) | TOG GAS Acute HI | TOG Diesel Acute Hi | TOG GAS + TOG Diesel Acute Hi |
|---|---|---|---|---|
| 461553 | 3741938 | 0.000 | 0.002 | 0.003 |
| 462553 | 3741938 | 0.000 | 0.003 | 0.003 |
| 463553 | 3741938 | 0.001 | 0.003 | 0.003 |
| 464553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 465553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 466553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 467553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 468553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 469553 | 3741938 | 0.001 | 0.004 | 0.004 |
| 470553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 471553 | 3741938 | 0.001 | 0.003 | 0.003 |
| 472553 | 3741938 | 0.000 | 0.003 | 0.003 |
| 473553 | 3741938 | 0.000 | 0.003 | 0.004 |
| 474553 | 3741938 | 0.001 | 0.003 | 0.004 |
| 475553 | 3741938 | 0.001 | 0.004 | 0.004 |
| 476553 | 3741938 | 0.001 | 0.004 | 0.005 |
| 477553 | 3741938 | 0.001 | 0.005 | 0.006 |
| 478553 | 3741938 | 0.001 | 0.005 | 0.006 |
| 479553 | 3741938 | 0.001 | 0.005 | 0.005 |
| 480553 | 3741938 | 0.001 | 0.005 | 0.005 |
| 481553 | 3741938 | 0.001 | 0.005 | 0.006 |
| 482553 | 3741938 | 0.001 | 0.005 | 0.006 |
| 483553 | 3741938 | 0.001 | 0.005 | 0.006 |
| 484553 | 3741938 | 0.000 | 0.005 | 0.005 |
| 485553 | 3741938 | 0.001 | 0.004 | 0.005 |
| 486553 | 3741938 | 0.001 | 0.004 | 0.005 |

**World Logistics Center**
**Calculation of Acute Hazard Index**

**Gasoline Exhaust TOG Profile**
Unit TOG Concentration 1 ug/m3

| Toxic Compound | ARB Speciation 2108 (%TOG) | Unit Factor | Species Concentration (ug/m3) | REL | Weighted Acute Hi |
|---|---|---|---|---|---|
| Acetaldehyde | 0.28% | 0.0028 | 0.0028 | 470 | 5.95745E-06 |
| Acrolein | 0.13% | 0.0013 | 0.0013 | 2.5 | 0.00052 |
| Benzene | 2.47% | 0.0247 | 0.0247 | 1300 | 0.000019 |
| Formaldehyde | 1.53% | 0.0153 | 0.0153 | 55 | 0.000278182 |
| Methyl Alcohol | 0.12% | 0.0012 | 0.0012 | 28000 | 4.28571E-08 |
| MethlethylKetone | 0.02% | 0.0002 | 0.0002 | 13000 | 1.53846E-08 |
| Styrene | 0.12% | 0.0012 | 0.0012 | 21000 | 5.71429E-08 |
| Toluene | 5.58% | 0.0558 | 0.0558 | 37000 | 1.50811E-06 |
| M-Xylene | 3.45% | 0.0345 | 0.0345 | 22000 | 1.56818E-06 |
| O-Xylene | 1.20% | 0.0120 | 0.012 | 22000 | 5.45455E-07 |
| 1-3 Butadiene | 0.53% | 0.0053 | 0.0053 | 660 | 8.0303E-06 |
| Total | | | 0.1543 | | 0.000834907 |

**World Logistics Center**
**Calculation of Acute Hazard Index**

**Diesel Exhaust TOG Profile**
Unit TOG Concentration 1 ug/m3

| Toxic Compound | ARB Speciation 818 (%TOG) | Unit Factor | Species Concentration (ug/m3) | REL (ug/m3) | Acute HI |
|---|---|---|---|---|---|
| Acetaldehyde | 7.35% | 0.0735 | 0.0735 | 470 | 0.000156383 |
| Benzene | 2.00% | 0.0200 | 0.02 | 1300 | 1.53846E-05 |
| Formaldehyde | 14.71% | 0.1471 | 0.1471 | 55 | 0.002674545 |
| Methyl Alcohol | 0.03% | 0.0003 | 0.0003 | 28000 | 1.07143E-08 |
| MethlethylKetone | 1.48% | 0.0148 | 0.0148 | 13000 | 1.13846E-06 |
| Styrene | 0.06% | 0.0006 | 0.0006 | 21000 | 2.85714E-08 |
| Toluene | 1.47% | 0.0147 | 0.0147 | 37000 | 3.97297E-07 |
| M-Xylenes | 0.61% | 0.0061 | 0.0061 | 22000 | 2.77273E-07 |
| O-Xylene | 0.34% | 0.0034 | 0.0034 | 22000 | 1.54545E-07 |
| P-Xylene | 0.10% | 0.0010 | 0.001 | 22000 | 4.54545E-08 |
| 1-3 Butadiene | 0.19% | 0.0019 | 0.0019 | 660 | 2.87879E-06 |
| | | | 0.2834 | | |
| | | | | Total | 0.002851244 |

**World Logistics Center** **2012** **TOG Pk Hr** Based on PB Traffic Results 10/3/2013
**Project Build Out** No Mitigation REV5
**Internal Roadway Circulation** With EMFAC2014

| Roadway Segment | Diesel Emissions (g/sec) | Gas Emissions (g/sec) | Total (g/sec) |
|---|---|---|---|
| 1 | 5.27E-02 | 1.81E-02 | 7.08E-02 |
| 2 | 1.41E-01 | 4.64E-02 | 1.87E-01 |
| 3 | 1.53E-01 | 5.48E-02 | 2.08E-01 |
| 5 | 8.86E-03 | 2.24E-02 | 3.12E-02 |
| 6 | 8.98E-02 | 3.27E-02 | 1.23E-01 |
| 8 | 8.98E-03 | 3.75E-02 | 4.65E-02 |
| 11 | 1.50E-04 | 1.10E-03 | 1.25E-03 |
| 12 | 3.86E-04 | 1.63E-03 | 2.01E-03 |
| 14 | 5.04E-02 | 1.59E-02 | 6.63E-02 |
| 18 | 9.80E-03 | 5.22E-03 | 1.50E-02 |
| 19 | 5.76E-02 | 1.95E-02 | 7.71E-02 |
| 21 | 5.81E-02 | 3.71E-02 | 9.51E-02 |
| 24 | 5.37E-02 | 3.80E-02 | 9.18E-02 |
| 26 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 2.06E-02 | 6.83E-03 | 2.74E-02 |
| 30 | 7.79E-02 | 2.98E-02 | 1.08E-01 |
| 31 | 5.19E-03 | 9.09E-03 | 1.43E-02 |
| Total (g/sec) | 7.88E-01 | 3.76E-01 | 1.16E+00 |
| Total (lbs/day) | 1.50E+02 | 7.16E+01 | 2.21E+02 |
| Total VMT (mi/day) | 2.76E+03 | 6.41E+03 | 9.17E+03 |

Project Bui

| ID | Arterial | d on PB Traffic Results 10/3/ | To | | 2012 With Project - Pk PM | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 1 | Street A | State Route 60 | Eucalyptus Ave | | 1,315 | 110 | 219 | 692 |
| 2 | Street A | Eucalyptus Ave | Street F | | 1,399 | 181 | 242 | 833 |
| 3 | Street E | west of Street A | | | 526 | 66 | 85 | 280 |
| 5 | Street E | Street D | Street A | | 685 | 40 | 49 | 19 |
| 6 | Street A | Street F | Street C | | 686 | 76 | 111 | 350 |
| 8 | Street D | Street E | Cactus Ave | | 1,006 | 60 | 73 | 0 |
| 11 | Redlands Blvd | Dracaea Ave | Alessandro Blvd | | 27 | 2 | 1 | 0 |
| 12 | Redlands Blvd | Eucalyptus Ave | Dracaea Ave | | 55 | 5 | 4 | 0 |
| 14 | Eucalyptus Ave | Street A | Redlands Blvd | | 250 | 16 | 27 | 142 |
| 18 | Street B | Street A | Gilman Springs Rd | | 82 | 14 | 12 | 28 |
| 19 | Street F | Street A | Street C | | 191 | 19 | 30 | 105 |
| 21 | Street C | Street A | Street F | | 776 | 58 | 89 | 183 |
| 24 | Street C | Street F | Gilman Springs Rd | | 528 | 35 | 56 | 108 |
| 26 | Street G | North of Street C | | | 0 | 0 | 0 | 0 |
| 29 | Gilman Springs Rd | State Route 60 | Eucalyptus Ave | | 245 | 20 | 34 | 135 |
| 30 | Gilman Springs Rd | Eucalyptus Ave | Street C | | 262 | 23 | 30 | 122 |
| 31 | Gilman Springs Rd | south of Street C | | | 327 | 16 | 23 | 19 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center**
Project Build Out
Internal Roadway Circulation

**2012 Based on PB Traffic Results 10/3/2013**
**No Mitigation**

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 2 | 0 | 0 | 0 | 22 | 8 | 176 | 677 | 886 | 180 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 2 | 0 | 0 | 0 | 37 | 13 | 195 | 815 | 1062 | 482 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 1 | 0 | 0 | 0 | 13 | 5 | 68 | 274 | 361 | 528 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 1 | 0 | 0 | 0 | 8 | 3 | 39 | 19 | 70 | 42 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 1 | 0 | 0 | 0 | 15 | 5 | 89 | 342 | 454 | 310 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 2 | 0 | 0 | 0 | 12 | 4 | 59 | 0 | 77 | 52 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 5 | 2 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 0 | 0 | 0 | 0 | 3 | 1 | 22 | 139 | 165 | 166 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 0 | 0 | 0 | 0 | 3 | 1 | 10 | 27 | 41 | 36 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 103 | 132 | 196 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 1 | 0 | 0 | 0 | 12 | 4 | 72 | 179 | 268 | 209 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 1 | 0 | 0 | 0 | 7 | 2 | 45 | 106 | 161 | 195 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 0 | 0 | 0 | 0 | 4 | 1 | 27 | 132 | 165 | 69 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 0 | 0 | 0 | 0 | 5 | 2 | 24 | 119 | 150 | 264 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 1 | 0 | 0 | 0 | 3 | 1 | 19 | 19 | 42 | 21 |
| | | | | | | | | | | | | | | | | Total | 2755 |

**Vehicle Fleet Emissions - Diesel**

| Segment Speeds | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 | | | | | | | | |
| Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 | | | | | | | | |
| Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 | | | | | | | | |
| Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 | | | | | | | | |
| Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1010 | 0.2430 | 0.0290 | 0.0380 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 2 | 0.0890 | 0.2240 | 0.0220 | 0.0330 | 0.1320 | 0.1240 | 0.3720 | 0.5540 |
| 3 | 0.0860 | 0.2130 | 0.0230 | 0.0320 | 0.1530 | 0.1440 | 0.5020 | 0.5540 |
| 4 | 0.1060 | 0.2840 | 0.0260 | 0.0400 | 0.1380 | 0.1280 | 0.3580 | 0.5000 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1.30E-05 | 1.51E-06 | 1.77E-07 | 4.48E-07 | 2.66E-04 | 8.67E-05 | 7.46E-03 | 4.49E-02 | 5.27E-02 |
| 2 | 1 | 3.09E-05 | 3.58E-06 | 4.20E-07 | 1.07E-06 | 9.80E-04 | 3.19E-04 | 1.84E-02 | 1.21E-01 | 1.41E-01 |
| 3 | 1 | 3.74E-05 | 4.33E-06 | 5.08E-07 | 1.29E-06 | 1.15E-03 | 3.74E-04 | 2.08E-02 | 1.31E-01 | 1.53E-01 |
| 5 | 1 | 1.97E-05 | 2.28E-06 | 2.68E-07 | 6.80E-07 | 2.82E-04 | 9.19E-05 | 4.87E-03 | 3.59E-03 | 8.86E-03 |
| 6 | 1 | 2.28E-05 | 2.64E-06 | 3.10E-07 | 7.86E-07 | 6.19E-04 | 2.01E-04 | 1.27E-02 | 7.63E-02 | 8.98E-02 |
| 8 | 1 | 3.32E-05 | 3.84E-06 | 4.51E-07 | 1.14E-06 | 4.85E-04 | 1.58E-04 | 8.30E-03 | 0.00E+00 | 8.98E-03 |
| 11 | 1 | 9.81E-07 | 1.13E-07 | 1.33E-08 | 3.38E-08 | 1.78E-05 | 5.79E-06 | 1.25E-04 | 0.00E+00 | 1.50E-04 |
| 12 | 1 | 1.37E-06 | 1.59E-07 | 1.86E-08 | 4.72E-08 | 3.05E-05 | 9.93E-06 | 3.44E-04 | 0.00E+00 | 3.86E-04 |
| 14 | 1 | 1.22E-05 | 1.42E-06 | 1.66E-07 | 4.21E-07 | 1.92E-04 | 6.24E-05 | 4.55E-03 | 4.56E-02 | 5.04E-02 |
| 18 | 1 | 3.50E-06 | 4.05E-07 | 4.76E-08 | 1.21E-07 | 1.46E-04 | 4.77E-05 | 1.77E-03 | 7.84E-03 | 9.80E-03 |
| 19 | 1 | 1.38E-05 | 1.60E-06 | 1.87E-07 | 4.75E-07 | 3.36E-04 | 1.09E-04 | 7.46E-03 | 4.97E-02 | 5.76E-02 |
| 21 | 1 | 2.95E-05 | 3.42E-06 | 4.01E-07 | 1.02E-06 | 5.40E-04 | 1.76E-04 | 1.17E-02 | 4.56E-02 | 5.81E-02 |
| 24 | 1 | 3.11E-05 | 3.60E-06 | 4.22E-07 | 1.07E-06 | 5.04E-04 | 1.64E-04 | 1.14E-02 | 4.17E-02 | 5.37E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 5.00E-06 | 5.79E-07 | 6.79E-08 | 1.72E-07 | 1.00E-04 | 3.25E-05 | 2.39E-03 | 1.81E-02 | 2.06E-02 |
| 30 | 1 | 2.24E-05 | 2.59E-06 | 3.04E-07 | 7.72E-07 | 4.82E-04 | 1.57E-04 | 8.84E-03 | 6.84E-02 | 7.79E-02 |
| 31 | 1 | 8.11E-06 | 9.38E-07 | 1.10E-07 | 2.79E-07 | 9.72E-05 | 3.16E-05 | 1.97E-03 | 3.09E-03 | 5.19E-03 |

**World Logistics Center** **2012 ²B Traffic Result No Mitigation**
Project Build Out
Internal Roadway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GASI (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Roadway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2336 | 1,315 | 110 | 219 | 692 | 327 | 0.203 | 753 | 88 | 262 | 208 | 72 | 8 | 43 | 15 | 1450 | 295 |
| 2 | 2655 | 1,399 | 181 | 242 | 833 | 731 | 0.454 | 802 | 94 | 279 | 221 | 119 | 13 | 47 | 18 | 1593 | 724 |
| 3 | 957 | 526 | 66 | 85 | 280 | 2352 | 1.461 | 301 | 35 | 105 | 83 | 43 | 5 | 17 | 6 | 596 | 870 |
| 5 | 793 | 685 | 40 | 49 | 19 | 953 | 0.592 | 392 | 46 | 137 | 108 | 26 | 3 | 10 | 0 | 723 | 428 |
| 6 | 1223 | 686 | 76 | 111 | 350 | 1099 | 0.683 | 393 | 46 | 137 | 109 | 50 | 5 | 22 | 8 | 769 | 525 |
| 8 | 1139 | 1,006 | 60 | 73 | 0 | 1091 | 0.678 | 576 | 68 | 201 | 159 | 39 | 4 | 14 | 0 | 1062 | 720 |
| 11 | 30 | 27 | 2 | 1 | 0 | 1201 | 0.746 | 15 | 2 | 5 | 4 | 1 | 0 | 0 | 0 | 29 | 21 |
| 12 | 64 | 55 | 5 | 4 | 0 | 824 | 0.512 | 32 | 4 | 11 | 9 | 3 | 0 | 1 | 0 | 59 | 30 |
| 14 | 435 | 250 | 16 | 27 | 142 | 1618 | 1.005 | 143 | 17 | 50 | 40 | 11 | 1 | 5 | 3 | 270 | 271 |
| 18 | 136 | 82 | 14 | 12 | 28 | 1412 | 0.877 | 47 | 6 | 16 | 13 | 9 | 1 | 2 | 1 | 95 | 83 |
| 19 | 345 | 191 | 19 | 30 | 105 | 2386 | 1.482 | 109 | 13 | 38 | 30 | 13 | 1 | 6 | 2 | 213 | 315 |
| 21 | 1106 | 776 | 58 | 89 | 183 | 1258 | 0.781 | 445 | 52 | 155 | 123 | 38 | 4 | 17 | 4 | 838 | 655 |
| 24 | 727 | 528 | 35 | 56 | 108 | 1946 | 1.209 | 303 | 35 | 105 | 84 | 23 | 2 | 11 | 2 | 566 | 684 |
| 26 | 0 | 0 | 0 | 0 | 0 | 342 | 0.212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 434 | 245 | 20 | 34 | 135 | 675 | 0.419 | 140 | 16 | 49 | 39 | 13 | 1 | 7 | 3 | 269 | 113 |
| 30 | 437 | 262 | 23 | 30 | 122 | 2827 | 1.756 | 150 | 18 | 52 | 41 | 15 | 2 | 6 | 3 | 287 | 504 |
| 31 | 385 | 327 | 16 | 23 | 19 | 820 | 0.509 | 187 | 22 | 65 | 52 | 11 | 1 | 4 | 0 | 343 | 175 |
| | | | | | | | | | | | | | | | | Total | 6411 |

**Vehicle Fleet Emissions - GAS**

| Segment Speeds | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |

**Emission Factors (g/mi)**

| Speed Group | LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | LHDT1-GAS | LHDT2-GAS | MHDT-GAS | HHDT-GAS |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1359 | 0.3762 | 0.1692 | 0.1783 | 0.4434 | 0.4535 | 0.9636 | 1.7793 |
| 2 | 0.1279 | 0.3535 | 0.1590 | 0.1633 | 0.2917 | 0.3073 | 0.6299 | 0.9098 |
| 3 | 0.1273 | 0.3533 | 0.1587 | 0.1642 | 0.3357 | 0.3495 | 0.7304 | 1.1783 |
| 4 | 0.1372 | 0.3729 | 0.1680 | 0.1727 | 0.2725 | 0.2892 | 0.5883 | 0.8006 |

**Segment Emissions**

| Roadway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.78E-03 | 1.88E-03 | 2.51E-03 | 2.09E-03 | 1.81E-03 | 1.95E-04 | 2.32E-03 | 1.53E-03 | 1.81E-02 |
| 2 | 1 | 1.37E-02 | 4.46E-03 | 5.96E-03 | 4.98E-03 | 6.66E-03 | 7.18E-04 | 5.72E-03 | 4.13E-03 | 4.64E-02 |
| 3 | 1 | 1.66E-02 | 5.40E-03 | 7.21E-03 | 6.02E-03 | 7.82E-03 | 8.43E-04 | 6.47E-03 | 4.46E-03 | 5.48E-02 |
| 5 | 1 | 8.77E-03 | 2.85E-03 | 3.80E-03 | 3.18E-03 | 1.92E-03 | 2.07E-04 | 1.51E-03 | 1.23E-04 | 2.24E-02 |
| 6 | 1 | 1.01E-02 | 3.29E-03 | 4.39E-03 | 3.67E-03 | 4.21E-03 | 4.53E-04 | 3.95E-03 | 2.61E-03 | 3.27E-02 |
| 8 | 1 | 1.47E-02 | 4.79E-03 | 6.39E-03 | 5.34E-03 | 3.30E-03 | 3.55E-04 | 2.58E-03 | 0.00E+00 | 3.75E-02 |
| 11 | 1 | 4.36E-04 | 1.41E-04 | 1.89E-04 | 1.58E-04 | 1.21E-04 | 1.30E-05 | 3.89E-05 | 0.00E+00 | 1.10E-03 |
| 12 | 1 | 6.09E-04 | 1.98E-04 | 2.64E-04 | 2.21E-04 | 2.07E-04 | 2.24E-05 | 1.07E-04 | 0.00E+00 | 1.63E-03 |
| 14 | 1 | 5.43E-03 | 1.76E-03 | 2.36E-03 | 1.97E-03 | 1.30E-03 | 1.41E-04 | 1.41E-03 | 1.56E-03 | 1.59E-02 |
| 18 | 1 | 1.56E-03 | 5.05E-04 | 6.75E-04 | 5.64E-04 | 9.95E-04 | 1.07E-04 | 5.48E-04 | 2.68E-04 | 5.22E-03 |
| 19 | 1 | 6.12E-03 | 1.99E-03 | 2.66E-03 | 2.22E-03 | 2.28E-03 | 2.46E-04 | 2.32E-03 | 1.70E-03 | 1.95E-02 |
| 21 | 1 | 1.31E-02 | 4.26E-03 | 5.69E-03 | 4.75E-03 | 3.67E-03 | 3.96E-04 | 3.62E-03 | 1.56E-03 | 3.71E-02 |
| 24 | 1 | 1.38E-02 | 4.48E-03 | 5.99E-03 | 5.00E-03 | 3.43E-03 | 3.70E-04 | 3.53E-03 | 1.42E-03 | 3.80E-02 |
| 26 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 29 | 1 | 2.22E-03 | 7.21E-04 | 9.64E-04 | 8.05E-04 | 6.80E-04 | 7.33E-05 | 7.42E-04 | 6.18E-04 | 6.83E-03 |
| 30 | 1 | 9.95E-03 | 3.23E-03 | 4.32E-03 | 3.61E-03 | 3.27E-03 | 3.53E-04 | 2.74E-03 | 2.34E-03 | 2.98E-02 |
| 31 | 1 | 3.60E-03 | 1.17E-03 | 1.56E-03 | 1.31E-03 | 6.61E-04 | 7.12E-05 | 6.10E-04 | 1.06E-04 | 9.09E-03 |

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2011
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for TOG Pk Hr emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2012** **Phase 1**
No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **TOG Pk Hr**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 8.71E-02 | 4.54E-02 |
| Light Logistics | Phase 1 | 1.43E-04 | 1.38E-04 |
| Utilities Service Station | Phase 1 | 9.44E-05 | 1.34E-04 |
| Gas Station w/Convenience Store | Phase 1 | 1.95E-04 | 3.98E-05 |
| Convenience Store | Phase 1 | 2.17E-04 | 4.99E-05 |
| Fire Station | Phase 1 | 9.09E-08 | 8.22E-05 |
| Total | | 8.78E-02 | 4.58E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 1 | 6.95E-02 | 1.83E-02 |
| Light Logistics | Phase 1 | 2.16E-04 | 7.29E-05 |
| Utilities Service Station | Phase 1 | 2.53E-04 | 1.62E-04 |
| Gas Station w/Convenience Store | Phase 1 | 1.03E-03 | 1.51E-04 |
| Convenience Store | Phase 1 | 1.17E-03 | 1.85E-04 |
| Fire Station | Phase 1 | 0.00E+00 | 0.00E+00 |
| Total | | 7.21E-02 | 1.88E-02 |

**Total Onsite Emission**

| | **Emissions (g/sec)** | **Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust | 8.78E-02 | 4.58E-02 |
| Idling Emissions | 7.21E-02 | 1.88E-02 |
| Total Vehicle Emissions | 1.60E-01 | 6.47E-02 |
| Area (m2) | 4.68E+06 | 4.68E+06 |
| Emission Rate (g/m2-sec) | 3.41E-08 | 1.38E-08 |

**World Logistics Center** 2012 Phase 1 No Mitigation
**Diesel Vehicle Emissions** TOG Pk Hr

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** TOG Pk Hr Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.172 | 3 | 330 | 0.21 | 1.08E-01 | 2.38E-04 | 3.00E-05 | |
| | LDT1 | 15 | 0.284 | 0 | 330 | 0.21 | 8.59E-03 | 1.89E-05 | 2.39E-06 | |
| | LDT2 | 15 | 0.264 | 0 | 330 | 0.21 | 7.85E-03 | 1.73E-05 | 2.18E-06 | |
| | MDT | 15 | 0.125 | 0 | 330 | 0.21 | 7.23E-03 | 1.59E-05 | 2.01E-06 | |
| | LHDT1 | 15 | 0.419 | 34 | 330 | 0.21 | 2.88E+00 | 6.34E-03 | 8.00E-04 | |
| | LHDT2 | 15 | 0.402 | 11 | 330 | 0.21 | 9.40E-01 | 2.07E-03 | 2.61E-04 | |
| | MHDT | 15 | 1.293 | 179 | 330 | 0.21 | 4.75E+01 | 1.05E-01 | 1.32E-02 | |
| | HHDT | 15 | 2.213 | 578 | 330 | 0.21 | 2.62E+02 | 5.77E-01 | 7.28E-02 | |
| | | | | | | | | | | 8.71E-02 |
| Travel at Light Logistics | LDA | 15 | 0.172 | 0 | 175 | 0.11 | 3.61E-04 | 7.96E-07 | 1.00E-07 | |
| | LDT1 | 15 | 0.284 | 0 | 175 | 0.11 | 2.87E-05 | 6.32E-08 | 7.97E-09 | |
| | LDT2 | 15 | 0.264 | 0 | 175 | 0.11 | 2.62E-05 | 5.78E-08 | 7.29E-09 | |
| | MDT | 15 | 0.125 | 0 | 175 | 0.11 | 2.42E-05 | 5.33E-08 | 6.72E-09 | |
| | LHDT1 | 15 | 0.419 | 0 | 175 | 0.11 | 8.49E-03 | 1.87E-05 | 2.36E-06 | |
| | LHDT2 | 15 | 0.402 | 0 | 175 | 0.11 | 2.77E-03 | 6.11E-06 | 7.70E-07 | |
| | MHDT | 15 | 1.293 | 1 | 175 | 0.11 | 7.75E-02 | 1.71E-04 | 2.15E-05 | |
| | HHDT | 15 | 2.213 | 2 | 175 | 0.11 | 4.25E-01 | 9.36E-04 | 1.18E-04 | 1.43E-04 |
| Travel at Utility | LDA | 15 | 0.172 | 0 | 100 | 0.06 | 3.19E-04 | 7.04E-07 | 8.87E-08 | |
| | LDT1 | 15 | 0.284 | 0 | 100 | 0.06 | 2.54E-05 | 5.59E-08 | 7.05E-09 | |
| | LDT2 | 15 | 0.264 | 0 | 100 | 0.06 | 2.32E-05 | 5.11E-08 | 6.44E-09 | |
| | MDT | 15 | 0.125 | 0 | 100 | 0.06 | 2.14E-05 | 4.71E-08 | 5.94E-09 | |
| | LHDT1 | 15 | 0.419 | 1 | 100 | 0.06 | 1.52E-02 | 3.35E-05 | 4.22E-06 | |
| | LHDT2 | 15 | 0.402 | 0 | 100 | 0.06 | 4.96E-03 | 1.09E-05 | 1.38E-06 | |
| | MHDT | 15 | 1.293 | 1 | 100 | 0.06 | 6.25E-02 | 1.38E-04 | 1.74E-05 | |
| | HHDT | 15 | 2.213 | 2 | 100 | 0.06 | 2.57E-01 | 5.65E-04 | 7.13E-05 | 9.44E-05 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.172 | 0 | 50 | 0.03 | 8.63E-05 | 1.90E-07 | 2.40E-08 | |
| | LDT1 | 15 | 0.284 | 0 | 50 | 0.03 | 6.86E-06 | 1.51E-08 | 1.90E-09 | |
| | LDT2 | 15 | 0.264 | 0 | 50 | 0.03 | 6.27E-06 | 1.38E-08 | 1.74E-09 | |
| | MDT | 15 | 0.125 | 0 | 50 | 0.03 | 5.77E-06 | 1.27E-08 | 1.60E-09 | |
| | LHDT1 | 15 | 0.419 | 0 | 50 | 0.03 | 5.55E-05 | 1.22E-07 | 1.54E-08 | |
| | LHDT2 | 15 | 0.402 | 0 | 50 | 0.03 | 1.81E-05 | 3.99E-08 | 5.04E-09 | |
| | MHDT | 15 | 1.293 | 2 | 50 | 0.03 | 7.54E-02 | 1.66E-04 | 2.09E-05 | |
| | HHDT | 15 | 2.213 | 9 | 50 | 0.03 | 6.27E-01 | 1.38E-03 | 1.74E-04 | 1.95E-04 |
| Travel at Convenience Store | LDA | 15 | 0.172 | 0 | 50 | 0.03 | 1.07E-04 | 2.37E-07 | 2.98E-08 | |
| | LDT1 | 15 | 0.284 | 0 | 50 | 0.03 | 8.53E-06 | 1.88E-08 | 2.37E-09 | |
| | LDT2 | 15 | 0.264 | 0 | 50 | 0.03 | 7.80E-06 | 1.72E-08 | 2.17E-09 | |
| | MDT | 15 | 0.125 | 0 | 50 | 0.03 | 7.18E-06 | 1.58E-08 | 2.00E-09 | |
| | LHDT1 | 15 | 0.419 | 0 | 50 | 0.03 | 2.38E-03 | 5.24E-06 | 6.61E-07 | |
| | LHDT2 | 15 | 0.402 | 0 | 50 | 0.03 | 7.77E-04 | 1.71E-06 | 2.16E-07 | |
| | MHDT | 15 | 1.293 | 1 | 50 | 0.03 | 5.74E-02 | 1.26E-04 | 1.59E-05 | |
| | HHDT | 15 | 2.213 | 10 | 50 | 0.03 | 7.21E-01 | 1.59E-03 | 2.00E-04 | 2.17E-04 |
| Travel at Fire Station | LDA | 15 | 0.172 | 0 | 50 | 0.03 | 2.68E-04 | 5.91E-07 | 7.46E-08 | |
| | LDT1 | 15 | 0.284 | 0 | 50 | 0.03 | 2.13E-05 | 4.70E-08 | 5.92E-09 | |
| | LDT2 | 15 | 0.264 | 0 | 50 | 0.03 | 1.95E-05 | 4.29E-08 | 5.42E-09 | |
| | MDT | 15 | 0.125 | 0 | 50 | 0.03 | 1.80E-05 | 3.96E-08 | 4.99E-09 | |
| | LHDT1 | 15 | 0.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.402 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 1.293 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 2.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.09E-08 |
| Total - All Buildings | LDA | | | 3 | | | 1.09E-01 | 2.41E-04 | 3.04E-05 | |
| | LDT1 | | | 0 | | | 8.68E-03 | 1.91E-05 | 2.41E-06 | |
| | LDT2 | | | 0 | | | 7.94E-03 | 1.75E-05 | 2.20E-06 | |
| | MDT | | | 0 | | | 7.31E-03 | 1.61E-05 | 2.03E-06 | |
| | LHDT1 | | | 34 | | | 2.90E+00 | 6.40E-03 | 8.07E-04 | |
| | LHDT2 | | | 12 | | | 9.48E-01 | 2.09E-03 | 2.63E-04 | |
| | MHDT | | | 184 | | | 4.78E+01 | 1.05E-01 | 1.33E-02 | |
| | HHDT | | | 601 | | | 2.64E+02 | 5.82E-01 | 7.34E-02 | |
| | Total | | | 835 | | | 3.16E+02 | 6.96E-01 | 8.78E-02 | 8.78E-02 |

**Diesel truck Idling Emissions** **TOG Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 2.795 | 5 | 17 | 3.91E+00 | 8.60E-03 | 1.08E-03 | |
| | **LHDT2** | 2.689 | 5 | 6 | 1.28E+00 | 2.81E-03 | 3.55E-04 | |
| | **MHDT** | 3.664 | 5 | 90 | 2.74E+01 | 6.03E-02 | 7.60E-03 | |
| | **HHDT** | 9.037 | 5 | 289 | 2.18E+02 | 4.79E-01 | 6.04E-02 | |
| | | | | 401 | 2.50E+02 | 5.51E-01 | 6.95E-02 | 6.95E-02 |
| **Idle at Light Logistics** | **LHDT1** | 2.795 | 5 | 0 | 2.17E-02 | 4.79E-05 | 6.04E-06 | |
| | **LHDT2** | 2.689 | 5 | 0 | 7.11E-03 | 1.57E-05 | 1.97E-06 | |
| | **MHDT** | 3.664 | 5 | 0 | 8.42E-02 | 1.85E-04 | 2.34E-05 | |
| | **HHDT** | 9.037 | 5 | 1 | 6.65E-01 | 1.46E-03 | 1.85E-04 | |
| | | | | 1 | 7.78E-01 | 1.71E-03 | 2.16E-04 | 2.16E-04 |
| **Idle at Utility** | **LHDT1** | 2.795 | 5 | 0 | 6.81E-02 | 1.50E-04 | 1.89E-05 | |
| | **LHDT2** | 2.689 | 5 | 0 | 2.23E-02 | 4.91E-05 | 6.19E-06 | |
| | **MHDT** | 3.664 | 5 | 0 | 1.19E-01 | 2.62E-04 | 3.30E-05 | |
| | **HHDT** | 9.037 | 5 | 1 | 7.03E-01 | 1.55E-03 | 1.95E-04 | |
| | | | | 2 | 9.12E-01 | 2.01E-03 | 2.53E-04 | 2.53E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 2.795 | 5 | 0 | 4.97E-04 | 1.10E-06 | 1.38E-07 | |
| | **LHDT2** | 2.689 | 5 | 0 | 1.63E-04 | 3.58E-07 | 4.52E-08 | |
| | **MHDT** | 3.664 | 5 | 1 | 2.87E-01 | 6.31E-04 | 7.96E-05 | |
| | **HHDT** | 9.037 | 5 | 5 | 3.43E+00 | 7.56E-03 | 9.54E-04 | |
| | | | | 6 | 3.72E+00 | 8.20E-03 | 1.03E-03 | 1.03E-03 |
| **Idle at Convenience Store** | **LHDT1** | 2.795 | 5 | 0 | 2.13E-02 | 4.70E-05 | 5.92E-06 | |
| | **LHDT2** | 2.689 | 5 | 0 | 6.97E-03 | 1.54E-05 | 1.94E-06 | |
| | **MHDT** | 3.664 | 5 | 1 | 2.18E-01 | 4.81E-04 | 6.06E-05 | |
| | **HHDT** | 9.037 | 5 | 5 | 3.95E+00 | 8.70E-03 | 1.10E-03 | |
| | | | | 6 | 4.20E+00 | 9.24E-03 | 1.17E-03 | 1.17E-03 |
| **Idle at Firestation** | **LHDT1** | 2.795 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 2.689 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 3.664 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 9.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 416 | 2.60E+02 | 5.72E-01 | 7.21E-02 | 7.21E-02 |

**World Logistics Center** **2012** **Phase 1** No Mitigation
**Non-Diesel Vehicle Emissions** **TOG Pk Hr**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day** SoCAB

**Onsite Running Exhaust Emissions** **TOG Pk Hr Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.266 | 1014 | 330 | 0.21 | 5.52E+01 | 1.22E-01 | 1.53E-02 | |
| | **LDT1** | 15 | 0.682 | 119 | 330 | 0.21 | 1.66E+01 | 3.66E-02 | 4.61E-03 | |
| | **LDT2** | 15 | 0.335 | 353 | 330 | 0.21 | 2.42E+01 | 5.34E-02 | 6.73E-03 | |
| | **MDT** | 15 | 0.404 | 280 | 330 | 0.21 | 2.32E+01 | 5.10E-02 | 6.44E-03 | |
| | **LHDT1** | 15 | 0.781 | 109 | 330 | 0.21 | 1.74E+01 | 3.83E-02 | 4.83E-03 | |
| | **LHDT2** | 15 | 0.777 | 11 | 330 | 0.21 | 1.82E+00 | 4.01E-03 | 5.06E-04 | |
| | **MHDT** | 15 | 1.706 | 43 | 330 | 0.21 | 1.51E+01 | 3.34E-02 | 4.21E-03 | |
| | **HHDT** | 15 | 3.679 | 13 | 330 | 0.21 | 9.84E+00 | 2.17E-02 | 2.73E-03 | |
| | | | | | | | | | | 4.54E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.266 | 6 | 175 | 0.11 | 1.85E-01 | 4.07E-04 | 5.13E-05 | |
| | **LDT1** | 15 | 0.682 | 1 | 175 | 0.11 | 5.55E-02 | 1.22E-04 | 1.54E-05 | |
| | **LDT2** | 15 | 0.335 | 2 | 175 | 0.11 | 8.10E-02 | 1.78E-04 | 2.25E-05 | |
| | **MDT** | 15 | 0.404 | 2 | 175 | 0.11 | 7.75E-02 | 1.71E-04 | 2.15E-05 | |
| | **LHDT1** | 15 | 0.781 | 1 | 175 | 0.11 | 5.12E-02 | 1.13E-04 | 1.42E-05 | |
| | **LHDT2** | 15 | 0.777 | 0 | 175 | 0.11 | 5.38E-03 | 1.18E-05 | 1.49E-06 | |
| | **MHDT** | 15 | 1.706 | 0 | 175 | 0.11 | 2.47E-02 | 5.44E-05 | 6.86E-06 | |
| | **HHDT** | 15 | 3.679 | 0 | 175 | 0.11 | 1.59E-02 | 3.51E-05 | 4.43E-06 | 1.38E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.266 | 10 | 100 | 0.06 | 1.63E-01 | 3.59E-04 | 4.53E-05 | |
| | **LDT1** | 15 | 0.682 | 1 | 100 | 0.06 | 4.91E-02 | 1.08E-04 | 1.36E-05 | |
| | **LDT2** | 15 | 0.335 | 3 | 100 | 0.06 | 7.16E-02 | 1.58E-04 | 1.99E-05 | |
| | **MDT** | 15 | 0.404 | 3 | 100 | 0.06 | 6.85E-02 | 1.51E-04 | 1.90E-05 | |
| | **LHDT1** | 15 | 0.781 | 2 | 100 | 0.06 | 9.18E-02 | 2.02E-04 | 2.55E-05 | |
| | **LHDT2** | 15 | 0.777 | 0 | 100 | 0.06 | 9.63E-03 | 2.12E-05 | 2.67E-06 | |
| | **MHDT** | 15 | 1.706 | 0 | 100 | 0.06 | 1.99E-02 | 4.39E-05 | 5.53E-06 | |
| | **HHDT** | 15 | 3.679 | 0 | 100 | 0.06 | 9.63E-03 | 2.12E-05 | 2.68E-06 | 1.34E-04 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.266 | 5 | 50 | 0.03 | 4.41E-02 | 9.71E-05 | 1.22E-05 | |
| | **LDT1** | 15 | 0.682 | 1 | 50 | 0.03 | 1.33E-02 | 2.92E-05 | 3.68E-06 | |
| | **LDT2** | 15 | 0.335 | 2 | 50 | 0.03 | 1.93E-02 | 4.26E-05 | 5.37E-06 | |
| | **MDT** | 15 | 0.404 | 1 | 50 | 0.03 | 1.85E-02 | 4.07E-05 | 5.14E-06 | |
| | **LHDT1** | 15 | 0.781 | 0 | 50 | 0.03 | 3.35E-04 | 7.38E-07 | 9.31E-08 | |
| | **LHDT2** | 15 | 0.777 | 0 | 50 | 0.03 | 3.52E-05 | 7.75E-08 | 9.77E-09 | |
| | **MHDT** | 15 | 1.706 | 0 | 50 | 0.03 | 2.40E-02 | 5.29E-05 | 6.67E-06 | |
| | **HHDT** | 15 | 3.679 | 0 | 50 | 0.03 | 2.35E-02 | 5.18E-05 | 6.53E-06 | 3.98E-05 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.266 | 7 | 50 | 0.03 | 5.49E-02 | 1.21E-04 | 1.52E-05 | |
| | **LDT1** | 15 | 0.682 | 1 | 50 | 0.03 | 1.65E-02 | 3.63E-05 | 4.58E-06 | |
| | **LDT2** | 15 | 0.335 | 2 | 50 | 0.03 | 2.41E-02 | 5.30E-05 | 6.68E-06 | |
| | **MDT** | 15 | 0.404 | 2 | 50 | 0.03 | 2.30E-02 | 5.07E-05 | 6.39E-06 | |
| | **LHDT1** | 15 | 0.781 | 1 | 50 | 0.03 | 1.44E-02 | 3.16E-05 | 3.99E-06 | |
| | **LHDT2** | 15 | 0.777 | 0 | 50 | 0.03 | 1.51E-03 | 3.32E-06 | 4.19E-07 | |
| | **MHDT** | 15 | 1.706 | 0 | 50 | 0.03 | 1.83E-02 | 4.03E-05 | 5.08E-06 | |
| | **HHDT** | 15 | 3.679 | 0 | 50 | 0.03 | 2.71E-02 | 5.96E-05 | 7.52E-06 | 4.99E-05 |
| **Travel at Fire Station** | **LDA** | 15 | 0.266 | 17 | 50 | 0.03 | 1.37E-01 | 3.02E-04 | 3.81E-05 | |
| | **LDT1** | 15 | 0.682 | 2 | 50 | 0.03 | 4.12E-02 | 9.09E-05 | 1.15E-05 | |
| | **LDT2** | 15 | 0.335 | 6 | 50 | 0.03 | 6.01E-02 | 1.32E-04 | 1.67E-05 | |
| | **MDT** | 15 | 0.404 | 5 | 50 | 0.03 | 5.75E-02 | 1.27E-04 | 1.60E-05 | |
| | **LHDT1** | 15 | 0.781 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.777 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.706 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.679 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.22E-05 |
| **Total - All Buildings** | **LDA** | | | 1059 | | | 5.58E+01 | 1.23E-01 | 1.55E-02 | |
| | **LDT1** | | | 124 | | | 1.68E+01 | 3.70E-02 | 4.66E-03 | |
| | **LDT2** | | | 369 | | | 2.45E+01 | 5.39E-02 | 6.80E-03 | |
| | **MDT** | | | 292 | | | 2.34E+01 | 5.16E-02 | 6.51E-03 | |
| | **LHDT1** | | | 112 | | | 1.75E+01 | 3.86E-02 | 4.87E-03 | |
| | **LHDT2** | | | 12 | | | 1.84E+00 | 4.05E-03 | 5.11E-04 | |
| | **MHDT** | | | 44 | | | 1.52E+01 | 3.35E-02 | 4.23E-03 | |
| | **HHDT** | | | 14 | | | 9.91E+00 | 2.18E-02 | 2.75E-03 | |
| | **Total** | | | 2026 | | | 1.65E+02 | 3.63E-01 | 4.58E-02 | 4.58E-02 |

**Non-Diesel truck Idling Emissions** **TOG Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 4.890 | 5 | 54 | 2.21E+01 | 4.87E-02 | 6.14E-03 | |
| | **LHDT2** | 4.787 | 5 | 6 | 2.28E+00 | 5.02E-03 | 6.34E-04 | |
| | **MHDT** | 11.810 | 5 | 22 | 2.13E+01 | 4.69E-02 | 5.92E-03 | |
| | **HHDT** | 36.819 | 5 | 7 | 2.00E+01 | 4.41E-02 | 5.56E-03 | |
| | | | | 88 | 6.57E+01 | 1.45E-01 | 1.83E-02 | 1.83E-02 |
| **Idle at Light Logistics** | **LHDT1** | 4.890 | 5 | 0 | 1.23E-01 | 2.71E-04 | 3.42E-05 | |
| | **LHDT2** | 4.787 | 5 | 0 | 1.27E-02 | 2.80E-05 | 3.52E-06 | |
| | **MHDT** | 11.810 | 5 | 0 | 6.55E-02 | 1.44E-04 | 1.82E-05 | |
| | **HHDT** | 36.819 | 5 | 0 | 6.11E-02 | 1.35E-04 | 1.70E-05 | |
| | | | | 0 | 2.62E-01 | 5.78E-04 | 7.29E-05 | 7.29E-05 |
| **Idle at Utility** | **LHDT1** | 4.890 | 5 | 1 | 3.86E-01 | 8.49E-04 | 1.07E-04 | |
| | **LHDT2** | 4.787 | 5 | 0 | 3.98E-02 | 8.76E-05 | 1.10E-05 | |
| | **MHDT** | 11.810 | 5 | 0 | 9.25E-02 | 2.04E-04 | 2.57E-05 | |
| | **HHDT** | 36.819 | 5 | 0 | 6.47E-02 | 1.42E-04 | 1.80E-05 | |
| | | | | 1 | 5.82E-01 | 1.28E-03 | 1.62E-04 | 1.62E-04 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 4.890 | 5 | 0 | 2.82E-03 | 6.20E-06 | 7.82E-07 | |
| | **LHDT2** | 4.787 | 5 | 0 | 2.91E-04 | 6.40E-07 | 8.07E-08 | |
| | **MHDT** | 11.810 | 5 | 0 | 2.23E-01 | 4.92E-04 | 6.20E-05 | |
| | **HHDT** | 36.819 | 5 | 0 | 3.16E-01 | 6.96E-04 | 8.77E-05 | |
| | | | | 0 | 5.42E-01 | 1.19E-03 | 1.51E-04 | 1.51E-04 |
| **Idle at Convenience Store** | **LHDT1** | 4.890 | 5 | 0 | 1.21E-01 | 2.66E-04 | 3.35E-05 | |
| | **LHDT2** | 4.787 | 5 | 0 | 1.25E-02 | 2.74E-05 | 3.46E-06 | |
| | **MHDT** | 11.810 | 5 | 0 | 1.70E-01 | 3.74E-04 | 4.72E-05 | |
| | **HHDT** | 36.819 | 5 | 0 | 3.63E-01 | 8.00E-04 | 1.01E-04 | |
| | | | | 1 | 6.66E-01 | 1.47E-03 | 1.85E-04 | 1.85E-04 |
| **Idle at Firestation** | **LHDT1** | 4.890 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 4.787 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 11.810 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 36.819 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 91 | 6.78E+01 | 1.49E-01 | 1.88E-02 | 1.88E-02 |

**World Logistics Center** **2012** No Mitigation
**TOG Pk Hr** **SoCAB**

***EMFAC2011 Running Exhaust + Running Loss***

| Vehicle Class | Fuel | Vehicle Speed (mph) | Emission Factor (g/mi) |
|---|---|---|---|
| LDA | DSL | 15 | 0.172 |
| LDT1 | DSL | 15 | 0.284 |
| LDT2 | DSL | 15 | 0.264 |
| LHD1 | DSL | 15 | 0.419 |
| LHD2 | DSL | 15 | 0.402 |
| MDV | DSL | 15 | 0.125 |
| MH | DSL | 15 | 0.738 |
| OBUS | DSL | 15 | 1.980 |
| SBUS | DSL | 15 | 1.670 |
| T6 | DSL | 15 | 1.293 |
| T7 | DSL | 15 | 2.213 |
| UBUS | DSL | 15 | 1.354 |
| LDA | GAS | 15 | 0.266 |
| LDT1 | GAS | 15 | 0.682 |
| LDT2 | GAS | 15 | 0.335 |
| LHD1 | GAS | 15 | 0.781 |
| LHD2 | GAS | 15 | 0.777 |
| MCY | GAS | 15 | 4.329 |
| MDV | GAS | 15 | 0.404 |
| MH | GAS | 15 | 1.276 |
| OBUS | GAS | 15 | 0.918 |
| SBUS | GAS | 15 | 3.706 |
| T6 | GAS | 15 | 1.706 |
| T7 | GAS | 15 | 3.679 |
| | | | 4.092 |

***EMFAC2011 Running Exhaust Emission Factors***

| Vehicle Class | Fuel | Vehicle Speed (mph) | Running Exhaust Emission Factor (g/mi) |
|---|---|---|---|
| LDA | DSL | 5 | 0.236 |
| LDT1 | DSL | 5 | 0.395 |
| LDT2 | DSL | 5 | 0.365 |
| LHD1 | DSL | 5 | 0.559 |
| LHD2 | DSL | 5 | 0.538 |
| MDV | DSL | 5 | 0.178 |
| MH | DSL | 5 | 1.795 |
| OBUS | DSL | 5 | 6.374 |
| SBUS | DSL | 5 | 5.040 |
| T6 | DSL | 5 | 4.243 |
| T7 | DSL | 5 | 7.340 |
| UBUS | DSL | 5 | 2.163 |
| LDA | GAS | 5 | 0.383 |
| LDT1 | GAS | 5 | 0.874 |
| LDT2 | GAS | 5 | 0.473 |
| LHD1 | GAS | 5 | 0.978 |
| LHD2 | GAS | 5 | 0.957 |
| MCY | GAS | 5 | 5.380 |
| MDV | GAS | 5 | 0.650 |
| MH | GAS | 5 | 2.062 |
| OBUS | GAS | 5 | 1.182 |
| SBUS | GAS | 5 | 6.307 |
| T6 | GAS | 5 | 2.362 |
| T7 | GAS | 5 | 6.301 |
| UBUS | GAS | 5 | 7.364 |

***EMFAC2011 Idling Emission Factors***

| Vehicle Class | Fuel | Idling Exhaust Emission Factor (g/hr) | |
|---|---|---|---|
| LDA | DSL | 1.1796 | * |
| LDT1 | DSL | 1.9752 | * |
| LDT2 | DSL | 1.8273 | * |
| LHD1 | DSL | 2.7953 | * |
| LHD2 | DSL | 2.6885 | * |
| MDV | DSL | 0.8922 | * |
| T6 | DSL | 3.6642 | |
| T7 | DSL | 9.0367 | |
| LDA | GAS | 1.9154 | * |
| LDT1 | GAS | 4.3700 | * |
| LDT2 | GAS | 2.3641 | * |
| LHD1 | GAS | 4.8903 | * |
| LHD2 | GAS | 4.7869 | * |
| MDV | GAS | 3.2505 | * |
| T6 | GAS | 11.810 | |
| T7 | GAS | 36.819 | |

* Idling emission factors (g/hr) estimated by miltiplying the running exhaust emission factor (g/mi) at 5 mph by 5 miles per hour

T6 and T7 DSL idling emisison factors taken directly from EMFAC2011

## Emission Assumptions

### Emission Factors

1) Vehicle Emissions

a) Truck and Auto Exhaust and Idling Emissions
(1) EMFAC2011
(a) Calculations for SoCAB
(c) Truck Mix
EMFAC2011/Traffic Impact Study used to derive fleet mix
EMFAC2011 to derive the number of diesel truck vehicles
(d) Truck Idle Time: 5 minutes (truck idling only applies to HDT vehicles)
(e) Vehicle Travel Speed
Onsite Travel 15 mph
b) Emission factors for TOG Pk Hr emissions
c) Emissions calculated for 2012

### Traffic Allocation

1) Onsite Traffic was allocated to an area source corresponding to each phase
2) Trip generation from traffic impact study
3) Onsite travel emssions generated from diesel vehicles
4) Onsite idling emissions generated only by heavy duty diesel trucks

### Emission Source Configuration

1) Vehicle traffic represented by an area source
2) Onsite idling represented by an area source

### Onsite Diesel Truck Travel Links

| Location | Diesel Truck Travel Distance (m) |
|---|---|
| High Cube | 330 |
| Light Logistics | 175 |
| Utility Service | 100 |
| Gas Station w/Convenience Store | 50 |
| Convenience Store | 50 |
| Fire Station | 50 |

### Other Input Parameters

Facility Operations for Warehouses (hr): 24
Facility operations for All Others (hr): 24

# World Logistics Center

**2012** **Phase 2**
No Mitigation

**Vehicle Running Exhaust Emissions** **Pollutant** **TOG Pk Hr**

| **Travel to Building** | **AERMOD Source ID** | **Diesel Vehicles (g/sec)** | **Non-Diesel Vehicles (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 6.66E-02 | 3.47E-02 |
| Light Logistics | Phase 2 | 4.85E-04 | 4.68E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 6.71E-02 | 3.52E-02 |

**Vehicle Idling Emission Sources**

| **Building** | **AERMOD Source IDs** | **Diesel Vehicles Emissions (g/sec)** | **Non-Diesel Vehicles Emissions (g/sec)** |
|---|---|---|---|
| High Cube | Phase 2 | 5.31E-02 | 1.39E-02 |
| Light Logistics | Phase 2 | 7.34E-04 | 2.47E-04 |
| Utilities Service Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Gas Station w/Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Convenience Store | Phase 2 | 0.00E+00 | 0.00E+00 |
| Fire Station | Phase 2 | 0.00E+00 | 0.00E+00 |
| Total | | 5.38E-02 | 1.42E-02 |

**Total Onsite Emission**

| | **Emissions (g/sec)** | **Emissions (g/sec)** |
|---|---|---|
| Runing Exhaust | 6.71E-02 | 3.52E-02 |
| Idling Emissions | 5.38E-02 | 1.42E-02 |
| Total Vehicle Emissions | 1.21E-01 | 4.94E-02 |
| Area (m2) | 5.15E+06 | 5.15E+06 |
| Emission rate (g/m2-sec) | 2.35E-08 | 9.58E-09 |

**World Logistics Center** 2012 Phase 2 No Mitigation
**Diesel Vehicle Emissions** TOG Pk Hr

**Processes Modeled**
Diesel vehicle exhaust
Diesel vehicle idling

**Facility Operations:** 1 hrs/day, 52weeks/year

**Onsite Running Exhaust Emissions** TOG Pk Hr Emissions

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Day (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| Travel at High Cube Warehouses | LDA | 15 | 0.172 | 2 | 330 | 0.21 | 8.26E-02 | 1.82E-04 | 2.30E-05 | |
| | LDT1 | 15 | 0.284 | 0 | 330 | 0.21 | 6.56E-03 | 1.45E-05 | 1.82E-06 | |
| | LDT2 | 15 | 0.264 | 0 | 330 | 0.21 | 6.00E-03 | 1.32E-05 | 1.67E-06 | |
| | MDT | 15 | 0.125 | 0 | 330 | 0.21 | 5.53E-03 | 1.22E-05 | 1.54E-06 | |
| | LHDT1 | 15 | 0.419 | 26 | 330 | 0.21 | 2.20E+00 | 4.84E-03 | 6.11E-04 | |
| | LHDT2 | 15 | 0.402 | 9 | 330 | 0.21 | 7.18E-01 | 1.58E-03 | 1.99E-04 | |
| | MHDT | 15 | 1.293 | 137 | 330 | 0.21 | 3.63E+01 | 8.00E-02 | 1.01E-02 | |
| | HHDT | 15 | 2.213 | 442 | 330 | 0.21 | 2.00E+02 | 4.41E-01 | 5.56E-02 | |
| | | | | | | | | | | 6.66E-02 |
| Travel at Light Logistics | LDA | 15 | 0.172 | 0 | 175 | 0.11 | 1.23E-03 | 2.70E-06 | 3.41E-07 | |
| | LDT1 | 15 | 0.284 | 0 | 175 | 0.11 | 9.75E-05 | 2.15E-07 | 2.71E-08 | |
| | LDT2 | 15 | 0.264 | 0 | 175 | 0.11 | 8.91E-05 | 1.96E-07 | 2.48E-08 | |
| | MDT | 15 | 0.125 | 0 | 175 | 0.11 | 8.21E-05 | 1.81E-07 | 2.28E-08 | |
| | LHDT1 | 15 | 0.419 | 1 | 175 | 0.11 | 2.88E-02 | 6.35E-05 | 8.01E-06 | |
| | LHDT2 | 15 | 0.402 | 0 | 175 | 0.11 | 9.41E-03 | 2.07E-05 | 2.61E-06 | |
| | MHDT | 15 | 1.293 | 2 | 175 | 0.11 | 2.63E-01 | 5.79E-04 | 7.31E-05 | |
| | HHDT | 15 | 2.213 | 6 | 175 | 0.11 | 1.44E+00 | 3.18E-03 | 4.01E-04 | 4.85E-04 |
| Travel at Utility | LDA | 15 | 0.172 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.284 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.264 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.125 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.419 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.402 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 1.293 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 2.213 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Gas Station/Convenience Store | LDA | 15 | 0.172 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.284 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.264 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.402 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 1.293 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 2.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Convenience Store | LDA | 15 | 0.172 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.284 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.264 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.402 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 1.293 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 2.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Travel at Fire Station | LDA | 15 | 0.172 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT1 | 15 | 0.284 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LDT2 | 15 | 0.264 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MDT | 15 | 0.125 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT1 | 15 | 0.419 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | LHDT2 | 15 | 0.402 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | MHDT | 15 | 1.293 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | HHDT | 15 | 2.213 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total - All Buildings | LDA | | | 2 | | | 8.39E-02 | 1.85E-04 | 2.33E-05 | |
| | LDT1 | | | 0 | | | 6.66E-03 | 1.47E-05 | 1.85E-06 | |
| | LDT2 | | | 0 | | | 6.09E-03 | 1.34E-05 | 1.69E-06 | |
| | MDT | | | 0 | | | 5.61E-03 | 1.24E-05 | 1.56E-06 | |
| | LHDT1 | | | 26 | | | 2.23E+00 | 4.91E-03 | 6.19E-04 | |
| | LHDT2 | | | 9 | | | 7.27E-01 | 1.60E-03 | 2.02E-04 | |
| | MHDT | | | 139 | | | 3.66E+01 | 8.06E-02 | 1.02E-02 | |
| | HHDT | | | 448 | | | 2.02E+02 | 4.44E-01 | 5.60E-02 | |
| | Total | | | 624 | | | 2.41E+02 | 5.32E-01 | 6.71E-02 | 6.71E-02 |

**Diesel truck Idling Emissions** **TOG Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Day | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 2.795 | 5 | 13 | 2.98E+00 | 6.57E-03 | 8.29E-04 | |
| | **LHDT2** | 2.689 | 5 | 4 | 9.76E-01 | 2.15E-03 | 2.71E-04 | |
| | **MHDT** | 3.664 | 5 | 69 | 2.09E+01 | 4.61E-02 | 5.81E-03 | |
| | **HHDT** | 9.037 | 5 | 221 | 1.66E+02 | 3.66E-01 | 4.62E-02 | |
| | | | | 306 | 1.91E+02 | 4.21E-01 | 5.31E-02 | 5.31E-02 |
| **Idle at Light Logistics** | **LHDT1** | 2.795 | 5 | 0 | 7.38E-02 | 1.63E-04 | 2.05E-05 | |
| | **LHDT2** | 2.689 | 5 | 0 | 2.41E-02 | 5.32E-05 | 6.70E-06 | |
| | **MHDT** | 3.664 | 5 | 1 | 2.86E-01 | 6.29E-04 | 7.94E-05 | |
| | **HHDT** | 9.037 | 5 | 3 | 2.26E+00 | 4.97E-03 | 6.27E-04 | |
| | | | | 4 | 2.64E+00 | 5.82E-03 | 7.34E-04 | 7.34E-04 |
| **Idle at Utility** | **LHDT1** | 2.795 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 2.689 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 3.664 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 9.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 2.795 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 2.689 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 3.664 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 9.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 2.795 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 2.689 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 3.664 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 9.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 2.795 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 2.689 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 3.664 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 9.037 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 311 | 1.94E+02 | 4.27E-01 | 5.38E-02 | 5.38E-02 |

**World Logistics Center** **2012** **Phase 2** No Mitigation
**Non-Diesel Vehicle Emissions** **TOG Pk Hr**

**Processes Modeled**
Non-Diesel vehicle exhaust
Non-Diesel vehicle idling

**Facility Operations:** 1 **hrs/day**
1 **hrs/day**

**Onsite Running Exhaust Emissions** **TOG Pk Hr Emissions**

| Link | Truck Type | Average Speed (mph) | Emission Factor (g/mi) | Trips per Hr (in and out) | Trip Length (m) | Trip Length (mi) | Emissions Over Link (g/hr) | Emissions (lbs/hr) | Daily Average Emissions (g/sec) | Total Daily Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Travel at High Cube Warehouses** | **LDA** | 15 | 0.266 | 775 | 330 | 0.21 | 4.22E+01 | 9.30E-02 | 1.17E-02 | |
| | **LDT1** | 15 | 0.682 | 91 | 330 | 0.21 | 1.27E+01 | 2.80E-02 | 3.53E-03 | |
| | **LDT2** | 15 | 0.335 | 270 | 330 | 0.21 | 1.85E+01 | 4.08E-02 | 5.14E-03 | |
| | **MDT** | 15 | 0.404 | 214 | 330 | 0.21 | 1.77E+01 | 3.90E-02 | 4.92E-03 | |
| | **LHDT1** | 15 | 0.781 | 83 | 330 | 0.21 | 1.33E+01 | 2.92E-02 | 3.69E-03 | |
| | **LHDT2** | 15 | 0.777 | 9 | 330 | 0.21 | 1.39E+00 | 3.07E-03 | 3.87E-04 | |
| | **MHDT** | 15 | 1.706 | 33 | 330 | 0.21 | 1.16E+01 | 2.55E-02 | 3.21E-03 | |
| | **HHDT** | 15 | 3.679 | 10 | 330 | 0.21 | 7.52E+00 | 1.66E-02 | 2.09E-03 | |
| | | | | | | | | | | 3.47E-02 |
| **Travel at Light Logistics** | **LDA** | 15 | 0.266 | 22 | 175 | 0.11 | 6.27E-01 | 1.38E-03 | 1.74E-04 | |
| | **LDT1** | 15 | 0.682 | 3 | 175 | 0.11 | 1.89E-01 | 4.15E-04 | 5.24E-05 | |
| | **LDT2** | 15 | 0.335 | 8 | 175 | 0.11 | 2.75E-01 | 6.06E-04 | 7.64E-05 | |
| | **MDT** | 15 | 0.404 | 6 | 175 | 0.11 | 2.63E-01 | 5.79E-04 | 7.31E-05 | |
| | **LHDT1** | 15 | 0.781 | 2 | 175 | 0.11 | 1.74E-01 | 3.83E-04 | 4.83E-05 | |
| | **LHDT2** | 15 | 0.777 | 0 | 175 | 0.11 | 1.83E-02 | 4.02E-05 | 5.07E-06 | |
| | **MHDT** | 15 | 1.706 | 0 | 175 | 0.11 | 8.38E-02 | 1.85E-04 | 2.33E-05 | |
| | **HHDT** | 15 | 3.679 | 0 | 175 | 0.11 | 5.41E-02 | 1.19E-04 | 1.50E-05 | 4.68E-04 |
| **Travel at Utility** | **LDA** | 15 | 0.266 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.682 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.335 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.404 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.781 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.777 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.706 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.679 | 0 | 100 | 0.06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Gas Station/Convenience Store** | **LDA** | 15 | 0.266 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.682 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.404 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.781 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.777 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.706 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.679 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Convenience Store** | **LDA** | 15 | 0.266 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.682 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.404 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.781 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.777 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.706 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.679 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Travel at Fire Station** | **LDA** | 15 | 0.266 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT1** | 15 | 0.682 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LDT2** | 15 | 0.335 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MDT** | 15 | 0.404 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT1** | 15 | 0.781 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 15 | 0.777 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 15 | 1.706 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 15 | 3.679 | 0 | 50 | 0.03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Total - All Buildings** | **LDA** | | | 797 | | | 4.28E+01 | 9.44E-02 | 1.19E-02 | |
| | **LDT1** | | | 93 | | | 1.29E+01 | 2.84E-02 | 3.58E-03 | |
| | **LDT2** | | | 277 | | | 1.88E+01 | 4.14E-02 | 5.22E-03 | |
| | **MDT** | | | 220 | | | 1.80E+01 | 3.96E-02 | 4.99E-03 | |
| | **LHDT1** | | | 85 | | | 1.34E+01 | 2.96E-02 | 3.74E-03 | |
| | **LHDT2** | | | 9 | | | 1.41E+00 | 3.11E-03 | 3.92E-04 | |
| | **MHDT** | | | 34 | | | 1.17E+01 | 2.57E-02 | 3.24E-03 | |
| | **HHDT** | | | 10 | | | 7.57E+00 | 1.67E-02 | 2.10E-03 | |
| | **Total** | | | 1525 | | | 1.27E+02 | 2.79E-01 | 3.52E-02 | 3.52E-02 |

**Non-Diesel Truck Idling Emissions** **TOG Pk Hr Emissions** Idle Time (minutes) 5

| Building/Location | Truck Type | Emission Factor (g/idle-hour) | Idling Time (min) | # Idling Vehicles/Hr | Emissions (g/hr) | Emissions (lb/hr) | Average Emissions (g/sec) | Total Emissions for all Vehicles (g/sec) |
|---|---|---|---|---|---|---|---|---|
| **Idle at High Cube Warehouses** | **LHDT1** | 4.890 | 5 | 41 | 1.69E+01 | 3.72E-02 | 4.69E-03 | |
| | **LHDT2** | 4.787 | 5 | 4 | 1.74E+00 | 3.84E-03 | 4.84E-04 | |
| | **MHDT** | 11.810 | 5 | 17 | 1.63E+01 | 3.59E-02 | 4.52E-03 | |
| | **HHDT** | 36.819 | 5 | 5 | 1.53E+01 | 3.37E-02 | 4.25E-03 | |
| | | | | 67 | 5.02E+01 | 1.11E-01 | 1.39E-02 | 1.39E-02 |
| **Idle at Light Logistics** | **LHDT1** | 4.890 | 5 | 1 | 4.18E-01 | 9.20E-04 | 1.16E-04 | |
| | **LHDT2** | 4.787 | 5 | 0 | 4.31E-02 | 9.49E-05 | 1.20E-05 | |
| | **MHDT** | 11.810 | 5 | 0 | 2.22E-01 | 4.90E-04 | 6.18E-05 | |
| | **HHDT** | 36.819 | 5 | 0 | 2.08E-01 | 4.57E-04 | 5.77E-05 | |
| | | | | 1 | 8.91E-01 | 1.96E-03 | 2.47E-04 | 2.47E-04 |
| **Idle at Utility** | **LHDT1** | 4.890 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 4.787 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 11.810 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 36.819 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Gas Station/Convenience Store** | **LHDT1** | 4.890 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 4.787 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 11.810 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 36.819 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Convenience Store** | **LHDT1** | 4.890 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 4.787 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 11.810 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 36.819 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **Idle at Firestation** | **LHDT1** | 4.890 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **LHDT2** | 4.787 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **MHDT** | 11.810 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | **HHDT** | 36.819 | 5 | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | |
| | | | | 0 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| **TOTAL** | | | | 69 | 5.11E+01 | 1.13E-01 | 1.42E-02 | 1.42E-02 |

**World Logistics Center** **2012** **TOG Pk Hr** Based on PB Traffic Results 10/3/2013
**2012 with Project (Freeway Segments to Ports)** No Mitigation With EMFAC2014
**Freeway Segments** Revised Segment Speeds

| Freeeway Segment | Diesel Emissions (g/sec) | GAS Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| 230 | 5.88E-03 | 4.74E-04 | 6.36E-03 |
| 229 | 3.68E-03 | 2.96E-04 | 3.97E-03 |
| 228 | 1.65E-03 | 1.33E-04 | 1.78E-03 |
| 227 | 2.64E-03 | 2.13E-04 | 2.86E-03 |
| 226 | 6.79E-03 | 5.47E-04 | 7.34E-03 |
| 225 | 3.27E-03 | 2.64E-04 | 3.54E-03 |
| 224 | 8.65E-03 | 6.97E-04 | 9.35E-03 |
| 223 | 3.76E-03 | 3.03E-04 | 4.06E-03 |
| 222 | 3.91E-03 | 3.15E-04 | 4.23E-03 |
| 221 | 3.66E-03 | 2.95E-04 | 3.95E-03 |
| 220 | 4.63E-03 | 3.73E-04 | 5.00E-03 |
| 219 | 7.83E-03 | 6.31E-04 | 8.46E-03 |
| 218 | 8.57E-03 | 6.90E-04 | 9.26E-03 |
| 217 | 9.80E-03 | 7.90E-04 | 1.06E-02 |
| 216 | 7.94E-03 | 6.40E-04 | 8.58E-03 |
| 215 | 4.58E-03 | 3.69E-04 | 4.95E-03 |
| 214 | 4.96E-03 | 4.00E-04 | 5.36E-03 |
| 213 | 7.78E-03 | 6.27E-04 | 8.41E-03 |
| 212 | 7.45E-03 | 6.00E-04 | 8.05E-03 |
| 211 | 5.61E-03 | 4.52E-04 | 6.06E-03 |
| 210 | 1.19E-02 | 9.58E-04 | 1.29E-02 |
| 209 | 6.30E-03 | 5.07E-04 | 6.80E-03 |
| 263 | 6.54E-03 | 5.27E-04 | 7.07E-03 |
| 264 | 3.16E-03 | 2.55E-04 | 3.42E-03 |
| 265 | 2.28E-03 | 1.84E-04 | 2.47E-03 |
| 266 | 2.14E-03 | 1.73E-04 | 2.31E-03 |
| 267 | 2.09E-03 | 1.68E-04 | 2.26E-03 |
| 268 | 3.21E-03 | 2.59E-04 | 3.47E-03 |

| | | | |
|---|---|---|---|
| 269 | 6.12E-03 | 4.93E-04 | 6.61E-03 |
| 270 | 5.70E-03 | 4.60E-04 | 6.16E-03 |
| 271 | 3.36E-03 | 2.70E-04 | 3.63E-03 |
| 272 | 2.14E-03 | 1.73E-04 | 2.32E-03 |
| 273 | 7.87E-04 | 6.34E-05 | 8.50E-04 |
| 274 | 5.47E-03 | 4.41E-04 | 5.91E-03 |
| 275 | 5.60E-03 | 4.51E-04 | 6.05E-03 |
| 276 | 5.63E-03 | 4.54E-04 | 6.09E-03 |
| 277 | 3.33E-03 | 2.68E-04 | 3.60E-03 |
| 278 | 5.60E-03 | 4.51E-04 | 6.05E-03 |
| 279 | 5.87E-03 | 4.73E-04 | 6.35E-03 |
| 280 | 4.79E-03 | 3.86E-04 | 5.18E-03 |
| 281 | 6.79E-03 | 5.47E-04 | 7.34E-03 |
| 282 | 3.61E-03 | 2.91E-04 | 3.90E-03 |
| 283 | 4.64E-03 | 3.74E-04 | 5.02E-03 |
| 284 | 4.70E-03 | 3.78E-04 | 5.07E-03 |
| 285 | 5.70E-03 | 4.59E-04 | 6.16E-03 |
| 286 | 5.06E-03 | 4.08E-04 | 5.47E-03 |
| 287 | 3.96E-03 | 3.19E-04 | 4.27E-03 |
| 288 | 4.64E-03 | 3.74E-04 | 5.02E-03 |
| 289 | 7.25E-03 | 5.84E-04 | 7.83E-03 |
| 290 | 1.50E-02 | 1.21E-03 | 1.62E-02 |
| 291 | 9.41E-03 | 7.58E-04 | 1.02E-02 |
| 292 | 1.71E-02 | 1.38E-03 | 1.85E-02 |
| 293 | 4.86E-03 | 3.92E-04 | 5.26E-03 |
| 262 | 6.84E-03 | 5.72E-04 | 7.41E-03 |
| 261 | 3.44E-03 | 2.88E-04 | 3.73E-03 |
| 260 | 5.36E-03 | 4.49E-04 | 5.81E-03 |
| 259 | 1.02E-02 | 8.54E-04 | 1.11E-02 |
| 258 | 9.05E-03 | 7.57E-04 | 9.80E-03 |
| 257 | 7.89E-03 | 6.60E-04 | 8.55E-03 |
| 256 | 5.81E-03 | 4.86E-04 | 6.30E-03 |
| 255 | 3.12E-03 | 2.62E-04 | 3.39E-03 |
| 254 | 3.39E-03 | 2.83E-04 | 3.67E-03 |
| 253 | 6.37E-03 | 5.33E-04 | 6.90E-03 |

| | | | |
|---|---|---|---|
| 252 | 7.39E-03 | 5.95E-04 | 7.98E-03 |
| 251 | 6.83E-03 | 5.51E-04 | 7.38E-03 |
| 250 | 1.10E-02 | 8.82E-04 | 1.18E-02 |
| 249 | 2.29E-03 | 1.85E-04 | 2.48E-03 |
| 248 | 3.84E-03 | 3.10E-04 | 4.15E-03 |
| 247 | 6.65E-03 | 5.36E-04 | 7.19E-03 |

| | | | |
|---|---|---|---|
| Total (g/sec) | 3.97E-01 | 3.22E-02 | 4.29E-01 |
| Total (lbs/day) | 7.56E+01 | 6.13E+00 | 8.17E+01 |
| | | | |
| Total VMT (mi/day) | 1.32E+03 | 2.97E+01 | 1.35E+03 |

| ID | Arterial | From | 2012 with Project - Pk PM | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| 230 | SR60 | I-710 to S Atlantic Blvd | 0 | 0 | 0 | 16 |
| 229 | SR60 | S Atlantic Blvd to W Pomona Blvd W of Findlay Ave | 0 | 0 | 0 | 16 |
| 228 | SR60 | W Pomona Blvd W of Findlay Ave to W Pomona Blvd E of Findlay Ave | 0 | 0 | 0 | 16 |
| 227 | SR60 | W Pomona Blvd E of Findlay Ave to E Markland Dr/Potrero Dr | 0 | 0 | 0 | 16 |
| 226 | SR60 | E Markland Dr/Potrero Dr to Paramount Blvd | 0 | 0 | 0 | 16 |
| 225 | SR60 | Paramount Blvd to San Gariel Blvd | 0 | 0 | 0 | 16 |
| 224 | SR60 | San Gariel Blvd to Rosemead Blvd | 0 | 0 | 0 | 16 |
| 223 | SR60 | Rosemead Blvd to Fawcett Ave/Santa Anita Ave | 0 | 0 | 0 | 16 |
| 222 | SR60 | Fawcett Ave/Santa Anita Ave to Peck Rd | 0 | 0 | 0 | 16 |
| 221 | SR60 | Peck Rd to I-605 | 0 | 0 | 0 | 16 |
| 220 | SR60 | I-605 to Crossroads Pkwy N | 0 | 0 | 0 | 16 |
| 219 | SR60 | Crossroads Pkwy N to S 7th Ave/E Gale Ave | 0 | 0 | 0 | 16 |
| 218 | SR60 | S 7th Ave/E Gale Ave to S. Hacienda Blvd | 0 | 0 | 0 | 16 |
| 217 | SR60 | S. Hacienda Blvd to S. Azusa Ave | 0 | 0 | 0 | 16 |
| 216 | SR60 | S. Azusa Ave to Fullerton Rd | 0 | 0 | 0 | 16 |
| 215 | SR60 | Fullerton Rd to Noglaes St | 0 | 0 | 0 | 16 |
| 214 | SR60 | Noglaes St to Fairway Dr | 0 | 0 | 0 | 16 |
| 213 | SR60 | Fairway Dr/Lemon Ave to Orange Fwy/Brea Canyon Rd | 0 | 0 | 0 | 16 |
| 212 | SR60 | Orange Fwy/Brea Canyon Rd to Grand Ave | 0 | 0 | 0 | 16 |
| 211 | SR60 | Grand Ave to N Diamond Bar Blvd/Orange Fwy | 0 | 0 | 0 | 16 |
| 210 | SR60 | N Diamond Bar Blvd/Orange Fwy to Phillips Ranch Rd | 0 | 0 | 0 | 16 |
| 209 | SR60 | Phillips Ranch Rd to SR -71 S | 0 | 0 | 0 | 16 |
| 263 | SR91 | I-710 to Cherry Ave | 0 | 0 | 0 | 16 |
| 264 | SR91 | Cherry Ave to Paramount Blvd | 0 | 0 | 0 | 16 |
| 265 | SR91 | Paramount Blvd to Downey Ave | 0 | 0 | 0 | 16 |
| 266 | SR91 | Downey Ave to Lakewood Blvd | 0 | 0 | 0 | 16 |
| 267 | SR91 | Lakewood Blvd to Clark Ave | 0 | 0 | 0 | 16 |
| 268 | SR91 | Clark Ave to Bellflower Blvd | 0 | 0 | 0 | 16 |
| 269 | SR91 | Bellflower Blvd to I-605 | 0 | 0 | 0 | 16 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 270 | SR91 | I-605 to Pioneer Blvd | 0 | 0 | 0 | 16 |
| 271 | SR91 | Pioneer Blvd to Norwalk Blvd | 0 | 0 | 0 | 16 |
| 272 | SR91 | Norwalk Blvd to Bloomfield Ave | 0 | 0 | 0 | 16 |
| 273 | SR91 | Bloomfield Ave to Artesia Blvd | 0 | 0 | 0 | 16 |
| 274 | SR91 | Artesia Blvd to Carmenita Rd | 0 | 0 | 0 | 16 |
| 275 | SR91 | Carmenita Rd to Valley View St | 0 | 0 | 0 | 16 |
| 276 | SR91 | Valley View St to Knott Ave | 0 | 0 | 0 | 16 |
| 277 | SR91 | Knott Ave to Beach Blvd | 0 | 0 | 0 | 16 |
| 278 | SR91 | Beach Blvd to I-5 | 0 | 0 | 0 | 16 |
| 279 | SR91 | I-5 to Brookhurst Rd | 0 | 0 | 0 | 16 |
| 280 | SR91 | Brookhurst Rd to Euclid St | 0 | 0 | 0 | 16 |
| 281 | SR91 | Euclid St to Anaheim Blvd/Harbor Blvd | 0 | 0 | 0 | 16 |
| 282 | SR91 | Anaheim Blvd/Harbor Blvd to Raymond Ave/East St | 0 | 0 | 0 | 16 |
| 283 | SR91 | Raymond Ave/East St to State College Blvd | 0 | 0 | 0 | 16 |
| 284 | SR91 | State College Blvd to SR-57 | 0 | 0 | 0 | 16 |
| 285 | SR91 | SR-57 to Kraemer Blvd | 0 | 0 | 0 | 16 |
| 286 | SR91 | Kraemer Blvd to Tustin Ave | 0 | 0 | 0 | 16 |
| 287 | SR91 | Tustin Ave to SR-55 | 0 | 0 | 0 | 16 |
| 288 | SR91 | SR-55 to Lakeview Ave | 0 | 0 | 0 | 16 |
| 289 | SR91 | Lakeview Ave to SR-90/Imperial Hwy | 0 | 0 | 0 | 16 |
| 290 | SR91 | SR-90/Imperial Hwy to S Weir Cyn Rd | 0 | 0 | 0 | 16 |
| 291 | SR91 | S Weir Cyn Rd to SR-241 | 0 | 0 | 0 | 16 |
| 292 | SR91 | Gypsum Cyn Rd to Green River Rd | 0 | 0 | 0 | 16 |
| 293 | SR91 | Green River Rd to SR-71 | 0 | 0 | 0 | 16 |
| 262 | I-710 | W Ocean Blvd to W Anaheim St/9th St | 0 | 0 | 0 | 31 |
| 261 | I-710 | W Anaheim St/9th St to Pacific Coast Hwy | 0 | 0 | 0 | 31 |
| 260 | I-710 | Pacific Coast Hwy to W Willow St | 0 | 0 | 0 | 31 |
| 259 | I-710 | W Willow St to I-405/W Wardlow Rd | 0 | 0 | 0 | 31 |
| 258 | I-710 | I-405/W Wardlow Rd to W Del Amo Blvd | 0 | 0 | 0 | 31 |
| 257 | I-710 | W Del Amo Blvd to Long Beach Blvd | 0 | 0 | 0 | 31 |
| 256 | I-710 | Long Beach Blvd to SR 91 | 0 | 0 | 0 | 31 |
| 255 | I-710 | SR 91 to E Alondra Blvd | 0 | 0 | 0 | 16 |
| 254 | I-710 | E Alondra Blvd to Rosecrans Ave | 0 | 0 | 0 | 16 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 253 | I-710 | I-105 to Imperial Hwy | 0 | 0 | 0 | 16 |
| 252 | I-710 | Imperial Hwy to Firestone Blvd | 0 | 0 | 0 | 16 |
| 251 | I-710 | Firestone Blvd to Florence Ave | 0 | 0 | 0 | 16 |
| 250 | I-710 | Florence Ave to S Atlantic Blvd/Bandini Blvd | 0 | 0 | 0 | 16 |
| 249 | I-710 | S Atlantic Blvd/Bandini Blvd to E Washington Blvd | 0 | 0 | 0 | 16 |
| 248 | I-710 | E Washington Blvd to I-5 | 0 | 0 | 0 | 16 |
| 247 | I-710 | S Eastern Ave/Olympic Blvd to SR 60 | 0 | 0 | 0 | 16 |

**World Logistics Center** **2012** **TOG Pk Hr** **No Mitigation**
2012 with Project (Freeway Segments to Ports) With EMFAC2014
Freeways to Ports

Project Operations: 1 hours/day

**Vehicle Fleet Trips - DSL (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.2% | 0.0% | 0.0% | 0.0% | 20.3% | 6.9% | 80.5% | 97.8% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 16 | 0 | 0 | 0 | 16 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 18 |
| 229 | 16 | 0 | 0 | 0 | 16 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 11 |
| 228 | 16 | 0 | 0 | 0 | 16 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 5 |
| 227 | 16 | 0 | 0 | 0 | 16 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 8 |
| 226 | 16 | 0 | 0 | 0 | 16 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 21 |
| 225 | 16 | 0 | 0 | 0 | 16 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 |
| 224 | 16 | 0 | 0 | 0 | 16 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 26 |
| 223 | 16 | 0 | 0 | 0 | 16 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 12 |
| 222 | 16 | 0 | 0 | 0 | 16 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 12 |
| 221 | 16 | 0 | 0 | 0 | 16 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 11 |
| 220 | 16 | 0 | 0 | 0 | 16 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 14 |
| 219 | 16 | 0 | 0 | 0 | 16 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 24 |
| 218 | 16 | 0 | 0 | 0 | 16 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 26 |
| 217 | 16 | 0 | 0 | 0 | 16 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 30 |
| 216 | 16 | 0 | 0 | 0 | 16 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 24 |
| 215 | 16 | 0 | 0 | 0 | 16 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 14 |
| 214 | 16 | 0 | 0 | 0 | 16 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 15 |
| 213 | 16 | 0 | 0 | 0 | 16 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 24 |
| 212 | 16 | 0 | 0 | 0 | 16 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 23 |
| 211 | 16 | 0 | 0 | 0 | 16 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 210 | 16 | 0 | 0 | 0 | 16 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 36 |
| 209 | 16 | 0 | 0 | 0 | 16 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 19 |
| 263 | 16 | 0 | 0 | 0 | 16 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 20 |
| 264 | 16 | 0 | 0 | 0 | 16 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 |
| 265 | 16 | 0 | 0 | 0 | 16 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 7 |
| 266 | 16 | 0 | 0 | 0 | 16 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 7 |
| 267 | 16 | 0 | 0 | 0 | 16 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 6 |
| 268 | 16 | 0 | 0 | 0 | 16 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 |
| 269 | 16 | 0 | 0 | 0 | 16 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 19 |
| 270 | 16 | 0 | 0 | 0 | 16 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 271 | 16 | 0 | 0 | 0 | 16 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 |
| 272 | 16 | 0 | 0 | 0 | 16 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 7 |
| 273 | 16 | 0 | 0 | 0 | 16 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 2 |
| 274 | 16 | 0 | 0 | 0 | 16 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 275 | 16 | 0 | 0 | 0 | 16 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 276 | 16 | 0 | 0 | 0 | 16 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 277 | 16 | 0 | 0 | 0 | 16 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 |
| 278 | 16 | 0 | 0 | 0 | 16 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 279 | 16 | 0 | 0 | 0 | 16 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 18 |
| 280 | 16 | 0 | 0 | 0 | 16 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 15 |
| 281 | 16 | 0 | 0 | 0 | 16 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 21 |
| 282 | 16 | 0 | 0 | 0 | 16 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 11 |
| 283 | 16 | 0 | 0 | 0 | 16 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 14 |
| 284 | 16 | 0 | 0 | 0 | 16 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 14 |
| 285 | 16 | 0 | 0 | 0 | 16 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 17 |
| 286 | 16 | 0 | 0 | 0 | 16 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 16 |
| 287 | 16 | 0 | 0 | 0 | 16 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 12 |
| 288 | 16 | 0 | 0 | 0 | 16 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 14 |
| 289 | 16 | 0 | 0 | 0 | 16 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 22 |
| 290 | 16 | 0 | 0 | 0 | 16 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 46 |
| 291 | 16 | 0 | 0 | 0 | 16 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 29 |
| 292 | 16 | 0 | 0 | 0 | 16 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 53 |
| 293 | 16 | 0 | 0 | 0 | 16 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 15 |
| 262 | 31 | 0 | 0 | 0 | 31 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 32 |
| 261 | 31 | 0 | 0 | 0 | 31 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 16 |
| 260 | 31 | 0 | 0 | 0 | 31 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 25 |
| 259 | 31 | 0 | 0 | 0 | 31 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 48 |
| 258 | 31 | 0 | 0 | 0 | 31 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 42 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 257 | 31 | 0 | 0 | 0 | 31 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 37 |
| 256 | 31 | 0 | 0 | 0 | 31 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 27 |
| 255 | 16 | 0 | 0 | 0 | 16 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 15 |
| 254 | 16 | 0 | 0 | 0 | 16 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 16 |
| 253 | 16 | 0 | 0 | 0 | 16 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 30 |
| 252 | 16 | 0 | 0 | 0 | 16 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 23 |
| 251 | 16 | 0 | 0 | 0 | 16 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 21 |
| 250 | 16 | 0 | 0 | 0 | 16 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 34 |
| 249 | 16 | 0 | 0 | 0 | 16 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 7 |
| 248 | 16 | 0 | 0 | 0 | 16 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 12 |
| 247 | 16 | 0 | 0 | 0 | 16 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 20 |
| | | | | | | | | | | | | | | | | Total | 1315.82 |

**Vehicle Fleet Emissions - DSL**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6 Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7 Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8 Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9 Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1010 | 0.2430 | 0.0290 | 0.0380 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 2 | 0.0890 | 0.2240 | 0.0220 | 0.0330 | 0.1320 | 0.1240 | 0.3720 | 0.5540 |
| 3 | 0.0860 | 0.2130 | 0.0230 | 0.0320 | 0.1530 | 0.1440 | 0.5020 | 0.7710 |
| 4 | 0.1060 | 0.2840 | 0.0260 | 0.0400 | 0.1380 | 0.1280 | 0.3580 | 0.5000 |
| 5 | 0.1210 | 0.2770 | 0.0340 | 0.0450 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 6 | 0.0900 | 0.2230 | 0.0250 | 0.0340 | 0.1530 | 0.1440 | 0.5020 | 0.7710 |
| 7 | 0.0850 | 0.2150 | 0.0220 | 0.0320 | 0.1390 | 0.1310 | 0.4240 | 0.6410 |
| 8 | 0.1500 | 0.3320 | 0.0430 | 0.0560 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 9 | 0.0960 | 0.2460 | 0.0230 | 0.0350 | 0.1320 | 0.1230 | 0.3500 | 0.5090 |

**Segment Emissions**

| **Freeway Segment** | **Speed Group** | **LDA-DSL (g/sec)** | **LDT1-DSL (g/sec)** | **LDT2-DSL (g/sec)** | **MDT-DSL (g/sec)** | **LHDT1-DSL (g/sec)** | **LHDT2-DSL (g/sec)** | **MHDT-DSL (g/sec)** | **HHDT-DSL (g/sec)** | | **Total (g/sec)** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.88E-03 | | 5.88E-03 |
| 229 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.68E-03 | | 3.68E-03 |
| 228 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.65E-03 | | 1.65E-03 |
| 227 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-03 | | 2.64E-03 |
| 226 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.79E-03 | | 6.79E-03 |
| 225 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.27E-03 | | 3.27E-03 |
| 224 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.65E-03 | | 8.65E-03 |
| 223 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.76E-03 | | 3.76E-03 |
| 222 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.91E-03 | | 3.91E-03 |
| 221 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-03 | | 3.66E-03 |
| 220 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.63E-03 | | 4.63E-03 |
| 219 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.83E-03 | | 7.83E-03 |
| 218 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.57E-03 | | 8.57E-03 |
| 217 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.80E-03 | | 9.80E-03 |
| 216 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.94E-03 | | 7.94E-03 |
| 215 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.58E-03 | | 4.58E-03 |
| 214 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.96E-03 | | 4.96E-03 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 213 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.78E-03 | | 7.78E-03 |
| 212 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.45E-03 | | 7.45E-03 |
| 211 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.61E-03 | | 5.61E-03 |
| 210 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.19E-02 | | 1.19E-02 |
| 209 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.30E-03 | | 6.30E-03 |
| 263 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.54E-03 | | 6.54E-03 |
| 264 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.16E-03 | | 3.16E-03 |
| 265 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.28E-03 | | 2.28E-03 |
| 266 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-03 | | 2.14E-03 |
| 267 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.09E-03 | | 2.09E-03 |
| 268 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.21E-03 | | 3.21E-03 |
| 269 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.12E-03 | | 6.12E-03 |
| 270 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.70E-03 | | 5.70E-03 |
| 271 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.36E-03 | | 3.36E-03 |
| 272 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.14E-03 | | 2.14E-03 |
| 273 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.87E-04 | | 7.87E-04 |
| 274 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.47E-03 | | 5.47E-03 |
| 275 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.60E-03 | | 5.60E-03 |
| 276 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.63E-03 | | 5.63E-03 |
| 277 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.33E-03 | | 3.33E-03 |
| 278 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.60E-03 | | 5.60E-03 |
| 279 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.87E-03 | | 5.87E-03 |
| 280 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.79E-03 | | 4.79E-03 |
| 281 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.79E-03 | | 6.79E-03 |
| 282 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.61E-03 | | 3.61E-03 |
| 283 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.64E-03 | | 4.64E-03 |
| 284 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.70E-03 | | 4.70E-03 |
| 285 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.70E-03 | | 5.70E-03 |
| 286 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.06E-03 | | 5.06E-03 |
| 287 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.96E-03 | | 3.96E-03 |
| 288 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.64E-03 | | 4.64E-03 |
| 289 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.25E-03 | | 7.25E-03 |
| 290 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.50E-02 | | 1.50E-02 |
| 291 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.41E-03 | | 9.41E-03 |
| 292 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.71E-02 | | 1.71E-02 |
| 293 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.86E-03 | | 4.86E-03 |
| 262 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.84E-03 | | 6.84E-03 |
| 261 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.44E-03 | | 3.44E-03 |
| 260 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.36E-03 | | 5.36E-03 |
| 259 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.02E-02 | | 1.02E-02 |
| 258 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.05E-03 | | 9.05E-03 |
| 257 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.89E-03 | | 7.89E-03 |
| 256 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.81E-03 | | 5.81E-03 |
| 255 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.12E-03 | | 3.12E-03 |
| 254 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.39E-03 | | 3.39E-03 |
| 253 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.37E-03 | | 6.37E-03 |
| 252 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.39E-03 | | 7.39E-03 |
| 251 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.83E-03 | | 6.83E-03 |
| 250 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-02 | | 1.10E-02 |
| 249 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.29E-03 | | 2.29E-03 |
| 248 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.84E-03 | | 3.84E-03 |
| 247 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.65E-03 | | 6.65E-03 |

**World Logistics Center** **2012** **TOG Pk Hr** **No Mitigation**
2012 with Project (Freeway Segments to Ports) With EMFAC2014
Freeways to Ports

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 16 | 0 | 0 | 0 | 16 | 1854 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.406802 |
| 229 | 16 | 0 | 0 | 0 | 16 | 1159 | 0.720 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.254306 |
| 228 | 16 | 0 | 0 | 0 | 16 | 520 | 0.323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.114098 |
| 227 | 16 | 0 | 0 | 0 | 16 | 833 | 0.517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.182776 |
| 226 | 16 | 0 | 0 | 0 | 16 | 2141 | 1.330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.469775 |
| 225 | 16 | 0 | 0 | 0 | 16 | 1032 | 0.641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.22644 |
| 224 | 16 | 0 | 0 | 0 | 16 | 2726 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.598135 |
| 223 | 16 | 0 | 0 | 0 | 16 | 1185 | 0.736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.260011 |
| 222 | 16 | 0 | 0 | 0 | 16 | 1233 | 0.766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.270543 |
| 221 | 16 | 0 | 0 | 0 | 16 | 1153 | 0.716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.25299 |
| 220 | 16 | 0 | 0 | 0 | 16 | 1458 | 0.906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.319912 |
| 219 | 16 | 0 | 0 | 0 | 16 | 2467 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.541305 |
| 218 | 16 | 0 | 0 | 0 | 16 | 2700 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.59243 |
| 217 | 16 | 0 | 0 | 0 | 16 | 3089 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.677784 |
| 216 | 16 | 0 | 0 | 0 | 16 | 2502 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.548985 |
| 215 | 16 | 0 | 0 | 0 | 16 | 1445 | 0.898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.31706 |
| 214 | 16 | 0 | 0 | 0 | 16 | 1563 | 0.971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.342951 |
| 213 | 16 | 0 | 0 | 0 | 16 | 2452 | 1.523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.538014 |
| 212 | 16 | 0 | 0 | 0 | 16 | 2347 | 1.458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.514975 |
| 211 | 16 | 0 | 0 | 0 | 16 | 1767 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.387712 |
| 210 | 16 | 0 | 0 | 0 | 16 | 3749 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8226 |
| 209 | 16 | 0 | 0 | 0 | 16 | 1985 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.435546 |
| 263 | 16 | 0 | 0 | 0 | 16 | 2061 | 1.280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.452222 |
| 264 | 16 | 0 | 0 | 0 | 16 | 997 | 0.619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.21876 |
| 265 | 16 | 0 | 0 | 0 | 16 | 720 | 0.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.157981 |
| 266 | 16 | 0 | 0 | 0 | 16 | 675 | 0.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.148107 |
| 267 | 16 | 0 | 0 | 0 | 16 | 659 | 0.409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.144597 |
| 268 | 16 | 0 | 0 | 0 | 16 | 1012 | 0.629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.222052 |
| 269 | 16 | 0 | 0 | 0 | 16 | 1929 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.423258 |
| 270 | 16 | 0 | 0 | 0 | 16 | 1798 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.394514 |
| 271 | 16 | 0 | 0 | 0 | 16 | 1058 | 0.657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.232145 |
| 272 | 16 | 0 | 0 | 0 | 16 | 676 | 0.420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.148327 |
| 273 | 16 | 0 | 0 | 0 | 16 | 248 | 0.154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.054416 |
| 274 | 16 | 0 | 0 | 0 | 16 | 1725 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.378497 |
| 275 | 16 | 0 | 0 | 0 | 16 | 1766 | 1.097 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.387493 |
| 276 | 16 | 0 | 0 | 0 | 16 | 1776 | 1.103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.389687 |
| 277 | 16 | 0 | 0 | 0 | 16 | 1050 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.230389 |
| 278 | 16 | 0 | 0 | 0 | 16 | 1765 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.387274 |
| 279 | 16 | 0 | 0 | 0 | 16 | 1851 | 1.150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.406144 |
| 280 | 16 | 0 | 0 | 0 | 16 | 1510 | 0.938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.331322 |
| 281 | 16 | 0 | 0 | 0 | 16 | 2140 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.469556 |
| 282 | 16 | 0 | 0 | 0 | 16 | 1138 | 0.707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.249698 |
| 283 | 16 | 0 | 0 | 0 | 16 | 1464 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.321229 |
| 284 | 16 | 0 | 0 | 0 | 16 | 1480 | 0.919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.324739 |
| 285 | 16 | 0 | 0 | 0 | 16 | 1797 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.394295 |
| 286 | 16 | 0 | 0 | 0 | 16 | 1596 | 0.991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.350192 |
| 287 | 16 | 0 | 0 | 0 | 16 | 1247 | 0.775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.273615 |
| 288 | 16 | 0 | 0 | 0 | 16 | 1463 | 0.909 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.321009 |
| 289 | 16 | 0 | 0 | 0 | 16 | 2284 | 1.419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.501152 |
| 290 | 16 | 0 | 0 | 0 | 16 | 4728 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.037411 |
| 291 | 16 | 0 | 0 | 0 | 16 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.651015 |
| 292 | 16 | 0 | 0 | 0 | 16 | 5404 | 3.357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.185738 |
| 293 | 16 | 0 | 0 | 0 | 16 | 1533 | 0.952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.336369 |
| 262 | 31 | 0 | 0 | 0 | 31 | 1695 | 1.053 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.720584 |
| 261 | 31 | 0 | 0 | 0 | 31 | 854 | 0.531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.363055 |
| 260 | 31 | 0 | 0 | 0 | 31 | 1330 | 0.826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.565414 |
| 259 | 31 | 0 | 0 | 0 | 31 | 2529 | 1.571 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1.075137 |
| 258 | 31 | 0 | 0 | 0 | 31 | 2243 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.953552 |
| 257 | 31 | 0 | 0 | 0 | 31 | 1956 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.831541 |
| 256 | 31 | 0 | 0 | 0 | 31 | 1441 | 0.895 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.612603 |
| 255 | 16 | 0 | 0 | 0 | 16 | 1501 | 0.932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.329347 |
| 254 | 16 | 0 | 0 | 0 | 16 | 1627 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.356994 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 253 | 16 | 0 | 0 | 0 | 16 | 3060 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.671421 |
| 252 | 16 | 0 | 0 | 0 | 16 | 2329 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.511026 |
| 251 | 16 | 0 | 0 | 0 | 16 | 2154 | 1.338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.472627 |
| 250 | 16 | 0 | 0 | 0 | 16 | 3452 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.757433 |
| 249 | 16 | 0 | 0 | 0 | 16 | 722 | 0.449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.15842 |
| 248 | 16 | 0 | 0 | 0 | 16 | 1211 | 0.752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.265716 |
| 247 | 16 | 0 | 0 | 0 | 16 | 2097 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.460121 |
| | | | | | | | | | | | | | | | | Total | 29.70334 |

**Vehicle Fleet Emissions - GAS**

| **Segment Speeds** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1<br>Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2<br>Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3<br>Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4<br>Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5<br>Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6<br>Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7<br>Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8<br>Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9<br>Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1303 | 0.4197 | 0.1651 | 0.1782 | 0.5955 | 0.5021 | 0.9974 | 4.1938 |
| 2 | 0.0949 | 0.1184 | 0.1184 | 0.1308 | 0.3326 | 0.2767 | 0.5519 | 2.3283 |
| 3 | 0.1040 | 0.3345 | 0.1311 | 0.1415 | 0.4176 | 0.3505 | 0.6870 | 2.8585 |
| 4 | 0.0996 | 0.3064 | 0.1205 | 0.1385 | 0.2958 | 0.2429 | 0.5273 | 2.2153 |
| 5 | 0.1541 | 0.4968 | 0.1962 | 0.2147 | 0.5955 | 0.5021 | 0.9974 | 4.1938 |
| 6 | 0.1143 | 0.3694 | 0.1449 | 0.1558 | 0.4176 | 0.3505 | 0.6870 | 2.8585 |
| 7 | 0.0980 | 0.3133 | 0.1221 | 0.1336 | 0.3683 | 0.3077 | 0.6068 | 2.5282 |
| 8 | 0.1901 | 0.6086 | 0.2432 | 0.2672 | 0.5955 | 0.5021 | 0.9974 | 4.1938 |
| 9 | 0.0955 | 0.2989 | 0.1176 | 0.1318 | 0.3092 | 0.2556 | 0.5252 | 2.2324 |

**Segment Emissions**

| **Freeway Segment** | **Speed Group** | **LDA-GAS (g/sec)** | **LDT1-GAS (g/sec)** | **LDT2-GAS (g/sec)** | **MDT-GAS (g/sec)** | **LHDT1-GAS (g/sec)** | **LHDT2-GAS (g/sec)** | **MHDT-GAS (g/sec)** | **HHDT-GAS (g/sec)** | | **Total (g/sec)** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 230 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.74E-04 | | 4.74E-04 |
| 229 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.96E-04 | | 2.96E-04 |
| 228 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.33E-04 | | 1.33E-04 |
| 227 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.13E-04 | | 2.13E-04 |
| 226 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.47E-04 | | 5.47E-04 |
| 225 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-04 | | 2.64E-04 |
| 224 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.97E-04 | | 6.97E-04 |
| 223 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.03E-04 | | 3.03E-04 |
| 222 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-04 | | 3.15E-04 |
| 221 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.95E-04 | | 2.95E-04 |
| 220 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.73E-04 | | 3.73E-04 |
| 219 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.31E-04 | | 6.31E-04 |
| 218 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.90E-04 | | 6.90E-04 |
| 217 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.90E-04 | | 7.90E-04 |
| 216 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.40E-04 | | 6.40E-04 |
| 215 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.69E-04 | | 3.69E-04 |
| 214 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.00E-04 | | 4.00E-04 |
| 213 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.27E-04 | | 6.27E-04 |
| 212 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.00E-04 | | 6.00E-04 |
| 211 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.52E-04 | | 4.52E-04 |
| 210 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.58E-04 | | 9.58E-04 |
| 209 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.07E-04 | | 5.07E-04 |
| 263 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.27E-04 | | 5.27E-04 |
| 264 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.55E-04 | | 2.55E-04 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 265 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.84E-04 | | 1.84E-04 |
| 266 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-04 | | 1.73E-04 |
| 267 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-04 | | 1.68E-04 |
| 268 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.59E-04 | | 2.59E-04 |
| 269 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.93E-04 | | 4.93E-04 |
| 270 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.60E-04 | | 4.60E-04 |
| 271 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.70E-04 | | 2.70E-04 |
| 272 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.73E-04 | | 1.73E-04 |
| 273 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.34E-05 | | 6.34E-05 |
| 274 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.41E-04 | | 4.41E-04 |
| 275 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.51E-04 | | 4.51E-04 |
| 276 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.54E-04 | | 4.54E-04 |
| 277 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-04 | | 2.68E-04 |
| 278 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.51E-04 | | 4.51E-04 |
| 279 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.73E-04 | | 4.73E-04 |
| 280 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.86E-04 | | 3.86E-04 |
| 281 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.47E-04 | | 5.47E-04 |
| 282 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.91E-04 | | 2.91E-04 |
| 283 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.74E-04 | | 3.74E-04 |
| 284 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.78E-04 | | 3.78E-04 |
| 285 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.59E-04 | | 4.59E-04 |
| 286 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.08E-04 | | 4.08E-04 |
| 287 | 1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.19E-04 | | 3.19E-04 |
| 288 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.74E-04 | | 3.74E-04 |
| 289 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.84E-04 | | 5.84E-04 |
| 290 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E-03 | | 1.21E-03 |
| 291 | 5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.58E-04 | | 7.58E-04 |
| 292 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.38E-03 | | 1.38E-03 |
| 293 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.92E-04 | | 3.92E-04 |
| 262 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.72E-04 | | 5.72E-04 |
| 261 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.88E-04 | | 2.88E-04 |
| 260 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.49E-04 | | 4.49E-04 |
| 259 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.54E-04 | | 8.54E-04 |
| 258 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.57E-04 | | 7.57E-04 |
| 257 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.60E-04 | | 6.60E-04 |
| 256 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.86E-04 | | 4.86E-04 |
| 255 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.62E-04 | | 2.62E-04 |
| 254 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.83E-04 | | 2.83E-04 |
| 253 | 3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.33E-04 | | 5.33E-04 |
| 252 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.95E-04 | | 5.95E-04 |
| 251 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.51E-04 | | 5.51E-04 |
| 250 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.82E-04 | | 8.82E-04 |
| 249 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.85E-04 | | 1.85E-04 |
| 248 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.10E-04 | | 3.10E-04 |
| 247 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.36E-04 | | 5.36E-04 |

**World Logistics Center** **2012** **TOG Pk Hr** Based on PB Traffic Results 10/3/2013
**2012 With Project** With EMFAC2014 No Mitigation
**Freeway Circulation** Revised Vehicle Speeds

| Freeeway Segment | Diesel Emissions (g/sec) | Gasoline Emissions (g/sec) | Total Emissions (g/sec) |
|---|---|---|---|
| FRWY1 | 9.25E-02 | 1.30E-02 | 1.05E-01 |
| FRWY2 | 1.31E-01 | 1.66E-02 | 1.47E-01 |
| FRWY3 | 1.05E-01 | 1.40E-02 | 1.19E-01 |
| FRWY4 | 1.12E-01 | 1.49E-02 | 1.27E-01 |
| FRWY5 | 8.92E-02 | 1.22E-02 | 1.01E-01 |
| FRWY6 | 1.31E-01 | 1.94E-02 | 1.50E-01 |
| FRWY7 | 1.04E-01 | 1.53E-02 | 1.19E-01 |
| FRWY8 | 9.96E-02 | 1.50E-02 | 1.15E-01 |
| FRWY9 | 1.22E-01 | 1.84E-02 | 1.40E-01 |
| FRWY10 | 1.16E-01 | 1.79E-02 | 1.34E-01 |
| FRWY11 | 5.93E-02 | 9.15E-03 | 6.84E-02 |
| FRWY12 | 1.16E-01 | 1.97E-02 | 1.36E-01 |
| FRWY13 | 8.96E-02 | 1.56E-02 | 1.05E-01 |
| FRWY14 | 1.33E-01 | 2.29E-02 | 1.56E-01 |
| FRWY15 | 8.74E-02 | 1.51E-02 | 1.02E-01 |
| FRWY16 | 1.50E-01 | 2.67E-02 | 1.77E-01 |
| FRWY17 | 1.81E-01 | 3.56E-02 | 2.16E-01 |
| FRWY18 | 1.45E-01 | 2.93E-02 | 1.74E-01 |
| FRWY19 | 5.44E-02 | 1.13E-02 | 6.57E-02 |
| FRWY20 | 4.88E-02 | 1.05E-02 | 5.93E-02 |
| FRWY21 | 2.48E-01 | 6.40E-02 | 3.12E-01 |
| FRWY22 | 1.47E-01 | 3.76E-02 | 1.84E-01 |
| FRWY23 | 1.49E-01 | 3.82E-02 | 1.87E-01 |
| FRWY24 | 3.44E-01 | 9.15E-02 | 4.35E-01 |
| FRWY25 | 2.05E-01 | 5.75E-02 | 2.62E-01 |
| FRWY26 | 1.51E-01 | 4.49E-02 | 1.96E-01 |
| FRWY27 | 9.57E-02 | 3.21E-02 | 1.28E-01 |
| FRWY28 | 1.33E-01 | 4.41E-02 | 1.77E-01 |

| | | | |
|---|---|---|---|
| FRWY29 | 1.34E-01 | 4.50E-02 | 1.79E-01 |
| FRWY30 | 1.29E-01 | 4.71E-02 | 1.76E-01 |
| FRWY31 | 2.91E-01 | 1.14E-01 | 4.06E-01 |
| FRWY32 | 9.58E-02 | 3.91E-02 | 1.35E-01 |
| FRWY33 | 1.68E-01 | 7.02E-02 | 2.39E-01 |
| FRWY34 | 1.33E-01 | 5.84E-02 | 1.92E-01 |
| FRWY35 | 2.41E-02 | 1.45E-02 | 3.85E-02 |
| FRWY36 | 9.68E-02 | 7.59E-02 | 1.73E-01 |
| FRWY37 | 4.04E-02 | 3.16E-02 | 7.20E-02 |
| FRWY294 | 9.28E-03 | 7.48E-04 | 1.00E-02 |
| FRWY295 | 3.33E-03 | 2.68E-04 | 3.60E-03 |
| FRWY296 | 5.75E-03 | 4.63E-04 | 6.21E-03 |
| FRWY297 | 4.77E-03 | 3.85E-04 | 5.16E-03 |
| FRWY299 | 5.25E-03 | 4.23E-04 | 5.67E-03 |
| FRWY75 | 1.00E-01 | 2.00E-02 | 1.20E-01 |
| FRWY76 | 8.74E-02 | 1.83E-02 | 1.06E-01 |
| FRWY77 | 1.57E-02 | 3.29E-03 | 1.90E-02 |
| FRWY78 | 4.84E-02 | 1.06E-02 | 5.90E-02 |
| FRWY79 | 6.33E-02 | 1.40E-02 | 7.72E-02 |
| FRWY80 | 4.25E-02 | 1.02E-02 | 5.28E-02 |
| FRWY81 | 6.28E-02 | 1.56E-02 | 7.84E-02 |
| FRWY82 | 4.18E-02 | 1.08E-02 | 5.26E-02 |
| FRWY83 | 4.54E-02 | 1.17E-02 | 5.72E-02 |
| FRWY84 | 2.95E-02 | 8.15E-03 | 3.77E-02 |
| FRWY85 | 8.96E-02 | 2.40E-02 | 1.14E-01 |
| FRWY86 | 2.43E-02 | 6.80E-03 | 3.11E-02 |
| FRWY87 | 4.25E-02 | 1.19E-02 | 5.44E-02 |
| FRWY101 | 1.55E-02 | 8.45E-03 | 2.39E-02 |
| FRWY102 | 7.93E-03 | 3.85E-03 | 1.18E-02 |
| FRWY103 | 1.52E-02 | 7.37E-03 | 2.25E-02 |
| FRWY104 | 2.73E-02 | 1.06E-02 | 3.79E-02 |
| FRWY105 | 7.72E-03 | 2.87E-03 | 1.06E-02 |
| FRWY106 | 9.97E-03 | 3.71E-03 | 1.37E-02 |
| FRWY107 | 1.26E-02 | 4.02E-03 | 1.67E-02 |
| FRWY108 | 3.09E-02 | 8.85E-03 | 3.98E-02 |

| | | | |
|---|---|---|---|
| FRWY109 | 1.23E-02 | 3.52E-03 | 1.58E-02 |
| FRWY110 | 1.99E-02 | 5.68E-03 | 2.55E-02 |
| FRWY111 | 5.50E-02 | 1.57E-02 | 7.07E-02 |
| FRWY112 | 9.86E-03 | 2.82E-03 | 1.27E-02 |
| FRWY113 | 2.07E-02 | 4.51E-03 | 2.52E-02 |
| FRWY114 | 2.28E-02 | 4.96E-03 | 2.77E-02 |
| FRWY129 | 3.13E-02 | 2.26E-02 | 5.40E-02 |
| FRWY130 | 2.68E-02 | 2.26E-02 | 4.94E-02 |
| FRWY131 | 2.11E-02 | 2.14E-02 | 4.24E-02 |
| FRWY132 | 9.46E-03 | 8.78E-03 | 1.82E-02 |
| FRWY133 | 3.70E-02 | 3.43E-02 | 7.12E-02 |
| FRWY167 | 1.03E-02 | 4.94E-03 | 1.52E-02 |
| FRWY168 | 8.22E-03 | 3.48E-03 | 1.17E-02 |
| FRWY169 | 3.91E-02 | 1.01E-02 | 4.92E-02 |
| FRWY171 | 1.70E-02 | 3.19E-03 | 2.02E-02 |
| FRWY172 | 2.97E-02 | 4.94E-03 | 3.47E-02 |
| FRWY173 | 2.74E-02 | 7.79E-03 | 3.52E-02 |
| FRWY174 | 1.24E-02 | 3.64E-03 | 1.61E-02 |
| FRWY175 | 2.02E-02 | 8.92E-03 | 2.91E-02 |
| FRWY176 | 1.77E-02 | 7.84E-03 | 2.56E-02 |
| FRWY134 | 1.81E-02 | 5.14E-03 | 2.32E-02 |
| FRWY135 | 2.23E-02 | 6.35E-03 | 2.87E-02 |
| FRWY136 | 1.35E-02 | 3.85E-03 | 1.74E-02 |
| FRWY137 | 1.66E-02 | 3.76E-03 | 2.04E-02 |
| FRWY138 | 2.72E-02 | 6.16E-03 | 3.34E-02 |
| FRWY139 | 2.14E-02 | 4.83E-03 | 2.62E-02 |
| FRWY140 | 1.75E-02 | 5.61E-03 | 2.31E-02 |
| FRWY141 | 1.60E-02 | 5.14E-03 | 2.11E-02 |
| FRWY142 | 1.04E-02 | 3.33E-03 | 1.37E-02 |
| FRWY143 | 2.25E-02 | 7.21E-03 | 2.97E-02 |
| FRWY144 | 2.80E-02 | 7.23E-03 | 3.52E-02 |
| Total (g/sec) | 6.26E+00 | 1.74E+00 | 8.00E+00 |
| Total (lbs/day) | 1.19E+03 | 3.30E+02 | 1.52E+03 |
| Total VMT | 2.85E+04 | 2.44E+04 | 5.29E+04 |

**World Logistics Center** **2012**
**Vehicle Fleet Mix**

**Vehicle VMT for SoCAB as per EMFAC2011 @ All Speeds**

| **GAS Vehicle Class** | **VMT (mils/day)** |
|---|---|
| LDA-GAS | 192,038,766 |
| LDT1-GAS | 22,519,393 |
| LDT2-GAS | 66,885,372 |
| MDT-GAS | 53,041,833 |
| LHDT1-GAS | 11,744,390 |
| LHDT2-GAS | 1,237,829 |
| MHDT-GAS | 1,034,400 |
| HHDT-GAS | 204,980 |
| Subtotal | 348706963 |
| | |
| **DSL Vehicle Class** | |
| LDA-DSL | 581,758.00 |
| LDT1-DSL | 27,976.46 |
| LDT2-DSL | 27,519.87 |
| MDT-DSL | 53,263.56 |
| LHDT1-DSL | 3,629,896.20 |
| LHDT2-DSL | 1,234,270.56 |
| MHDT-DSL | 4,281,960.84 |
| HHDT-DSL | 9,080,349.97 |
| Subtotal | 18916995 |
| | |
| Grand Total | 367623959 |

| **Vehicle Class** | | **VMT-GAS** | **VMT-DSL** | **VMT-Total** | **% VMT-Total** | **%GAS** | **%DSL** |
|---|---|---|---|---|---|---|---|
| LDA | Pass Car | 192038766 | 581758 | 192620524 | 57.47% | 99.7% | 0.30% |
| LDT1 | | 22519393 | 27976 | 22547370 | 6.73% | 99.9% | 0.12% |
| LDT2 | | 66885372 | 27520 | 66912892 | 19.96% | 100.0% | 0.04% |
| MDT | | 53041833 | 53264 | 53095097 | 15.84% | 99.9% | 0.10% |
| Subtotal | | 334485365 | 690518 | 335175883 | 100.00% | 99.8% | 0.21% |
| | | | | | | | |
| LHDT1 | Light Heavy Truck | 11744390 | 3629896 | 15374286 | 86.15% | 76.4% | 23.61% |
| LHDT2 | | 1237829 | 1234271 | 2472100 | 13.85% | 50.1% | 49.93% |
| Subtotal | | 12982219 | 4864167 | 17846385 | | | |
| | | | | | | | |
| MHDT | Medium Heavy Truck | 1034400 | 4281961 | 5316361 | 100% | 19.5% | 80.54% |
| HHDT | Heavy Heavy Truck | 204980 | 9080350 | 9285330 | 100% | 2.2% | 97.79% |

| ID | Arterial | From | 2012 with Project - Pk Hr | | | |
|---|---|---|---|---|---|---|
| | | | Cars | Light Trucks | Medium Trucks | Heavy Trucks & Buses |
| FRWY1 | SR60 | SR-71/S Garey Ave to S Reservoir Rd | 60 | 10 | 30 | 280 |
| FRWY2 | SR60 | S Reservoir Rd to Ramona Ave | 40 | 10 | 30 | 290 |
| FRWY3 | SR60 | Ramona Ave to Central Ave | 50 | 10 | 30 | 290 |
| FRWY4 | SR60 | Central Ave to Mountain Ave | 50 | 10 | 30 | 290 |
| FRWY5 | SR60 | Mountain Ave to Euclid Ave | 60 | 10 | 30 | 300 |
| FRWY6 | SR60 | Euclid Ave to Grove Ave | 60 | 20 | 30 | 300 |
| FRWY7 | SR60 | Grove Ave to Vineyard Ave | 60 | 20 | 30 | 300 |
| FRWY8 | SR60 | Vineyard Ave to Archibald Ave | 70 | 20 | 30 | 310 |
| FRWY9 | SR60 | Archibald Ave to Haven Ave | 70 | 20 | 40 | 320 |
| FRWY10 | SR60 | Haven Ave to Miliken Ave | 80 | 20 | 40 | 330 |
| FRWY11 | SR60 | Miliken Ave to SR-15 | 80 | 20 | 40 | 330 |
| FRWY12 | SR60 | I-15 to Etiwanda Ave | 110 | 20 | 50 | 360 |
| FRWY13 | SR60 | Etiwanda Ave to Mission Blvd/Country Village Rd | 130 | 20 | 50 | 380 |
| FRWY14 | SR60 | Mission Blvd/Country Village Rd to Pedley Rd | 130 | 20 | 50 | 390 |
| FRWY15 | SR60 | Pedley Rd to Pyrite St | 130 | 20 | 50 | 390 |
| FRWY16 | SR60 | Pyrite St to Valley Way | 140 | 20 | 60 | 390 |
| FRWY17 | SR60 | Valley Way to Rubidoux Blvd | 170 | 30 | 60 | 400 |
| FRWY18 | SR60 | Rubidoux Blvd to Market St | 190 | 30 | 60 | 410 |
| FRWY19 | SR60 | Market St to Main St | 210 | 30 | 70 | 420 |
| FRWY20 | SR60 | Main St to SR-91 | 240 | 30 | 80 | 440 |
| FRWY21 | SR60 | SR-91 to W Blaine St/3rd St | 430 | 50 | 120 | 630 |
| FRWY22 | SR60 | W Blaine St/3rd St to University Ave | 440 | 50 | 120 | 650 |
| FRWY23 | SR60 | University Ave to Martin Luther King Blvd | 440 | 50 | 130 | 650 |
| FRWY24 | SR60 | Martin Luther King Blvd to Central Ave | 490 | 60 | 140 | 690 |
| FRWY25 | SR60 | Central Ave to Fair Isle Dr/Box Springs Rd | 560 | 60 | 150 | 710 |
| FRWY26 | SR60 | Fair Isle Dr/Box Springs Rd to I-215 | 610 | 60 | 150 | 700 |
| FRWY27 | SR60 | I-215 to Day St | 700 | 70 | 160 | 770 |
| FRWY28 | SR60 | Day St to Pigeon Pass Rd/Frederick St | 690 | 70 | 160 | 770 |
| FRWY29 | SR60 | Pigeon Pass Rd/Frederick St to Heacock St | 710 | 70 | 170 | 780 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY30 | SR60 | Heacock St to Perris Blvd | 820 | 80 | 170 | 790 |
| FRWY31 | SR60 | Perris Blvd to Nason St | 940 | 90 | 190 | 810 |
| FRWY32 | SR60 | Nason St to Moreno Beach Dr | 1,010 | 90 | 190 | 810 |
| FRWY33 | SR60 | Moreno Beach Dr to Redlands Blvd | 1,060 | 90 | 190 | 820 |
| FRWY34 | SR60 | Redlands Blvd to Theodore St | 1,040 | 90 | 170 | 750 |
| FRWY35 | SR60 | Theodore St to Gilman Springs Rd | 420 | 30 | 60 | 190 |
| FRWY36 | SR60 | Gilman Springs Rd to Jack Rabbit Trail | 290 | 20 | 40 | 90 |
| FRWY37 | SR60 | Jack Rabbit Trail to I-10 | 290 | 20 | 40 | 90 |
| FRWY294 | SR-91 | SR-71 to Serfas Club Dr | 0 | 0 | 0 | 16 |
| FRWY295 | SR-91 | Serfas Club Dr to 6th St/Maple St | 0 | 0 | 0 | 16 |
| FRWY296 | SR-91 | 6th St/Maple St to S Lincoln Ave | 0 | 0 | 0 | 16 |
| FRWY297 | SR-91 | S Lincoln Ave to Grand Blvd/Main St | 0 | 0 | 0 | 16 |
| FRWY299 | SR-91 | S Main St to I-15 | 0 | 0 | 0 | 16 |
| FRWY75 | SR91 | I-15 to McKinley St | 80 | 10 | 30 | 160 |
| FRWY76 | SR91 | McKinley St to Pierce St | 90 | 10 | 30 | 160 |
| FRWY77 | SR91 | Pierce St to Magnolia Ave | 90 | 10 | 30 | 160 |
| FRWY78 | SR91 | Magnolia Ave to La Sierra Ave | 100 | 10 | 30 | 160 |
| FRWY79 | SR91 | La Sierra Ave to Tyler St | 110 | 10 | 30 | 170 |
| FRWY80 | SR91 | Tyler St to Van Buren Blvd | 120 | 10 | 40 | 170 |
| FRWY81 | SR91 | Van Buren Blvd to Adam St | 130 | 10 | 40 | 170 |
| FRWY82 | SR91 | Adam St to Madison St | 140 | 10 | 40 | 170 |
| FRWY83 | SR91 | Madison St to Indiana Ave (off-ramp) | 140 | 10 | 40 | 170 |
| FRWY84 | SR91 | Arlington Ave to Central Ave | 160 | 10 | 40 | 170 |
| FRWY85 | SR91 | Central Ave to 14th St | 160 | 10 | 40 | 170 |
| FRWY86 | SR91 | 14th St to University Ave | 140 | 10 | 30 | 140 |
| FRWY87 | SR91 | University Ave to Spruce St (off-ramp) | 140 | 10 | 30 | 140 |
| FRWY101 | I-10 | SR-60 to Beaumont Ave | 160 | 10 | 30 | 80 |
| FRWY102 | I-10 | Beaumont Ave to Pennsylvania Ave | 130 | 10 | 20 | 80 |
| FRWY103 | I-10 | Pennsylvania Ave to Highland Springs Ave | 130 | 10 | 20 | 80 |
| FRWY104 | I-10 | Highland Springs Ave to Sunset Ave | 90 | 10 | 20 | 80 |
| FRWY105 | I-10 | Sunset Ave to 22nd St | 70 | 10 | 20 | 70 |
| FRWY106 | I-10 | 22nd St to S 8th St | 70 | 10 | 20 | 70 |
| FRWY107 | I-10 | S 8th St to S Hargrave St | 50 | 10 | 20 | 70 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FRWY108 | I-10 | S Hargrave St to Field Rd | 40 | 10 | 10 | 70 |
| FRWY109 | I-10 | Field Rd to Main St (Cabazon) | 40 | 10 | 10 | 70 |
| FRWY110 | I-10 | Main St (Cabazon) to Main St | 40 | 10 | 10 | 70 |
| FRWY111 | I-10 | Main St to Haugen-Lehmann Way | 40 | 10 | 10 | 70 |
| FRWY112 | I-10 | Haugen-Lehmann Way to SR-111 | 40 | 10 | 10 | 70 |
| FRWY113 | I-10 | SR-111 to Tipton Rd | 30 | 0 | 10 | 60 |
| FRWY114 | I-10 | Tipton Rd to SR-62 | 30 | 0 | 10 | 60 |
| FRWY129 | SR-215 | Scott Rd to Newport Rd | 150 | 0 | 10 | 30 |
| FRWY130 | SR-215 | Newport Rd to MacCall Blvd | 180 | 0 | 10 | 30 |
| FRWY131 | SR-215 | MacCall Blvd to Ethanac Rd | 200 | 10 | 10 | 30 |
| FRWY132 | SR-215 | Ethanac Rd to SR-74/Case | 200 | 10 | 20 | 30 |
| FRWY133 | SR-215 | SR-74/Case Rd to Redlands Blvd | 200 | 10 | 20 | 30 |
| FRWY167 | I-215 | Redlands Ave to D St | 90 | 0 | 10 | 30 |
| FRWY168 | I-215 | D St to Nuevo St/Harvil Ave | 100 | 0 | 10 | 40 |
| FRWY169 | I-215 | Nuevo St/Harvil Ave to Ramona Expy/Cajalco Expy | 50 | 0 | 0 | 40 |
| FRWY171 | I-215 | Ramona Expy/Cajalco Expy to Harley Knox Blvd | 30 | 0 | 0 | 40 |
| FRWY172 | I-215 | Harley Knox Blvd to Van Buren Blvd | 30 | 0 | 0 | 50 |
| FRWY173 | I-215 | Van Buren Blvd to Cactus Ave | 70 | 0 | 10 | 50 |
| FRWY174 | I-215 | Cactus Ave to Alessandro Blvd | 50 | 0 | 10 | 50 |
| FRWY175 | I-215 | Alessandro Blvd to Eucalyptus Ave | 90 | 10 | 10 | 60 |
| FRWY176 | I-215 | Eucalyptus Ave to SR-60 | 90 | 10 | 10 | 60 |
| FRWY134 | SR-215 | SR-60 to Columbia Ave | 50 | 10 | 10 | 60 |
| FRWY135 | SR-215 | Columbia Ave to Center St | 50 | 10 | 10 | 60 |
| FRWY136 | SR-215 | Center St to Iowa Ave/La Cadena Dr | 50 | 10 | 10 | 60 |
| FRWY137 | SR-215 | Iowa Ave/La Cadena Dr to Barton Rd | 40 | 0 | 10 | 50 |
| FRWY138 | SR-215 | Barton Rd to Mt Vernon Ave/Washington St | 40 | 0 | 10 | 50 |
| FRWY139 | SR-215 | Mt Vernon Ave/Washington St to I-10 | 40 | 0 | 10 | 50 |
| FRWY140 | SR-215 | I-10 to Auto Plaza Dr/Orange Show Rd | 50 | 10 | 10 | 50 |
| FRWY141 | SR-215 | Auto Plaza Dr/Orange Show Rd to Mill St | 50 | 10 | 10 | 50 |
| FRWY142 | SR-215 | Mill St to 2rd St | 50 | 10 | 10 | 50 |
| FRWY143 | SR-215 | 2rd St to Baseline Rd | 50 | 10 | 10 | 50 |
| FRWY144 | SR-215 | Baseline Rd to Highland Ave/SR-210 | 40 | 0 | 10 | 40 |

Traffic Volumes Provided by Parsons Brinkerhoff (2013)

**World Logistics Center** **2012** **TOG Pk Hr** **No Mitigation**
2012 With Project
Freeway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - Diesel (% Vehicle Class)**

| LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | 2 axle LHDT1-DSL | 2 axle LHDT2-DSL | 3 axle MHDT-DSL | 4+ axle HHDT-DSL |
|---|---|---|---|---|---|---|---|
| 0.17% | 0.01% | 0.01% | 0.02% | 20.34% | 6.92% | 80.54% | 97.79% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-DSL (Trips) | LDT1-DSL (Trips) | LDT2-DSL (Trips) | MDT-DSL (Trips) | LHDT1-DSL (Trips) | LHDT2_DSL (Trips) | MHDT-DSL (Trips) | HHDT-DSL (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 380 | 60 | 10 | 30 | 280 | 1574 | 0.978 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 274 | 301 | 294 |
| FRWY2 | 370 | 40 | 10 | 30 | 290 | 2153 | 1.337 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 284 | 311 | 415 |
| FRWY3 | 380 | 50 | 10 | 30 | 290 | 1737 | 1.079 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 284 | 311 | 335 |
| FRWY4 | 380 | 50 | 10 | 30 | 290 | 1847 | 1.147 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 284 | 311 | 356 |
| FRWY5 | 400 | 60 | 10 | 30 | 300 | 1422 | 0.883 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 293 | 320 | 283 |
| FRWY6 | 410 | 60 | 20 | 30 | 300 | 2087 | 1.296 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 293 | 323 | 419 |
| FRWY7 | 410 | 60 | 20 | 30 | 300 | 1650 | 1.025 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 293 | 323 | 331 |
| FRWY8 | 430 | 70 | 20 | 30 | 310 | 1537 | 0.955 | 0 | 0 | 0 | 0 | 4 | 1 | 24 | 303 | 333 | 318 |
| FRWY9 | 450 | 70 | 20 | 40 | 320 | 1792 | 1.113 | 0 | 0 | 0 | 0 | 4 | 1 | 32 | 313 | 351 | 390 |
| FRWY10 | 470 | 80 | 20 | 40 | 330 | 1665 | 1.034 | 0 | 0 | 0 | 0 | 4 | 1 | 32 | 323 | 361 | 373 |
| FRWY11 | 470 | 80 | 20 | 40 | 330 | 849 | 0.527 | 0 | 0 | 0 | 0 | 4 | 1 | 32 | 323 | 361 | 190 |
| FRWY12 | 540 | 110 | 20 | 50 | 360 | 2299 | 1.428 | 0 | 0 | 0 | 0 | 4 | 1 | 40 | 352 | 398 | 568 |
| FRWY13 | 580 | 130 | 20 | 50 | 380 | 1689 | 1.049 | 0 | 0 | 0 | 0 | 4 | 1 | 40 | 372 | 418 | 438 |
| FRWY14 | 590 | 130 | 20 | 50 | 390 | 2444 | 1.518 | 0 | 0 | 0 | 0 | 4 | 1 | 40 | 381 | 427 | 649 |
| FRWY15 | 590 | 130 | 20 | 50 | 390 | 1608 | 0.999 | 0 | 0 | 0 | 0 | 4 | 1 | 40 | 381 | 427 | 427 |
| FRWY16 | 610 | 140 | 20 | 60 | 390 | 2722 | 1.691 | 0 | 0 | 0 | 0 | 4 | 1 | 48 | 381 | 435 | 736 |
| FRWY17 | 660 | 170 | 30 | 60 | 400 | 3198 | 1.987 | 0 | 0 | 0 | 0 | 6 | 2 | 48 | 391 | 448 | 890 |
| FRWY18 | 690 | 190 | 30 | 60 | 410 | 2509 | 1.559 | 0 | 0 | 0 | 0 | 6 | 2 | 48 | 401 | 458 | 714 |
| FRWY19 | 730 | 210 | 30 | 70 | 420 | 910 | 0.565 | 0 | 0 | 0 | 0 | 6 | 2 | 56 | 411 | 476 | 269 |
| FRWY20 | 790 | 240 | 30 | 80 | 440 | 774 | 0.481 | 0 | 0 | 0 | 0 | 6 | 2 | 64 | 430 | 503 | 242 |
| FRWY21 | 1230 | 430 | 50 | 120 | 630 | 1798 | 1.117 | 1 | 0 | 0 | 0 | 10 | 3 | 97 | 616 | 727 | 812 |
| FRWY22 | 1260 | 440 | 50 | 120 | 650 | 1035 | 0.643 | 1 | 0 | 0 | 0 | 10 | 3 | 97 | 636 | 747 | 480 |
| FRWY23 | 1270 | 440 | 50 | 130 | 650 | 1042 | 0.647 | 1 | 0 | 0 | 0 | 10 | 3 | 105 | 636 | 755 | 489 |
| FRWY24 | 1380 | 490 | 60 | 140 | 690 | 2260 | 1.404 | 1 | 0 | 0 | 0 | 12 | 4 | 113 | 675 | 805 | 1130 |
| FRWY25 | 1480 | 560 | 60 | 150 | 710 | 1305 | 0.811 | 1 | 0 | 0 | 0 | 12 | 4 | 121 | 694 | 833 | 675 |
| FRWY26 | 1520 | 610 | 60 | 150 | 700 | 977 | 0.607 | 1 | 0 | 0 | 0 | 12 | 4 | 121 | 685 | 823 | 499 |
| FRWY27 | 1700 | 700 | 70 | 160 | 770 | 1186 | 0.737 | 1 | 0 | 0 | 0 | 14 | 5 | 129 | 753 | 902 | 665 |
| FRWY28 | 1690 | 690 | 70 | 160 | 770 | 1642 | 1.020 | 1 | 0 | 0 | 0 | 14 | 5 | 129 | 753 | 902 | 920 |
| FRWY29 | 1730 | 710 | 70 | 170 | 780 | 1636 | 1.016 | 1 | 0 | 0 | 0 | 14 | 5 | 137 | 763 | 920 | 935 |
| FRWY30 | 1860 | 820 | 80 | 170 | 790 | 1555 | 0.966 | 1 | 0 | 0 | 0 | 16 | 6 | 137 | 773 | 933 | 901 |
| FRWY31 | 2030 | 940 | 90 | 190 | 810 | 3384 | 2.102 | 2 | 0 | 0 | 0 | 18 | 6 | 153 | 792 | 972 | 2043 |
| FRWY32 | 2100 | 1,010 | 90 | 190 | 810 | 1112 | 0.691 | 2 | 0 | 0 | 0 | 18 | 6 | 153 | 792 | 972 | 671 |
| FRWY33 | 2160 | 1,060 | 90 | 190 | 820 | 1935 | 1.202 | 2 | 0 | 0 | 0 | 18 | 6 | 153 | 802 | 982 | 1180 |
| FRWY34 | 2050 | 1,040 | 90 | 170 | 750 | 1675 | 1.041 | 2 | 0 | 0 | 0 | 18 | 6 | 137 | 733 | 897 | 933 |
| FRWY35 | 700 | 420 | 30 | 60 | 190 | 1143 | 0.710 | 1 | 0 | 0 | 0 | 6 | 2 | 48 | 186 | 243 | 173 |
| FRWY36 | 440 | 290 | 20 | 40 | 90 | 9120 | 5.665 | 1 | 0 | 0 | 0 | 4 | 1 | 32 | 88 | 126 | 715 |
| FRWY37 | 440 | 290 | 20 | 40 | 90 | 3802 | 2.362 | 1 | 0 | 0 | 0 | 4 | 1 | 32 | 88 | 126 | 298 |
| FRWY294 | 16 | 0 | 0 | 0 | 16 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 28 |
| FRWY295 | 16 | 0 | 0 | 0 | 16 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 |
| FRWY296 | 16 | 0 | 0 | 0 | 16 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 18 |
| FRWY297 | 16 | 0 | 0 | 0 | 16 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 15 |
| FRWY299 | 16 | 0 | 0 | 0 | 16 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 16 |
| FRWY75 | 280 | 80 | 10 | 30 | 160 | 2861 | 1.777 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 156 | 184 | 326 |
| FRWY76 | 290 | 90 | 10 | 30 | 160 | 2500 | 1.553 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 156 | 184 | 285 |
| FRWY77 | 290 | 90 | 10 | 30 | 160 | 450 | 0.280 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 156 | 184 | 51 |
| FRWY78 | 300 | 100 | 10 | 30 | 160 | 1384 | 0.860 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 156 | 184 | 158 |
| FRWY79 | 320 | 110 | 10 | 30 | 170 | 1713 | 1.064 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 166 | 193 | 206 |
| FRWY80 | 340 | 120 | 10 | 40 | 170 | 1703 | 1.058 | 0 | 0 | 0 | 0 | 2 | 1 | 32 | 166 | 201 | 213 |
| FRWY81 | 350 | 130 | 10 | 40 | 170 | 2512 | 1.560 | 0 | 0 | 0 | 0 | 2 | 1 | 32 | 166 | 201 | 314 |
| FRWY82 | 360 | 140 | 10 | 40 | 170 | 1674 | 1.040 | 0 | 0 | 0 | 0 | 2 | 1 | 32 | 166 | 201 | 210 |
| FRWY83 | 360 | 140 | 10 | 40 | 170 | 1819 | 1.130 | 0 | 0 | 0 | 0 | 2 | 1 | 32 | 166 | 201 | 228 |
| FRWY84 | 380 | 160 | 10 | 40 | 170 | 1182 | 0.734 | 0 | 0 | 0 | 0 | 2 | 1 | 32 | 166 | 202 | 148 |
| FRWY85 | 380 | 160 | 10 | 40 | 170 | 2360 | 1.466 | 0 | 0 | 0 | 0 | 2 | 1 | 32 | 166 | 202 | 295 |
| FRWY86 | 320 | 140 | 10 | 30 | 140 | 783 | 0.486 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 137 | 164 | 80 |
| FRWY87 | 320 | 140 | 10 | 30 | 140 | 1370 | 0.851 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 137 | 164 | 140 |
| FRWY101 | 280 | 160 | 10 | 30 | 80 | 1703 | 1.058 | 0 | 0 | 0 | 0 | 2 | 1 | 24 | 78 | 105 | 112 |
| FRWY102 | 240 | 130 | 10 | 20 | 80 | 925 | 0.575 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 78 | 97 | 56 |
| FRWY103 | 240 | 130 | 10 | 20 | 80 | 1770 | 1.100 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 78 | 97 | 107 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY104 | 200 | 90 | 10 | 20 | 80 | 3182 | 1.977 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 78 | 97 | 192 |
| FRWY105 | 170 | 70 | 10 | 20 | 70 | 1010 | 0.627 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 68 | 87 | 55 |
| FRWY106 | 170 | 70 | 10 | 20 | 70 | 1305 | 0.811 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 68 | 87 | 71 |
| FRWY107 | 150 | 50 | 10 | 20 | 70 | 1655 | 1.028 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 68 | 87 | 90 |
| FRWY108 | 130 | 40 | 10 | 10 | 70 | 4341 | 2.697 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 68 | 79 | 214 |
| FRWY109 | 130 | 40 | 10 | 10 | 70 | 1728 | 1.073 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 68 | 79 | 85 |
| FRWY110 | 130 | 40 | 10 | 10 | 70 | 2788 | 1.732 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 68 | 79 | 137 |
| FRWY111 | 130 | 40 | 10 | 10 | 70 | 7717 | 4.794 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 68 | 79 | 380 |
| FRWY112 | 130 | 40 | 10 | 10 | 70 | 1384 | 0.860 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 68 | 79 | 68 |
| FRWY113 | 100 | 30 | 0 | 10 | 60 | 3380 | 2.100 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 59 | 67 | 140 |
| FRWY114 | 100 | 30 | 0 | 10 | 60 | 3719 | 2.310 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 59 | 67 | 154 |
| FRWY129 | 190 | 150 | 0 | 10 | 30 | 4476 | 2.781 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 29 | 38 | 105 |
| FRWY130 | 220 | 180 | 0 | 10 | 30 | 3830 | 2.379 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 29 | 38 | 90 |
| FRWY131 | 250 | 200 | 10 | 10 | 30 | 2967 | 1.843 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 29 | 41 | 75 |
| FRWY132 | 260 | 200 | 10 | 20 | 30 | 1163 | 0.722 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 29 | 49 | 35 |
| FRWY133 | 260 | 200 | 10 | 20 | 30 | 4541 | 2.821 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 29 | 49 | 137 |
| FRWY167 | 130 | 90 | 0 | 10 | 30 | 1471 | 0.914 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 29 | 38 | 34 |
| FRWY168 | 150 | 100 | 0 | 10 | 40 | 916 | 0.569 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 39 | 47 | 27 |
| FRWY169 | 90 | 50 | 0 | 0 | 40 | 4924 | 3.059 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 39 | 120 |
| FRWY171 | 70 | 30 | 0 | 0 | 40 | 2145 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 39 | 52 |
| FRWY172 | 80 | 30 | 0 | 0 | 50 | 3000 | 1.864 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 49 | 91 |
| FRWY173 | 130 | 70 | 0 | 10 | 50 | 2501 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 49 | 57 | 89 |
| FRWY174 | 110 | 50 | 0 | 10 | 50 | 1135 | 0.705 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 49 | 57 | 40 |
| FRWY175 | 170 | 90 | 10 | 10 | 60 | 1547 | 0.961 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 59 | 70 | 67 |
| FRWY176 | 170 | 90 | 10 | 10 | 60 | 1359 | 0.844 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 59 | 70 | 59 |
| FRWY134 | 130 | 50 | 10 | 10 | 60 | 1385 | 0.860 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 59 | 70 | 60 |
| FRWY135 | 130 | 50 | 10 | 10 | 60 | 1711 | 1.063 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 59 | 70 | 74 |
| FRWY136 | 130 | 50 | 10 | 10 | 60 | 1038 | 0.645 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 59 | 70 | 45 |
| FRWY137 | 100 | 40 | 0 | 10 | 50 | 1516 | 0.942 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 49 | 57 | 54 |
| FRWY138 | 100 | 40 | 0 | 10 | 50 | 2485 | 1.544 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 49 | 57 | 88 |
| FRWY139 | 100 | 40 | 0 | 10 | 50 | 1950 | 1.211 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 49 | 57 | 69 |
| FRWY140 | 120 | 50 | 10 | 10 | 50 | 1581 | 0.982 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 49 | 60 | 59 |
| FRWY141 | 120 | 50 | 10 | 10 | 50 | 1447 | 0.899 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 49 | 60 | 54 |
| FRWY142 | 120 | 50 | 10 | 10 | 50 | 938 | 0.583 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 49 | 60 | 35 |
| FRWY143 | 120 | 50 | 10 | 10 | 50 | 2032 | 1.262 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 49 | 60 | 75 |
| FRWY144 | 90 | 40 | 0 | 10 | 40 | 3119 | 1.938 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 39 | 47 | 92 |
| | | | | | | | | | | | | | | | | Total | 28487 |

**Vehicle Fleet Emissions - Diesel**

| **Segment Speeds** | **LDA-DSL** | **LDT1-DSL** | **LDT2-DSL** | **MDT-DSL** | **LHDT1-DSL** | **LHDT2-DSL** | **MHDT-DSL** | **HHDT-DSL** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6 Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7 Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8 Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9 Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| Speed Group | LDA-DSL | LDT1-DSL | LDT2-DSL | MDT-DSL | LHDT1-DSL | LHDT2-DSL | MHDT-DSL | HHDT-DSL |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1010 | 0.2430 | 0.0290 | 0.0380 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 2 | 0.0890 | 0.2240 | 0.0220 | 0.0330 | 0.1320 | 0.1240 | 0.3720 | 0.5540 |
| 3 | 0.0860 | 0.2130 | 0.0230 | 0.0320 | 0.1530 | 0.1440 | 0.5020 | 0.7710 |
| 4 | 0.1060 | 0.2840 | 0.0260 | 0.0400 | 0.1380 | 0.1280 | 0.3580 | 0.5000 |
| 5 | 0.1210 | 0.2770 | 0.0340 | 0.0450 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 6 | 0.0900 | 0.2230 | 0.0250 | 0.0340 | 0.1530 | 0.1440 | 0.5020 | 0.7710 |
| 7 | 0.0850 | 0.2150 | 0.0220 | 0.0320 | 0.1390 | 0.1310 | 0.4240 | 0.6410 |
| 8 | 0.1500 | 0.3320 | 0.0430 | 0.0560 | 0.2110 | 0.2020 | 0.7500 | 1.1750 |
| 9 | 0.0960 | 0.2460 | 0.0230 | 0.0350 | 0.1320 | 0.1230 | 0.3500 | 0.5090 |

**Segment Emissions**

| Freeway Segment | Speed Group | LDA-DSL (g/sec) | LDT1-DSL (g/sec) | LDT2-DSL (g/sec) | MDT-DSL (g/sec) | LHDT1-DSL (g/sec) | LHDT2-DSL (g/sec) | MHDT-DSL (g/sec) | HHDT-DSL (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 5 | 3.42E-06 | 3.77E-07 | 4.55E-08 | 1.17E-07 | 1.17E-04 | 3.79E-05 | 4.92E-03 | 8.74E-02 | | 9.25E-02 |
| FRWY2 | 5 | 3.12E-06 | 3.44E-07 | 4.15E-08 | 1.06E-07 | 1.59E-04 | 5.19E-05 | 6.73E-03 | 1.24E-01 | | 1.31E-01 |
| FRWY3 | 5 | 3.15E-06 | 3.47E-07 | 4.18E-08 | 1.07E-07 | 1.29E-04 | 4.19E-05 | 5.43E-03 | 9.99E-02 | | 1.05E-01 |
| FRWY4 | 5 | 3.35E-06 | 3.68E-07 | 4.45E-08 | 1.14E-07 | 1.37E-04 | 4.45E-05 | 5.78E-03 | 1.06E-01 | | 1.12E-01 |
| FRWY5 | 5 | 3.09E-06 | 3.40E-07 | 4.11E-08 | 1.05E-07 | 1.05E-04 | 3.43E-05 | 4.45E-03 | 8.46E-02 | | 8.92E-02 |
| FRWY6 | 5 | 4.54E-06 | 5.00E-07 | 6.03E-08 | 1.55E-07 | 3.09E-04 | 1.01E-04 | 6.53E-03 | 1.24E-01 | | 1.31E-01 |
| FRWY7 | 5 | 3.59E-06 | 3.95E-07 | 4.77E-08 | 1.22E-07 | 2.44E-04 | 7.96E-05 | 5.16E-03 | 9.81E-02 | | 1.04E-01 |
| FRWY8 | 5 | 3.90E-06 | 4.29E-07 | 5.18E-08 | 1.33E-07 | 2.28E-04 | 7.41E-05 | 4.81E-03 | 9.45E-02 | | 9.96E-02 |
| FRWY9 | 5 | 4.55E-06 | 5.00E-07 | 6.04E-08 | 1.55E-07 | 2.65E-04 | 8.64E-05 | 7.47E-03 | 1.14E-01 | | 1.22E-01 |
| FRWY10 | 5 | 4.83E-06 | 5.31E-07 | 6.42E-08 | 1.64E-07 | 2.47E-04 | 8.03E-05 | 6.94E-03 | 1.09E-01 | | 1.16E-01 |
| FRWY11 | 5 | 2.46E-06 | 2.71E-07 | 3.27E-08 | 8.38E-08 | 1.26E-04 | 4.09E-05 | 3.54E-03 | 5.56E-02 | | 5.93E-02 |
| FRWY12 | 3 | 6.51E-06 | 7.76E-07 | 8.24E-08 | 2.22E-07 | 2.47E-04 | 7.90E-05 | 8.02E-03 | 1.08E-01 | | 1.16E-01 |
| FRWY13 | 3 | 5.66E-06 | 6.74E-07 | 7.16E-08 | 1.93E-07 | 1.81E-04 | 5.81E-05 | 5.89E-03 | 8.35E-02 | | 8.96E-02 |
| FRWY14 | 3 | 8.18E-06 | 9.75E-07 | 1.04E-07 | 2.79E-07 | 2.62E-04 | 8.40E-05 | 8.53E-03 | 1.24E-01 | | 1.33E-01 |
| FRWY15 | 3 | 5.38E-06 | 6.41E-07 | 6.81E-08 | 1.83E-07 | 1.73E-04 | 5.53E-05 | 5.61E-03 | 8.16E-02 | | 8.74E-02 |
| FRWY16 | 3 | 9.82E-06 | 1.17E-06 | 1.24E-07 | 3.34E-07 | 2.92E-04 | 9.36E-05 | 1.14E-02 | 1.38E-01 | | 1.50E-01 |
| FRWY17 | 3 | 1.40E-05 | 1.67E-06 | 1.77E-07 | 4.77E-07 | 5.15E-04 | 1.65E-04 | 1.34E-02 | 1.66E-01 | | 1.81E-01 |
| FRWY18 | 3 | 1.23E-05 | 1.46E-06 | 1.55E-07 | 4.18E-07 | 4.04E-04 | 1.29E-04 | 1.05E-02 | 1.34E-01 | | 1.45E-01 |
| FRWY19 | 3 | 4.92E-06 | 5.86E-07 | 6.23E-08 | 1.68E-07 | 1.47E-04 | 4.69E-05 | 4.44E-03 | 4.97E-02 | | 5.44E-02 |
| FRWY20 | 3 | 4.78E-06 | 5.70E-07 | 6.05E-08 | 1.63E-07 | 1.25E-04 | 3.99E-05 | 4.32E-03 | 4.43E-02 | | 4.88E-02 |
| FRWY21 | 8 | 3.47E-05 | 3.70E-06 | 4.71E-07 | 1.19E-06 | 6.66E-04 | 2.17E-04 | 2.25E-02 | 2.25E-01 | | 2.48E-01 |
| FRWY22 | 8 | 2.05E-05 | 2.18E-06 | 2.77E-07 | 6.99E-07 | 3.83E-04 | 1.25E-04 | 1.29E-02 | 1.33E-01 | | 1.47E-01 |
| FRWY23 | 8 | 2.06E-05 | 2.19E-06 | 2.79E-07 | 7.04E-07 | 3.86E-04 | 1.26E-04 | 1.41E-02 | 1.34E-01 | | 1.49E-01 |
| FRWY24 | 8 | 4.98E-05 | 5.30E-06 | 6.75E-07 | 1.70E-06 | 1.00E-03 | 3.27E-04 | 3.30E-02 | 3.09E-01 | | 3.44E-01 |
| FRWY25 | 8 | 3.28E-05 | 3.49E-06 | 4.45E-07 | 1.12E-06 | 5.80E-04 | 1.89E-04 | 2.04E-02 | 1.84E-01 | | 2.05E-01 |
| FRWY26 | 8 | 2.68E-05 | 2.85E-06 | 3.63E-07 | 9.15E-07 | 4.34E-04 | 1.41E-04 | 1.53E-02 | 1.36E-01 | | 1.51E-01 |
| FRWY27 | 2 | 2.21E-05 | 2.68E-06 | 2.59E-07 | 7.51E-07 | 3.85E-04 | 1.23E-04 | 9.81E-03 | 8.54E-02 | | 9.57E-02 |
| FRWY28 | 2 | 3.02E-05 | 3.66E-06 | 3.53E-07 | 1.03E-06 | 5.33E-04 | 1.70E-04 | 1.36E-02 | 1.18E-01 | | 1.33E-01 |
| FRWY29 | 2 | 3.10E-05 | 3.75E-06 | 3.62E-07 | 1.05E-06 | 5.31E-04 | 1.69E-04 | 1.44E-02 | 1.19E-01 | | 1.34E-01 |
| FRWY30 | 2 | 3.40E-05 | 4.11E-06 | 3.97E-07 | 1.15E-06 | 5.76E-04 | 1.84E-04 | 1.37E-02 | 1.15E-01 | | 1.29E-01 |
| FRWY31 | 2 | 8.48E-05 | 1.03E-05 | 9.91E-07 | 2.88E-06 | 1.41E-03 | 4.51E-04 | 3.32E-02 | 2.56E-01 | | 2.91E-01 |
| FRWY32 | 2 | 2.99E-05 | 3.62E-06 | 3.50E-07 | 1.02E-06 | 4.64E-04 | 1.48E-04 | 1.09E-02 | 8.42E-02 | | 9.58E-02 |
| FRWY33 | 2 | 5.47E-05 | 6.62E-06 | 6.39E-07 | 1.86E-06 | 8.07E-04 | 2.58E-04 | 1.90E-02 | 1.48E-01 | | 1.68E-01 |
| FRWY34 | 2 | 4.64E-05 | 5.62E-06 | 5.43E-07 | 1.58E-06 | 6.98E-04 | 2.23E-04 | 1.47E-02 | 1.17E-01 | | 1.33E-01 |
| FRWY35 | 2 | 1.28E-05 | 1.55E-06 | 1.50E-07 | 4.34E-07 | 1.59E-04 | 5.07E-05 | 3.55E-03 | 2.03E-02 | | 2.41E-02 |
| FRWY36 | 2 | 7.05E-05 | 8.53E-06 | 8.24E-07 | 2.39E-06 | 8.45E-04 | 2.70E-04 | 1.89E-02 | 7.67E-02 | | 9.68E-02 |
| FRWY37 | 2 | 2.94E-05 | 3.56E-06 | 3.44E-07 | 9.98E-07 | 3.52E-04 | 1.13E-04 | 7.86E-03 | 3.20E-02 | | 4.04E-02 |
| FRWY294 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.28E-03 | | 9.28E-03 |
| FRWY295 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.33E-03 | | 3.33E-03 |
| FRWY296 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.75E-03 | | 5.75E-03 |
| FRWY297 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.77E-03 | | 4.77E-03 |
| FRWY299 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.25E-03 | | 5.25E-03 |
| FRWY75 | 5 | 8.29E-06 | 9.13E-07 | 1.10E-07 | 2.82E-07 | 2.12E-04 | 6.90E-05 | 8.95E-03 | 9.08E-02 | | 1.00E-01 |
| FRWY76 | 5 | 8.15E-06 | 8.98E-07 | 1.08E-07 | 2.78E-07 | 1.85E-04 | 6.03E-05 | 7.82E-03 | 7.93E-02 | | 8.74E-02 |
| FRWY77 | 5 | 1.47E-06 | 1.62E-07 | 1.95E-08 | 5.00E-08 | 3.33E-05 | 1.08E-05 | 1.41E-03 | 1.43E-02 | | 1.57E-02 |
| FRWY78 | 5 | 5.02E-06 | 5.52E-07 | 6.67E-08 | 1.71E-07 | 1.02E-04 | 3.34E-05 | 4.33E-03 | 4.39E-02 | | 4.84E-02 |
| FRWY79 | 5 | 6.83E-06 | 7.52E-07 | 9.08E-08 | 2.33E-07 | 1.27E-04 | 4.13E-05 | 5.36E-03 | 5.77E-02 | | 6.33E-02 |
| FRWY80 | 3 | 5.26E-06 | 6.27E-07 | 6.66E-08 | 1.79E-07 | 9.15E-05 | 2.93E-05 | 4.75E-03 | 3.77E-02 | | 4.25E-02 |
| FRWY81 | 3 | 8.41E-06 | 1.00E-06 | 1.06E-07 | 2.87E-07 | 1.35E-04 | 4.32E-05 | 7.01E-03 | 5.56E-02 | | 6.28E-02 |
| FRWY82 | 3 | 6.04E-06 | 7.19E-07 | 7.64E-08 | 2.06E-07 | 8.99E-05 | 2.88E-05 | 4.67E-03 | 3.70E-02 | | 4.18E-02 |
| FRWY83 | 3 | 6.56E-06 | 7.81E-07 | 8.30E-08 | 2.23E-07 | 9.77E-05 | 3.13E-05 | 5.08E-03 | 4.02E-02 | | 4.54E-02 |
| FRWY84 | 3 | 4.87E-06 | 5.80E-07 | 6.16E-08 | 1.66E-07 | 6.35E-05 | 2.03E-05 | 3.30E-03 | 2.61E-02 | | 2.95E-02 |
| FRWY85 | 5 | 1.37E-05 | 1.51E-06 | 1.82E-07 | 4.66E-07 | 1.75E-04 | 5.69E-05 | 9.84E-03 | 7.96E-02 | | 8.96E-02 |
| FRWY86 | 5 | 3.97E-06 | 4.37E-07 | 5.28E-08 | 1.35E-07 | 5.80E-05 | 1.89E-05 | 2.45E-03 | 2.17E-02 | | 2.43E-02 |
| FRWY87 | 5 | 6.95E-06 | 7.65E-07 | 9.24E-08 | 2.37E-07 | 1.01E-04 | 3.30E-05 | 4.28E-03 | 3.80E-02 | | 4.25E-02 |
| FRWY101 | 2 | 7.26E-06 | 8.79E-07 | 8.49E-08 | 2.47E-07 | 7.89E-05 | 2.52E-05 | 2.64E-03 | 1.27E-02 | | 1.55E-02 |
| FRWY102 | 2 | 3.21E-06 | 3.88E-07 | 3.75E-08 | 1.09E-07 | 4.29E-05 | 1.37E-05 | 9.56E-04 | 6.92E-03 | | 7.93E-03 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY103 | 2 | 6.13E-06 | 7.42E-07 | 7.17E-08 | 2.08E-07 | 8.20E-05 | 2.62E-05 | 1.83E-03 | 1.32E-02 | | 1.52E-02 |
| FRWY104 | 2 | 7.63E-06 | 9.24E-07 | 8.93E-08 | 2.59E-07 | 1.47E-04 | 4.71E-05 | 3.29E-03 | 2.38E-02 | | 2.73E-02 |
| FRWY105 | 2 | 1.88E-06 | 2.28E-07 | 2.20E-08 | 6.40E-08 | 4.68E-05 | 1.49E-05 | 1.04E-03 | 6.61E-03 | | 7.72E-03 |
| FRWY106 | 2 | 2.44E-06 | 2.95E-07 | 2.85E-08 | 8.27E-08 | 6.05E-05 | 1.93E-05 | 1.35E-03 | 8.54E-03 | | 9.97E-03 |
| FRWY107 | 2 | 2.21E-06 | 2.67E-07 | 2.58E-08 | 7.49E-08 | 7.67E-05 | 2.45E-05 | 1.71E-03 | 1.08E-02 | | 1.26E-02 |
| FRWY108 | 2 | 4.63E-06 | 5.60E-07 | 5.41E-08 | 1.57E-07 | 2.01E-04 | 6.42E-05 | 2.24E-03 | 2.84E-02 | | 3.09E-02 |
| FRWY109 | 2 | 1.84E-06 | 2.23E-07 | 2.15E-08 | 6.25E-08 | 8.01E-05 | 2.56E-05 | 8.93E-04 | 1.13E-02 | | 1.23E-02 |
| FRWY110 | 2 | 2.97E-06 | 3.60E-07 | 3.48E-08 | 1.01E-07 | 1.29E-04 | 4.13E-05 | 1.44E-03 | 1.82E-02 | | 1.99E-02 |
| FRWY111 | 2 | 8.23E-06 | 9.96E-07 | 9.62E-08 | 2.79E-07 | 3.58E-04 | 1.14E-04 | 3.99E-03 | 5.05E-02 | | 5.50E-02 |
| FRWY112 | 2 | 1.48E-06 | 1.79E-07 | 1.73E-08 | 5.01E-08 | 6.41E-05 | 2.05E-05 | 7.16E-04 | 9.06E-03 | | 9.86E-03 |
| FRWY113 | 2 | 2.70E-06 | 3.27E-07 | 3.16E-08 | 9.18E-08 | 0.00E+00 | 0.00E+00 | 1.75E-03 | 1.90E-02 | | 2.07E-02 |
| FRWY114 | 2 | 2.97E-06 | 3.60E-07 | 3.48E-08 | 1.01E-07 | 0.00E+00 | 0.00E+00 | 1.92E-03 | 2.09E-02 | | 2.28E-02 |
| FRWY129 | 1 | 2.03E-05 | 2.35E-06 | 2.76E-07 | 7.00E-07 | 0.00E+00 | 0.00E+00 | 4.67E-03 | 2.66E-02 | | 3.13E-02 |
| FRWY130 | 1 | 2.09E-05 | 2.41E-06 | 2.83E-07 | 7.18E-07 | 0.00E+00 | 0.00E+00 | 3.99E-03 | 2.28E-02 | | 2.68E-02 |
| FRWY131 | 1 | 1.80E-05 | 2.08E-06 | 2.44E-07 | 6.18E-07 | 2.20E-04 | 7.15E-05 | 3.09E-03 | 1.76E-02 | | 2.11E-02 |
| FRWY132 | 1 | 7.04E-06 | 8.14E-07 | 9.56E-08 | 2.42E-07 | 8.61E-05 | 2.80E-05 | 2.42E-03 | 6.92E-03 | | 9.46E-03 |
| FRWY133 | 1 | 2.75E-05 | 3.18E-06 | 3.73E-07 | 9.46E-07 | 3.36E-04 | 1.09E-04 | 9.47E-03 | 2.70E-02 | | 3.70E-02 |
| FRWY167 | 1 | 4.00E-06 | 4.63E-07 | 5.44E-08 | 1.38E-07 | 0.00E+00 | 0.00E+00 | 1.53E-03 | 8.75E-03 | | 1.03E-02 |
| FRWY168 | 1 | 2.77E-06 | 3.21E-07 | 3.76E-08 | 9.54E-08 | 0.00E+00 | 0.00E+00 | 9.55E-04 | 7.27E-03 | | 8.22E-03 |
| FRWY169 | 1 | 7.45E-06 | 8.62E-07 | 1.01E-07 | 2.57E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.91E-02 | | 3.91E-02 |
| FRWY171 | 1 | 1.95E-06 | 2.25E-07 | 2.64E-08 | 6.71E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.70E-02 | | 1.70E-02 |
| FRWY172 | 1 | 2.72E-06 | 3.15E-07 | 3.70E-08 | 9.38E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.97E-02 | | 2.97E-02 |
| FRWY173 | 1 | 5.30E-06 | 6.13E-07 | 7.19E-08 | 1.82E-07 | 0.00E+00 | 0.00E+00 | 2.61E-03 | 2.48E-02 | | 2.74E-02 |
| FRWY174 | 8 | 2.55E-06 | 2.71E-07 | 3.46E-08 | 8.71E-08 | 0.00E+00 | 0.00E+00 | 1.18E-03 | 1.13E-02 | | 1.24E-02 |
| FRWY175 | 8 | 6.26E-06 | 6.66E-07 | 8.48E-08 | 2.14E-07 | 1.15E-04 | 3.73E-05 | 1.61E-03 | 1.84E-02 | | 2.02E-02 |
| FRWY176 | 8 | 5.49E-06 | 5.85E-07 | 7.45E-08 | 1.88E-07 | 1.01E-04 | 3.28E-05 | 1.42E-03 | 1.62E-02 | | 1.77E-02 |
| FRWY134 | 5 | 2.51E-06 | 2.76E-07 | 3.34E-08 | 8.55E-08 | 1.03E-04 | 3.34E-05 | 1.44E-03 | 1.65E-02 | | 1.81E-02 |
| FRWY135 | 5 | 3.10E-06 | 3.41E-07 | 4.12E-08 | 1.06E-07 | 1.27E-04 | 4.12E-05 | 1.78E-03 | 2.04E-02 | | 2.23E-02 |
| FRWY136 | 5 | 1.88E-06 | 2.07E-07 | 2.50E-08 | 6.40E-08 | 7.69E-05 | 2.50E-05 | 1.08E-03 | 1.23E-02 | | 1.35E-02 |
| FRWY137 | 5 | 2.20E-06 | 2.42E-07 | 2.92E-08 | 7.48E-08 | 0.00E+00 | 0.00E+00 | 1.58E-03 | 1.50E-02 | | 1.66E-02 |
| FRWY138 | 5 | 3.60E-06 | 3.97E-07 | 4.79E-08 | 1.23E-07 | 0.00E+00 | 0.00E+00 | 2.59E-03 | 2.46E-02 | | 2.72E-02 |
| FRWY139 | 5 | 2.83E-06 | 3.11E-07 | 3.76E-08 | 9.63E-08 | 0.00E+00 | 0.00E+00 | 2.03E-03 | 1.93E-02 | | 2.14E-02 |
| FRWY140 | 5 | 2.86E-06 | 3.15E-07 | 3.81E-08 | 9.75E-08 | 1.17E-04 | 3.81E-05 | 1.65E-03 | 1.57E-02 | | 1.75E-02 |
| FRWY141 | 5 | 2.62E-06 | 2.89E-07 | 3.49E-08 | 8.93E-08 | 1.07E-04 | 3.49E-05 | 1.51E-03 | 1.43E-02 | | 1.60E-02 |
| FRWY142 | 5 | 1.70E-06 | 1.87E-07 | 2.26E-08 | 5.79E-08 | 6.95E-05 | 2.26E-05 | 9.78E-04 | 9.30E-03 | | 1.04E-02 |
| FRWY143 | 5 | 3.68E-06 | 4.05E-07 | 4.89E-08 | 1.25E-07 | 1.50E-04 | 4.90E-05 | 2.12E-03 | 2.01E-02 | | 2.25E-02 |
| FRWY144 | 5 | 4.52E-06 | 4.98E-07 | 6.01E-08 | 1.54E-07 | 0.00E+00 | 0.00E+00 | 3.25E-03 | 2.47E-02 | | 2.80E-02 |

**World Logistics Center** **2012** **TOG Pk Hr** **No Mitigation**
2012 With Project
Freeway Circulation

Project Operations: 1 hours/day

**Vehicle Fleet Trips - GAS (% Vehicle Class)**

| LDA-GAS | LDT1-GAS | LDT2-GAS | MDT-GAS | 2 axle LHDT1-GAS | 2 axle LHDT2-GAS | 3 axle MHDT-GAS | 4+ axle HHDT-GAS |
|---|---|---|---|---|---|---|---|
| 57.29% | 6.72% | 19.96% | 15.83% | 65.81% | 6.94% | 19.46% | 2.21% |

**Vehicle Trips**

| Freeway Segment | Total Daily Trips | Total Passenger Trips | Total LHDT Trips | Total MHDT Trips | Total HHDT Trips | Trip Length (meters) | Trip Length (miles) | LDA-GAS (Trips) | LDT1-GAS (Trips) | LDT2-GAS (Trips) | MDT-GAS (Trips) | LHDT1-GAS (Trips) | LHDT2_GAS (Trips) | MHDT-GAS (Trips) | HHDT-GAS (Trips) | Total (Trips) | Total VMT (mi/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 380 | 60 | 10 | 30 | 280 | 1574 | 0.978 | 34 | 4 | 12 | 9 | 7 | 1 | 6 | 6 | 79 | 77.410556 |
| FRWY2 | 370 | 40 | 10 | 30 | 290 | 2153 | 1.337 | 23 | 3 | 8 | 6 | 7 | 1 | 6 | 6 | 59 | 79.4872 |
| FRWY3 | 380 | 50 | 10 | 30 | 290 | 1737 | 1.079 | 29 | 3 | 10 | 8 | 7 | 1 | 6 | 6 | 69 | 74.897006 |
| FRWY4 | 380 | 50 | 10 | 30 | 290 | 1847 | 1.147 | 29 | 3 | 10 | 8 | 7 | 1 | 6 | 6 | 69 | 79.640052 |
| FRWY5 | 400 | 60 | 10 | 30 | 300 | 1422 | 0.883 | 34 | 4 | 12 | 9 | 7 | 1 | 6 | 7 | 80 | 70.325093 |
| FRWY6 | 410 | 60 | 20 | 30 | 300 | 2087 | 1.296 | 34 | 4 | 12 | 9 | 13 | 1 | 6 | 7 | 87 | 112.64378 |
| FRWY7 | 410 | 60 | 20 | 30 | 300 | 1650 | 1.025 | 34 | 4 | 12 | 9 | 13 | 1 | 6 | 7 | 87 | 89.057132 |
| FRWY8 | 430 | 70 | 20 | 30 | 310 | 1537 | 0.955 | 40 | 5 | 14 | 11 | 13 | 1 | 6 | 7 | 97 | 92.697206 |
| FRWY9 | 450 | 70 | 20 | 40 | 320 | 1792 | 1.113 | 40 | 5 | 14 | 11 | 13 | 1 | 8 | 7 | 99 | 110.48809 |
| FRWY10 | 470 | 80 | 20 | 40 | 330 | 1665 | 1.034 | 46 | 5 | 16 | 13 | 13 | 1 | 8 | 7 | 109 | 113.20795 |
| FRWY11 | 470 | 80 | 20 | 40 | 330 | 849 | 0.527 | 46 | 5 | 16 | 13 | 13 | 1 | 8 | 7 | 109 | 57.725856 |
| FRWY12 | 540 | 110 | 20 | 50 | 360 | 2299 | 1.428 | 63 | 7 | 22 | 17 | 13 | 1 | 10 | 8 | 142 | 202.7967 |
| FRWY13 | 580 | 130 | 20 | 50 | 380 | 1689 | 1.049 | 74 | 9 | 26 | 21 | 13 | 1 | 10 | 8 | 162 | 170.39265 |
| FRWY14 | 590 | 130 | 20 | 50 | 390 | 2444 | 1.518 | 74 | 9 | 26 | 21 | 13 | 1 | 10 | 9 | 163 | 246.89504 |
| FRWY15 | 590 | 130 | 20 | 50 | 390 | 1608 | 0.999 | 74 | 9 | 26 | 21 | 13 | 1 | 10 | 9 | 163 | 162.44158 |
| FRWY16 | 610 | 140 | 20 | 60 | 390 | 2722 | 1.691 | 80 | 9 | 28 | 22 | 13 | 1 | 12 | 9 | 175 | 295.14345 |
| FRWY17 | 660 | 170 | 30 | 60 | 400 | 3198 | 1.987 | 97 | 11 | 34 | 27 | 20 | 2 | 12 | 9 | 212 | 421.12211 |
| FRWY18 | 690 | 190 | 30 | 60 | 410 | 2509 | 1.559 | 109 | 13 | 38 | 30 | 20 | 2 | 12 | 9 | 232 | 361.84483 |
| FRWY19 | 730 | 210 | 30 | 70 | 420 | 910 | 0.565 | 120 | 14 | 42 | 33 | 20 | 2 | 14 | 9 | 254 | 143.74653 |
| FRWY20 | 790 | 240 | 30 | 80 | 440 | 774 | 0.481 | 138 | 16 | 48 | 38 | 20 | 2 | 16 | 10 | 287 | 137.80617 |
| FRWY21 | 1230 | 430 | 50 | 120 | 630 | 1798 | 1.117 | 246 | 29 | 86 | 68 | 33 | 3 | 23 | 14 | 503 | 561.53257 |
| FRWY22 | 1260 | 440 | 50 | 120 | 650 | 1035 | 0.643 | 252 | 30 | 88 | 70 | 33 | 3 | 23 | 14 | 513 | 329.94056 |
| FRWY23 | 1270 | 440 | 50 | 130 | 650 | 1042 | 0.647 | 252 | 30 | 88 | 70 | 33 | 3 | 25 | 14 | 515 | 333.43149 |
| FRWY24 | 1380 | 490 | 60 | 140 | 690 | 2260 | 1.404 | 281 | 33 | 98 | 78 | 39 | 4 | 27 | 15 | 575 | 807.4181 |
| FRWY25 | 1480 | 560 | 60 | 150 | 710 | 1305 | 0.811 | 321 | 38 | 112 | 89 | 39 | 4 | 29 | 16 | 647 | 524.79644 |
| FRWY26 | 1520 | 610 | 60 | 150 | 700 | 977 | 0.607 | 349 | 41 | 122 | 97 | 39 | 4 | 29 | 15 | 697 | 423.04329 |
| FRWY27 | 1700 | 700 | 70 | 160 | 770 | 1186 | 0.737 | 401 | 47 | 140 | 111 | 46 | 5 | 31 | 17 | 798 | 587.64386 |
| FRWY28 | 1690 | 690 | 70 | 160 | 770 | 1642 | 1.020 | 395 | 46 | 138 | 109 | 46 | 5 | 31 | 17 | 788 | 803.40521 |
| FRWY29 | 1730 | 710 | 70 | 170 | 780 | 1636 | 1.016 | 407 | 48 | 142 | 112 | 46 | 5 | 33 | 17 | 810 | 822.95546 |
| FRWY30 | 1860 | 820 | 80 | 170 | 790 | 1555 | 0.966 | 470 | 55 | 164 | 130 | 53 | 6 | 33 | 17 | 927 | 895.48976 |
| FRWY31 | 2030 | 940 | 90 | 190 | 810 | 3384 | 2.102 | 539 | 63 | 188 | 149 | 59 | 6 | 37 | 18 | 1058 | 2224.9128 |
| FRWY32 | 2100 | 1,010 | 90 | 190 | 810 | 1112 | 0.691 | 579 | 68 | 202 | 160 | 59 | 6 | 37 | 18 | 1128 | 779.37346 |
| FRWY33 | 2160 | 1,060 | 90 | 190 | 820 | 1935 | 1.202 | 607 | 71 | 212 | 168 | 59 | 6 | 37 | 18 | 1178 | 1416.4377 |
| FRWY34 | 2050 | 1,040 | 90 | 170 | 750 | 1675 | 1.041 | 596 | 70 | 208 | 165 | 59 | 6 | 33 | 17 | 1153 | 1199.6906 |
| FRWY35 | 700 | 420 | 30 | 60 | 190 | 1143 | 0.710 | 241 | 28 | 84 | 66 | 20 | 2 | 12 | 4 | 457 | 324.3676 |
| FRWY36 | 440 | 290 | 20 | 40 | 90 | 9120 | 5.665 | 166 | 19 | 58 | 46 | 13 | 1 | 8 | 2 | 314 | 1777.3719 |
| FRWY37 | 440 | 290 | 20 | 40 | 90 | 3802 | 2.362 | 166 | 19 | 58 | 46 | 13 | 1 | 8 | 2 | 314 | 740.96141 |
| FRWY294 | 16 | 0 | 0 | 0 | 16 | 2926 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6420185 |
| FRWY295 | 16 | 0 | 0 | 0 | 16 | 1049 | 0.652 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.23017 |
| FRWY296 | 16 | 0 | 0 | 0 | 16 | 1811 | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3973669 |
| FRWY297 | 16 | 0 | 0 | 0 | 16 | 1505 | 0.935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3302248 |
| FRWY299 | 16 | 0 | 0 | 0 | 16 | 1654 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3629182 |
| FRWY75 | 280 | 80 | 10 | 30 | 160 | 2861 | 1.777 | 46 | 5 | 16 | 13 | 7 | 1 | 6 | 4 | 96 | 171.47058 |
| FRWY76 | 290 | 90 | 10 | 30 | 160 | 2500 | 1.553 | 52 | 6 | 18 | 14 | 7 | 1 | 6 | 4 | 106 | 165.33279 |
| FRWY77 | 290 | 90 | 10 | 30 | 160 | 450 | 0.280 | 52 | 6 | 18 | 14 | 7 | 1 | 6 | 4 | 106 | 29.759902 |
| FRWY78 | 300 | 100 | 10 | 30 | 160 | 1384 | 0.860 | 57 | 7 | 20 | 16 | 7 | 1 | 6 | 4 | 116 | 100.1081 |
| FRWY79 | 320 | 110 | 10 | 30 | 170 | 1713 | 1.064 | 63 | 7 | 22 | 17 | 7 | 1 | 6 | 4 | 127 | 134.75982 |
| FRWY80 | 340 | 120 | 10 | 40 | 170 | 1703 | 1.058 | 69 | 8 | 24 | 19 | 7 | 1 | 8 | 4 | 139 | 146.58898 |
| FRWY81 | 350 | 130 | 10 | 40 | 170 | 2512 | 1.560 | 74 | 9 | 26 | 21 | 7 | 1 | 8 | 4 | 149 | 231.7979 |
| FRWY82 | 360 | 140 | 10 | 40 | 170 | 1674 | 1.040 | 80 | 9 | 28 | 22 | 7 | 1 | 8 | 4 | 159 | 164.84808 |
| FRWY83 | 360 | 140 | 10 | 40 | 170 | 1819 | 1.130 | 80 | 9 | 28 | 22 | 7 | 1 | 8 | 4 | 159 | 179.12704 |
| FRWY84 | 380 | 160 | 10 | 40 | 170 | 1182 | 0.734 | 92 | 11 | 32 | 25 | 7 | 1 | 8 | 4 | 178 | 131.05331 |
| FRWY85 | 380 | 160 | 10 | 40 | 170 | 2360 | 1.466 | 92 | 11 | 32 | 25 | 7 | 1 | 8 | 4 | 178 | 261.66312 |
| FRWY86 | 320 | 140 | 10 | 30 | 140 | 783 | 0.486 | 80 | 9 | 28 | 22 | 7 | 1 | 6 | 3 | 156 | 75.837825 |
| FRWY87 | 320 | 140 | 10 | 30 | 140 | 1370 | 0.851 | 80 | 9 | 28 | 22 | 7 | 1 | 6 | 3 | 156 | 132.69198 |
| FRWY101 | 280 | 160 | 10 | 30 | 80 | 1703 | 1.058 | 92 | 11 | 32 | 25 | 7 | 1 | 6 | 2 | 175 | 184.65848 |
| FRWY102 | 240 | 130 | 10 | 20 | 80 | 925 | 0.575 | 74 | 9 | 26 | 21 | 7 | 1 | 4 | 2 | 143 | 81.977782 |
| FRWY103 | 240 | 130 | 10 | 20 | 80 | 1770 | 1.100 | 74 | 9 | 26 | 21 | 7 | 1 | 4 | 2 | 143 | 156.86559 |
| FRWY104 | 200 | 90 | 10 | 20 | 80 | 3182 | 1.977 | 52 | 6 | 18 | 14 | 7 | 1 | 4 | 2 | 103 | 203.09859 |
| FRWY105 | 170 | 70 | 10 | 20 | 70 | 1010 | 0.627 | 40 | 5 | 14 | 11 | 7 | 1 | 4 | 2 | 83 | 51.804469 |
| FRWY106 | 170 | 70 | 10 | 20 | 70 | 1305 | 0.811 | 40 | 5 | 14 | 11 | 7 | 1 | 4 | 2 | 83 | 66.935478 |
| FRWY107 | 150 | 50 | 10 | 20 | 70 | 1655 | 1.028 | 29 | 3 | 10 | 8 | 7 | 1 | 4 | 2 | 63 | 64.367761 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY108 | 130 | 40 | 10 | 10 | 70 | 4341 | 2.697 | 23 | 3 | 8 | 6 | 7 | 1 | 2 | 2 | 51 | 136.67594 |
| FRWY109 | 130 | 40 | 10 | 10 | 70 | 1728 | 1.073 | 23 | 3 | 8 | 6 | 7 | 1 | 2 | 2 | 51 | 54.405902 |
| FRWY110 | 130 | 40 | 10 | 10 | 70 | 2788 | 1.732 | 23 | 3 | 8 | 6 | 7 | 1 | 2 | 2 | 51 | 87.779892 |
| FRWY111 | 130 | 40 | 10 | 10 | 70 | 7717 | 4.794 | 23 | 3 | 8 | 6 | 7 | 1 | 2 | 2 | 51 | 242.96895 |
| FRWY112 | 130 | 40 | 10 | 10 | 70 | 1384 | 0.860 | 23 | 3 | 8 | 6 | 7 | 1 | 2 | 2 | 51 | 43.575097 |
| FRWY113 | 100 | 30 | 0 | 10 | 60 | 3380 | 2.100 | 17 | 2 | 6 | 5 | 0 | 0 | 2 | 1 | 33 | 69.72763 |
| FRWY114 | 100 | 30 | 0 | 10 | 60 | 3719 | 2.310 | 17 | 2 | 6 | 5 | 0 | 0 | 2 | 1 | 33 | 76.721022 |
| FRWY129 | 190 | 150 | 0 | 10 | 30 | 4476 | 2.781 | 86 | 10 | 30 | 24 | 0 | 0 | 2 | 1 | 152 | 423.47411 |
| FRWY130 | 220 | 180 | 0 | 10 | 30 | 3830 | 2.379 | 103 | 12 | 36 | 28 | 0 | 0 | 2 | 1 | 182 | 433.58631 |
| FRWY131 | 250 | 200 | 10 | 10 | 30 | 2967 | 1.843 | 115 | 13 | 40 | 32 | 7 | 1 | 2 | 1 | 209 | 386.08242 |
| FRWY132 | 260 | 200 | 10 | 20 | 30 | 1163 | 0.722 | 115 | 13 | 40 | 32 | 7 | 1 | 4 | 1 | 211 | 152.74169 |
| FRWY133 | 260 | 200 | 10 | 20 | 30 | 4541 | 2.821 | 115 | 13 | 40 | 32 | 7 | 1 | 4 | 1 | 211 | 596.38864 |
| FRWY167 | 130 | 90 | 0 | 10 | 30 | 1471 | 0.914 | 52 | 6 | 18 | 14 | 0 | 0 | 2 | 1 | 92 | 84.456003 |
| FRWY168 | 150 | 100 | 0 | 10 | 40 | 916 | 0.569 | 57 | 7 | 20 | 16 | 0 | 0 | 2 | 1 | 103 | 58.395426 |
| FRWY169 | 90 | 50 | 0 | 0 | 40 | 4924 | 3.059 | 29 | 3 | 10 | 8 | 0 | 0 | 0 | 1 | 51 | 155.32838 |
| FRWY171 | 70 | 30 | 0 | 0 | 40 | 2145 | 1.333 | 17 | 2 | 6 | 5 | 0 | 0 | 0 | 1 | 31 | 41.069277 |
| FRWY172 | 80 | 30 | 0 | 0 | 50 | 3000 | 1.864 | 17 | 2 | 6 | 5 | 0 | 0 | 0 | 1 | 31 | 57.850957 |
| FRWY173 | 130 | 70 | 0 | 10 | 50 | 2501 | 1.554 | 40 | 5 | 14 | 11 | 0 | 0 | 2 | 1 | 73 | 113.26937 |
| FRWY174 | 110 | 50 | 0 | 10 | 50 | 1135 | 0.705 | 29 | 3 | 10 | 8 | 0 | 0 | 2 | 1 | 53 | 37.331269 |
| FRWY175 | 170 | 90 | 10 | 10 | 60 | 1547 | 0.961 | 52 | 6 | 18 | 14 | 7 | 1 | 2 | 1 | 100 | 96.44675 |
| FRWY176 | 170 | 90 | 10 | 10 | 60 | 1359 | 0.844 | 52 | 6 | 18 | 14 | 7 | 1 | 2 | 1 | 100 | 84.726007 |
| FRWY134 | 130 | 50 | 10 | 10 | 60 | 1385 | 0.860 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 52.002711 |
| FRWY135 | 130 | 50 | 10 | 10 | 60 | 1711 | 1.063 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 64.24306 |
| FRWY136 | 130 | 50 | 10 | 10 | 60 | 1038 | 0.645 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 38.973873 |
| FRWY137 | 100 | 40 | 0 | 10 | 50 | 1516 | 0.942 | 23 | 3 | 8 | 6 | 0 | 0 | 2 | 1 | 43 | 40.464561 |
| FRWY138 | 100 | 40 | 0 | 10 | 50 | 2485 | 1.544 | 23 | 3 | 8 | 6 | 0 | 0 | 2 | 1 | 43 | 66.328782 |
| FRWY139 | 100 | 40 | 0 | 10 | 50 | 1950 | 1.211 | 23 | 3 | 8 | 6 | 0 | 0 | 2 | 1 | 43 | 52.048743 |
| FRWY140 | 120 | 50 | 10 | 10 | 50 | 1581 | 0.982 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 59.145126 |
| FRWY141 | 120 | 50 | 10 | 10 | 50 | 1447 | 0.899 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 54.132193 |
| FRWY142 | 120 | 50 | 10 | 10 | 50 | 938 | 0.583 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 35.09053 |
| FRWY143 | 120 | 50 | 10 | 10 | 50 | 2032 | 1.262 | 29 | 3 | 10 | 8 | 7 | 1 | 2 | 1 | 60 | 76.017012 |
| FRWY144 | 90 | 40 | 0 | 10 | 40 | 3119 | 1.938 | 23 | 3 | 8 | 6 | 0 | 0 | 2 | 1 | 43 | 82.823568 |
| | | | | | | | | | | | | | | | | Total | 24443.523 |

**Vehicle Fleet Emissions - GAS**

| **Segment Speeds** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** |
|---|---|---|---|---|---|---|---|---|
| Segment Speed Group 1 Vehicle Speed (mph) | 35 | 35 | 35 | 35 | 25 | 25 | 25 | 25 |
| Segment Speed Group 2 Vehicle Speed (mph) | 55 | 55 | 55 | 55 | 45 | 45 | 45 | 45 |
| Segment Speed Group 3 Vehicle Speed (mph) | 45 | 45 | 45 | 45 | 35 | 35 | 35 | 35 |
| Segment Speed Group 4 Vehicle Speed (mph) | 65 | 65 | 65 | 65 | 55 | 55 | 55 | 55 |
| Segment Speed Group 5 Ave Vehicle Speed (mph) | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| Segment Speed Group 6 Ave Vehicle Speed (mph) | 40 | 40 | 40 | 40 | 35 | 35 | 35 | 35 |
| Segment Speed Group 7 Ave Vehicle Speed (mph) | 50 | 50 | 50 | 50 | 40 | 40 | 40 | 40 |
| Segment Speed Group 8 Ave Vehicle Speed (mph) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Segment Speed Group 9 Ave Vehicle Speed (mph) | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 |

**Emission Factors (g/mi)**

| **Speed Group** | **LDA-GAS** | **LDT1-GAS** | **LDT2-GAS** | **MDT-GAS** | **LHDT1-GAS** | **LHDT2-GAS** | **MHDT-GAS** | **HHDT-GAS** |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1303 | 0.4197 | 0.1651 | 0.1782 | 0.5955 | 0.5021 | 0.9974 | 4.1938 |
| 2 | 0.0949 | 0.3023 | 0.1184 | 0.1308 | 0.3326 | 0.2767 | 0.5519 | 2.3283 |
| 3 | 0.1040 | 0.3345 | 0.1311 | 0.1415 | 0.4176 | 0.3505 | 0.6870 | 2.8585 |
| 4 | 0.0996 | 0.3064 | 0.1205 | 0.1385 | 0.2958 | 0.2429 | 0.5273 | 2.2153 |
| 5 | 0.1541 | 0.4968 | 0.1962 | 0.2147 | 0.5955 | 0.5021 | 0.9974 | 4.1938 |
| 6 | 0.1143 | 0.3694 | 0.1449 | 0.1558 | 0.4176 | 0.3505 | 0.6870 | 2.8585 |
| 7 | 0.0980 | 0.3133 | 0.1221 | 0.1336 | 0.3683 | 0.3077 | 0.6068 | 2.5282 |
| 8 | 0.1901 | 0.6086 | 0.2432 | 0.2672 | 0.5955 | 0.5021 | 0.9974 | 4.1938 |
| 9 | 0.0955 | 0.2989 | 0.1176 | 0.1318 | 0.3092 | 0.2556 | 0.5252 | 2.2324 |

**Segment Emissions**

| Freeway Segment | Speed Group | LDA-GAS (g/sec) | LDT1-GAS (g/sec) | LDT2-GAS (g/sec) | MDT-GAS (g/sec) | LHDT1-GAS (g/sec) | LHDT2-GAS (g/sec) | MHDT-GAS (g/sec) | HHDT-GAS (g/sec) | | Total (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY1 | 5 | 1.44E-03 | 5.44E-04 | 6.38E-04 | 5.54E-04 | 1.06E-03 | 9.46E-05 | 1.58E-03 | 7.04E-03 | | 1.30E-02 |
| FRWY2 | 5 | 1.31E-03 | 4.96E-04 | 5.82E-04 | 5.05E-04 | 1.46E-03 | 1.29E-04 | 2.16E-03 | 9.97E-03 | | 1.66E-02 |
| FRWY3 | 5 | 1.32E-03 | 5.00E-04 | 5.87E-04 | 5.09E-04 | 1.17E-03 | 1.04E-04 | 1.75E-03 | 8.05E-03 | | 1.40E-02 |
| FRWY4 | 5 | 1.41E-03 | 5.32E-04 | 6.24E-04 | 5.41E-04 | 1.25E-03 | 1.11E-04 | 1.86E-03 | 8.56E-03 | | 1.49E-02 |
| FRWY5 | 5 | 1.30E-03 | 4.91E-04 | 5.76E-04 | 5.00E-04 | 9.62E-04 | 8.55E-05 | 1.43E-03 | 6.82E-03 | | 1.22E-02 |
| FRWY6 | 5 | 1.91E-03 | 7.21E-04 | 8.46E-04 | 7.34E-04 | 2.82E-03 | 2.51E-04 | 2.10E-03 | 1.00E-02 | | 1.94E-02 |
| FRWY7 | 5 | 1.51E-03 | 5.70E-04 | 6.69E-04 | 5.80E-04 | 2.23E-03 | 1.98E-04 | 1.66E-03 | 7.91E-03 | | 1.53E-02 |
| FRWY8 | 5 | 1.64E-03 | 6.20E-04 | 7.27E-04 | 6.31E-04 | 2.08E-03 | 1.85E-04 | 1.54E-03 | 7.61E-03 | | 1.50E-02 |
| FRWY9 | 5 | 1.91E-03 | 7.23E-04 | 8.47E-04 | 7.35E-04 | 2.42E-03 | 2.15E-04 | 2.40E-03 | 9.16E-03 | | 1.84E-02 |
| FRWY10 | 5 | 2.03E-03 | 7.67E-04 | 9.00E-04 | 7.81E-04 | 2.25E-03 | 2.00E-04 | 2.23E-03 | 8.78E-03 | | 1.79E-02 |
| FRWY11 | 5 | 1.03E-03 | 3.91E-04 | 4.59E-04 | 3.98E-04 | 1.15E-03 | 1.02E-04 | 1.14E-03 | 4.48E-03 | | 9.15E-03 |
| FRWY12 | 3 | 2.60E-03 | 9.81E-04 | 1.14E-03 | 9.77E-04 | 2.18E-03 | 1.93E-04 | 2.65E-03 | 9.01E-03 | | 1.97E-02 |
| FRWY13 | 3 | 2.26E-03 | 8.52E-04 | 9.91E-04 | 8.48E-04 | 1.60E-03 | 1.42E-04 | 1.95E-03 | 6.99E-03 | | 1.56E-02 |
| FRWY14 | 3 | 3.27E-03 | 1.23E-03 | 1.43E-03 | 1.23E-03 | 2.32E-03 | 2.05E-04 | 2.82E-03 | 1.04E-02 | | 2.29E-02 |
| FRWY15 | 3 | 2.15E-03 | 8.11E-04 | 9.44E-04 | 8.07E-04 | 1.53E-03 | 1.35E-04 | 1.85E-03 | 6.83E-03 | | 1.51E-02 |
| FRWY16 | 3 | 3.92E-03 | 1.48E-03 | 1.72E-03 | 1.47E-03 | 2.58E-03 | 2.28E-04 | 3.77E-03 | 1.16E-02 | | 2.67E-02 |
| FRWY17 | 3 | 5.59E-03 | 2.11E-03 | 2.45E-03 | 2.10E-03 | 4.55E-03 | 4.02E-04 | 4.43E-03 | 1.39E-02 | | 3.56E-02 |
| FRWY18 | 3 | 4.90E-03 | 1.85E-03 | 2.15E-03 | 1.84E-03 | 3.57E-03 | 3.16E-04 | 3.47E-03 | 1.12E-02 | | 2.93E-02 |
| FRWY19 | 3 | 1.97E-03 | 7.41E-04 | 8.63E-04 | 7.38E-04 | 1.29E-03 | 1.15E-04 | 1.47E-03 | 4.16E-03 | | 1.13E-02 |
| FRWY20 | 3 | 1.91E-03 | 7.20E-04 | 8.39E-04 | 7.18E-04 | 1.10E-03 | 9.74E-05 | 1.43E-03 | 3.71E-03 | | 1.05E-02 |
| FRWY21 | 8 | 1.45E-02 | 5.45E-03 | 6.47E-03 | 5.64E-03 | 6.08E-03 | 5.40E-04 | 7.23E-03 | 1.81E-02 | | 6.40E-02 |
| FRWY22 | 8 | 8.56E-03 | 3.21E-03 | 3.81E-03 | 3.32E-03 | 3.50E-03 | 3.11E-04 | 4.16E-03 | 1.07E-02 | | 3.76E-02 |
| FRWY23 | 8 | 8.62E-03 | 3.23E-03 | 3.84E-03 | 3.35E-03 | 3.52E-03 | 3.13E-04 | 4.54E-03 | 1.08E-02 | | 3.82E-02 |
| FRWY24 | 8 | 2.08E-02 | 7.81E-03 | 9.27E-03 | 8.08E-03 | 9.17E-03 | 8.15E-04 | 1.06E-02 | 2.49E-02 | | 9.15E-02 |
| FRWY25 | 8 | 1.37E-02 | 5.16E-03 | 6.12E-03 | 5.33E-03 | 5.29E-03 | 4.71E-04 | 6.56E-03 | 1.48E-02 | | 5.75E-02 |
| FRWY26 | 8 | 1.12E-02 | 4.20E-03 | 4.99E-03 | 4.35E-03 | 3.96E-03 | 3.52E-04 | 4.91E-03 | 1.09E-02 | | 4.49E-02 |
| FRWY27 | 2 | 7.79E-03 | 2.91E-03 | 3.38E-03 | 2.97E-03 | 3.14E-03 | 2.75E-04 | 3.52E-03 | 8.10E-03 | | 3.21E-02 |
| FRWY28 | 2 | 1.06E-02 | 3.97E-03 | 4.62E-03 | 4.05E-03 | 4.34E-03 | 3.81E-04 | 4.87E-03 | 1.12E-02 | | 4.41E-02 |
| FRWY29 | 2 | 1.09E-02 | 4.07E-03 | 4.73E-03 | 4.15E-03 | 4.33E-03 | 3.79E-04 | 5.15E-03 | 1.13E-02 | | 4.50E-02 |
| FRWY30 | 2 | 1.20E-02 | 4.47E-03 | 5.20E-03 | 4.56E-03 | 4.70E-03 | 4.12E-04 | 4.90E-03 | 1.09E-02 | | 4.71E-02 |
| FRWY31 | 2 | 2.99E-02 | 1.12E-02 | 1.30E-02 | 1.14E-02 | 1.15E-02 | 1.01E-03 | 1.19E-02 | 2.43E-02 | | 1.14E-01 |
| FRWY32 | 2 | 1.05E-02 | 3.94E-03 | 4.58E-03 | 4.01E-03 | 3.78E-03 | 3.31E-04 | 3.92E-03 | 7.99E-03 | | 3.91E-02 |
| FRWY33 | 2 | 1.93E-02 | 7.19E-03 | 8.36E-03 | 7.33E-03 | 6.58E-03 | 5.77E-04 | 6.81E-03 | 1.41E-02 | | 7.02E-02 |
| FRWY34 | 2 | 1.64E-02 | 6.11E-03 | 7.10E-03 | 6.22E-03 | 5.69E-03 | 4.99E-04 | 5.28E-03 | 1.11E-02 | | 5.84E-02 |
| FRWY35 | 2 | 4.51E-03 | 1.68E-03 | 1.96E-03 | 1.72E-03 | 1.30E-03 | 1.14E-04 | 1.27E-03 | 1.93E-03 | | 1.45E-02 |
| FRWY36 | 2 | 2.48E-02 | 9.27E-03 | 1.08E-02 | 9.45E-03 | 6.89E-03 | 6.04E-04 | 6.76E-03 | 7.28E-03 | | 7.59E-02 |
| FRWY37 | 2 | 1.03E-02 | 3.86E-03 | 4.49E-03 | 3.94E-03 | 2.87E-03 | 2.52E-04 | 2.82E-03 | 3.03E-03 | | 3.16E-02 |
| FRWY294 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.48E-04 | | 7.48E-04 |
| FRWY295 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.68E-04 | | 2.68E-04 |
| FRWY296 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.63E-04 | | 4.63E-04 |
| FRWY297 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.85E-04 | | 3.85E-04 |
| FRWY299 | 8 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.23E-04 | | 4.23E-04 |
| FRWY75 | 5 | 3.49E-03 | 1.32E-03 | 1.55E-03 | 1.34E-03 | 1.93E-03 | 1.72E-04 | 2.87E-03 | 7.31E-03 | | 2.00E-02 |
| FRWY76 | 5 | 3.43E-03 | 1.30E-03 | 1.52E-03 | 1.32E-03 | 1.69E-03 | 1.50E-04 | 2.51E-03 | 6.39E-03 | | 1.83E-02 |
| FRWY77 | 5 | 6.17E-04 | 2.33E-04 | 2.74E-04 | 2.37E-04 | 3.04E-04 | 2.70E-05 | 4.52E-04 | 1.15E-03 | | 3.29E-03 |
| FRWY78 | 5 | 2.11E-03 | 7.97E-04 | 9.35E-04 | 8.11E-04 | 9.36E-04 | 8.32E-05 | 1.39E-03 | 3.54E-03 | | 1.06E-02 |
| FRWY79 | 5 | 2.87E-03 | 1.09E-03 | 1.27E-03 | 1.10E-03 | 1.16E-03 | 1.03E-04 | 1.72E-03 | 4.65E-03 | | 1.40E-02 |
| FRWY80 | 3 | 2.10E-03 | 7.93E-04 | 9.23E-04 | 7.89E-04 | 8.08E-04 | 7.14E-05 | 1.57E-03 | 3.15E-03 | | 1.02E-02 |
| FRWY81 | 3 | 3.36E-03 | 1.27E-03 | 1.47E-03 | 1.26E-03 | 1.19E-03 | 1.05E-04 | 2.32E-03 | 4.65E-03 | | 1.56E-02 |
| FRWY82 | 3 | 2.41E-03 | 9.09E-04 | 1.06E-03 | 9.05E-04 | 7.94E-04 | 7.02E-05 | 1.54E-03 | 3.10E-03 | | 1.08E-02 |
| FRWY83 | 3 | 2.62E-03 | 9.88E-04 | 1.15E-03 | 9.84E-04 | 8.63E-04 | 7.63E-05 | 1.68E-03 | 3.37E-03 | | 1.17E-02 |
| FRWY84 | 3 | 1.95E-03 | 7.34E-04 | 8.54E-04 | 7.31E-04 | 5.61E-04 | 4.96E-05 | 1.09E-03 | 2.19E-03 | | 8.15E-03 |
| FRWY85 | 5 | 5.75E-03 | 2.17E-03 | 2.55E-03 | 2.21E-03 | 1.60E-03 | 1.42E-04 | 3.16E-03 | 6.41E-03 | | 2.40E-02 |
| FRWY86 | 5 | 1.67E-03 | 6.31E-04 | 7.40E-04 | 6.43E-04 | 5.29E-04 | 4.71E-05 | 7.87E-04 | 1.75E-03 | | 6.80E-03 |
| FRWY87 | 5 | 2.92E-03 | 1.10E-03 | 1.30E-03 | 1.12E-03 | 9.26E-04 | 8.23E-05 | 1.38E-03 | 3.06E-03 | | 1.19E-02 |
| FRWY101 | 2 | 2.56E-03 | 9.55E-04 | 1.11E-03 | 9.73E-04 | 6.43E-04 | 5.64E-05 | 9.47E-04 | 1.21E-03 | | 8.45E-03 |
| FRWY102 | 2 | 1.13E-03 | 4.22E-04 | 4.90E-04 | 4.30E-04 | 3.49E-04 | 3.06E-05 | 3.43E-04 | 6.56E-04 | | 3.85E-03 |
| FRWY103 | 2 | 2.16E-03 | 8.07E-04 | 9.38E-04 | 8.22E-04 | 6.69E-04 | 5.86E-05 | 6.56E-04 | 1.26E-03 | | 7.37E-03 |
| FRWY104 | 2 | 2.69E-03 | 1.00E-03 | 1.17E-03 | 1.02E-03 | 1.20E-03 | 1.05E-04 | 1.18E-03 | 2.26E-03 | | 1.06E-02 |
| FRWY105 | 2 | 6.64E-04 | 2.48E-04 | 2.88E-04 | 2.53E-04 | 3.81E-04 | 3.35E-05 | 3.74E-04 | 6.27E-04 | | 2.87E-03 |
| FRWY106 | 2 | 8.57E-04 | 3.20E-04 | 3.72E-04 | 3.26E-04 | 4.93E-04 | 4.32E-05 | 4.84E-04 | 8.10E-04 | | 3.71E-03 |
| FRWY107 | 2 | 7.77E-04 | 2.90E-04 | 3.37E-04 | 2.96E-04 | 6.25E-04 | 5.48E-05 | 6.13E-04 | 1.03E-03 | | 4.02E-03 |
| FRWY108 | 2 | 1.63E-03 | 6.09E-04 | 7.08E-04 | 6.20E-04 | 1.64E-03 | 1.44E-04 | 8.04E-04 | 2.70E-03 | | 8.85E-03 |
| FRWY109 | 2 | 6.49E-04 | 2.42E-04 | 2.82E-04 | 2.47E-04 | 6.53E-04 | 5.72E-05 | 3.20E-04 | 1.07E-03 | | 3.52E-03 |
| FRWY110 | 2 | 1.05E-03 | 3.91E-04 | 4.55E-04 | 3.98E-04 | 1.05E-03 | 9.23E-05 | 5.17E-04 | 1.73E-03 | | 5.68E-03 |
| FRWY111 | 2 | 2.90E-03 | 1.08E-03 | 1.26E-03 | 1.10E-03 | 2.91E-03 | 2.56E-04 | 1.43E-03 | 4.79E-03 | | 1.57E-02 |
| FRWY112 | 2 | 5.20E-04 | 1.94E-04 | 2.26E-04 | 1.98E-04 | 5.23E-04 | 4.58E-05 | 2.56E-04 | 8.59E-04 | | 2.82E-03 |
| FRWY113 | 2 | 9.52E-04 | 3.55E-04 | 4.13E-04 | 3.62E-04 | 0.00E+00 | 0.00E+00 | 6.26E-04 | 1.80E-03 | | 4.51E-03 |
| FRWY114 | 2 | 1.05E-03 | 3.91E-04 | 4.55E-04 | 3.99E-04 | 0.00E+00 | 0.00E+00 | 6.89E-04 | 1.98E-03 | | 4.96E-03 |
| FRWY129 | 1 | 8.65E-03 | 3.27E-03 | 3.82E-03 | 3.27E-03 | 0.00E+00 | 0.00E+00 | 1.50E-03 | 2.15E-03 | | 2.26E-02 |
| FRWY130 | 1 | 8.88E-03 | 3.35E-03 | 3.92E-03 | 3.35E-03 | 0.00E+00 | 0.00E+00 | 1.28E-03 | 1.84E-03 | | 2.26E-02 |
| FRWY131 | 1 | 7.65E-03 | 2.89E-03 | 3.37E-03 | 2.89E-03 | 2.01E-03 | 1.78E-04 | 9.94E-04 | 1.42E-03 | | 2.14E-02 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRWY132 | 1 | 3.00E-03 | 1.13E-03 | 1.32E-03 | 1.13E-03 | 7.86E-04 | 6.99E-05 | 7.79E-04 | 5.57E-04 | | 8.78E-03 |
| FRWY133 | 1 | 1.17E-02 | 4.42E-03 | 5.16E-03 | 4.42E-03 | 3.07E-03 | 2.73E-04 | 3.04E-03 | 2.18E-03 | | 3.43E-02 |
| FRWY167 | 1 | 1.71E-03 | 6.44E-04 | 7.53E-04 | 6.44E-04 | 0.00E+00 | 0.00E+00 | 4.93E-04 | 7.05E-04 | | 4.94E-03 |
| FRWY168 | 1 | 1.18E-03 | 4.46E-04 | 5.21E-04 | 4.46E-04 | 0.00E+00 | 0.00E+00 | 3.07E-04 | 5.85E-04 | | 3.48E-03 |
| FRWY169 | 1 | 3.17E-03 | 1.20E-03 | 1.40E-03 | 1.20E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.15E-03 | | 1.01E-02 |
| FRWY171 | 1 | 8.29E-04 | 3.13E-04 | 3.66E-04 | 3.13E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.37E-03 | | 3.19E-03 |
| FRWY172 | 1 | 1.16E-03 | 4.38E-04 | 5.12E-04 | 4.38E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.40E-03 | | 4.94E-03 |
| FRWY173 | 1 | 2.26E-03 | 8.52E-04 | 9.95E-04 | 8.52E-04 | 0.00E+00 | 0.00E+00 | 8.38E-04 | 2.00E-03 | | 7.79E-03 |
| FRWY174 | 8 | 1.07E-03 | 4.00E-04 | 4.75E-04 | 4.14E-04 | 0.00E+00 | 0.00E+00 | 3.80E-04 | 9.07E-04 | | 3.64E-03 |
| FRWY175 | 8 | 2.62E-03 | 9.82E-04 | 1.17E-03 | 1.02E-03 | 1.05E-03 | 9.30E-05 | 5.18E-04 | 1.48E-03 | | 8.92E-03 |
| FRWY176 | 8 | 2.30E-03 | 8.63E-04 | 1.02E-03 | 8.92E-04 | 9.19E-04 | 8.17E-05 | 4.55E-04 | 1.30E-03 | | 7.84E-03 |
| FRWY134 | 5 | 1.05E-03 | 3.99E-04 | 4.68E-04 | 4.06E-04 | 9.37E-04 | 8.32E-05 | 4.64E-04 | 1.33E-03 | | 5.14E-03 |
| FRWY135 | 5 | 1.30E-03 | 4.93E-04 | 5.78E-04 | 5.02E-04 | 1.16E-03 | 1.03E-04 | 5.73E-04 | 1.64E-03 | | 6.35E-03 |
| FRWY136 | 5 | 7.91E-04 | 2.99E-04 | 3.51E-04 | 3.04E-04 | 7.02E-04 | 6.24E-05 | 3.48E-04 | 9.95E-04 | | 3.85E-03 |
| FRWY137 | 5 | 9.24E-04 | 3.49E-04 | 4.10E-04 | 3.55E-04 | 0.00E+00 | 0.00E+00 | 5.08E-04 | 1.21E-03 | | 3.76E-03 |
| FRWY138 | 5 | 1.51E-03 | 5.73E-04 | 6.71E-04 | 5.83E-04 | 0.00E+00 | 0.00E+00 | 8.32E-04 | 1.98E-03 | | 6.16E-03 |
| FRWY139 | 5 | 1.19E-03 | 4.49E-04 | 5.27E-04 | 4.57E-04 | 0.00E+00 | 0.00E+00 | 6.53E-04 | 1.56E-03 | | 4.83E-03 |
| FRWY140 | 5 | 1.20E-03 | 4.55E-04 | 5.34E-04 | 4.63E-04 | 1.07E-03 | 9.50E-05 | 5.29E-04 | 1.26E-03 | | 5.61E-03 |
| FRWY141 | 5 | 1.10E-03 | 4.17E-04 | 4.89E-04 | 4.24E-04 | 9.79E-04 | 8.70E-05 | 4.85E-04 | 1.16E-03 | | 5.14E-03 |
| FRWY142 | 5 | 7.14E-04 | 2.70E-04 | 3.17E-04 | 2.75E-04 | 6.34E-04 | 5.64E-05 | 3.14E-04 | 7.49E-04 | | 3.33E-03 |
| FRWY143 | 5 | 1.55E-03 | 5.85E-04 | 6.86E-04 | 5.96E-04 | 1.37E-03 | 1.22E-04 | 6.80E-04 | 1.62E-03 | | 7.21E-03 |
| FRWY144 | 5 | 1.90E-03 | 7.19E-04 | 8.43E-04 | 7.31E-04 | 0.00E+00 | 0.00E+00 | 1.04E-03 | 1.99E-03 | | 7.23E-03 |

# G.8 - 1,000-Foot Buffer Analysis

**Appendix G-8 contains an estimate of the project's mitigated cancer risks considering the 1,000-foot buffer zone for sensitive receptors. Cancer risks were estimated using the "Current OEHHA Guidance".**

**World Logistics Center** **1000 foot Buffer** **with EMFAC2014**
**Project Operational and Construction Cancer Risks** **Rev 5** **Sample Output**
**With Mitigation** **Max Risk** **16.54**

| X (m) | Y (m) | 30 year Risk (/million) |
|---|---|---|
| 461553 | 3741938 | 0.0772 |
| 462553 | 3741938 | 0.0636 |
| 463553 | 3741938 | 0.0585 |
| 464553 | 3741938 | 0.0603 |
| 465553 | 3741938 | 0.0568 |
| 466553 | 3741938 | 0.0630 |
| 467553 | 3741938 | 0.0628 |
| 468553 | 3741938 | 0.0592 |
| 469553 | 3741938 | 0.0674 |
| 470553 | 3741938 | 0.0671 |
| 471553 | 3741938 | 0.0722 |
| 472553 | 3741938 | 0.0805 |
| 473553 | 3741938 | 0.0958 |
| 474553 | 3741938 | 0.0999 |
| 475553 | 3741938 | 0.1070 |
| 476553 | 3741938 | 0.1466 |
| 477553 | 3741938 | 0.2062 |
| 478553 | 3741938 | 0.2104 |
| 479553 | 3741938 | 0.2030 |
| 480553 | 3741938 | 0.1871 |
| 481553 | 3741938 | 0.2208 |
| 482553 | 3741938 | 0.1960 |
| 483553 | 3741938 | 0.1890 |
| 484553 | 3741938 | 0.1843 |
| 485553 | 3741938 | 0.1781 |
| 486553 | 3741938 | 0.1766 |
| 487553 | 3741938 | 0.1766 |

# G.9 - Assessment of Mortality and Morbidity

**Appendix G-9 contains the methodology and results of the mortality/morbidity estimates for both unmitigated and mitigated project construction and operational emissions.**

# Estimating Mortality and Morbidity Impacts from Diesel Particulate Matter

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March 25, 2015

## Purpose

This report was prepared to provide additional background information and support to the Air Quality, Greenhouse Gas, and Health Risk Assessment (technical report) prepared pursuant to the California Environmental Quality Act for the World Logistics Center project (project). The project is a master-planned logistics campus to include up to 40.4 million sq ft of high-cube logistics warehousing, up to 200,000 sq ft of light logistics uses, a site for logistics support uses, and 74.3 acres of Open Space in Moreno Valley, California.

## Background and Methodology

Respirable particulate matter is a public health concern as it is known to impact both the respiratory and cardiovascular systems. Respirable particulate matter deposition in the lungs and penetration into the bloodstream (for the smallest particles) triggers a range of inflammation responses and exacerbates health problems such as asthma and chronic bronchitis. Individuals susceptible to higher health risks from exposure to airborne particulate matter ($PM_{10}$ and $PM_{2.5}$) include children, the elderly, smokers, and people of all ages with low pulmonary/cardiovascular function. Mortality is a measure of the number of deaths in a population, scaled to the size of that population, per unit time. Morbidity refers to the number of individuals who have contracted a disease during a given time period (the incidence rate) or the number who currently have that disease (the prevalence rate), scaled to the size of the population. These terms differ from the cancer risk because the cancer risk is the risk of developing cancer over a lifetime

The ARB reviewed and summarized the non-toxic health effects (i.e., mortality and morbidity) of PM exposure and presented a health effect model attempting to quantify these impacts based on concentration-response functions (ARB 2002)[1]. Concentration-response (C-R) functions are equations that relate the change in the number of adverse health effect incidences in a population to a change in pollutant concentration experienced by that population. This ARB model has been used, for example, to estimate the number of cases of disease and premature deaths linked to PM and ozone exposure from ports and goods movement in California (ARB 2006).[2]

Although the ARB model has also been used to quantitatively assess project-specific incremental levels of public mortality and morbidity, such calculations are subject to significant uncertainty. Sources of uncertainty include emission estimates, population exposure estimates, concentration-response functions, baseline rates of mortality and morbidity that are entered into concentration response functions (C-R functions), and occurrence of additional not-quantified adverse health effects. It should be noted that the nature of PM as a complex mixture of various pollutants, as well as the confounding health effects of pollutants such as sulfur dioxide, $NO_2$, CO, and ozone that tend to co-occur with PM in ambient air, greatly increase the complexity of deriving accurate PM concentration-response functions. Health risk estimates derived in the presence of significant uncertainty tend to rely on very conservative

[1] ARB 2002. Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quaity Standards for Particulate Matter and Sulfates, May 3, 2002. Web site: http://www.arb.ca.gov/carbis/research/aaqs/std-rs/pm-final/PMfinal.pdf
[2] ARB 2006. Final Emission Reduction Plan for Ports and Goods Movement. Website: http://www.arb.ca.gov/planning/gmerp/plan/final_plan.pdf

assumptions that may greatly overestimate the potential adverse health effects. As stated by ARB in a study of diesel PM exposure from ports and goods movement in California: "Risk assessment has various uncertainties in the methodology and is therefore deliberately designed so that risks are not under predicted. Risk assessment is thus best understood as a tool for comparing risks from various sources, usually for purposes of prioritizing risk reduction, and not as literal prediction of the community incidence of disease from exposure" (ARB 2006, page 4).

However, perhaps the most compelling use limitation of C-R functions for site-specific projects is the consideration of whether it is valid to apply the C-R functions to changes in PM concentrations that are far below the ambient concentration. For example, the ARB/OEHHA analysis applied a threshold of 18 $\mu g/m^3$ for $PM_{10}$ and 9 $\mu g/m^3$ for $PM_{2.5}$ for the long-term mortality C-R function, representing the lowest concentration level observed in the long-term mortality studies evaluated. In other words, ARB/OEHHA assumed that the C-R functions were continuous and differentiable down to threshold levels. In the case of trying to quantify Project-specific impacts, it may not be appropriate to use C-R functions that were developed with a threshold significantly higher than the change in PM due to the Project.

Nonetheless, despite these uncertainties in the analysis methodology, the potential increase in long-term mortality was calculated for the project. The most common forms of the C-R function are represented in the log-linear form as discussed in the Health Risk Assessment of the Port of Long Beach Middle Harbor Project (Port of Long Beach 2009, page A-3-22). For estimates of long-term mortality/morbidity impacts, the following C-R function is used:

$$\Delta y = y_o \left(e^{\beta \Delta PM10} - 1\right) \times \text{population} \qquad \text{Equation 1}$$

Where:

$\Delta y$ = changes in the incidence of a health risk endpoint (in this case changes in mortality or morbidity) corresponding to a particular change in diesel $PM_{10}$ (assumed to be diesel PM)

$y_0$ = baseline occurrence of the health risk endpoint rate per person for the South Coast Air Basin

B = this coefficient is based on the relative risk that is associated with a particular concentration and varies from one study to another; and

$\Delta PM_{10}$ = change in diesel PM concentration estimated by the project's air dispersion modeling($ug/m^3$)

Population = population of the impacted census tracts and population subgroup exposed to the change in diesel PM

Similar C-R functions are used to estimate daily changes in morbidity effects from diesel PM including incidences of chronic bronchitis, hospital admissions for pulmonary disease, pneumonia, cardiovascular disease, and asthma

The parameters in the functions differ depending on the study. Some studies of the relationship between ambient PM concentrations and mortality excluded accidental deaths from their mortality counts; others included all deaths. Some studies considered only members of a particular subgroup of the population, e.g., individuals 65 and older, while other studies considered the entire population in the study location. When using a C-R function from an epidemiological study to estimate changes in the incidence of a health endpoint corresponding to a particular change in PM in a location, it is important to use the appropriate value of parameters for the C-R function. That is, the measure of PM, the type of population, and the characterization of the health endpoint should be the same as or as close as possible to those used in the study that estimated the C-R function.

The form of the C-R function was used to predict the effect of changes in ambient PM concentrations on health effects such as premature deaths, cardiac and respiratory hospitalizations, asthma and other lower respiratory symptoms, etc. The parametric values for the variables $y_o$ and $\beta$ are provided in Table 1 along with the averaging time for the estimate of the health risk endpoint.

**Table 1: Concentration-Response Functional Values**

| Health Risk Endpoint | Averaging Time | Affected Population | Baseline Occurrence, $y_o$ | Relative Incidence, $\beta$ |
|---|---|---|---|---|
| Long-term Mortality | Annual | Ages 30 years and older | 0.001768 | 0.005827 |
| Chronic Illness: Chronic Bronchitis | Annual | Ages 27 years and older | 0.00378 | 0.0132 |
| Hospitalization: Chronic Obstructive Pulmonary Disease | Daily | Ages 65 years and older | 0.0000259 | 0.00288 |
| Hospitalization: Pneumonia (Age 65+) | Daily | Ages 65 years and older | 0.0000516 | 0.00207 |
| Hospitalization: Cardiovascular (Age 65+) | Daily | Ages 65 years and older | 0.000158 | 0.00119 |
| Hospitalization: Asthma (Age 0-64) | Daily | Ages 0 to 64 years old | 0.00000263 | 0.00205 |
| Emergency Room Visits for Asthma | Daily | Ages 0 to 64 years old | 0.00000448 | 0.00367 |
| Source: ARB 2002 (ibid.) | | | | |

## Exposure Estimation and Assumptions

The basic procedure for determining exposures is based on the methods published by the ARB in its development of the technical support to consider amendments to the ambient air quality standards for particulate matter and sulfates (ARB 2002). Within the context of this assessment, the following information is required to make the relevant health risk endpoint estimates in addition to the C-R function shown in Equation 1 and the parametric information shown in Table 1:

- Air pollutant concentrations (represented as the incremental diesel PM impacts from the project); and

- Population affected

The incremental air pollutant concentrations of diesel PM resulting from the project were determined using the USEPA AERMOD air dispersion model and associated emission estimates of diesel PM as discussed in Section 4 of the technical report. The dispersion model predicted annual estimates of diesel PM at over 2,300 discrete locations surrounding the project corresponding to the location of population centroids from the US Census Bureau. The locations of these census tract centroid receptors were shown in Exhibit 20 in the technical report. To provide estimates of 24-hour diesel PM, the annual average diesel PM concentration values calculated by the air dispersion model were multiplied by a factor of 6 which corresponds to the ratio of 24-hour average to annual average air concentrations recommended by the California Office of Environmental Health Hazard Assessment (OEHHA 2003)[3].

Each population centroid contained an estimate of the 2010 population. The breakdown of the total population by age group for use in the concentration-response functions was accomplished using the 2010 US Census for California age breakdown as shown in Table 2. This population breakdown was assumed to apply to all census tract receptors to determine the affected population in each census tract.

**Table 2: California Age Breakdown in 2010**

| Age Group | Percent of Total Population |
|---|---|
| <5 years | 7.3% |
| 5-9 | 8.0% |
| 10-14 | 7.6% |
| 15-19 | 7.2% |
| 20-24 | 7.0% |
| 25-34 | 15.5% |
| 35-44 | 16.2% |
| 45-54 | 12.8% |
| 55 to 59 | 4.3% |
| 60-64 | 3.4% |
| 65-74 | 5.6% |
| 75-84 | 3.8% |
| >=85 | 1.6% |
| Source: US Census Bureau 2014. . Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data for California. Website: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk | |

[3] California Office of Environmental Health Hazard Assessment 2003. Air Toxics Hot Spots Program Risk Assessment Guidelines. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Website: http://oehha.ca.gov/air/hot_spots/pdf/HRAguidefinal.pdf

## Health Effects Results

Estimated health risk endpoints resulting from the project's diesel PM emissions are summarized in Table 3. The locations for the morbidity/mortality estimations were at the location with the highest combined annual diesel PM concentration and census tract population such that the change in diesel PM would affect the greatest number of people. A cumulative total of each mortality/morbidity health endpoint was also calculated, which totals the number of added cases of an identified health endpoint at every census tract location within the entire region potentially impacted by the project emissions. As shown in this table, the project would not result in a single new added case of a quantified health endpoint either at either the location where the impact would be greatest or cumulatively over the entire air dispersion modeling domain examined in this assessment (approximately 3,500 square miles, potentially impacted by the project).

Table 3 provides the results from the mortality/morbidity calculation for the unmitigated emissions from project construction and operation. For the results below, the Project would result in an increase in mortality of approximately 0.0022 additional cases per year at census tract with the largest project impact and 0.22 additional cases over all census tracts contained in the modeling domain attributable to the project emissions. Table 4 provides the results for the mitigated emissions. A comparison of Table 3 and Table 4 indicates that the mitigated impacts are about an order or magnitude lower than the unmitigated impacts.

**Table 3: Estimates of Various Morbidity Health Endpoints from Project Emissions Without Mitigation**

| Health Endpoint | Maximum Added Occurrences (added cases/year)(1) | Cumulative Occurrences over the Entire Modeling Region (added cases/year)(2) |
|---|---|---|
| Long-term Mortality (Ages 30+) | 0.0022 | 0.22 |
| Chronic Illness: Chronic Bronchitis (Age 27+) | 0.010 | 0.99 |
| Hospitalization: Chronic Obstructive Pulmonary Disease (Age 65+) | 0.00002 | 0.002 |
| Hospitalization: Pneumonia (Age 65+) | 0.00003 | 0.003 |
| Hospitalization: Cardiovascular (Age 65+) | 0.00005 | 0.005 |
| Hospitalization: Asthma (Age 0-64) | 0.00001 | 0.001 |
| Hospitalization: Asthma-related Emergency Visits (Ages 0-64) | 0.00003 | 0.004 |

Notes:
(1) At the location of the census tract centroid with the highest number of cases/year
(2) Cumulative total of the health endpoint cases/year over all census tract centroids in the modeling domain
Source: FirstCarbon Solutions | Michael Brandman Associates

**Table 4: Estimates of Various Morbidity Health Endpoints from Project Emissions With Mitigation**

| Health Endpoint | Maximum Added Occurrences (added cases/year)(1) | Cumulative Occurrences over the Entire Modeling Region (added cases/year)(2) |
|---|---|---|
| Long-term Mortality (Ages 30+) | 0.00025 | 0.012 |
| Chronic Illness: Chronic Bronchitis (Age 27+) | 0.001 | 0.055 |
| Hospitalization: Chronic Obstructive Pulmonary Disease (Age 65+) | 0.000002 | 0.0001 |
| Hospitalization: Pneumonia (Age 65+) | 0.000003 | 0.0001 |
| Hospitalization: Cardiovascular (Age 65+) | 0.000005 | 0.0003 |
| Hospitalization: Asthma (Age 0-64) | 0.000001 | 0.0001 |
| Hospitalization: Asthma-related Emergency Visits (Ages 0-64) | 0.00004 | 0.0002 |

Notes:
(1) At the location of the census tract centroid with the highest number of cases/year
(2) Cumulative total of the health endpoint cases/year over all census tract centroids in the modeling domain
Source: FirstCarbon Solutions | Michael Brandman Associates

## Uncertainties of Risk Estimates

There are numerous uncertainties associated with the estimates of the health risk endpoints, including the following:

- The mathematical formulation for estimating the dispersion of air emissions,
- The estimation of the emissions of diesel PM from the various motor vehicle sources,
- The natural range or variability in the human population in such properties as height, weight, and susceptibility to chemical toxicants,
- The formulation of the concentration-response functions including the application of epidemiological studies results from non-California regions, and
- The effects of co-pollutants on described diesel PM effects, that is, the inclusion of health effects from other non-PM air pollutants.

As shown, the various methodologies used to estimate risks are conservative and health-protective to avoid underestimation of risk to the public. Thus, these risk estimates should not be interpreted as the expected rates of disease in the exposed population but rather as estimates of potential risk, based on

current knowledge and a number of assumptions. Risk assessment is best used as a ruler to compare one source with another and to prioritize concerns.

# Appendix H: Health Effects Institute - Advanced Collaborative Emissions Study: Lifetime Cancer Risk and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust, Research Report 184

RESEARCH REPORT

HEALTH EFFECTS INSTITUTE

Number 184
January 2015

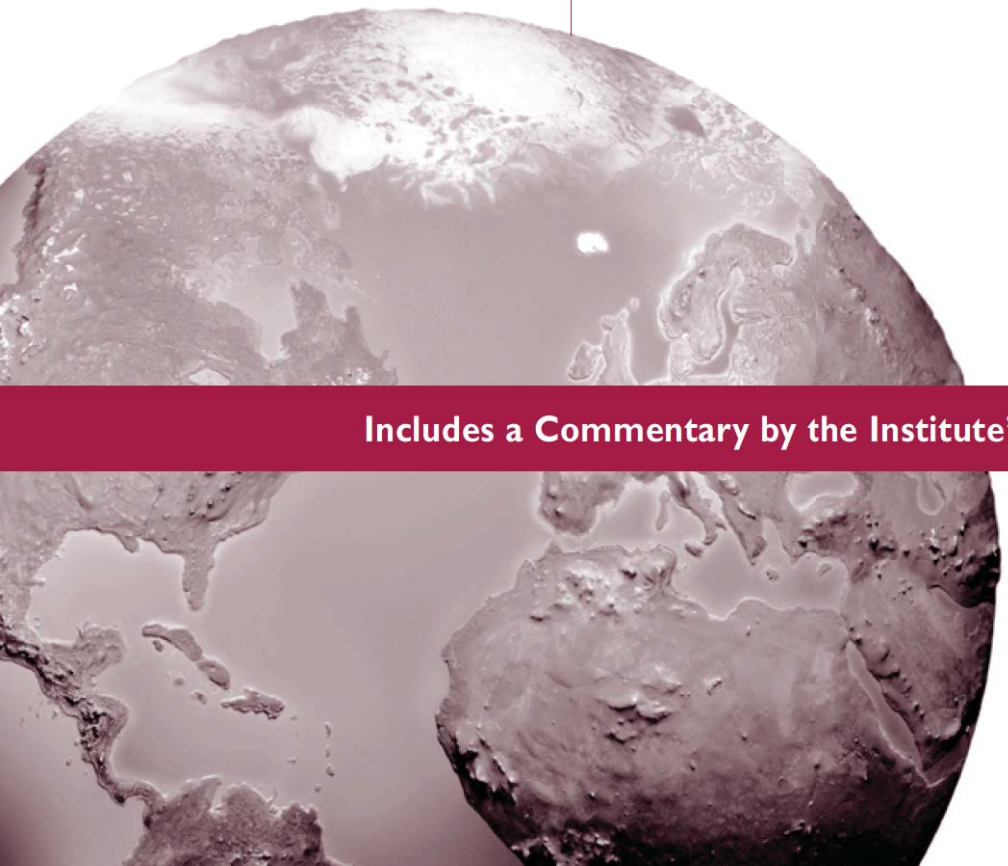
# Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust

**Part 1. Assessment of Carcinogenicity and Biologic Responses in Rats After Lifetime Inhalation of New-Technology Diesel Exhaust in the ACES Bioassay**
Jacob D. McDonald et al.

**Part 2. Assessment of Micronucleus Formation in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay**
Jeffrey C. Bemis et al.

**Part 3. Assessment of Genotoxicity and Oxidative Damage in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay**
Lance M. Hallberg et al.

**Part 4. Assessment of Plasma Markers and Cardiovascular Responses in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay**
Daniel J. Conklin and Maiying Kong



Includes a Commentary by the Institute's ACES Review Panel

# Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust

with a Commentary by the HEI ACES Review Panel

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Research Report 184
Health Effects Institute
Boston, Massachusetts

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Bemis JC, Torous DK, Dertinger SD. 2015. Part 2. Assessment of micronucleus formation in rats after chronic exposure to new-technology diesel exhaust in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust. Research Report 184. Boston, MA:Health Effects Institute.

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Hallberg LM, Ward JB, Hernandez C, Ameredes BT, Wickliffe JK. 2015. Part 3. Assessment of genotoxicity and oxidative damage in rats after chronic exposure to new-technology diesel exhaust in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust. Research Report 184. Boston, MA:Health Effects Institute.

Citation for Part 4 only:

Conklin DJ, Kong M. 2015. Part 4. Assessment of plasma markers and cardiovascular responses in rats after chronic exposure to new-technology diesel exhaust in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust. Research Report 184. Boston, MA:Health Effects Institute.

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# ABOUT HEI

The Health Effects Institute is a nonprofit corporation chartered in 1980 as an independent research organization to provide high-quality, impartial, and relevant science on the effects of air pollution on health. To accomplish its mission, the institute

- Identifies the highest-priority areas for health effects research;
- Competitively funds and oversees research projects;
- Provides intensive independent review of HEI-supported studies and related research;
- Integrates HEI's research results with those of other institutions into broader evaluations; and
- Communicates the results of HEI's research and analyses to public and private decision makers.

HEI typically receives half of its core funds from the U.S. Environmental Protection Agency and half from the worldwide motor vehicle industry. Frequently, other public and private organizations in the United States and around the world also support major projects or research programs. Specific components of the ACES program were funded by the U.S. Department of Energy and the Federal Highway Administration. HEI has funded more than 330 research projects in North America, Europe, Asia, and Latin America, the results of which have informed decisions regarding carbon monoxide, air toxics, nitrogen oxides, diesel exhaust, ozone, particulate matter, and other pollutants. These results have appeared in more than 260 comprehensive reports published by HEI, as well as more than 1000 articles in the peer-reviewed literature.

HEI's independent Board of Directors consists of leaders in science and policy who are committed to fostering the public–private partnership that is central to the organization. The Health Research Committee solicits input from HEI sponsors and other stakeholders and works with scientific staff to develop a Five-Year Strategic Plan, select research projects for funding, and oversee their conduct. The Health Review Committee, which has no role in selecting or overseeing studies, works with staff to evaluate and interpret the results of funded studies and related research. For the ACES studies, a special ACES Review Panel — comprising Health Review Committee members and outside experts — fulfilled this role.

All project results and accompanying comments by the Health Review Committee (or, in this case, the ACES Review Panel) are widely disseminated through HEI's Web site (*www.healtheffects.org*), printed reports, newsletters and other publications, annual conferences, and presentations to legislative bodies and public agencies.

# ABOUT THIS REPORT

Research Report 184, *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust,* presents four studies funded by the Health Effects Institute. This report contains the following main elements:

**The Preface**, prepared by staff at HEI, is a brief summary of HEI's rationale for undertaking the ACES program and the selection of the investigators and development of the protocol for the ACES health studies described in this report, as well as an overview of Phases 1, 2, and 3A of the ACES program.

**The Investigators' Reports** for the core animal bioassay and three ancillary studies describe the scientific background, aims, methods, results after 1, 3, 12, and 24 months of exposure, and interpretations and conclusions of the studies. The report on the core bioassay by McDonald and colleagues also includes lifetime results (28 months for males; 30 months for females).

**The Commentary** on the four studies was prepared by members of the HEI ACES Review Panel (see below) with the assistance of HEI staff. The Commentary provides scientific background to the studies, comments on the methods used and strengths and limitations of the observations, discusses conclusions that can be drawn, and puts the studies into a broad scientific and regulatory perspective.

The four reports in this publication have gone through HEI's rigorous review process. Thus, each investigator team submitted a draft final report. These draft reports were evaluated by the HEI ACES Review Panel — an independent panel of distinguished scientists who had no involvement in selecting or overseeing these studies and included some members of the HEI Review Committee. Comments from the Panel were sent to the investigators, who revised their reports as they considered appropriate. Each revised report was evaluated by the Panel, which prepared the Commentary based on the contents of all final reports.

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# PREFACE

## HEI's Advanced Collaborative Emissions Study: Phase 3B

### INTRODUCTION

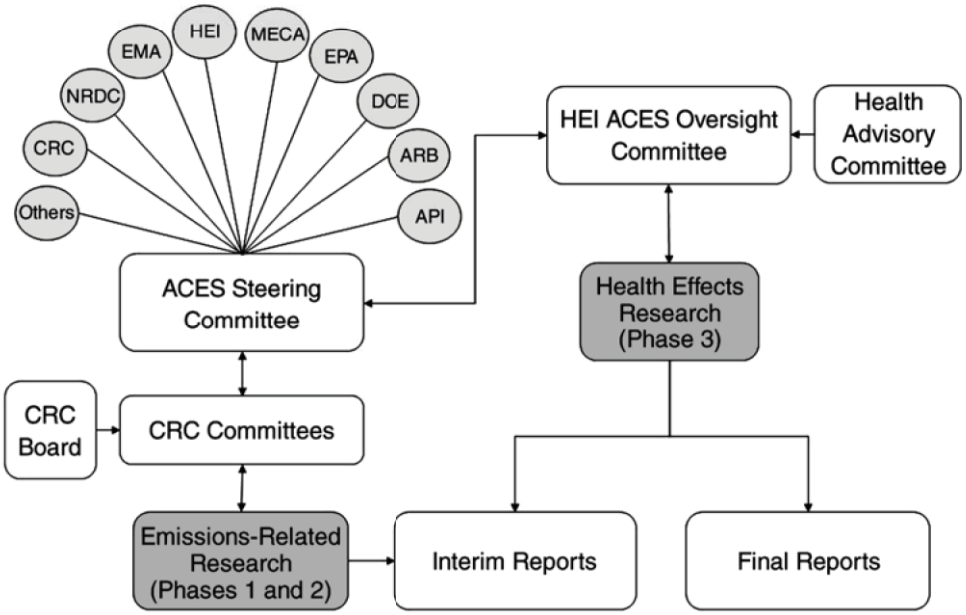
Because of health concerns related to exposure to diesel exhaust (DE*) emissions, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) in 2001 adopted stringent new standards for diesel fuel and for heavy-duty diesel engine emissions. Starting with model-year 2007, engines were required to meet a new standard for particulate matter (PM) and, beginning in 2010, to conform to a new standard for nitrogen oxides ($NO_x$). In response, industry developed a combination of advanced-technology compression-ignition engines, exhaust control systems, and reformulated fuels to meet these stringent standards, which were expected to result in substantially reduced emissions of other exhaust constituents as well. The EPA and CARB projected that the targeted emissions reductions of about 90% (compared with emissions from pre-2007 heavy-duty diesel engine systems) would have substantial public health benefits. For clarity, exhaust from the modern advanced engines and emission control systems is sometimes referred to as "new-technology diesel exhaust" (NTDE) and exhaust from pre-2007 engine technology is referred to as "traditional-technology diesel exhaust" (TDE).

To characterize the emissions and assess the safety of these new, advanced heavy-duty engine systems and fuels, the Health Effects Institute and the Coordinating Research Council (CRC; a nonprofit organization that directs engineering and environmental studies on the interaction between automotive or other mobility equipment and petroleum products) developed the Advanced Collaborative Emissions Study (ACES), a cooperative, multiparty effort that was conceived in 2005 and consisted of three phases:

- **Phase 1**: Extensive emissions characterization of four production-ready heavy heavy-duty diesel (HHDD; i.e., gross vehicle weight higher than 33,000 lb) engines equipped with control systems designed to meet the 2007 standards for reduced PM. This phase was conducted at the Southwest Research Institute (SwRI) in 2007 and 2008 and was the basis for selecting one HHDD engine/control system for health testing in Phase 3.
- **Phase 2**: Extensive emissions characterization of a group of diesel engine and control systems intended for production that met the stringent 2010 standards (including more advanced $NO_x$ controls). This phase was conducted at SwRI in 2012.
- **Phase 3**: Health effects assessment in rodents using the selected 2007-compliant heavy-duty diesel engine system among the four tested in Phase 1. This phase started in 2008 with the installation of a specially designed emissions-generation and animal-exposure facility at the Lovelace Respiratory Research Institute (LRRI) and was conducted in two parts. Phase 3A included setting up the engine, characterizing the engine performance and emissions to make sure it was operating as intended, and generating and characterizing the exposure atmospheres in the animal inhalation chambers at three dilution levels. Phase 3B included a 90-day inhalation study in mice and a lifetime inhalation study in rats with health measurements at several time points, as described later in this Preface.

The Figure in this Preface provides an overview of the ACES entities and stakeholders. The CRC initiated and oversaw the emissions characterizations in Phases 1 and 2 of ACES under its committee structure for such projects. The design and implementation of the health effects research in Phase 3 and overall reporting of results for ACES were the responsibility of HEI and were overseen by the HEI ACES Oversight Committee

* A list of abbreviations and other terms appears at the end of the Preface.




**Preface Figure. ACES flow chart including the ACES entities and stakeholders.** (API = American Petroleum Institute, ARB = Air Resources Board [California], CRC = Coordinating Research Council, DOE = U.S. Department of Energy, EMA = Truck & Engine Manufacturers Association, EPA = U.S. Environmental Protection Agency, HEI = Health Effects Institute, MECA = Manufacturers of Emission Controls Association, NRDC = Natural Resources Defense Council).

(a subset of the HEI Research Committee, augmented by independent experts from several disciplines), with advice from a Health Advisory Committee of ACES stakeholder experts. The overall effort has been guided by an ACES Steering Committee consisting of representatives of HEI and CRC, along with the U.S. Department of Energy, U.S. EPA, engine manufacturers, the petroleum industry, CARB, emission control manufacturers, the National Resources Defense Council, and others. At the inception of ACES, the first step taken jointly by the CRC and HEI committees was the development of a detailed project plan that formed the basis for the subsequent requests for applications (RFAs) issued by CRC and HEI.

This Preface accompanies a Research Report comprising investigators' reports resulting from studies funded by HEI to conduct work in Phase 3B. The sections that follow provide some background on the process leading to the selection of the investigators for Phase 3, an overview of the studies funded under Phase 3B, and a description of the development of a protocol for the chronic bioassay, as well as background on emissions and animal exposure characterization conducted in Phase 3A. More detailed information about Phase 3A and the engine selection process can be found in HEI Communication 17 (Mauderly and McDonald 2012). Results from Phases 1 and 2, the emissions characterization of four 2007-compliant engines and three 2010-compliant engines, respectively, have been published elsewhere (Khalek et al. 2009, 2011, 2013).

The investigators' reports in this Research Report describe the results from 12- and 24-month exposures in rats, including final pathology results in rats exposed for 28 months (males) or 30 months (females) in the core study. An earlier series of investigators' reports described interim results from 1- and 3-month exposures in rats and mice, as well as some key results at 12 months in rats in the core study (ACES 2012). Both reports are accompanied by a detailed Commentary from a panel of expert reviewers appointed by HEI.

## SELECTION OF PHASE 3 INVESTIGATORS

In 2006, HEI issued request for proposals (RFP) 06-1, *Exposure Facility and Conduct of a Chronic Bioassay,* in tandem with RFA 06-2, *Additional Health Effects*

*Measurements During the Chronic Bioassay and Short-Term Study.* RFP 06-1 solicited proposals from multidisciplinary teams to design and implement an engine facility with an engine dynamometer and a dilution system, to characterize the engine exhaust and animal chamber exposure, and to conduct a chronic inhalation bioassay in rats and mice. The bioassay would include standard assessments of general health status, tumor incidence, and histopathologic changes in all major organs similar to the standard rodent bioassay conducted by the National Toxicology Program (NTP) to evaluate potential carcinogenicity of chemical compounds (NTP 2011). In addition, the bioassay was intended to provide information on chronic toxicity (through histopathologic analyses of multiple organs at interim necropsies and at the end of the study) and on in vivo genotoxicity, inflammation, and other non-cancer health endpoints that have been associated with exposure to DE and that are not part of the standard NTP bioassays (NTP 2011).

A team led by Drs. Joseph Mauderly and Jacob McDonald at LRRI submitted a proposal for RFP 06-1 in July 2006. The proposal was reviewed by the HEI ACES Oversight Committee, which recommended the LRRI team for funding to conduct the core inhalation studies in Phase 3 (see Table). After a review of the project

**Preface Table.** Summary of Studies Completed in Phase 3B of the ACES Program

| Request Number and Title / Primary Investigator(s) (Institution) | Study Title | Main Health Endpoints in Rats and Mice |
|---|---|---|
| **RFP 06-1 Exposure Facility and Conduct of a Chronic Inhalation Bioassay** | | |
| Joseph L. Mauderly and Jacob D. McDonald (Lovelace Respiratory Research Institute, Albuquerque, N.M.) | Development of a diesel exhaust exposure facility and conduct of a chronic inhalation bioassay in rats and mice | Mortality and morbidity, body weight, clinical observations (including hematology and serum chemistry), gross pathology of major organs<br>Lung: Cytotoxicity, inflammation, oxidative stress, cytokines; cell proliferation; pulmonary function |
| **RFA 06-2 Additional Health Effects Measurements During the Chronic Bioassay and Short-Term Study** | | |
| Jeffrey C. Bemis (Litron Laboratories, Rochester, N.Y.) | Genotoxicity of inhaled diesel exhaust: examination of rodent blood for micronucleus formation | Micronucleated reticulocytes and normochromatic erythrocytes in serum |
| Daniel J. Conklin (University of Louisville, Louisville, Ky.) | Effects of diesel emissions on vascular inflammation and thrombosis | Inflammatory cytokines and chemokines; lipids; acute phase reactants; markers of thrombosis, vascular inflammation, and oxidative stress in serum and aorta<br>Immunoglobulins in serum (added at the request of HEI) |
| Lance M. Hallberg (University of Texas Medical Branch, Galveston, Tex.) and Jeffrey Wickliffe (Tulane University Health Sciences Center, New Orleans, La.) | Assessment of the genotoxicity of diesel exhaust/diesel exhaust particulates from improved diesel engines | Oxidative DNA damage in serum; DNA damage in lung; lipid peroxidation in brain |

costs and the key health studies needed to assess any health effects of these new technologies, the HEI ACES Oversight Committee decided to conduct the bioassay only in rats; mice were to be used only to study the effects of short-term exposures. The rationales for these choices are described below.

One important element of the ACES plan was to make maximum, cost-effective use of the exposures being conducted in the Phase 3 bioassay using mice and rats. Thus, RFA 06-2 solicited applications to measure additional endpoints, such as vascular markers of inflammation and damage, genotoxicity, respiratory infections, and immune responses, that were not included in the core health effects studies funded under RFP 06-1. Through a competitive selection process, five studies were approved for funding by an expert panel consisting of members of the HEI ACES Oversight Committee and additional outside experts. Three of the funded studies measured endpoints of genotoxicity and mutations, and two studies measured markers of vascular damage and inflammation. HEI did not receive any applications on immunotoxicity or respiratory infection. Because the HEI ACES Oversight Committee thought measures of immunotoxicity would be important to incorporate, such measures were included in the ancillary study by Conklin and Kong. Two of the ancillary studies were terminated after they were initiated because of technical issues.

## PROTOCOL DEVELOPMENT

A detailed project plan was developed for the design of all three phases of the ACES program. For Phase 3, the project plan included recommendations about the rodent strains, exposure concentrations and duration, and endpoints to be covered. However, the specific details were to be worked out and agreed upon with the selected team of investigators. Several important recommendations made by the HEI ACES Oversight Committee, and approved by the HEI Research Committee, are described in this Preface.

### SELECTING A RAT STRAIN

Criteria considered in selecting a rat strain were longevity, whether a strain had been used previously in chronic inhalation studies (particularly of DE), whether there existed a historical database of cancer incidence (based on control groups from chronic studies using inhalation or other methods of administering toxic compounds), and the maximum body weight reached by males (because it affects housing in inhalation chambers with limited space available; male rats typically gain more weight than female rats). A full discussion of these criteria is provided in Additional Materials I (available on the Web at *http://pubs.healtheffects.org*) of the report by McDonald and colleagues in this volume.

When RFP 06-1 was issued, two rat strains were being considered for ACES: F344 and Wistar WU. Historically, F344 had been the strain of choice for chronic NTP bioassays and had been used in many of the chronic bioassays of DE in the United States, whereas the Wistar strain had been used in chronic bioassays in Europe (including bioassays of DE). During 2005 and 2006, the NTP was reconsidering its use of the F344 strain because of a high spontaneous incidence of leukemia, which could reduce the statistical power for distinguishing exposure-associated lung lesions and shorten the life span of the animals (King-Herbert and Thayer 2006). In late 2006 (i.e., after RFP 06-1 was issued), the NTP decided to use the Wistar Han strain for chronic bioassays (King-Herbert et al. 2010). This decision subsequently guided the discussions within the HEI ACES Oversight Committee that led to recommending the Wistar Han strain for the ACES program as well.

However, the NTP changed its recommendation again in 2010 — when the ACES chronic bioassay was about to start — in favor of using the Sprague Dawley rat strain (King-Herbert et al. 2010). This decision was based in part on the observation that Wistar Han rats produced fewer offspring than were required to successfully conduct developmental and reproductive toxicology studies. Because the chronic bioassay had not yet started, the HEI ACES Oversight Committee revisited the rat strain decision but decided to stay with the original recommendation of the Wistar Han strain because ACES did not include developmental or reproductive outcomes. The HEI ACES Oversight Committee also considered questions raised by CARB regarding the Wistar strain, because a portion of the animals may have a mutation in the aryl hydrocarbon receptor gene that could affect their responsiveness to exposure to polycyclic aromatic hydrocarbons. The Committee again weighed this issue against all factors

that influenced the rat strain selection and deciced not to change its decision. More discussion of this issue is provided in the HEI ACES Review Panel Commentary which is a part of this report.

## SELECTING A MOUSE STRAIN

Similar criteria (i.e., longevity, background tumor incidence, and use in previous inhalation studies) were used to identify a suitable mouse strain for the ACES program. RFP 06-1 stated that three mouse strains could be considered for ACES: C57BL/6, CD-1, and $B6C3F_1$. $B6C3F_1$ mice (a cross between female C57BL/6 and male C3H mice) are used in the standard NTP bioassay (King-Herbert et al. 2010), but have not been used in previous DE bioassays and have a relatively high spontaneous liver tumor incidence. Previous DE bioassays have used a variety of mouse strains, including NMRI, CD-1, C57BL/6N, SENCAR, and Strain A. Because the C57BL/6 strain has a relatively low incidence of spontaneous lung tumors and has been used in previous DE bioassays, RFP 06-1 indicated that there may be advantages to using that strain. When proposing a particular strain, applicants were asked to consider differences in the sensitivity of strains in their response to exposure to chemicals via inhalation. Based on longevity and a lower incidence of spontaneous lung tumors than other strains under consideration, the C57BL/6 strain was proposed by the LRRI team and approved by the HEI ACES Oversight Committee.

## SELECTING TIME POINTS FOR EVALUATING HEALTH ENDPOINTS

To standardize the evaluations among the four ACES studies and to accommodate cost considerations, it was agreed that all studies should evaluate blood and tissue samples collected in rats after 1, 3, 12, and 24 months of exposure and in mice after 1 and 3 months of exposure.

RFP 06-1 indicated that about half the number of animals (180 of 288 rats and 180 of 360 mice; equal numbers of males and females) per exposure level would be assigned to the terminal necropsy at 24 or 30 months (see the subsection "Duration of Chronic Exposures in Rats"). The RFP stated that the remaining rats and mice would be available for intermediate necropsies at 1, 3, 6, 12, and 18 months, plus 24 months if animals were kept on the study for 30 months. These time points were proposed to capture changes at short-, intermediate-, and long-term exposure durations. Applicants to RFA 06-2 were asked to indicate, justify, and estimate costs for a number of time points that they thought would be optimal for measuring their proposed endpoints. Final decisions about the times of measurements and numbers of animals were made during protocol development.

During the budget negotiations with the LRRI team, the HEI ACES Oversight Committee and ACES stakeholders discussed options to lower the cost of the study by reducing the scope of the chronic bioassay. One major reduction was to limit the chronic bioassay to rats only, in part because there were more data available on DE exposures in rats than in mice and because rats are considered slightly more relevant than mice when extrapolating results to humans. Consequently, the duration of the mouse exposures was reduced to 90 days, a typical time span for short-term exposures. In addition, the number of intermediate necropsies among rats was reduced from six to four.

## COLLABORATION AND LOGISTICS

LRRI investigators' facilitated the collaboration with the additional investigators funded under RFA 06-2, by conducting all animal exposures and necropsies and by devising a scheme for sharing tissues among the three ancillary studies. Because of limited blood volumes available from individual mice, they exposed additional mice to accommodate all requests for blood and tissue samples. All samples were collected and distributed by LRRI personnel according to procedures specified by the investigators of the ancillary studies and approved by the HEI ACES Oversight Committee. In addition, any unused blood and tissue samples are being banked for future analyses if the need arises.

## DURATION OF CHRONIC EXPOSURES IN RATS

Inhalation exposures of rats were conducted 16 hours per day, 5 days a week for 30 months. Based on survival rates at 23 months of exposure, a decision was made to continue until 30 months of exposure before euthanizing the rats, which provided a longer time window to examine whether tumor formation occurs.

Because of lower survival rates of male rats compared with females, exposures of males were terminated after 28 months, as described in more detail in the report by McDonald and colleagues, Part 1 of this volume.

## GENERATION AND CHARACTERIZATION OF THE EXPOSURE ATMOSPHERE

The LRRI team and collaborators spent considerable effort in optimizing engine operation, testing the emissions to ensure comparability with Phase 1 results, determining the appropriate dilution factors, maintaining a constant temperature in the inhalation chambers in spite of introducing hot exhaust, and making sure the whole system — comprising engine, dilution, and animal inhalation facilities — operated reliably and consistently. The results of these important efforts are presented in detail in HEI Communication 17 (Mauderly and McDonald 2012). A brief summary of the major decisions is presented here.

### EXPOSURE ATMOSPHERE GENERATION

Because the chosen HHDD engine was considerably larger than engines previously used at LRRI (which were light-duty), HEI funded LRRI to construct a special facility for housing the dynamometer and the engine and for delivering the exhaust to the animal exposure chambers. A protocol for commissioning the dynamometer and characterizing the engine exhaust and the exhaust in the exposure chambers was developed by the LRRI team and approved by the HEI ACES Oversight Committee after receiving input from the Health Advisory Committee (see Appendices B and C of Communication 17, available at *http://pubs.healtheffects.org*).

### 16-HOUR TEST CYCLE

During Phase 1, a specially designed 16-hour test cycle was developed by a team at West Virginia University for use during animal exposures in Phase 3. The cycle includes four 4-hour parts consisting of Federal Test Procedure segments mixed with segments of the CARB HHDD engine-5 (CARB 5-Modes) driving cycles. It was designed to be representative of modern truck usage and included a broad range of engine loads and speeds reflecting both urban and rural (highway) driving. Details about the development of the cycle can be found in an article by Clark and colleagues (2007). The 16-hour cycle also allowed for collection of useful information on emissions during particle filter regeneration, which does not occur during the shorter test cycles. The 16-hour engine cycle was used to characterize the emissions of 2007- and 2010-compliant engines in Phases 1 and 2, as well as to expose animals in Phase 3.

### SELECTION OF MAIN AND BACKUP ENGINES

After the emissions characterization of the four engines in May 2008 during Phase 1, HEI randomly selected engine B for the health studies, as described in the *Final Plan for Engine Selection* provided in Appendix A of Communication 17 (Mauderly and McDonald 2012; available on the HEI Web site at *http://pubs.healtheffects.org*). A duplicate engine (referred to as *engine B′*) was obtained as a backup in the event of a breakdown of the primary engine for which repairs were estimated to last more than one or two days. Engine B′ underwent a set of emissions tests similar to those for engine B. There were some differences between the engines (see Tables 10–15 of HEI Communication 17 [Mauderly and McDonald 2012]). However, the differences were small — given the low level of emissions from both engines — and could be due to inter-engine variability and the fact that engine B′ was produced about a year after engine B and had updated engine features and emissions controls. At the time Phase 3B was about to start, engine B′ had a larger share of the market (more than two-thirds of the 2007-compliant engine market) than the original engine B, and its market share was expected to increase over time. Therefore, after consultation with the engine manufacturer, the HEI ACES Oversight Committee decided that engine B′ should be used as the main engine for the animal exposures at LRRI, with the original engine B serving as the backup engine.

### EXHAUST DILUTIONS

Four chamber exposure levels were targeted for the animal bioassay: low, medium, and high DE dilutions, and clean air. In previous DE animal exposure studies, dilution levels were based on particle mass concentrations. However, this approach was no longer viable because of the low particle concentrations in the exhaust of the 2007-compliant diesel engine and control systems. The HEI ACES Oversight Committee

therefore decided, after discussion with the investigators and the ACES stakeholders, to set dilutions based on predetermined $NO_2$ concentrations. This decision was made because $NO_2$ is the pollutant with the highest concentration in the exhaust of the 2007-compliant engines and because only non-cancer health effects have been observed with exposure to $NO_2$ in previous animal inhalation studies. The $NO_2$ concentrations selected and the rationale for their selection are as follows:

1. **The highest concentration of $NO_2$ would be 4.2 ppm**. This concentration was derived from a prior study of chronic $NO_2$ exposures (Mauderly et al. 1989) in which rats were exposed to $NO_2$ at 9.5 ppm for 7 hours per day, 5 days per week, for 24 months. This concentration would serve as the maximum tolerated dose (MTD). The equivalent concentration for a 16-hour exposure duration is 4.15 ppm. However, given that actual concentrations vary during the 16-hour cycle and may end up slightly below or above the target, the HEI ACES Oversight Committee recommended that concentrations should not go below 4.0 ppm. At this concentration, it was deemed possible to control the exposure chamber temperature to within the specified range.

2. **The lowest concentration would be 0.1 ppm**, or as close as possible to that concentration, in order to provide a likely no-observed-adverse-effect level (NOAEL). This concentration approaches the U.S. EPA ambient $NO_2$ air quality standard of 0.053 ppm. Concentrations in this range would be expected to be quite variable because of the high dilution ratio.

3. **The intermediate concentration would be 0.8 ppm.** Based on the highest and lowest concentrations, the HEI ACES Oversight Committee recommended targeting 0.8 ppm (but not exceeding it) and going no lower than 0.7 ppm.

Because of the overall low exhaust emissions, an additional issue considered in setting the highest chamber concentration was the chamber temperature. The acceptable range of temperatures with the animals in the chamber was set at 75° ± 3°F. A cooler was installed in the chamber to ensure that temperatures did not rise too high during the exposures.

## SUMMARY

HEI initiated the multiparty ACES project to evaluate 2007- and 2010-compliant HHDD engine and control technologies. Phase 3 of ACES included exposure atmosphere generation and characterization before the start of the animal exposures (Phase 3A, described in HEI Communication 17 [Mauderly and McDonald 2012]) and the evaluation of biologic responses associated with exposure to whole DE from one randomly selected 2007-compliant diesel engine for up to 30 months for all studies in rats and up to 3 months for all studies in mice (Phase 3B, described in this Research Report and in the interim report [ACES 2012]). This volume comprises detailed reports from all the investigators who completed health effects testing of DE from the 2007 engine, as well as a comprehensive Commentary by the HEI-appointed ACES Review Panel.

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## ABBREVIATIONS AND OTHER TERMS

| | |
|---|---|
| ACES | Advanced Collaborative Emissions Study |
| API | American Petroleum Institute |
| CARB | California Air Resources Board |
| CRC | Coordinating Research Council |
| DE | diesel exhaust |
| DOE | U.S. Department of Energy |
| EMA | Truck & Engine Manufacturers Association |
| EPA | U.S. Environmental Protection Agency |
| HHDD | heavy heavy-duty diesel |
| LRRI | Lovelace Respiratory Research Institute |
| MECA | Manufacturers of Emission Controls Association |
| MTD | maximum tolerated dose |
| NOAEL | no-observed-adverse-effect level |
| $NO_x$ | nitrogen oxides |
| NRDC | Natural Resources Defense Council |
| NTDE | new-technology diesel exhaust |
| NTP | National Toxicology Program |
| PM | particulate matter |
| RFA | request for applications |
| RFP | request for proposals |
| SwRI | Southwest Research Institute |
| TDE | traditional-technology diesel exhaust |

# HEI STATEMENT

## Synopsis of Research Report 184, Parts 1–4

# Effects of Lifetime Exposure to Inhaled New-Technology Diesel Exhaust in Rats

### INTRODUCTION

This Statement summarizes HEI's independent evaluation, conducted by a specially convened Review Panel, of four studies conducted as a single phase (Phase 3B) of the Advanced Collaborative Emissions Study (ACES) program. The ACES Phase 3B studies investigated the health effects of chronic, lifetime exposures of rats (up to 30 months) and subchronic exposures (3 months) of mice to "new-technology diesel exhaust" (NTDE) — emissions from a heavy-duty diesel engine system compliant with 2007 U.S. Environmental Protection Agency (EPA) regulations. The studies were led by Drs. Jacob D. McDonald of the Lovelace Respiratory Research Institute (LRRI), Albuquerque, New Mexico, Jeffrey C. Bemis of Litron Laboratories, Rochester, New York, Lance M. Hallberg of the University of Texas Medical Branch, Galveston, Texas, and Daniel J. Conklin of the University of Louisville, Louisville, Kentucky.

### BACKGROUND

In light of concerns identified over many decades about the potential health effects of diesel emissions, the U.S. EPA and the California Air Resources Board adopted stringent regulations for heavy-duty highway diesel engines, which were required to meet a new standard for particulate matter (PM) by 2007. A tighter standard for nitrogen oxides (primarily nitric oxide [NO] and nitrogen dioxide [$NO_2$]) came into effect in 2010. The regulatory agencies also mandated that sulfur in fuel be reduced substantially. To address these regulations and standards, motor vehicle and engine manufacturers introduced new technologies. These developments were expected to substantially reduce emissions from diesel engines.

To characterize the exhaust emissions from heavy-duty diesel engines that met the new standards and to assess the possible adverse health effects of

### What This Study Adds

- This is the first study to conduct a comprehensive evaluation of lifetime inhalation exposure to emissions from heavy-duty 2007-compliant engines (referred to as "new-technology diesel exhaust," or NTDE).
- The study evaluated the long-term effects of multiple concentrations of inhaled NTDE, which has greatly reduced particle emissions compared with "traditional-technology diesel exhaust" (TDE) in male and female rats on more than 100 different biologic endpoints, including tumor development, and compared the results with biologic effects seen in earlier studies in rats after exposure to TDE.
- Lifetime inhalation exposure of rats exposed to one of three levels of NTDE from a 2007-compliant engine, for 16 hours per day, 5 days a week, with use of a strenuous operating cycle that more accurately reflected the real-world operation of a modern engine than cycles used in previous studies, did not induce tumors or pre-cancerous changes in the lung and did not increase tumors that were considered to be related to NTDE in any other tissue. A few mild changes were seen in the lungs, consistent with long-term exposure to $NO_2$, a major component of NTDE, which is being further substantially reduced in 2010-compliant engines.

This Statement, prepared by the Health Effects Institute, summarizes a research project funded by HEI and conducted by Drs. Jacob D. McDonald of the Lovelace Respiratory Research Institute, Albuquerque, New Mexico, Jeffrey C. Bemis of Litron Laboratories, Rochester, New York, and Lance M. Hallberg of the University of Texas Medical Branch, Galveston, Texas, and their colleagues, and Daniel J. Conklin and Maiying Kong of the University of Louisville, Louisville, Kentucky. Research Report 184 contains both the detailed Investigators' Reports and a Commentary on the study prepared by the Institute's ACES Review Panel.

exposure to these emissions, HEI, working in collaboration with the Coordinating Research Council, a nonprofit organization with expertise in emissions characterization, launched the multiphase ACES program. Phases 1 and 2 focused on emissions characterization, and Phase 3A established conditions for animal exposure. Phase 3B was designed to evaluate health outcomes in rats exposed to NTDE for up to 24 months, with the possibility of extension to 30 months, and in mice exposed for up to 3 months.

Through competitive processes, HEI funded several investigator teams in Phase 3B: a core study at LRRI, led by McDonald (who became principal investigator after the retirement of Dr. Joe L. Mauderly), and ancillary studies to evaluate endpoints not assessed in the core study. The overall hypothesis for ACES Phase 3B was that NTDE would *not* increase tumor formation or have substantial toxic health effects in rats and mice, although some biologic effects might occur.

This Statement summarizes results reported from the core study and the ancillary studies led by Bemis and Hallberg, which assessed genotoxic endpoints in the exposed animals, and by Conklin, which assessed inflammatory and thrombotic endpoints. Reports from the investigator teams were reviewed by a specially convened ACES Review Panel, comprising members of HEI's Health Review Committee and outside experts. The current report focuses on findings in rats over the entire study; findings from subchronic exposures of mice and rats (up to 3 months of exposure) have already been published in HEI Research Report 166.

## APPROACH

McDonald and colleagues generated exhaust from a 2007-compliant heavy heavy-duty diesel engine (defined as an engine installed in a vehicle with gross vehicle weight rating above 33,000 lb; hereafter called "heavy-duty") equipped with emission controls. The engine was fueled with ultra-low-sulfur diesel fuel meeting current on-road specifications and was operated with a dynamometer.

The investigators exposed male and female 6-week-old Wistar Han rats (140 animals of each sex per exposure level) to one of three target dilutions of whole diesel exhaust — 4.2 (high), 0.8 (mid), or 0.1 (low) ppm $NO_2$ — or to filtered air as a control. Exposure levels were set based on $NO_2$ rather than PM, which had been used in previous studies of TDE, because the PM level in NTDE, identified in earlier phases of ACES, was so substantially reduced compared with TDE. Thus, calibrating exposures based on PM would have been problematic. In addition, the highest $NO_2$ exposure level was chosen to provide a comparison with the same cumulative exposure to $NO_2$ (the product of concentration and exposure duration) used in prior HEI-funded long-term inhalation studies in rats conducted by Mauderly and colleagues, in which minor biologic changes — but no cancer or pre-cancerous changes — were observed in the respiratory tract.

Exposures were conducted for 16 hours per day from approximately 1600 to 0800 hours for 5 days per week. The engine was run on a unique and strenuous operating cycle that represented more closely the behavior of modern engines than operating cycles used in older long-term studies of TDE. The emissions were characterized before they reached the animal exposure chambers as well as inside the chambers; in this way, the investigators could assess how the presence of the animals affected the composition of the exposure atmospheres.

Groups of male and female rats were euthanized at LRRI after 1, 3, 12, and 24 months of exposure, as well as at the terminal sacrifice — 28 months for males, 30 months for females. The LRRI investigators harvested blood and tissues for their analyses at these time points (10 animals of each sex per exposure group) and also sent aliquots of blood and appropriate tissue samples from 5 to 10 animals of each sex per exposure group to the ACES Phase 3B ancillary studies investigators. McDonald and colleagues evaluated animals histologically throughout the study for the presence of tumors and other types of lesions in the airways and in multiple tissues. In addition, they examined a vast array of biologic endpoints: hematologic (several cell types, plus coagulation), serum chemistry (including triglyceride and protein components), lung lavage (including numbers of cells and levels of multiple cytokines and markers of oxidative stress and tissue injury), and pulmonary function.

For the assessments of genotoxicity, Bemis and colleagues measured the number of reticulocytes — immature red blood cells — containing micronuclei

in peripheral blood. Micronuclei can form as a result of a break in deoxyribonucleic acid (DNA) or from the disruption of chromosome segregation during cell division. Hallberg and colleagues assessed several markers of oxidative damage to cell components, which is believed to be involved in the induction of carcinogenesis. To detect damage to DNA, the Hallberg team used a comet assay on lung cells and measured 8-hydroxy-deoxyguanosine levels in blood. As a measure of damage to lipids, they assessed levels of thiobarbituric acid reactive substances in brain tissue. Conklin and Kong measured multiple plasma markers of inflammation and thrombosis, and whether chronic exposure had an effect on cardiac fibrosis or the remodeling of the aorta.

## RESULTS AND CONCLUSIONS

In its independent review of the core ACES Phase 3B report by McDonald and colleagues, the HEI ACES Review Panel concluded that their study is the first to conduct a careful, comprehensive, and well-executed evaluation in rodents of lifetime inhalation exposure to NTDE from a 2007-compliant engine. Using appropriate statistical approaches to analyze the data from more than 100 endpoints in the broad areas of histology, serum chemistry, systemic and lung inflammation, and respiratory function, the investigators confirmed the a priori hypothesis, namely, that NTDE would *not* cause an increase in tumor formation or substantial toxic health effects in rats, although some biologic effects might occur.

Over the entire exposure period, the investigators attained NTDE exposure atmospheres within 20% of the target $NO_2$ levels. In their extensive analysis of the physical and chemical composition of the emissions, McDonald and colleagues found that the most abundant pollutants were carbon dioxide, carbon monoxide, NO, and $NO_2$. Concentrations of engine-generated PM were very low (<11 µg/m$^3$) at all exposure levels (in the ultrafine range of 20–40 nm in diameter), as were concentrations of sulfur dioxide and semivolatile and volatile organic species. These findings confirm that the concentrations of components of NTDE differ strikingly from those of older engines, in which the concentrations of PM, as well as volatile and PM-associated organic species, are much higher.

Most biologic endpoints evaluated showed no NTDE-associated changes after exposure of rats for up to 28 months in males and 30 months in females. In particular, chronic exposure to NTDE did not induce tumors or pre-cancerous changes in the lung and did not increase tumors that were considered to be related to NTDE in any other tissue. Some mild histologic changes were found in the lung; however, these were not pre-cancerous lesions, previously described in long-term exposure studies of rats to TDE. Rather, the histologic changes — periacinar epithelial hyperplasia, bronchiolization, accumulation of macrophages, and periacinar interstitial fibrosis — were confined to a small region, the centriacinus, which is involved in gas exchange.

HEI convened a separate panel of expert pathologists, the Pathology Working Group (PWG), to evaluate the histopathology data collected. The PWG findings confirmed the major histopathologic observations reported by the investigators. Also, the PWG, by evaluating the findings of this study side by side with findings from prior long-term exposure studies, provided a context with which to compare and contrast the current study findings with those of other relevant long-term studies of exposure to TDE and oxidant gases. The overall conclusion was that chronic exposure of rats to NTDE did not produce tumors in the lung, in marked contrast to the effects of chronic exposure to TDE observed in multiple previous rat studies, in which lung tumors, as well as inflammation and the deposition of soot in the lung, were observed. Rather, the effects of NTDE in the lung more closely resembled changes noted after long-term exposures to gaseous oxidant pollutants, in particular $NO_2$, and to TDE from which particles have been filtered out. It is possible that components of NTDE other than $NO_2$ may have contributed to the effects reported, but the low levels of other components suggest that they would not be primarily responsible.

The ACES Review Panel concluded that the multiple toxicity endpoints evaluated — including lung and serum chemistry and respiratory function — were appropriate for evaluating a wide range of possible biologic effects. There were small decreases in some respiratory endpoints, in particular those concerned with expiratory flow, predominantly at the highest exposure level and more in females than males. The diffusing capacity of carbon monoxide ($DL_{CO}$, a measure of alveolar–capillary gas exchange) showed a small effect of exposure to

NTDE. The Panel considered the small reductions in $DL_{CO}$ to be consistent with the histopathologic findings of mild changes in the gas-exchange regions of the lung, indicating that the histologic changes might have had functional effects. In addition, some small changes in a few markers of oxidative stress and inflammation were detected in lung tissue, bronchoalveolar lavage fluid, and blood. The Panel identified a minor limitation to the study: some biochemical assays lacked positive controls (to determine that each was sensitive enough to detect any changes).

The Panel considered that the ancillary studies by Bemis et al., Hallberg et al., and Conklin and Kong were valuable extensions to the ACES core investigation. These generally well implemented studies took advantage of samples collected by McDonald and colleagues at several exposure time points up to 24 months to assess multiple endpoints that are not normally part of chronic inhalation bioassays. The genotoxicity studies assessed well-accepted endpoints — the frequency of micronucleated reticulocytes (immature red blood cells) in blood in the report by Bemis et al., and DNA damage and lipid peroxidation in the report by Hallberg et al. Conklin and Kong assessed a wide range of plasma markers associated with systemic inflammation and thrombosis, as well as markers of more chronic effects, to identify possible cardiovascular effects of NTDE. The Panel agreed with the conclusions of Bemis and colleagues and of Hallberg and colleagues that no genotoxic effects could be detected that were associated with exposure for up to 24 months to NTDE. However, the Panel noted that the assays measured relatively short-term effects (lasting 1 month or less), which somewhat reduced confidence in the utility of these negative findings. In Conklin and Kong's study, NTDE had no effect on cardiac fibrosis or aortic remodeling and few effects, predominantly in females and of uncertain pathophysiologic significance, on the inflammatory and thrombotic pathway endpoints measured in plasma over 24 months of exposure.

Overall, these results indicate that rats exposed to one of three levels of NTDE from a 2007-compliant engine for up to 30 months, for 16 hours per day, 5 days a week, with use of a strenuous operating cycle that more accurately reflected the real-world operation of a modern engine than cycles used in previous studies, showed few exposure-related biologic effects. In contrast to the findings in rats chronically exposed to TDE, there was no induction of tumors or pre-cancerous changes in the lung and no increase in tumors that were considered to be related to NTDE in any other tissue. The effects that were observed with NTDE were limited to the respiratory tract and were mild and generally seen only at the highest exposure level. The histologic changes in the lungs were consistent with previous findings in rats after long-term exposure to $NO_2$ — a major component of the exposure atmosphere, which is being substantially further reduced in 2010-compliant engines.

# Part 1. Assessment of Carcinogenicity and Biologic Responses in Rats After Lifetime Inhalation of New-Technology Diesel Exhaust in the ACES Bioassay

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# INVESTIGATORS' REPORT

## Part 1. Assessment of Carcinogenicity and Biologic Responses in Rats After Lifetime Inhalation of New-Technology Diesel Exhaust in the ACES Bioassay

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ABSTRACT

The Health Effects Institute and its partners conceived and funded a program to characterize the emissions from heavy-duty diesel engines compliant with the 2007 and 2010 on-road emissions standards in the United States and to evaluate indicators of lung toxicity in rats and mice exposed repeatedly to 2007-compliant new-technology diesel exhaust (NTDE*). The a priori hypothesis of this Advanced Collaborative Emissions Study (ACES) was that 2007-compliant on-road diesel emissions "... will not cause an increase in tumor formation or substantial toxic effects in rats and mice at the highest concentration of exhaust that can be used . . . although some biological effects may occur." This hypothesis was tested at the Lovelace Respiratory Research Institute (LRRI) by exposing rats by chronic inhalation as a carcinogenicity bioassay. Indicators of pulmonary toxicity in rats were measured after 1, 3, 12, 24, and 28–30 months of exposure. Similar indicators of pulmonary toxicity were measured in mice, as an interspecies comparison of the effects of subchronic exposure, after 1 and 3 months of exposure. A previous HEI report (Mauderly and McDonald 2012) described the operation of the engine and exposure systems and the characteristics of the exposure atmospheres during system commissioning. Another HEI report described the biologic responses in mice and rats after subchronic exposure to NTDE (McDonald et al. 2012). The primary motivation for the present chronic study was to evaluate the effects of NTDE in rats in the context of previous studies that had shown neoplastic lung lesions in rats exposed chronically to traditional technology diesel exhaust (TDE) (i.e., exhaust from diesel engines built before the 2007 U.S. requirements went into effect). The hypothesis was largely based on the marked reduction of diesel particulate matter (DPM) in NTDE compared with emissions from older diesel engine and fuel technologies, although other emissions were also reduced. The DPM component of TDE was considered the primary driver of lung tumorigenesis in rats exposed chronically to historical diesel emissions.

Emissions from a 2007-compliant, 500-horsepower–class engine and aftertreatment system operated on a variable-duty cycle were used to generate the animal inhalation test atmospheres. Four groups were exposed to one of three concentrations (dilutions) of exhaust combined with crankcase emissions, or to clean air as a negative control. Dilutions of exhaust were set to yield average integrated concentrations of 4.2, 0.8, and 0.1 ppm nitrogen dioxide ($NO_2$). Exposure atmospheres were analyzed by daily measurements of key

This Investigators' Report is one part of Health Effects Institute Research Report 184, which also includes a Commentary by the HEI ACES Review Panel and an HEI Statement about the research project. Correspondence concerning the Investigators' Report may be addressed to Dr. Jacob D. McDonald, Lovelace Respiratory Research Institute, 2425 Ridgecrest Dr., SE, Albuquerque, NM 87108; e-mail: *JMcDonal@lrri.org*.

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* A list of abbreviations and other terms appears at the end of the Investigators' Report.

components and periodic detailed physical–chemical characterizations. Exposures were conducted 16 hours/day (overnight, during the rats' most active period), 5 days/week. Responses to exposure were evaluated via hematology, serum chemistry, bronchoalveolar lavage (BAL), lung cell proliferation, histopathology, and pulmonary function.

The exposures were accomplished as planned, with average integrated exposure concentrations within 20% of the target dilutions. The major components from exhaust were the gaseous inorganic compounds, nitrogen monoxide (NO), $NO_2$, and carbon monoxide (CO). Minor components included low concentrations of DPM and volatile and semivolatile organic compounds (VOCs and SVOCs).

Among the more than 100 biologic response variables evaluated, the majority showed no significant difference from control as a result of exposure to NTDE. The major outcome of this study was the absence of pre-neoplastic lung lesions, primary lung neoplasia, or neoplasia of any type attributable to NTDE exposure. The lung lesions that did occur were minimal to mild, occurred only at the highest exposure level, and were characterized by an increased number and prominence of basophilic epithelial cells (considered reactive or regenerative) lining distal terminal bronchioles, alveolar ducts, and adjacent alveoli (termed in this report "Hyperplasia; Epithelial; Periacinar"), which often had a minimal increase in subjacent fibrous stroma (termed "Fibrosis; Interstitial; Periacinar"). Slight epithelial metaplastic change to a cuboidal morphology, often demonstrating cilia, was also noted in some animals (termed "Bronchiolization"). In addition to the epithelial proliferation, there was occasionally a subtle accumulation of pulmonary alveolar macrophages (termed "Accumulation; Macrophage") in affected areas. The findings in the lung progressed slightly from 3 to 12 months, without further progression between 12 months and the final sacrifice at 28 or 30 months. In addition to the histologic findings, there were biochemical changes in the lung tissue and lavage fluid that indicated mild inflammation and oxidative stress. Generally, these findings were observed only at the highest exposure level. There was also a mild progressive decrease in pulmonary function, which was more consistent in females than males. Limited nasal epithelial changes resulted from NTDE exposure, including increases in minor olfactory epithelial degeneration, hyperplasia, and/or metaplasia. Increases in these findings were present primarily at the highest exposure level, and their minor and variable nature renders their biologic significance uncertain.

Overall, the findings of this study demonstrated markedly less severe biologic responses to NTDE than observed previously in rats exposed similarly to TDE. Further, the effects of NTDE in the present study were generally consistent with those observed previously in rats exposed chronically to $NO_2$ alone. This suggests that $NO_2$ may have been the primary driver of the biologic responses to NTDE in the present study. There was little evidence of effects characteristic of rats exposed chronically to high concentrations of DPM in TDE, such as an extensive accumulation of DPM within alveolar macrophages and inflammation leading to neoplastic transformation of epithelia and lung tumors.

## INTRODUCTION

The multidisciplinary ACES program was designed by HEI and the Coordinating Research Council (CRC) to better characterize the composition and potential toxicity of NTDE. The program addressed the advances in engine design, aftertreatment design, and reformulated fuels developed to meet 2007 and 2010 U.S. Environmental Protection Agency (EPA) emissions standards. The program consisted of three phases: characterization of 2007-compliant emissions (Phase 1; Khalek et al. 2011), characterization of 2010-compliant emissions (Phase 2; Khalek et al. 2013), and assessment of the toxicity of exhaust from 2007 technology (Phase 3; current report). McDonald and colleagues (2012) reported the findings in rats and mice exposed for 1 and 3 months (4 and 13 weeks), and the respiratory pathology and pulmonary function results in rats after 12 months of exposure.The current report adds the results of exposures of rats studied over the full length of the chronic bioassay (up to 30 months) and includes results from the interim sacrifices at 12 and 24 months. Appendix I of this report (available on the HEI Web site at *http://pubs.healtheffects.org*) provides details of the test atmosphere composition and the exposure system performance over the course of the study.

## SPECIFIC AIM

The aim of this study was to determine biologic responses in rats exposed repeatedly from young adulthood to NTDE. The biologic response indicators included standardized toxicity endpoints such as tissue histopathology, clinical chemistry, clinical pathology, biochemical indicators of lung inflammation and oxidative stress, and pulmonary function. A major goal of the study was to evaluate the potential of NTDE to cause pre-neoplastic or neoplastic lesions in rats for comparison with the previously described effects of TDE under similar exposure conditions. To accomplish this, the overall study design was similar to that of an earlier HEI-funded study comparing lung carcinogenicity in rats after chronic exposure to TDE or carbon black (Mauderly et al. 1994; Nikula et al. 1995).

## METHODS AND STUDY DESIGN

The animal groups used in this study are described in Table 1. Wistar Han rats (HsdRccHan:Wist, Harlan Laboratories) (10/sex/group for interim toxicity assays and 100/sex/group for long-term observation and histopathology) were exposed by inhalation 16 hours/day, 5 days/week to one of three dilutions of NTDE or to clean air as a control. Female rats were exposed for up to 30 months, but remaining males were euthanized at 28 months because their survival rate was lower than that of the females. Randomly selected rats were euthanized after 1, 3, 12, or 24 months of exposure for interim evaluations. Those evaluations included pulmonary function, necropsy, organ weights, bronchoalveolar lavage fluid (BALF) analysis, hematology, serum chemistry, lung cell proliferation, and histopathology of lesions and standard organ sections. Tissue and fluid samples were also collected from euthanized animals for the evaluation of additional responses in ancillary studies conducted by investigators outside LRRI (see the other Investigators' Reports in this volume).

### ANIMALS AND MAINTENANCE

Rats were received at 6 weeks of age and quarantined and conditioned in inhalation exposure chambers for a period of no less than 14 days before being randomly assigned to exposure groups. They were housed individually in stainless-steel wire-mesh cages within stainless steel 1- or 2-$m^3$ Hazleton-type whole-body inhalation exposure chambers (H1000 and H2000, respectively; Lab Products, Seaford, DE) throughout the quarantine and exposure periods. The chambers were maintained daily by cleaning of excreta trays and visually inspecting the rats. Ad libitum water availability was verified daily by bleeding out the water lines. The chambers were washed and sanitized weekly, and the automatic watering system was also sanitized and checked at that time. The cage units within each chamber were rotated weekly, so that each cage unit was rotated through all positions within its chamber as the study progressed.

To verify the specific pathogen-free status of the rats, blood for serologic analysis was obtained from each group of animals before their entry into the exposure chambers (after release from quarantine). Serum separated from the cell fraction of each blood sample was frozen and shipped to BioReliance (Rockville, MD) for analysis of the presence of antibodies to common rodent pathogens. The BioReliance 80-221 panel was used and included H-1 parvovirus, Kilham rat virus, cilia-associated respiratory bacillus, pneumonia virus of rats, rat corona virus/Sialodacryoadenitis virus, and Sendai virus.

Exposure chamber flow rates were adjusted to maintain a minimum of 12 air changes per hour. The chambers were maintained at 2 to 5 cm of water pressure negative with respect to the room. Daily average temperatures were held within a target range of 18 to 26°C. The temperature fluctuated depending on the room temperature and would typically increase during each exposure period. In general, the highest exposure level had the highest temperature, which was typically 1.5° to 2° higher than the temperature at the lower exposure levels and in control chambers. Relative humidity was monitored, but not controlled or alarmed. A 12-hour light cycle (on from approximately 0600 to 1800 hours) was used. Tap water and 2016C Harlan Global Certified Rodent Chow were available ad libitum.

**Table 1.** Study Design to Examine Effects of Inhalation Exposure to NTDE in Wistar Han Rats[a]

| Target NTDE Exposure | Sacrifice Time Point | Total No. of Rats per Sex per Exposure Level[b] | Endpoint Measurements |
|---|---|---|---|
| $NO_2$ (average integrated concentration) of 4.2 (high), 0.8 (mid), or 0.1 (low) ppm, or filtered air (control) | Terminal sacrifice (28 and 30 months) | 100 | Carcinogenesis and lifetime inhalation effects |
| | 1 month | 10 | Pulmonary and systemic effects[c] |
| | 3 months | 10 | Pulmonary and systemic effects[c] |
| | 12 months | 10 | Pulmonary and systemic effects[c] |
| | 24 months | 10 | Pulmonary and systemic effects[c] |

[a] 6-Week-old male and female rats.

[b] The total number of rats used was a few more than the 1120 (140 × 4 exposure levels × 2 sexes) listed in the ACES Phase 3B Protocol (see Additional Materials 2 on the HEI Web site at *http://pubs.healtheffects.org*); additional animals were purchased in anticipation of losses during shipping from the breeding facility and were added to the chronic inhalation study.

[c] For a detailed list, see Table 2.

## EXPOSURES AND MEASUREMENT OF EXPOSURE ATMOSPHERES

Detroit Diesel 2007 model Series 60 14.0L on-highway certified heavy-duty diesel engines and their stock aftertreatment systems were used to generate the test atmospheres for the ACES Phase 3 bioassay. This engine was selected from among the four candidate engines provided by different manufacturers and which were tested in Phase 1 of the ACES program at Southwest Research Institute (SwRI), San Antonio, Texas (Khalek et al., 2009). After the engine had been selected, the same engine manufacturer provided a backup engine, which was also characterized at SwRI. Characteristics of the emissions of these two engines, termed B and B′, and the process for engine selection are described in Khalek et al (2009 and 2011). Prestudy testing involved approximately 1200 hours of operation of each engine. Engine exchanges occurred during the exposure because of engine maintenance requirements. During the exposures, engine B′ was used from February 2010 to September 2011. That engine was replaced with engine B, which continued in operation until May 2012. Engine B′ was re-installed in June 2012 and operated until the end of the exposure (December 2012). At the end of the study, engine B′ had been operated for 10,090 hours, and engine B had been operated for 4031 hours. After each oil change and after each engine change-out, the engine's performance was "mapped" as required by 40 CFR Part 86. Speed, torque, and power measurements were compared with the speed, torque, and power cycle demand values using the "least squares" method. All engine maps met the criteria for performance.

The engine was mated to a Dyne Systems, 550-hp, 660-A, alternating current dynamometer and controlled remotely using a Dyne Systems, Inter-Loc V, Digital Multi-Loop Controller (Dyne Systems, Jackson, WI) interfaced to a personal computer. The engine test cycle was controlled with the Dyne Systems Cell Assistant for Windows software. The engine was operated on a 16-hour variable-load duty cycle developed specifically for the ACES program (Clark et al. 2007). Diesel fuel meeting current on-road specifications ("ultra-low-sulfur") was delivered to LRRI from a local commercial source (Chevron-branded D-2 [legal for on-road use], Ever-Ready Oil Co., Albuquerque, NM). The engine and associated systems were maintained as recommended by the engine manufacturer. Crankcase lubricating oil was changed every 250 hours. The oil was a proprietary blend approved by HEI and the CRC, which was provided by Lubrizol Corp., and was also used in Phase 1 of the ACES program. The manufacturer-recommended oil filter was changed with each change of lubrication oil. A more detailed description of the exposure system is provided in Appendix I of this report (available on the HEI Web site, *http://pubs.healtheffects.org*).

Exhaust was passed through a stock aftertreatment system before injection into a 35.6 cm internal diameter dilution tunnel. The crankcase ventilation effluent joined the exhaust stream downstream of the aftertreatment system and before entry into the dilution tunnel. The exhaust was diluted with filtered air under turbulent conditions at the injection point. The dilution tunnel supply air flow was approximately 3000 cubic feet per minute. The primary dilution tunnel was a constant-pressure tunnel, rather than constant-volume. When exhaust flow increased, the increased pressure caused a portion of the dilution air to be dumped into a bypass leg in the test cell. At a distance of 5.5 m from the injection point (and in the exposure room), portions of the diluted exhaust were drawn through individual in-line extraction probes and routed through individual transit lines to each exposure chamber. The line to each chamber had its own secondary dilution system. Subsequent to extraction, the exhaust was diluted with filtered, compressed air provided through a rotary dilution and bypass system. Diluting flows were adjusted as needed to reach the final concentration targets. The residence time of diesel exhaust (DE) in the dilution tunnel and transit lines was less than 5 seconds. After the exhaust reached the exposure chamber, the residence time was approximately 4 minutes. All dilution and transit lines were constructed of stainless steel and were of nearly equal lengths for all exposure levels. Achieving the preselected target exposure concentrations of 4.2, 0.8, and 0.1 ppm $NO_2$ required total dilution ratios of approximately 25:1, 115:1, and 840:1. The dilution ratio in the primary dilution tunnel was approximately 5:1.

Exposures were conducted 16 hours/day, 5 days/week from approximately 1600 to 0800 hours Sunday through Thursday. Because the protocol required rats to be exposed on the day before necropsy, the Sunday–Thursday schedule allowed necropsies during the regular Monday–Friday workweek. Exposures were conducted for 16 hours plus the time to reach 90% of the target atmosphere ($T_{90}$). The system was operated without continuous operator presence between 1800 and 0800 hours, although surveillance personnel were always available and checked the system periodically during the night. Several control-alarm systems were in place to automatically shut down the engine and notify personnel in case of malfunction. The system was programmed to automatically terminate the engine cycle and switch the exposure chambers to clean dilution air at 0800 hours.

Certain components of the exposure atmospheres were measured throughout each 16-hour exposure period.

Concentrations of NO and $NO_2$ were measured directly from each exposure level chamber throughout each exposure day. These samples were drawn from mid-chamber to represent the average of concentrations within the rats' breathing zone. Nitrogen oxides ($NO_x$) were also measured from the primary dilution tunnel to enable measurements of the secondary dilution ratio (the ratio of tunnel concentration to chamber concentration). CO, carbon dioxide ($CO_2$), non-methane hydrocarbons, particle mass (using a Dekati Mass Monitor), and black carbon (using a Photoacoustic Soot Spectrometer) were measured daily at the highest exposure level. These measurements were taken at the other exposure levels during periodic intensive characterizations and on those days the measurements were not made at the high level. Particle size was measured as part of the Dekati Mass Monitor analysis. A more detailed measurement of particle size was conducted once per week at each exposure level using a Fast Mobility Particle Sizer (TSI, St. Paul, MN). A periodic measurement of particle size in the chamber was conducted using an Aerodynamic Particle Sizer (TSI, St, Paul, MN). Particle mass concentration was measured once a week by gravimetric analysis of Teflon-membrane filters at the inlet of the chamber and at mid chamber at each exposure level. A detailed description of the composition of the test atmosphere is provided in Appendix I of this report (available on the HEI Web site, *http://pubs.healtheffects.org*).

## EVALUATION OF HEALTH EFFECTS

The biologic response indicators are summarized in Table 2. Rats were observed twice daily for morbidity and mortality, and more detailed clinical evaluations using standardized criteria and computer entry of findings were performed during monthly weighing sessions. The rats were euthanized with an overdose of a pentobarbital–phenytoin euthanasia solution (Euthasol, VIRBAC, Fort Worth, TX). For interim assays, body and organ weights, blood, BALF, and frozen tissue specimens were collected in addition to fixed tissue specimens. The lungs were weighed, the left mainstem bronchus was clamped, and the right lung lobes were lavaged three times with phosphate-buffered saline (PBS) using 12 µL per gram of body weight (using average weights for females and males) at the time of euthanization. BAL was performed on the right lung only, preserving the left lung exclusively for histopathology. Right lung lobes were then frozen individually, and the left lung was instilled with neutral-buffered formalin (NBF) at 25 cm of hydrostatic pressure before immersion fixation. For rats designated for long-term observation, both right and left lung lobes were instilled with NBF and examined histologically. All major organs were examined and fixed in NBF.

For rats designated for clinical pathology analyses (i.e., hematology, serum chemistry, coagulation, as well as BALF cell count, cell differential, and chemistry), blood was collected at necropsy via open thorax cardiac puncture and immediately placed into potassium ethylenediaminetetraacetate anticoagulant tubes for hematology analysis, sodium citrate anticoagulant tubes for coagulation analyses, or a gel serum separator tube for serum chemistry analyses. All clinical pathology analyses were performed by American Society for Clinical Pathology–certified medical technologists. Hematology analysis was performed using an automated analyzer (Advia120 Hematology System, Siemens Medical Solutions Diagnostics, Tarrytown, NY). Serum and BAL supernatant chemistry analyses were conducted using a Hitachi Modular Analytics Clinical Chemistry System (Roche Diagnostics, Indianapolis, IN). An Amax Destiny Plus coagulation analyzer (Trinity Biotech, Jamestown, NY) was used for coagulation analyses (prothrombin time and activated partial thromboplastin time). BAL cells were counted manually using a Neubauer hemacytometer, and modified Wright-Giemsa stained cytospin preparations were used to conduct manual differential counts on BAL specimens.

Tissues for histologic examination (listed in the ACES protocol in Additional Materials 2 for this report at *http://pubs.healtheffects.org*) were trimmed per commonly accepted toxicologic pathology methodology, largely following published Registry of Industrial Toxicology animal-data guidance (Kittel et al. 2004; Morawietz et al. 2004; Ruehl-Fehlert et al. 2003). The left lung from interim sacrifices (1, 3, 12, and 24 months) and both right and left lung lobes from long-term observation (28–30 months) were sectioned per the published guidance to yield a single section of each lobe in a manner consistent with many historical toxicology studies in rats. Left lobes and right caudal lobes were sectioned in a plane to visualize primary and major secondary airways in the monopodial airway branching pattern of rats, right cranial and right middle lobes were sectioned parallel to the major intralobar airway, and right accessory lobes were sectioned transversely across the major intralobar airway. This method yielded five sections of lung with one section per lobe. Tissues were then processed routinely, embedded in paraffin, sectioned at approximately 4 µm, placed on glass slides, and stained with hematoxylin and eosin. Sections of selected target tissues (e.g., lung [five sections], nasal turbinates [four transverse sections], larynx [1 section at base of the epiglottis], trachea [cranial transverse section and frontal section at carina], kidney, liver, heart, brain, ovaries, and testes) were examined from all animals. Other tissues (e.g., pancreas, stomach, adrenal glands, and pituitary gland) were examined from all animals in the control and high-level exposure groups only. Non-target tissues

**Table 2.** Biologic Response Indicators Used to Indicate Effects of Inhaled NTDE

| Hematology | Serum Chemistry | Pulmonary Function | Lung Lavage |
|---|---|---|---|
| Red blood cell count | Alanine aminotransferase (alanine transaminase) | Minute volume/body weight | Lactate dehydrogenase activity |
| Hemoglobin | Albumin | Total lung capacity | Protein |
| Hematocrit | Aspartate aminotransferase (aspartate transaminase) | Total lung capacity/kg | Albumin |
| Mean corpuscular volume | | Dynamic lung compliance | Hemoglobin |
| Mean corpuscular hemoglobin concentration | | Quasistatic lung compliance | Alkaline phosphatase |
| Mean corpuscular hemoglobin | Bilirubin (total) | CO diffusing capacity/alveolar volume | Total cell counts/differentials |
| Platelet count | Blood urea nitrogen | Forced expiratory flow | Total antioxidant capacity |
| Percent reticulocytes | Calcium | Mean mid-expiratory flow | Sodium (serum) |
| White blood cell count and absolute differential | Chloride | Other | Triglycerides |
| White blood cell count | Cholesterol (total) | | |
| Neutrophils | Creatinine | **Other Clinical Observations** | **Lung Tissue Analysis** |
| Lymphocytes | Glucose | | |
| | | Mortality | Interleukin 1β |
| Monocytes | Gamma glutamyltransferase | Body weight | Tumor necrosis factor α |
| Eosinophils | Alkaline phosphatase | Organ weights | Macrophage inflammatory protein 2 |
| Basophils | Phosphates | Tissue histopathology | Keratinocyte-derived chemokine |
| Large unstained cells | Potassium | | Interleukin 6 |
| Coagulation: | Protein (total) | | Oxidized/reduced glutathione |
| Activated partial thromboplastin time | Sodium | | Heme oxygenase 1 |
| Prothrombin time | Triglycerides | | Cell proliferation |
| | Calculated variables and ratios: | | |
| | Albumin/globulin | | |
| | Blood urea nitrogen/creatinine | | |
| | Globulin | | |

were examined in animals from intermediate-level exposure groups only when the tissues exhibited gross abnormalities. If there was evidence of an exposure effect in a tissue from the high-level exposure group, that tissue was examined in all animals in intermediate groups (as occurred with thyroid glands in all but interim sacrifice rats); otherwise, the incidence in intermediate groups was based only on animals exhibiting gross lesions. Thus, incidences in non-target organs reflect a "gross lesion sampling bias" in the low- and mid-level exposure groups because the denominator of the computed incidence included only those animals with visually observed tissue abnormalities. In those instances, the observed incidence was reported, but no statistical testing was performed; age-adjusted rates (see Statistical Methods) were also reported, but they reflect the same sampling bias as the observed incidences and should be discounted. All lesions were graded subjectively by a single board-certified veterinary pathologist, and diagnoses received a severity grade on a 0–4 scale (where 0 indicated not present; 1, minimal; 2, mild; 3, moderate; and 4, marked). For example, in lung tissue, indicators of inflammation, cytotoxicity, and parenchymal changes (alveolar wall thickening, fibrosis, and pneumocyte hyperplasia) were graded for each animal.

In accordance with standard practice in toxicologic pathology as recommended by the Society of Toxicologic Pathology (Crissman et al. 2004), tissues were initially examined with knowledge of the exposure groups. Two experienced, board-certified pathologists performed the evaluations. The study pathologist (R.A.M., Experimental Pathology Laboratories [EPL]) coordinated the evaluations, examined all tissues, participated in a portion of the necropsies, and ensured consistency in nomenclature and grading. The on-site pathologist (A.P.G., LRRI) supervised and participated in the necropsies of both interim and long-term rats. Frequent communication between the study and on-site pathologists and image review of selected slides using the Internet ensured diagnostic consistency and lesion agreement. After the initial histopathology evaluation, the study pathologist and his in-house colleagues verified exposure-related changes observed in the lung by blinded evaluation. In addition, an independent pathologist consultant designated by HEI (E. McConnell, Tox Path) participated in pre-study discussions, observed a portion of the necropsies, and participated in example-based discussions of nomenclature and grading during the study. A second independent pathologist (Ronald Herbert, NIEHS, NTP), designated by HEI, participated with Dr. McConnell in reviewing pathology results at all interim exposure time points. An extensive peer review of the histopathologic findings was then performed. Finally, HEI commissioned a pathology working group (PWG; see the section of this volume titled "Pathology Working Group Report") to review the findings.

For biochemical analyses, lung tissue was homogenized in a buffer consisting of 1× Dulbecco phosphate-buffered saline (DPBS), 0.5% Triton X-100, and a proteinase cocktail including 1 mM 4-(2-aminoethyl)-benzenesulfonyl fluoride (serine proteinase inhibitor), 15 µM trans-epoxysuccinyl-L-leucine-4-guanidinobutylamide (E-64, cysteine proteinase inhibitor), 20 µM pepstatin A (aspartic acid proteinase inhibitor), and 5 mM 1,10-phenanthroline (metalloproteinase inhibitor). The tissues were weighed and combined with 5 volumes of the lysis buffer and then homogenized on ice using a Tissumizer (TeledyneTekmar, Mason, OH). The homogenates were centrifuged, and the supernatant was frozen until use. The protein content was measured using a bicinchoninic acid reagent kit (Pierce Chemical Co., Rockford, IL) using bovine serum albumin as the standard. Hemoglobin in BALF was assayed using a hemoglobin reagent set (No. 6200-1, Eagle Diagnostics, Cedar Hill, TX) according to the procedures provided by the supplier. The assay is based on measurement of cyanmethemoglobin after the reaction of the hemoglobin with ferricyanide, which converts oxyhemoglobin to methemoglobin, and with cyanide, which converts the methemoglobin to cyanmethemoglobin. The reactions were carried out in microtiter plates, and the optical density at 540 nm was read on a spectrophotometric plate reader using human hemoglobin (Sigma Chemical Co., St. Louis, MO) as a standard.

Albumin in BALF was measured using an enzyme-linked immunosorbant assay (ELISA) (Immunology Consultants Laboratory, Newberg, OR; kit E-25AL) diluted 1:1000 in PBS, according to the supplier's procedures. Glutathione was analyzed in lung tissue and BALF. BALF samples were deproteinized with 5% sulfosalicylic acid (SSA) as soon as possible after collection and centrifuged in a microfuge at full speed (14,000*g*) for 1 minute. The supernatants were flash-frozen in liquid nitrogen and stored at −80° C until analysis. Portions of the lungs (lavaged) were flash-frozen in liquid nitrogen. The frozen lung tissues were weighed, and 20 volumes of 5% SSA were added before homogenization using a Tissumizer; the samples were maintained on ice during the homogenization. The homogenates were centrifuged at 2000*g* for 5 minutes at 4°C. The supernatant was used for the glutathione assay, and the pellet was solubilized in DPBS (pH adjusted to be 7.0–7.5 after addition to the SSA pellets) for protein determination using the Coomassie assay. Glutathione was measured according to the Anderson modification (Anderson 1985) of the Tietze enzymatic recycling method (Tietze 1969). Results for the lung tissue are normalized to the total protein.

Cytokines were analyzed in lung tissue homogenates, prepared as described in the paragraph above. Cytokines (keratinocyte-derived chemokine [KC], interleukin-1β [IL-1β], interleukin-6 [IL-6], and tumor necrosis factor α [TNF-α]) were measured using a Luminex bead-based multiplex immunoassay (Milliplex, Millipore, Billerica, MA). Cytokine-induced neutrophil chemoattractant-3 (CINC-3) (also known as macrophage inflammatory protein-2 [MIP-2]) was assayed with an ELISA kit (cat. no. RCN300, R&D Systems, Goodhue, MN). Results were normalized to the protein content of the lysates. Lung tissue homogenates were analyzed for heme oxygenase-1 (HO-1) measured using a commercially available ELISA kit (Enzo Life Sciences, cat. no. ADI-EKS-810A). Lactate dehydrogenase (LDH) was measured using a microtiter plate method based on the oxidation of the reduced form of nicotinamide adenine dinucleotide in the presence of pyruvate. Alkaline phosphatase (ALP) was measured using a microtiter plate method based on hydrolysis of para-nitrophenylphosphate (March et al. 2002). Total protein was measured using a Coomassie Blue reagent (Pierce Chemical Co.) using bovine serum albumin as the standard. Lavage Trolox equivalent antioxidant capacity (TEAC) was measured as described in earlier studies (Troost et al. 2003). Briefly, buffer consisting of 150 mM sodium phosphate pH 7.4 and 150 mM sodium chloride was bubbled with nitrogen. A mixture of freshly prepared 0.23 mM 2,2′-azinobis [3-ethylbenzothiazoline-6-sulfonic acid/2.3 mM 2,2′-azobis(2-amidinopropane) was prepared in the buffer and heated to 70°C for 15 minutes. A stock solution of 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid (Trolox, Santa Cruz Biotechnology, Santa Cruz, CA) was prepared in ethanol and diluted in nitrogen-sparged DPBS to a range of concentrations from 10 to 100 µM and used as a standard. Samples or standards were combined with the Trolox solution, incubated for 5 minutes at room temperature, and then read in a spectrophotometric plate reader (VersaMax, Molecular Devices, Sunnyvale, CA) at 734 nm.

Cell proliferation was analyzed in lung tissue sections prepared from the paraffin-embedded, fixed left lung. Antigen was recovered by heating the tissue for 2 minutes under pressure in a commercial pressure cooker (Presto, 6 qt, National Presto Industries, Eau Claire, WI) in 10 mM sodium citrate buffer with 0.05% Tween (pH 6.0), a polysorbate surfactant. Endogenous peroxidases were quenched by treatment with 3% hydrogen peroxide in methanol for 30 minutes, and the sections were blocked by incubation in 10% goat serum in Tris-buffered saline for 1 hour. The primary antibody (rabbit polyclonal anti-Ki-67, Abcam, Cambridge, MA) was diluted to 0.05 µg/mL in the same buffer with 10% goat serum, and the slides were incubated with this solution overnight at 4°C in a humidified chamber. After the slides were washed, the secondary antibody (biotinylated goat anti-rabbit, Vectastain Elite kit, PK-610,Vector Laboratories, Burlingame, CA) was diluted (1:400) in the same buffer with 10% normal goat serum and incubated with the samples for 1 hour at room temperature. Finally, the antigen was visualized using the avidin-biotin-peroxidase complex (1:50 in PBS, Vectastain kit), and the slide was incubated for 5 minutes with diaminobenzidine (DAB) as the substrate. Sections were counterstained with hematoxylin.

Each experimental series included a negative control in which an isotype-matched (IgG1) nonspecific antibody was substituted for the primary antibody. A tracheobronchial or mesenteric lymph node collected from a control animal during each necropsy served as a positive control and was processed identically. Whole stained slides were scanned using a 20× objective (NanoZoomer Digital Pathology, Hamamatsu Photonics, Bridgewater, NJ) and then analyzed using the image quantification module in the Visiopharm Integrator System (Visiopharm, Copenhagen, Denmark). The software was used to randomly sample 50% of the tissue section. Within sampled areas, DAB-stained positive nuclei and hematoxylin-only stained negative nuclei were quantified, and a percentage labeling index ([positive nuclei/total nuclei] × 100) was determined across the sampled lung (on average over 100,000 total nuclei were counted for each lung slide analyzed).

Selected pulmonary function parameters were measured on 10 male and 10 female rats per exposure group after 3, 12, and 24 months of exposure using established methods (Harkema et al. 1982; Mauderly 1995). The measurements were performed immediately preceding necropsy. Rats were anesthetized with isofluorane, intubated by mouth with semi-rigid, thin-walled endotracheal catheters (modified 12- or 14-gauge intravenous catheters; Cathlon, Jelco, Raritan, NJ) (Mauderly 1977) and liquid-filled esophageal catheters, and placed prone in a 9.2 L heated flow plethysmograph. The plethysmograph was fitted with plastic spacers to minimize dead volume as the rats increased in size. Flows were determined by measuring plethysmograph-to-room differences in pressure (MP-45, ± 2 cm $H_2O$, Validyne, Northridge, CA) across a resistance element consisting of five 400-mesh stainless-steel screens fixed rigidly over a 1.27-cm hole at the rear of the plethysmograph. The resistance element was sized for an estimated maximum peak flow of 200 mL/sec, using an established formula (Mauderly 1995). Transpulmonary pressure ($P_{tp}$) was measured as the difference between esophageal and airway pressure (Motorola MPX11DP, Buxco Electronics, Wilmington, NC). Flow, volume, and

$P_{tp}$ signals were acquired via preamplifiers (Validyne) and a PC-based programmable system (Acknowledge V.3.7.2, Biopac Systems, Goleta, CA). Body temperature was measured using an electronic rectal thermometer.

The test sequence consisted of three steps involving single-breath inflations and deflations by syringes or standardized positive and negative airway pressures during brief hyperventilation-induced apnea. The lung diffusing capacity for carbon monoxide ($DL_{CO}$) was measured first by the traditional single-breath method (Ogilvie et al. 1957). The injected volume required to inflate the lung to a $P_{tp}$ of +20 cm $H_2O$ was determined during apnea using an air-filled syringe. A dual syringe-stopcock assembly was flushed with a test gas mixture containing 0.3% CO and 0.5% neon (Ne) in air. Apnea was re-induced, the test gas was injected into the lung, most of the gas was withdrawn after 6 seconds, and a sample of gas from the lung was then collected in a small side syringe. The CO and Ne concentrations in the collected sample were measured by gas chromatography (Model 111, Carle, Fullerton, CA). The differences in gas concentrations, inflation time, barometric pressure, and body and room temperatures were entered into a standardized program to calculate $DL_{CO}$, $DL_{CO}$ per kilogram of body weight ($DL_{CO}$/kg), and $DL_{CO}$ normalized by the inflated alveolar volume estimated by Ne dilution ($DL_{CO}$/VA).

The relation between lung pressure and volume was measured during a quasistatic inflation–deflation cycle. During apnea, the lung was connected to a plus-or-minus pressure reservoir–solenoid system via connectors designed to minimize dead space and abrupt changes in internal diameter. The lung was inflated at 5 mL/sec to a $P_{tp}$ of 30 cm $H_2O$ (defined as total lung capacity) and deflated at 3 mL/sec until flow stopped (defined as residual volume). The exhaled volume was measured as the slow vital capacity (SVC), and quasistatic lung compliance (Cqs) was measured from the descending pressure–volume curve over the chord between $P_{tp}$ + 10 and 0 cm $H_2O$.

Another slow inhalation, but with forced exhalation, was performed as described above, but without intentional restriction of expiratory flow. Flow was driven by a vacuum reservoir maintained at −50 cm $H_2O$ and connected to the airway via a solenoid valve having a 9.5 mm orifice (V52DA3012, Skinner, New Britain, CT) and an airway having a minimum internal diameter of 2.5 mm. The forced expiratory maneuver was performed at least twice with intervening recovery of spontaneous respiration, and was repeated a third time if the first two flow-time curves were noticeably different or if the pressure or volume traces were not acceptable. Measured and calculated variables included forced vital capacity (FVC), forced expiratory volume in 0.1 second ($FEV_{0.1}$, as mL and percentage of FVC), peak expiratory flow rate (PEFR), forced expiratory flow (FEF) at 75%, 50%, 25%, and 10% of FVC ($FEF_{75}$, $FEF_{50}$, $FEF_{25}$, $FEF_{10}$), mean mid-expiratory flow (MMEF, the average flow between 75% and 25% FVC), and all flows normalized by FVC.

After the test series, anesthesia was discontinued, the rats were allowed to recover, and the catheters were removed at the first sign of voluntary movement. The rats were returned to bedded plastic cages with food and water until necropsy the same day.

## STATISTICAL METHODS AND DATA ANALYSIS

### Survival Analysis

The probability of survival was determined by the product-limit procedure of Kaplan and Meier (1958) and is presented in the form of graphs in Appendix A on the HEI Web site (*http://pubs.healtheffects.org*). Animals found dead of other than natural causes were censored; animals dying from natural causes were not censored. Statistical analyses for possible exposure-related effects on survival were performed using Cox's (1972) method for testing two groups for equality and Tarone's (1975) life-table test to identify exposure-related trends. All reported *P* values for the survival analyses are two-sided.

### Histopathology Data

Neoplastic and non-neoplastic lesions that had an incidence greater than two in any exposure group were summarized and statistically analyzed. A modified Poly-3 method based on the Poly-k statistical test (Bailer and Portier 1988; Piegorsch and Bailer 1997; Portier and Bailer 1989) was used to assess the prevalence of non-neoplastic lesions and neoplasms. For analysis of a given tissue site, each rat was assigned a weighted risk factor. This value was 1 if the animal had a lesion at that site or if it survived until terminal sacrifice; if the animal died before terminal sacrifice and did not have a lesion at that site, its weighted risk factor was the fraction of the entire study time that it survived, raised to the *kth* power., A value of $k = 3$ was used in the analysis of site-specific lesions in the present study. Bailer and Portier (1988) recommended this value after an evaluation of neoplasm onset time distributions for a variety of site-specific neoplasms in control F344 rats (Portier et al. 1986). Bailer and Portier (1988) showed that the Poly-3 test gave valid results if the true value of *k* was anywhere in the range of 1 to 5. A further advantage of the Poly-3 method is that it does not require lesion lethality assumptions. Variations introduced by the use of weighted risk factors, which reflect differential mortality, were

accommodated by adjusting the variance of the Poly-3 statistic as recommended by Bieler and Williams (1993). Tests of significance include pairwise comparisons of each exposed group with controls and a test for an overall exposure-related trend. Continuity-corrected Poly-3 tests were used in the analysis of lesion incidence, and one-sided *P* values were reported. For both neoplastic and non-neoplastic lesions, the modified Poly-3 method was used to estimate age-adjusted incidences; in the case of non-neoplastic lesions, average nonzero severity scores were computed.

In a previous report (McDonald et al. 2012), BALF, hematology, and serum chemistry measurements taken at 1 and 3 months of exposure were summarized and analyzed. This report provides data summaries for subsequent exposure time points (at 12 months, 24 months, and terminal sacrifice), as well as the results of comprehensive analyses across all time points (described below).

One-way analysis of variance (ANOVA) was used to evaluate exposure-related effects in organ and body weights at each exposure time point. For other endpoints, both one-way and two-way ANOVA tests were used to assess exposure effects at each exposure time point. Two-way ANOVA models contained terms for exposure group (control, low, mid, and high), sex, and sex × exposure group interaction effects. The comparability of sex-based differences in exposure-related responses was assessed with the sex × exposure group interaction term in the ANOVA. Where there was no substantial evidence of sex-based differences in exposure-related response ($P > 0.05$), the effects were assessed across sexes using a two-way ANOVA with no interaction term. The Dunnett multiple comparison procedure (Dunnett 1955, 1980) was performed to compare NTDE-exposed group means with those of controls. The linear term of the ANOVA (under the assumption of equal exposure spacing, using orthogonal coding of −3, −1, 1, 3) was used to assess evidence of exposure-related trends in responses across control and exposed groups.

Endpoints that had 10 or fewer distinct values (e.g., cellular count data) were analyzed with an analogous ANOVA and trend analysis approach for categorical data based on weighted least squares (Grizzle et al. 1969). As there is no standard multiple comparison method for categorical data that is analogous to the Dunnett test, the *P* values for comparisons of individual NTDE exposure groups against the control group obtained from the categorical ANOVA were adjusted using the Bonferroni correction method.

Heteroscedasticity was significant for several endpoints, with exposure group variances increasing in magnitude with their associated sample means. Logarithmic transformation of these data was employed before analysis to satisfy the assumptions of homogeneity of variance underlying the ANOVA regression model. For heteroscedastic endpoints that had values of zero (where the logarithmic transformation was undefined), an offset constant was added to values before logarithmic transformation (Rocke and Durbin 2003).

The data are summarized as mean values plus or minus standard error of the mean. In analyses across sexes, the reported mean values are the averages of the means by sex in the four exposure groups, and the reported standard errors are based on pooled sample variance estimates, after adjustment for sex differences (as opposed to variances calculated across all animals without regard for differences between sexes). All *P* values are two-sided, and statistical significance was assessed at $P = 0.05$ and $P = 0.01$.

### Three-Way ANOVA

Three-way ANOVA models were employed to evaluate systematic response variation relative to sex, exposure times (at 1, 3, 12, and 24 months), exposure (control and low, mid, and high levels), and the interactions between these main effects (sex × time, exposure × time, sex × exposure, and sex × time × exposure). Although sex and exposure time effects (and the interactions between these sources of variation) are interesting from a biologic perspective, they are not indicators of exposure-related effects; instead, they indicate systematic differences in response (relative to sex and/or exposure time) across all exposure levels (including controls). However, their inclusion in the ANOVA model is important as it provides adjustment for systematic variation attributable to these factors (e.g., sex-related differences in baseline response levels, and differences in response levels at different points in time) that is needed to facilitate assessments of overall exposure effects and differences in exposure effects across time. Specifically, the *P* value for "exposure" assesses the equality of mean responses in exposure groups across time and sex. The "exposure × time" *P* value assesses the extent to which mean responses in exposure groups differ at different points in time (i.e., it tests the hypothesis that exposure effects are of the same magnitude across time, irrespective of sex). Similarly, the sex × exposure interaction tests the hypothesis that exposure effects were the same across sexes (irrespective of time), and the three-way interaction (sex × exposure × time) tests the extent to which exposure effects differed by sex at the measurement time points.

The three-way ANOVAs were used to identify endpoints with substantive evidence of exposure effects. Endpoints having statistically significant ($P < 0.05$) evidence of effects from exposure, exposure × time, sex × exposure, or exposure × sex × time were further examined with two-way and one-way ANOVAs at all measurement time points.

## QUALITY ASSURANCE

This research was conducted in a manner consistent with most standards developed for the Good Laboratory Practices (GLP) requirements for regulatory studies, although full compliance with GLP was not a requirement of the protocol. Quality control (QC) consisted of conducting all work according to approved protocols and standard operating procedures, the inclusion of verified QC control standards for calibration and certification of system performance, and third-party verification of all data prior to submission to the statistician for analysis. These QC processes applied to all aspects of the study, including the test and evaluation of engine performance, the verification of fuel and oil composition, the receipt and husbandry of animals, the analysis of test atmospheres, the evaluation of clinical signs or pulmonary function, and the evaluation of changes in tissue or other biologic responses in animals. All animal activities, including receipt, husbandry, clinical observations, necropsy, tissue collection, histopathology, and clinical pathology were tracked through a validated software system (Provantis, Instem, Conshohocken, PA).

For each analytical instrument, calibration or "span" checks were conducted at each time of use. A wide array of biologic assays was used for this study, the sensitivity and range of which varied. They were, however, internally consistent with standards of operation and matched well against historical control data. Most of the assays did not have "positive controls" to verify their ability to detect a biologic effect, but all assays had been shown to be responsive to treatment effects in previous studies.

In addition to QC, the LRRI Quality Assurance Unit independently monitored the quality of operations and scientific data. Quality Assurance Unit duties for this protocol included evaluating study-start parameters; auditing exposure system functions, study-related animal care functions, and the processes of scientific data collection; and assuring that data were recorded and stored according to accepted standards and LRRI Policy 602. The data were stored in a secure electronic database.

## RESULTS

### GENERAL FINDINGS

Over 100 biologic response variables were assessed in exposed and control rats during either the interim or terminal evaluations. The target $NO_2$ concentrations were achieved, which resulted in a complex mixture characterized by low concentrations of particulate matter (PM), VOCs, and SVOCs, but relatively high concentrations of $NO_x$. The $NO_2$:NO ratio changed throughout the study as a result of a decrease in the performance of the diesel particle filter (DPF) catalyst. The PM remained below 15 µg/m$^3$ on average throughout the study. A summary of the biologic responses, including results of the statistical analyses (ANOVA and three-way ANOVA), is provided in Appendices A through H (available on the HEI Web site at *http://pubs.healtheffects.org*). Most indicators demonstrated no statistically significant differences from control as a result of exposure. Similar to findings from the subchronic sacrifices at 1 and 3 months (McDonald et al. 2012), most of the statistically significant responses at 12 and 24 months were accompanied by evidence of mild oxidative stress in the lung and increases in lung protein and cytokines that reflected a mild inflammatory response. There were minimal to mild exposure-related histopathologic changes in the lungs, but there was no evidence of neoplastic transformation. The non-neoplastic lesions were minimal to mild in severity and primarily characterized by an increase in the number and prominence of basophilic epithelial cells lining terminal bronchioles, alveolar ducts, and adjacent alveoli (those in close proximity to the terminal bronchioles and alveolar ducts). The severity and magnitude of the histopathologic findings progressed slightly from 3 to 12 months. However, further progression between 12 months and the terminal sacrifice was limited. The rats also had slight but statistically significant changes in pulmonary function at 24 months, a finding that was also observed at the earlier time points (McDonald et al. 2012). Although the impacts on pulmonary function were mild, they had progressed at the 24-month time point compared with the findings at 3 and 12 months.

### EXPOSURE ATMOSPHERES

The exposure atmospheres are described in detail in Appendix I of this report (available on the HEI Web site at *http://pubs.healtheffects.org*). The mean concentrations of key components over the entire study are listed in Table 3. The concentrations of PM, SVOCs, and VOCs were generally very low. This confirmed the original expectations during the planning of ACES and predictions from Phase 1, which characterized the emissions from 2007-compliant engines (Khalek et al. 2011). The most abundant components were $CO_2$, CO, NO, and $NO_2$. The ratio of PM to $NO_2$ was at least 3 times lower than in earlier studies of inhaled TDE (e.g., Nikula et al., 1995). As discussed in more detail in Appendix I, the ratio of PM:$NO_2$ changed slightly throughout the study because of a decrease over time in the efficiency of the DPF in converting NO to $NO_2$. As a result, the dilution used to achieve the test atmospheres

**Table 3.** Average Atmosphere Composition (± SD[a]) during Exposure of Mice and Rats in ACES Phase 3B[b]

| Exposure Atmosphere Composition | Units | Control | Low | Mid | High |
|---|---|---|---|---|---|
| Particle mass | | | | | |
| Dekati, inside chamber | µg/m³ | 0.3 ± 0.2 | 0.2 ± 0.2 | 0.9 ± 0.6 | 6.3 ± 4 |
| Filter sample, chamber inlet | µg/m³ | NA | 2.5 ± 1.6 | 2.7 ± 1.2 | 7.8 ± 2.8 |
| Filter sample, inside chamber | µg/m³ | 16.9 ± 6.7 | 23.3 ± 11.4 | 20 ± 5.4 | 27.3 ± 6.2 |
| Particle mass (FMPS)[c] | µg/m³ | 0.2 ± 0.2 | 1.1 ± 0.9 | 2 ± 1.7 | 5.3 ± 2.9 |
| Particle count (FMPS)[c] | particle/cm³ | 17,136 ± 23,420.5 | 215,225.5 ± 412,548.9 | 678,184 ± 1,247,908.6 | 828,814.3 ± 1,041,924.8 |
| NMAD[a] (FMPS)[c] | nm | 23 (1.8) ± 8.8 (0.5) | 16.6 (1.5) ± 6.3 (0.2) | 15.4 (1.5) ± 5.5 (0.2) | 18.6 (1.6) ± 4.4 (0.1) |
| MMAD[a] (FMPS)[c] | nm | 196.8 (1.7) ± 149 (0.2) | 181.8 (2.7) ± 113.4 (0.6) | 81.2 (2.9) ± 32 (0.8) | 41.6 (2.2) ± 4.1 (0.5) |
| Nitrogen oxide (NO) | µg/m³ (ppm) | 2 ± 3 (0.001 ± 0.002) | 274.3 ± 186.3 (0.3 ± 0.2) | 1,376.6 ± 390.4 (1.3 ± 0.4) | 6,878.6 ± 2591.8 (6.6 ± 2.4) |
| Nitrogen dioxide ($NO_2$) | µg/m³ (ppm) | 2.6 ± 5.2 (0.002 ± 0.004) | 159.5 ± 16.6 (0.1 ± 0.01) | 1,421.5 ± 83.7 (0.9 ± 0.05) | 6,873.2 ± 489.4 (4.4 ± 0.3) |
| Carbon monoxide (CO)[c] | µg/m³ (ppm) | 895.8 ± 883.2 (0.9 ± 0.9) | 1,042.2 ± 510.1 (1.1 ± 0.5) | 1,787.1 ± 444 (1.9 ± 0.5) | 6,167.6 ± 2445.4 (6.4 ± 2.6) |
| Carbon dioxide ($CO_2$)[c] | mg/m³ (ppm) | 2,110.6 ± 800.1 (1,402.2 ± 531.7) | 2,695.7 ± 1,175.2 (1,790.9 ± 780.9) | 3,599.1 ± 497.8 (2,391.2 ± 330.8) | 7,215.6 ± 1456.4 (4,794.1 ± 967.5) |
| Sulfur dioxide ($SO_2$) | µg/m³ (ppb) | 4.9 ± 1 (2.2 ± 0.4) | 6.6 ± 1.5 (2.9 ± 0.7) | 20.5 ± 6.2 (9.1 ± 2.7) | 69.6 ± 28.6 (30.8 ± 12.6) |
| Elemental carbon[c] | µg/m³ | 0.4 ± 0.4 | 1.2 ± 1.2 | 0.4 ± 0.4 | 1.2 ± 1 |
| Organic carbon[c] | µg/m³ | 4.5 ± 1.4 | 6.6 ± 1.4 | 4.8 ± 1.9 | 5.7 ± 2.4 |
| Ammonium[c] | ng/m³ | 31.3 ± 31.3 | 57.2 ± 29 | 203.2 ± 150.6 | 1,312.2 ± 450.2 |
| Sulfate[c] | ng/m³ | 101.6 ± 26 | 193.1 ± 153.1 | 644.8 ± 405.5 | 2,121.1 ± 968.2 |
| Nitrate[c] | ng/m³ | 18.6 ± 16.7 | 181.2 ± 195.9 | 220.2 ± 73.9 | 2,087.3 ± 747 |
| Elements (metals)[c] | ng/m³ | 461.3 ± 208.5 | 567.9 ± 224 | 661 ± 302.1 | 811.5 ± 336.3 |
| Alkanes[c] | µg/m³ | 2.8 ± 0.5 | 4.7 ± 1.9 | 8.6 ± 2.8 | 26.6 ± 9.3 |
| Carbonyl[c] | µg/m³ | 53.8 ± 12.1 | 71.2 ± 40.2 | 21.4 ± 5.1 | 1 ± 1.5 |
| Polyaromatic hydrocarbons (PAHs)[c] | µg/m³ | 0.8 ± 0.5 | 1.1 ± 0.4 | 1.9 ± 0.7 | 4.7 ± 1.6 |
| Nitro-PAHs[c] | ng/m³ | 0.4 ± 0.2 | 0.8 ± 0.4 | 1.6 ± 0.5 | 8 ± 2.5 |
| Polars (acids)[c] | µg/m³ | 3.2 ± 1.2 | 4.1 ± 1.6 | 6.9 ± 2.9 | 16 ± 6 |
| Hopane and steranes | ng/m³ | 2 ± 0.7 | 5.1 ± 3.5 | 2.5 ± 1.6 | 3.7 ± 3.9 |
| Volatile organic compounds (VOC) | µg/m³ | 33.5 ± 21.3 | 50.3 ± 31.3 | 44.2 ± 15.3 | 148.9 ± 96.9 |

[a] Or geometric standard deviation where indicated.

[b] For composition during rat-only exposures, see Table 3B in Appendix I. $NO_2$ levels were 4.2, 0.8, and 0.1 ppm over the 30-month rat exposures.

[c] Derived from detailed characterizations (April 2010, September 2010, April 2011, April 2012). (See Appendix I.)

FMPS = fast mobility particle sizer; MMAD = mass median aerodynamic diameter; NA = not available (no data were collected during that period due to study design); NMAD = number median aerodynamic diameter.

was also changed by 35% to maintain the target $NO_2$ concentrations. However, this had only a minor impact on the test atmosphere composition in view of the variability of emissions and the low concentrations of most of the test atmosphere constituents. Analysis of the test atmospheres revealed that animals contributed to the overall composition of the chamber atmospheres by adding both PM (as dander) and VOCs, as well as products of reactions between animal "emissions" and components from the exhaust.

The PM mass concentrations were measured at the inlet to the chambers and at mid-chamber to allow the contribution of PM from the animals to be distinguished from the DPM from exhaust. As expected, the concentration in the chambers was much higher than at the chamber inlets, showing that the major portion of PM mass was due to contributions from animals. As a result of the "animal background," particle mass concentration within the chambers was not closely dilution-dependent. However, there was a dilution-dependent difference in the particle mass at the inlets, as well as a dilution-dependent difference in particle number count, with the highest particle number measured within the highest level chamber. The particle–number-based size distribution had a median size of approximately 20 nm, and the particle mass size distribution had a median size of 40 nm at the mid and high levels. The low and control levels had much larger size particles within the exposure chamber, but the mass concentrations were very low. The larger sized particles were likely attributed to the larger contribution from dander and background relative to the NTDE particles.

NO, $NO_2$, and CO accounted for most of the mass of the measured components of the exposure atmospheres. The contribution of NO and $NO_2$ as a fraction of total mass increased proportionally with exposure level, as expected. VOCs accounted for a small proportion of the mass in general, but because of the low concentrations of CO and $NO_x$, VOCs accounted for up to 10% of the mass at the low and control exposure levels. It is noteworthy that this result indicated that the animals contributed a major portion of the VOCs measured. The concentration of sulfur dioxide was low at all exposure levels.

The composition of the PM mass at mid-chamber resulted from a combination of DPM and the animal background PM. The animal contribution undoubtedly included both dander and fine food dust. In addition, some PM likely formed in the chamber as a result of reactions between exhaust gases and ammonia, as previously shown (e.g., McDonald et al. 2004). As a result, the PM composition was slightly different at each exposure level. This was evidenced by differences in the proportion of ammonium, nitrates, and sulfates. The similar concentrations of particulate organic carbon across exposure groups suggested that the "animal background" PM was the dominant source. Because the sum of organic carbon and additional species exceeded the total measured mass, the organic carbon is considered to be biased by a sampling artifact (organic vapor adsorption). Furthermore, some of the organic carbon measured in the chamber may have come from the animals, including from dander and SVOC emissions from respiration. The high-level exposure atmosphere had the largest fraction of PM derived from the engine. At that level, carbon accounted for about 50% of the mass, and the remainder was a combination of the inorganic ions and elements. The elements were primarily composed of zinc, manganese, copper, and iron. Potassium and calcium were also present. The metal concentrations were small and not substantially different from background in most cases.

Among the measured SVOCs, the alkanes and polar compounds contributed the most to the test atmospheres, followed by polyaromatic hydrocarbons (PAHs). The polar compounds were primarily benzoic acid derivatives, and the alkanes were compounds of higher molecular weight, perhaps derived mostly from unburned fuel because they are consistent with the fraction of petroleum distillate found in diesel fuel (Rogge et al. 1992). The PAHs were dominated by compounds of lower molecular weight, primarily in the gas phase. Concentrations of hopanes and steranes, as well as nitro-PAHs, were substantially less than those of lower molecular weight species, as expected.

## BIOLOGIC RESPONSES IN THE WISTAR HAN RAT

### Clinical Observations

A number of animals were found moribund throughout the study due to a range of causes that would be expected during the natural senescence of the rat. In addition, most animals in the study developed pododermatitis (ulcerative foot lesions) near the end of year 1. The pododermatitis was attributed to pressure on their feet from the wire-bottom construction that is typical of the Hazelton whole-body inhalation cages often used for such studies. The larger size of the Wistar Han rat may have elicited more of this response than observed in the smaller rat strains, such as Fischer 344, used in previous studies (e.g., Nikula et al. 1995). Supporting this explanation was the general trend toward higher prevalence and severity in the heavier animals (males). Severe pododermatitis became a criterion for euthanasia for a number of animals, especially in males. In all, 183 (of ~1000) animals were diagnosed with pododermatitis, resulting in euthanasia. At 13 months into the study, solid perches were added to the cages to reduce strain on the rats' feet. Animals that showed signs of pododermatitis were treated with a combination of cleaning and disinfecting with topical povidone-iodine (Biozide, St. Louis, MO).

### Mortality, Body Weight, and Organ Weight

Mortality, body weight, and organ weight data are provided in Appendices A through C (available on the HEI Web site, *http://pubs.healtheffects.org*). Across the entire course of the study, there was a statistically significant increase in mortality among the male rats at the highest level of exposure (see Appendix A available on the HEI Web site at *http://pubs.healtheffects.org*). This was primarily the result of the substantial number of animals that were euthanized, many toward the end of year 1, due to pododermatitis-related moribund status. After day 485, when the preventative care and treatment for pododermatitis was in place, mortality rates among exposure groups did not differ significantly. Histopathology conducted on pododermatitis lesions from several animals from different exposure groups did not reveal exposure-related differences.

There was no overall relationship between body weight and exposure group. There were statistically significant differences in mean body weight among the groups during particular months (see Appendix B available on the HEI Web site at *http://pubs.healtheffects.org*). For example, body weights at the low levels of exposure were greater than that of controls during 5 out of 30 months.

There were only a few statistically significant exposure-related trends in raw organ weights or organ weights normalized to either body or brain weight, and none were concurrent in both sexes (see Appendix C available on the HEI Web site at *http://pubs.healtheffects.org*). There were no significant trends at 12 months. At 24 months, there were significant exposure-related downward trends in the ratios of heart and liver weight to body weight in males, but no trend in the raw organ weights. There were marginal downward trends among males in raw thymus weight and the ratios of thymus to body or brain weight ($P$ = 0.075–0.091). There was a significant downward trend in raw liver weight among females at 24 months, but not in the normalized liver weights. At terminal sacrifice, there were significant upward trends in lung and thymus weights of females, but only marginal trends in the normalized weights ($P$ = 0.061–0.081). There was also a marginal downward trend in the liver to body weight ratio of females ($P$ = 0.096), but not in the raw or brain-normalized liver weights. There were neither significant nor marginal exposure-related trends in organ weights of males at terminal sacrifice. Overall, the magnitudes of the differences in organ weight among groups were small. None of the mean values of the high or mid exposure groups were significantly different from control mean values by pairwise comparison.

### Hematology and Clinical Chemistry

Three-way ANOVA results (see Tables D.1, D.3, and D.5 in Appendix D on the HEI Web site at *http://pubs.healtheffects.org*) indicated that there was little, if any, evidence of consistent exposure-related effects in hematology, serum chemistry, or coagulation endpoints. For hematology endpoints, the only indication of a consistent exposure effect across time was for absolute eosinophils ($P$ = 0.029), which were modestly elevated in low- and mid-level exposure groups at 12 and 24 months (Table D.1), but overall there was no substantial evidence of an exposure-related trend at any time point (Figure D.1). There was some evidence of exposure effects that differed across time for mean corpuscular hemoglobin and mean corpuscular hemoglobin concentration, shown in statistically significant increasing trends at 24 months across both sexes (Figures D.2 and D.3; Table D.2).

Of the clinical chemistry parameters, only ALP showed evidence of exposure effects consistent across time; these effects were manifested as trends toward decreasing response with increasing exposure level (Figure D.4), with statistically significant trends identified in both sexes at 12 months (Table D.4). Alanine aminotransferase (ALT) serum and chloride measurements showed statistically significant evidence of exposure effects that differed across time. In the case of ALT (Figure D.5), this was shown in a statistically significant decreasing trend in females at 12 months (Table D.4), which was not replicated at other time points or in males. For chloride, the significant exposure × time effect reflected a statistically significant decreasing trend in males at 24 months that appeared to be due to a high control mean (Figure D.6; Table D.4). Triglycerides (Figure D.7) had a statistically significant sex × exposure × time effect, which related to a nearly statistically significant increasing trend in males at terminal sacrifice and a nearly significant decreasing trend in females at 24 months (Table D.4) No other evidence of exposure-related effects was observed at other time points or in females.

### Bronchoalveolar Lavage and Lung Tissue Analysis

Data summaries and time-specific statistical analysis results for biologic endpoints in BALF and lung tissue measured at the 12- and 24-month time points are in Tables E.3, E.4, and F.2 in Appendices E and F (on the HEI Web site at *http://pubs.healtheffects.org*). Several endpoints indicative of oxidative stress in the lung were upregulated. In general the responses were mild, and most showed only significant trends, not significant differences from controls.

Three-way ANOVA results for lavage fluid and biochemical endpoints (Table 4) provided evidence of consistent exposure effects across time and sex for alkaline

**Table 4.** Three-Way ANOVA Analysis (*P* Values) of Variance on Lung Lavage Cell and Biochemical Data in Rats at 1, 3, 12, and 24 Months of Exposure[a,b]

| Endpoint | Sex | Time | Exposure | Sex × Exposure | Exposure × Time | Sex × Time | Sex × Exposure × Time |
|---|---|---|---|---|---|---|---|
| Alkaline phosphatase | 0.433 | 0.009** | 0.011* | 0.700 | 0.359 | 0.567 | 0.367 |
| μTP | < 0.001** | 0.003** | < 0.001** | 0.641 | 0.004** | 0.021* | 0.674 |
| Eosinophils absolute count | 0.133 | 0.525 | 0.307 | 0.409 | 0.844 | 0.233 | 0.870 |
| Eosinophils differential cell count | 0.140 | 0.898 | 0.178 | 0.355 | 0.794 | 0.213 | 0.799 |
| LDH | 0.011* | 0.215 | 0.067 | 0.760 | 0.315 | 0.202 | 0.434 |
| Lymphocytes absolute count | 0.217 | < 0.001** | 0.717 | 0.219 | 0.835 | 0.483 | 0.197 |
| Lymphocytes differential cell count | 0.498 | < 0.001** | 0.572 | 0.316 | 0.469 | 0.126 | 0.121 |
| Macrophages absolute count | < 0.001** | < 0.001** | 0.001** | 0.606 | 0.558 | 0.046* | 0.196 |
| Macrophages differential cell count | 0.287 | 0.130 | 0.345 | 0.697 | 0.832 | 0.537 | 0.136 |
| Number of epithelial cells per 100 cells absolute | 0.819 | < 0.01** | 0.059 | 0.995 | 0.481 | 0.774 | 0.957 |
| Number of epithelial cells per 100 cells differential | 0.251 | < 0.001** | 0.075 | 0.954 | 0.504 | 0.601 | 0.967 |
| Neutrophils absolute count | 0.777 | 0.007** | 0.635 | 0.601 | 0.965 | 0.420 | 0.217 |
| Neutrophils differential cell count | 0.644 | 0.002** | 0.233 | 0.570 | 0.975 | 0.442 | 0.419 |
| Total white blood cells | < 0.001** | < 0.001** | 0.001** | 0.696 | 0.547 | 0.053 | 0.173 |
| Albumin | < 0.001** | < 0.001** | < 0.001** | 0.978 | 0.208 | 0.842 | 0.200 |
| GSH BALF | < 0.001** | < 0.001** | 0.373 | 0.090 | 0.923 | < 0.001** | 0.255 |
| GSSG BALF | 0.021* | < 0.001** | 0.016* | 0.593 | 0.009** | 0.001** | 0.008** |
| Hemoglobin | 0.016* | < 0.001** | 0.001** | 0.431 | 0.198 | 0.075 | 0.533 |
| TEAC | 0.384 | < 0.001** | 0.101 | 0.696 | 0.040* | 0.111 | 0.563 |
| Total GSH BALF | < 0.001** | < 0.001** | 0.165 | 0.064 | 0.849 | < 0.001** | 0.375 |

[a] BALF = bronchoalveolar lavage fluid; GSH = glutathione; GSSG = oxidized glutathione; LDH = lactase dehydrogenase; μTP = micro–total protein; TEAC = Trolox equivalent antioxidant capacity.

[b] Degrees of freedom associated with sources of variation: sex (1); time (3); exposure (3); sex × exposure (3); sex × time (3); exposure × time (9); sex × exposure × time (9)

* $P < 0.05$.

** $P < 0.01$.

phosphatase, albumin, and hemoglobin. Significant (or marginally significant) exposure interaction effects for µTP, TEAC, GSSG, and some cellular counts (macrophages and total white blood cells) indicated exposure–response patterns that differed by time and/or sex. TEAC, which measures the ability of the BALF to prevent oxidation of a chromophore by a chemically generated free radical, was increased in females at 24 months, but showed substantial evidence of decreases in both sexes at 3 months and in females at 12 months (Figure E.1). Changes in hemoglobin and glutathione reflect a change in the oxidative balance in the lung. There was statistically significant evidence of exposure-related hemoglobin increases in BALF in both sexes at 24 months and in combined sexes at 12 months (Table E.4, Figure E.2), but only suggestive evidence of this pattern at earlier time points (McDonald et al. 2012). However, the response pattern of GSSG in BALF varied significantly relative to time point and sex (Figure E.3), with no substantial evidence of exposure differences at 1 or 3 months (McDonald et al. 2012), marginal ($P = 0.07$) evidence of an exposure-related increase for males at 12 months (Table E.4), and a statistically significant exposure-related increasing trend in females at 24 months.

In lung tissue, the three-way ANOVAs (Table 5) indicated exposure effects for HO-1 and the cytokines IL-6 and KC. There was evidence of exposure-related increases in HO-1 throughout the study (Figure 1). At 4 and 13 weeks, there were statistically significant exposure-related trends in both sexes (McDonald et al. 2012). At 12 months, there were significant increases in both sexes at the high exposure level followed by a significant increase in combined sexes at 24 months. In addition, there was evidence of exposure effects on the cytokines IL-6 (Figure 2) and KC (Figure F.1) in both sexes across time, with a statistically significant increasing trend identified in at least one sex (or combined sexes) at 12 and 24 months (Table F.2).

In addition to oxidative stress, some mild tissue injury was indicated by the lung tissue and BALF data at 12 and 24 months (Tables E.3, E.4, and F.1), primarily at the high-exposure level. Increases in µTP in BALF were observed in both sexes at 3, 12, and 24 months (Figure E.4), with statistical significance in high-level-exposure males at 3 months (McDonald et al. 2012), in females at 24 months (Table E.3), and in combined sexes at 3, 12, and 24 months. The increases in protein were paralleled by increases in

**Table 5.** Three-Way ANOVA (*P* Values) of Lung Tissue Data in Rats at 1, 3, 12, and 24 Months of Exposure[a,b]

| Endpoint | Sex | Time | Exposure | Sex × Exposure | Exposure × Time | Sex × Time | Sex × Exposure × Time |
|---|---|---|---|---|---|---|---|
| Cytokine CINC-3 lung | < 0.001** | < 0.001** | 0.870 | 0.516 | 0.340 | 0.477 | 0.614 |
| Cytokine IL-6 lung | 0.213 | < 0.001** | 0.002** | 0.687 | 0.692 | 0.890 | 0.752 |
| Cytokine IL-1β | 0.098 | < 0.001** | 0.900 | 0.526 | 0.895 | 0.081 | 0.094 |
| Cytokine KC lung | < 0.001** | < 0.001** | 0.042* | 0.547 | 0.290 | 0.432 | 0.589 |
| Cytokine TNF-α[c] | 0.226 | < 0.001** | 0.167 | 0.101 | 0.714 | 0.198 | 0.068 |
| GSH lung | < 0.001** | < 0.001** | 0.255 | 0.568 | 0.796 | < 0.001** | 0.762 |
| GSSG lung | < 0.001** | < 0.001** | 0.502 | 0.149 | 0.750 | < 0.001** | 0.880 |
| HO-1 | 0.016* | < 0.001** | < 0.001** | 0.812 | 0.179 | 0.366 | 0.919 |
| Total GSH lung | < 0.001** | < 0.001** | 0.146 | 0.265 | 0.569 | < 0.001** | 0.486 |

[a] CINC = cytokine-induced neutrophil chemoattractant; GSH= glutathione; GSSG = oxidized glutathione; HO-1 = heme oxygenase 1; IL = interleukin; KC = keratinocyte-derived chemokine; TNF-α = tumor necrosis factor α.

[b] Degrees of freedom associated with sources of variation: sex (1); time (3); exposure (3); sex × exposure (3); sex × time (3); exposure × time (9); sex × exposure × time (9).

[c] No 3-month data available.

* $P < 0.05$.

** $P < 0.01$.

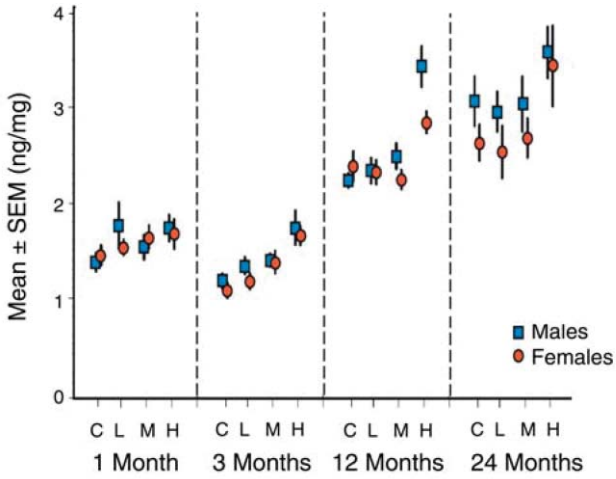


**Figure 1. Pattern of response in HO-1 for males and females at 1, 3, 12, and 24 months (C = control, L = low-level exposure, M = mid-level exposure, H = high-level exposure).** The 3-way ANOVA test and time-specific analyses indicated exposure-related increases across time (see Table F.1 in Appendix F).

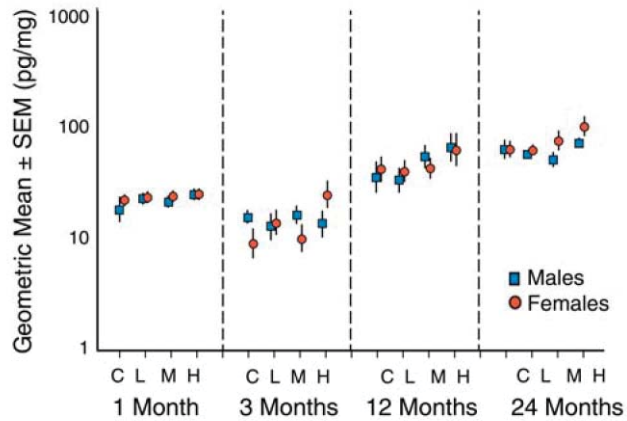


**Figure 2. Pattern of response in IL-6 for males and females at 1, 3, 12, and 24 months (C = control, L = low-level exposure, M = mid-level exposure, H = high-level exposure).** Note that data are plotted as geometric means and geometric standard errors. The 3-way ANOVA test revealed evidence of exposure effects across time points (see Table F.1 in Appendix F). Time-specific analysis identified statistically significant exposure-related trends at 12 and 24 months (Table F.2).

albumin (Figure E.5). There were also increased ALP levels in rats of both sexes exposed to the high level of NTDE at all points in time (Figure E.6), with the increase achieving statistical significance in combined sexes at 24 months (Table E.3). Figures E.7 and E.8 show evidence of exposure-related increases in total white blood cell and macrophage counts (which comprised most of the measured cells in BALF), but there was substantial variability in response, and statistically significant trends were observed only in males at 1 month (McDonald et al. 2012) and in females at 24 months (Table E.3). Even when exposure effects were noted in macrophage counts and total number of cells, the increases were modest (less than 2-fold), and the total number of cells was low.

### Pulmonary Function

Three-way ANOVA of pulmonary function data (Table G.1 in Appendix G, available on the HEI Web site at *http://pubs.healtheffects.org*) indicated that exposure significantly effected forced expiratory flow rates and CO diffusing capacity, but had no significant affect on vital capacity (SVC or FVC) or Cqs.

Pairwise comparisons revealed that the reductions of forced flows were manifested more strongly in females than in males and, with only one exception, significant reductions occurred only at the highest exposure level in either sex (Table G.2). At 3 months, PEFR, $FEF_{25}$, and MMEF were significantly reduced in females exposed at the high level, but there were no significant differences in the volume-adjusted flows (PEFR/FVC, $FEF_{25}$/FVC, or MMEF/FVC). At 24 months, flows were significantly reduced in females exposed at the high level throughout the lung volume range (PEFR, $FEF_{75}$, $FEF_{50}$, $FEF_{25}$, $FEF_{10}$, and MMEF), and the volume-adjusted flows were also significantly reduced. There were no significant reductions of forced flows in females at 12 months or in males at 3 or 12 months. At 24 months, the $FEF_{25}$/FVC of males exposed at the mid level and $FEF_{10}$ of males at the high level were significantly reduced. Both the unadjusted (raw) flow rates and flows adjusted by lung volume were affected more strongly at low lung volumes than at high lung volumes. Among females exposed at the high level, mean values for $FEF_{75}$ and $FEF_{75}$/FVC were 18% and 14% lower than control mean values, respectively, while $FEF_{10}$ and $FEF_{10}$/FVC were 50% and 46% lower than control. Among exposed males at 24 months, mean values differed significantly from control only at 25% and 10% of FVC at the high level. In general, flow performance at decreasing lung volumes is thought to reflect impacts on airways of decreasing size (Mauderly 1995). Accordingly, the results suggest that exposure affected the smallest airways more than larger airways.

Although ANOVA indicated an effect of exposure on $DL_{CO}$ (Appendix Table G.1), pairwise comparisons between values for rats exposed at the high level and controls did not indicate significant reductions in either sex at any measurement time (Table G.2). At 24 months, the small nonsignificant differences in $DL_{CO}$ among groups

resulted in significant downward trends in $DL_{CO}$ across exposure groups of both males and females, and the mean value for the combined sexes exposed to the high level was significantly different from control. The magnitude of $DL_{CO}$ is a combined function of the time over which the test gas is held in the lung, the efficiency of alveolar–capillary gas transfer, and lung size (affecting both the alveolar volume [VA] of test gas and the volume of blood in the alveolar capillary bed) (Mauderly 1995). Because the procedure is intended primarily as a test of the efficiency of gas transfer, the "breath-holding" time is held constant among subjects, and the result is divided by body weight or the estimated alveolar volume of test gas to adjust for lung size. At 24 months, adjustment by body weight ($DL_{CO}$/kg) eliminated the significance of the exposure-related trend in females, but not males or the combined sexes. Adjustment by alveolar volume ($DL_{CO}$/VA) eliminated the exposure-related trend in males, but the trend in females remained marginally significant ($P = 0.056$), and the trend for combined genders remained significant. These results suggest that the small effect of exposure on $DL_{CO}$ at 24 months was in part due to a small reduction of lung size relative to control. Accordingly, the impact on the efficiency of gas transfer across the alveolar–capillary membrane, if any, must have been very slight.

### Histopathology

Histologic analysis revealed a number of exposure-related findings, which were restricted to the respiratory tract. Chronic exposure of rat lungs to NTDE did not result in the induction of pre-neoplastic lung lesions or primary lung neoplasia. Neoplasms were not induced in the nasal cavity, and neoplasms in other organ systems were not associated with exposure and occurred within historical control values (Giknis and Clifford 2003; Poteracki and Walsh 1998; Tucker 1997; Walsh and Poteracki 1994). At the terminal sacrifice, the incidence of inflammatory changes in the lung related to exposure was not notable, and no DPM was detectable by light microscopy.

Results of statistical analyses of the histologic data are provided in Appendix H (available on the HEI Web site at *http://pubs.healtheffects.org*). Table H.2 lists the presence and type of lesions in each organ by sex and exposure group. The table provides the incidence rate (including adjustment for mortality), the time of first observation, and the mean lesion severity score. Table 6 summarizes the incidence and severity of selected findings in the lungs. Lesions interpreted to be related to exposure were observed at all time points beyond 1 month (3, 12, 24 months, and terminal sacrifice) in the lungs of both male and female rats at the high-level of exposure. These exposure-related lesions were not evident among the lower level groups or controls. Figure 3 provides illustrative photomicrographs of the lung findings that were typical at the high-exposure level. Tissues are shown from females in the control and high-level exposure groups at 30 months of exposure. These photographs are considered to be representative of lesions noted in both males and females from 12 months on. The lung lesions were primarily characterized by an increased number and prominence of basophilic epithelial cells, considered reactive or regenerative, lining pre-terminal and terminal bronchioles, alveolar ducts, and alveoli in close proximity to the terminal bronchiole and alveolar ducts. The distribution was rather uniform and focused at the central acinus, affecting many, but not all, centriacinar regions of any one lung section. This hyperplasia of the epithelium was minimal to mild, similar morphologically to these lesions seen at 12 months, but having mild-grade effects occurring at higher incidences at 24 months and at the terminal sacrifice. Often when the lesions were considered mild, epithelial cell proliferation within the pre-terminal bronchioles and terminal bronchioles formed unusual individual papillary projections into the lumina of those bronchioles. These projections were lined by epithelial cells and sometimes had a central collagenous stalk. The focal hyperplasia was observed in the absence of significant effects on cell proliferation as measured by Ki-67 staining (Table 7). Notably, the hyperplasia observed was confined to a quite limited area within the central acinus, while the labeling index was determined via image quantification using random fields involving 50% of the left lung. Thus the Ki-67 cell proliferation assay may not have been optimized to detect these subtle differences, which were observed in only a limited portion of the airways (i.e., any effect may have been diluted by the large sampling area). In addition to the epithelial proliferation, there was a slight amount of bronchiolization (a term used to describe metaplasia resulting in the presence of cuboidal, often ciliated, cells in the alveolar region where they are not typically present) in some animals.

The incidence of periacinar interstitial fibrosis was high at 12 months (80% in males and 100% in females), and remained high in both sexes at 24 months and terminal sacrifice (Table 6). Fibrosis occurred only around alveolar ducts and at the junctions of the alveolar ducts and alveolar walls in the centriacinar areas in the stroma underlying the epithelial change (Figure 4). The severity of the periacinar interstitial fibrosis remained mostly minimal even in animals at the terminal sacrifice. At 24 months and terminal sacrifice, the severity of fibrosis when present was only marginally increased relative to that seen at 3 months, and exposure-related fibrosis did not occur

**Table 6.** Summary of Incidence[a] Rate for Non-Neoplastic Lesions and Mean Severity Score[b] for Histopathologic Findings in the Lungs at Each of the Sacrifice Times by Sex and Exposure Group

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| Histopathologic Endpoint | Control (%) | Low (%) | Mid (%) | High (%) | Control (%) | Low (%) | Mid (%) | High (%) |
| **Lung(s); Accumulation; Macrophage** | | | | | | | | |
| Incidence | 0/139 (0) | 0/141 (0) | 0/136 (0) | 8/131 (6) | 0/139 (0) | 0/142 (0) | 0/139 (0) | 6/134 (4) |
| Adjusted rate | 0% | 0% | 0% | 17% | 0% | 0% | 0% | 9% |
| 1-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| 3-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 3/10 (30) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 3/10 (30) |
| 12-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 3/10 (30) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 3/10 (30) |
| 24-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 2/10 (20) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| Terminal rate[c] | 0/16 (0) | 0/26 (0) | 0/18 (0) | 0/9 (0) | 0/24 (0) | 0/29 (0) | 0/17 (0) | 0/17 (0) |
| Natural death & moribund sacrifice rate | 0/83 (0) | 0/75 (0) | 0/78 (0) | 0/82 (0) | 0/75 (0) | 0/73 (0) | 0/82 (0) | 0/77 (0) |
| First incidence (days) | — | — | — | 94 | — | — | — | 93 |
| Poly-3 test | $P < 0.001$ | — | — | $P = 0.001$ | $P = 0.001$ | — | — | $P = 0.013$ |
| Mean lesion severity score | — | — | — | 1.1 | — | — | — | 1.0 |
| **Lung(s); Bronchiolization** | | | | | | | | |
| Incidence | 0/139 (0) | 0/141 (0) | 0/136 (0) | 38/131 (29) | 0/139 (0) | 0/142 (0) | 0/139 (0) | 30/134 (22) |
| Adjusted Rate | 0% | 0% | 0% | 58% | 0% | 0% | 0% | 41% |
| 1-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| 3-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| 12-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 2/10 (20) |
| 24-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) |
| Terminal rate[c] | 0/16 (0) | 0/26 (0) | 0/18 (0) | 4/9 (44) | 0/24 (0) | 0/29 (0) | 0/17 (0) | 5/17 (29) |
| Natural death & moribund sacrifice rate | 0/83 (0) | 0/75 (0) | 0/78 (0) | 32/82 (39) | 0/75 (0) | 0/73 (0) | 0/82 (0) | 22/77 (29) |
| First incidence (days) | — | — | — | 346 | — | — | — | 367 |
| Poly-3 test | $P < 0.001$ | — | — | $P < 0.001$ | $P < 0.001$ | — | — | $P < 0.001$ |
| Mean lesion severity score | — | — | — | 1.1 | — | — | — | 1.1 |
| **Lung(s); Fibrosis; Interstitial; Periacinar** | | | | | | | | |
| Incidence | 0/139 (0) | 0/141 (0) | 0/136 (0) | 93/131 (71) | 0/139 (0) | 0/142 (0) | 0/139 (0) | 101/134 (75) |
| Adjusted rate | 0% | 0% | 0% | 91% | 0% | 0% | 0% | 91% |
| 1-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| 3-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 4/10 (40) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 2/10 (20) |
| 12-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 8/10 (80) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) |
| 24-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) |
| Terminal rate[c] | 0/16 (0) | 0/26 (0) | 0/18 (0) | 6/9 (67) | 0/24 (0) | 0/29 (0) | 0/17 (0) | 14/17 (82) |
| Natural death & moribund sacrifice rate | 0/83 (0) | 0/75 (0) | 0/78 (0) | 65/82 (79) | 0/75 (0) | 0/73 (0) | 0/82 (0) | 65/77 (84) |
| First incidence (days) | — | — | — | 83 | — | — | — | 93 |
| Poly-3 test | $P < 0.001$ | — | — | $P < 0.001$ | $P < 0.001$ | — | — | $P < 0.001$ |
| Mean lesion severity score | — | — | — | 1.1 | — | — | — | 1.0 |

*(Table continues next page)*

[a] Number of lesion-bearing animals/number of animals examined. (In some cases, spare animals were included in groups based on total number of animals received and assigned.)

[b] Severity score: 0, not present; 1, minimal; 2, mild; 3, moderate; 4, marked.

[c] Observed incidence at terminal sacrifice.

**Table 6 (*Continued*).** Summary of Incidence[a] Rate for Non-Neoplastic Lesions and Mean Severity Score[b] for Histopathologic Findings in the Lungs at Each of the Sacrifice Times by Sex

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| Histopathologic Endpoint | Control (%) | Low (%) | Mid (%) | High (%) | Control (%) | Low (%) | Mid (%) | High (%) |
| **Lung(s); Hyperplasia; Epithelium; Periacinar** | | | | | | | | |
| Incidence | 0/139 (0) | 0/141 (0) | 0/136 (0) | 117/131 (89) | 0/139 (0) | 0/142 (0) | 0/139 (0) | 116/134 (87) |
| Adjusted rate | 0% | 0% | 0% | 99% | 0% | 0% | 0% | 97% |
| 1-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| 3-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 9/10 (90) |
| 12-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) |
| 24-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 10/10 (100) |
| Terminal rate[c] | 0/16 (0) | 0/26 (0) | 0/18 (0) | 9/9 (100) | 0/24 (0) | 0/29 (0) | 0/17 (0) | 17/17 (100) |
| Natural death & moribund sacrifice rate | 0/83 (0) | 0/75 (0) | 0/78 (0) | 78/82 (95) | 0/75 (0) | 0/73 (0) | 0/82 (0) | 70/77 (91) |
| First incidence (days) | — | — | — | 83 | — | — | — | 93 |
| Poly-3 test | $P < 0.001$ | — | — | $P < 0.001$ | $P < 0.001$ | — | — | $P < 0.001$ |
| Mean lesion severity score | — | — | — | 1.4 | — | — | — | 1.4 |
| **Nose/Turbinate 2 Level; Degeneration; Olfactory Epithelium** | | | | | | | | |
| Incidence | 12/137 (9) | 14/140 (10) | 12/134 (9) | 23/131 (18) | 12/137 (9) | 23/138 (17) | 29/136 (21) | 27/132 (20) |
| Adjusted rate | 19% | 20% | 19% | 40% | 17% | 30% | 36% | 36% |
| 1-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 0/10 (0) | 1/10 (10) | 0/10 (0) | 1/10 (10) |
| 3-Month sacrifice rate | 0/10 (0) | 1/10 (10) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) |
| 12-Month sacrifice rate | 0/10 (0) | 1/10 (10) | 2/10 (20) | 5/10 (50) | 0/10 (0) | 1/10 (10) | 4/10 (40) | 2/10 (20) |
| 24-Month sacrifice rate | 3/10 (30) | 1/10 (10) | 1/10 (10) | 1/10 (10) | 1/10 (10) | 3/10 (30) | 5/10 (50) | 1/10 (10) |
| Terminal rate[c] | 2/16 (13) | 4/26 (15) | 2/18 (11) | 0/9 (0) | 1/24 (4) | 7/29 (24) | 3/17 (18) | 1/17 (6) |
| Natural death & moribund sacrifice rate | 7/81 (9) | 7/74 (9) | 7/76 (9) | 16/82 (20) | 10/73 (14) | 11/69 (16) | 17/79 (22) | 22/75 (29) |
| First incidence (days) | 177 | 94 | 366 | 31 | 650 | 31 | 326 | 31 |
| Poly-3 test | $P = 0.009$ | $P = 0.625$ | $P = 0.588$ | $P = 0.005$ | $P = 0.008$ | $P = 0.070$ | $P = 0.007$ | $P = 0.007$ |
| Mean lesion severity score | 1.3 | 1.5 | 1.7 | 1.6 | 1.8 | 1.5 | 1.5 | 1.5 |
| **Nose/Turbinate 3 Level; Degeneration; Olfactory Epithelium** | | | | | | | | |
| Incidence | 2/139 (1) | 7/138 (5) | 4/134 (3) | 11/132 (8) | 4/137 (3) | 14/137 (10) | 13/134 (10) | 15/134 (11) |
| Adjusted rate | 3% | 10% | 7% | 22% | 6% | 19% | 18% | 21% |
| 1-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 0/10 (0) |
| 3-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 0/10 (0) |
| 12-Month sacrifice rate | 0/10 (0) | 3/10 (30) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 2/10 (20) | 2/10 (20) |
| 24-Month sacrifice rate | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 0/10 (0) | 1/10 (10) | 1/10 (10) | 0/10 (0) |
| Terminal rate[c] | 0/16 (0) | 0/25 (0) | 0/18 (0) | 0/9 (0) | 0/24 (0) | 1/29 (3) | 1/16 (6) | 0/17 (0) |
| Natural death & moribund sacrifice rate | 2/83 (2) | 4/73 (5) | 4/76 (5) | 10/83 (12) | 4/73 (5) | 12/68 (18) | 7/78 (9) | 13/77 (17) |
| First incidence (days) | 391 | 367 | 416 | 31 | 326 | 303 | 30 | 341 |
| Poly-3 test | $P = 0.007$ | $P = 0.208$ | $P = 0.341$ | $P = 0.002$ | $P = 0.020$ | $P = 0.032$ | $P = 0.022$ | $P = 0.007$ |
| Mean lesion severity score | 1.5 | 1.4 | 2.0 | 1.5 | 1.5 | 1.2 | 1.2 | 1.4 |

[a] Number of lesion-bearing animals/number of animals examined. (In some cases, spare animals were included in groups based on total number of animals received and assigned.)

[b] Severity score: 0, not present; 1, minimal; 2, mild; 3, moderate; 4, marked.

[c] Observed incidence at terminal sacrifice.

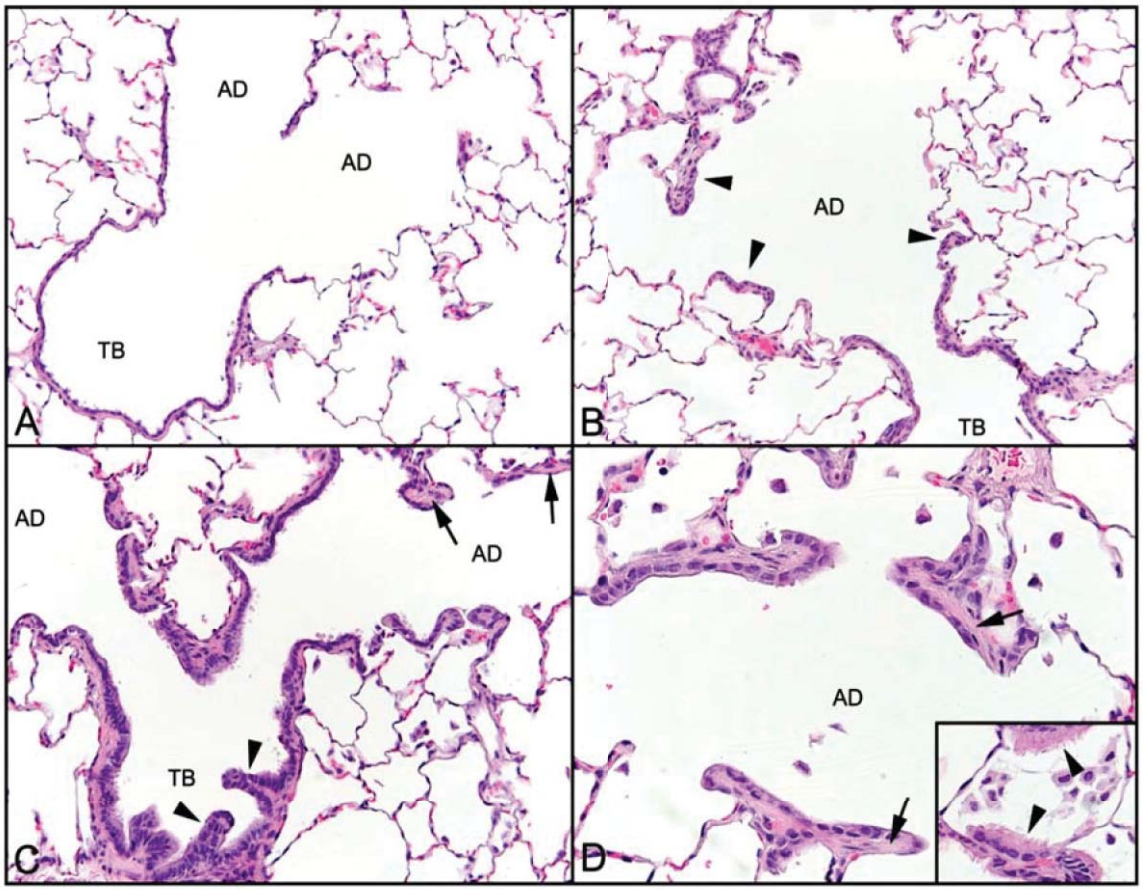


**Figure 3. Illustrative photomicrographs of female rat lungs in the control and high-level groups after 30 months of exposure to NTDE, showing findings typical for this study: (A) control:** normal appearance of a centriacinar area of the lung showing a terminal bronchiole (TB), alveolar ducts (AD), and alveoli (original magnification 200×); **(B) high-level group**: centriacinar area of the lung showing a minimally affected terminal bronchiole and an alveolar duct with increased numbers of epithelial cells lining the airways resulting in areas of increased thickening (arrowheads) of mainly the alveolar duct walls (termed "Hyperplasia; Epithelial; Periacinar"; original magnification 200×); **(C) high-level group:** more prominent increase in epithelial cells of the terminal bronchiole resulting in the projection of epithelial fronds into the lumen (arrowheads). Epithelial cells also increased in the lining of the alveolar ducts. The walls of some areas of the alveolar ducts are slightly thickened with an increase in fibrous connective tissue (arrows) ("Hyperplasia; Epithelial; Periacinar" and "Fibrosis; Interstitial; Periacinar"; original magnification 200×); **(D) high-level group:** the increased magnification of this image shows more cellular detail of the proliferating epithelial component alveolar duct and surrounding alveoli. Epithelial cell proliferation lines the alveolar duct and extends into some alveoli. The walls of the alveolar duct have increased fibrous connective tissue (arrows) (changes termed "Hyperplasia; Epithelial; Periacinar" and "Fibrosis; Interstitial; Periacinar"; original magnification 400×). ***Inset*** demonstrates that in some areas in some animals proliferating epithelial cells of alveolar ducts and alveoli are ciliated (arrowheads) and therefore allow confirmation of metaplasia of the alveolar epithelium to a bronchiolar cell type (i.e., "bronchiolization") (changes termed "Hyperplasia; Epithelial; Periacinar"; and "Bronchiolization"; original magnification 400×).

beyond the centriacinar areas. Since it was now clear that fibrosis had not affected the alveolar interstitium distal to the central acinus, we chose the term "fibrosis, interstitial, periacinar" to convey that the lesion distribution was not typical of the pattern generally associated with the term "interstitial fibrosis." The report of findings at earlier time points (McDonald et al. 2012) had used the "interstitial fibrosis" terminology.

There was statistically significant evidence of exposure-related effects in the nasal cavity that were generally limited to the high-level exposure groups. The presence of some (usually) minimal- to mild-grade nasal lesions occurring across all groups throughout the study was noted. Rats of both sexes from all experimental groups had inflammation, squamous metaplasia, and epithelial hyperplasia in the nose/turbinate at one or more of the four nose/turbinate

**Table 7.** Cell Proliferation in Rat Lung Tissue at Different Exposure Time Points Measured by Percentage of Ki-67+ Cells × 100[a]

| % Positive | Group | Males Mean ± SEM (*n*) | Females Mean ± SEM (*n*) | Both Mean ± SEM (*n*) | Interaction[a] |
|---|---|---|---|---|---|
| 1 Month | Control | 3.5 ± 0.6 (10) | 2.4 ± 0.3 (10) | 3.0 ± 0.4 (20) | 0.602 |
| | High | 3.6 ± 0.4 (10) | 3.0 ± 0.3 (10) | 3.3 ± 0.3 (20) | |
| 3 Months | Control | 4.2 ± 0.6 (10) | 4.3 ± 0.6 (10) | 4.2 ± 0.5 (20) | 0.692 |
| | High | 3.9 ± 0.3 (10) | 4.6 ± 0.8 (10) | 4.3 ± 0.4 (20) | |
| 12 Months | Control | 1.5 ± 0.4 (10) | 3.4 ± 1.1 (10) | 2.5 ± 0.6 (20) | 0.956 |
| | High | 1.9 ± 0.5 (10) | 3.8 ± 1.0 (10) | 2.8 ± 0.6 (20) | |
| 24 Months | Control | 1.9 ± 0.5 (9) | 1.5 ± 0.2 (10) | 1.7 ± 0.3 (19) | 0.207 |
| | High | 3.2 ± 0.6 (8) | 1.6 ± 0.5 (9) | 2.4 ± 0.4 (17) | |

[a] *P* value for sex × exposure effect. Tests equality of exposure effect across sexes.

sectioning levels. Minimal mucous cell metaplasia of the epithelium of the lateral wall often occurred in concert with those more prominent changes. The most consistent finding was minor olfactory epithelial degeneration within nose/turbinate levels 2 and 3, which exhibited statistically significant increases in both sexes (Table 6). In males, evidence of an increase was limited to the high exposure group, while females in all NTDE-exposed groups exhibited significant, or marginally significant, evidence of increased incidence relative to controls in both nasal levels. Other statistically significant increases in the rates of common spontaneously occurring lesions in nose/turbinate level 1 were found predominately in high-level-exposure animals relative to controls. These increases were small in magnitude: epithelial lateral wall hyperplasia (males 23% vs. 15%); suppurative inflammation (males 23% vs. 18%); lateral wall squamous metaplasia, (females 41% vs. 29%); lateral wall hyperplasia or squamous metaplasia (males 55% vs. 48%; females 64% vs. 55%). Statistically significant evidence in nose/turbinates levels 2 and 3 was limited to low incidences (5 or less) of two lesions that occurred in high-level-exposure males but were not found in controls.

A finding of note was that, in the rats under long-term observation, the incidence of thyroid follicular cell adenomas and combined incidence of follicular cell adenomas and carcinomas (Table H.1) were significantly increased in females exposed at the high level compared with control females (but not in males exposed at the high level compared with controls). The PWG members reviewed the thyroid follicular cell lesions and generally agreed with the diagnoses of the study pathologist. In the rare instances where the PWG consensus differed from the study pathologist's conclusion, the diagnoses were changed to reflect the PWG consensus opinion. Incidences in rats of both sexes exposed at the high level at the 1-, 3-, 12-, and 24-month interim sacrifices were unremarkable compared with controls (0% for all; no tumors of this type were seen in any rats exposed to the high level at interim sacrifice). In concert with the PWG, the decision was made to further investigate the increase in thyroid follicular cell tumors in females for a possible exposure–response effect by examining low- and mid-level exposure rats of both sexes. As there were no follicular cell tumors in any high-level interim-sacrifice rats, the PWG reasoned that it would be of little benefit to microscopically examine thyroids from low- and mid-level interim sacrifices. Thus low- and mid-level interim-sacrifice animals were excluded from histopathologic examination. However, all low- and mid-level animals from the terminal sacrifice, as well as any animals dying or euthanized moribund prior to the terminal sacrifice, were included. The combined incidences of follicular cell tumors in NTDE-exposed females were similar across exposure levels (low, 9%; mid, 9%; high, 6%) and consistent with historical control rates (see Discussion), but significantly higher than the control rate in the present study (1%). In males, there was no substantial statistical evidence that combined tumor incidence rates in exposed groups (low, 12%; mid, 5%; high, 2%) differed significantly from the concurrent control rate (6%).

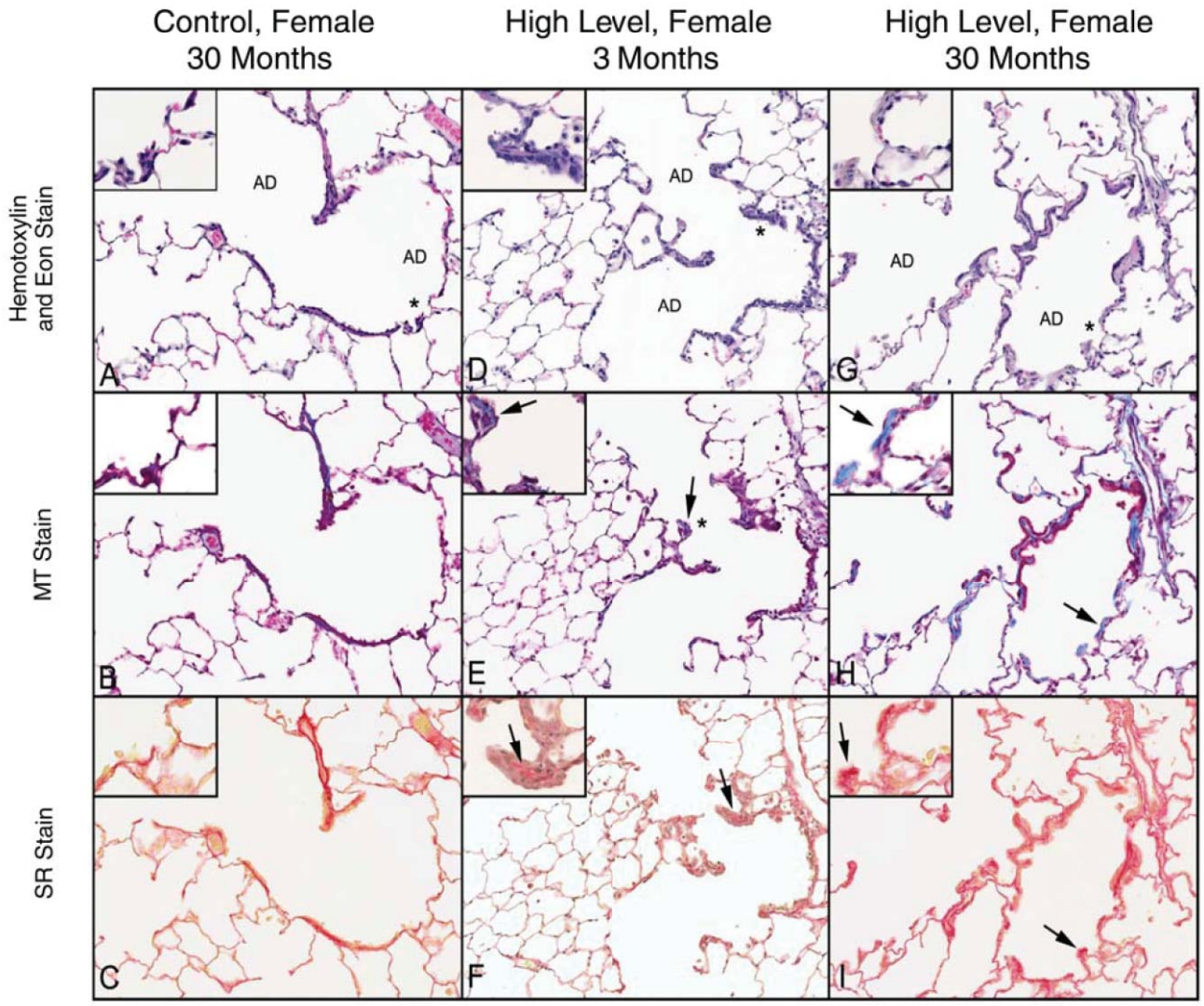


**Figure 4. Illustrative photomicrographs of female rat lungs after 3 and 30 months of exposure to NTDE.** Histochemical stains aid in demonstrating the minimal increase in mature collagenous connective tissue (termed "Fibrosis; Interstitial; Periacinar") sometimes occurring within areas of epithelial hyperplasia at 3 months and usually occurring after 30 months of exposure (all main panels original magnification 200×; all insets original magnification 400×; asterisk (*) designates region further magnified in insets; arrow indicates collagen): **(A–C) control female; 30 months: (A)** normal alveolar ducts (ADs) and adjacent alveoli as seen with hematoxylin and eosin stain, **(B)** Masson's Trichrome (MT) stain to highlight collagen in blue, and **(C)** Sirius Red (SR) stain to highlight collagen in red; **(D–F) high-group female; 3 months: (D)** centriacinar region demonstrates an increase in epithelial cells and connective tissue, **(E)** collagen within the stroma stains blue with the MT stain, and **(F)** red with the SR stain (see arrows in main panels and insets for examples). Note that area shown in inset for MT stain in panel E is slightly moved relative to D and F (as shown by asterisk in panel E) to better demonstrate a focus of collagen within the MT slide section; **(G–I) high-group female; 30 months:** centriacinar region demonstrating somewhat more prominent increase in collagenous tissue within alveolar duct region with hematoxylin and eosin stain **(G)**, MT stain **(H)**, and SR stain **(I)**.

## DISCUSSION AND CONCLUSIONS

This study was the first to evaluate potential biologic responses to repeatedly inhaled NTDE. It was designed with three exposure levels and a clean air control and with interim evaluations at 1, 3, 12, and 24 months, and terminal sacrifice (28 to 30 months). Rats were selected for this lifetime study both because they were expected, as observed in historical studies of TDE, to be more sensitive than mice to DE-induced lung neoplasia and because the previous hazard evaluations of TDE had focused primarily on responses in the rat (EPA 2002; Mauderly and Garshick 2009). The Wistar Han rat in particular was selected because of its relatively low incidence of background lung tumors and the concern that a higher background tumor incidence in F344 rats would make it potentially more difficult to distinguish subtle NTDE effects based on the number of animals in the study. A detailed description of the rationale for the decision is provided in Additional Materials 1 (available on the HEI Web site at *http:// pubs.healtheffects.org*). Although the Wistar Han rat is considered less sensitive to chemically induced neoplastic and non-neoplastic outcomes compared with the F344 rat (Weber et al. 2011), they have both been shown to be susceptible to the effects of high level exposure to TDE (Heinrich et al. 1995; Mauderly et al. 1987a; Nikula et al. 1995). Previous responses in both rat strains are described later in the section of this volume titled "Pathology Working Group Comparison Statement." The primary motivation for this study was to investigate the potential for NTDE to cause pre-neoplastic lung lesions or primary lung neoplasia similar to what had been observed in previous studies of TDE. The outcome showed that NTDE exposures at the highest practical concentration resulted in a markedly less severe and different biologic responses compared with the effects of TDE and did not provide any indication of a cancer potential in the respiratory tract or other organs.

The study was intentionally designed to potentially cause statistically significant exposure-related effects at the most extreme (high) exposure level and to potentially demonstrate no statistically significant effects at one or more of the two lower exposure levels. It was anticipated that any biologic effects would most likely be related to the concentration of $NO_2$ in the chambers; $NO_2$ was thus used as the target component for setting and controlling the NTDE dilutions. The high level of $NO_2$ (4.2 ppm target) was selected to approximate the weekly time-integrated exposure to $NO_2$ in a previous HEI-funded chronic inhalation study of male Fischer-344 rats exposed to $NO_2$ alone (Mauderly et al. 1990). That study evaluated some biologic endpoints similar to those used in the present study. Although $NO_2$ concentration level was the primary indicator of dilution in the present study, it is important to acknowledge that the exposure atmosphere was a complex mixture containing many components. The present study design did not allow discrimination among the contributions of the different exposure components to the observed effects. However, as described below, considerable effort was expended in evaluating the potential roles of $NO_2$ and other reactive gases in causing the observed responses.

The major outcome of this study was the absence of lung lesions that may be considered potentially pre-neoplastic or primary lung neoplasia in rats exposed to NTDE. Spherical parenchymal hyperplastic lesions are classically considered potentially pre-neoplastic in the rat lung and are usually seen within the alveolar regions, where the alveolar walls are lined by densely proliferative epithelial cells, yet alveolar architecture remains intact. Such lesions are considered pre-neoplastic because they usually increase alongside lung tumors as a result of exposure to a carcinogen. The lung lesions that were found in this study occurred at the high level of exposure only and were characterized by an increased number and prominence of basophilic epithelial cells lining terminal bronchioles, alveolar ducts, and adjacent alveoli (those in close proximity to the terminal bronchioles and alveolar ducts). In addition to the epithelial proliferation, there was a slight bronchiolization in some rats. The histologic findings showed an increase in the extent of the tissue changes in the respiratory tract between 3 and 12 months (McDonald et al. 2012). Of interest is that the severity of the tissue injury that was considered related to NTDE exposure did not increase substantially after 12 months.

Changes attributed to exposure within the nose/turbinates were generally minimal to mild. These changes also demonstrated a high level of variability within a given nasal section (where extent and location varied), between sections within an animal, between rats within an exposure group, and through time as animals progressed through the study. The most consistent findings—those involving the olfactory epithelial changes—were mostly unilateral, generally single and very small, often scattered across interim sacrifices, and did not show a pattern of distribution within the nose typical of exposure to an inhaled agent. Frequently only a single small focus was observed anywhere within all four nasal sections. It is noted that the often inconsistent pattern of occurrence is difficult to reconcile with typical nasal responses to inhaled toxicants (i.e., ozone [NTP 1994]), which generally show a more consistent pattern within the nose and through time. Any clinical significance was not apparent, and the minor degree

and inconsistent nature of the change renders the biologic significance uncertain.

In the present study, the apparent increase in combined incidence of thyroid follicular cell tumors in exposed female rats (6%) was considered to be an artifact of the remarkably low incidence in controls (1%) and not to be related to exposure to NTDE for several reasons:

- The incidence of thyroid follicular cell neoplasms in control females (1%) was abnormally low compared with historical control values. Historical control data for female Wistar Han rats document that thyroid follicular cell adenomas and carcinomas often occur spontaneously at similar or higher incidences than those observed in the females exposed to a high level of NTDE. In one summary of historical control rates in female Wistar Han rats that was based on 10 two-year bioassays of animals from a single supplier (Giknis and Clifford 2003), the reported overall incidence rate of follicular cell adenomas across studies was 3.6% (with 4 of the 10 studies exceeding 5%, and a maximum rate of 9.1%); for thyroid follicular cell carcinomas, the overall rate was 1.62%, with a maximum of 3.64%. Similarly, in an examination of 50 two-year studies (RCC 2003), the overall rate of thyroid follicular adenomas was 1.9% (with 3 studies showing rates of 6% or higher, and a maximum rate of 8.5%); for thyroid follicular cell carcinomas, the overall rate was 1.0%, with a maximum rate of 5.8%.
- The 5% incidence of follicular cell adenomas in high-exposure NTDE females is remarkably similar to the rates reported by Giknis and Clifford (2003) and is well within the range reported by RCC (2003). The 2% incidence of follicular cell carcinomas is also consistent with these reports of historical data from 24-month studies. This is particularly noteworthy given that the present study was of 30 months' duration and would therefore be plausibly expected to have resulted in higher incidences than in those 24-month studies.
- There was no evidence of an increase in incidence with increasing exposure concentration (i.e., no exposure–response) in the combined incidence of follicular cell adenomas and carcinomas in females (low level, 9%; mid level, 9%; high level, 6%; mortality-adjusted rates 13%, 14%, 13%, respectively).
- The apparent evidence of exposure-related increase in incidence was limited to only one sex (female). The incidence in high level males (2%) was actually decreased relative to controls (6%).
- There was no corresponding evidence of an increase in thyroid follicular cell hyperplasia (3% in females exposed to the high level vs. 3% in controls). This is typically considered the relevant "pre-neoplastic" change, which would also be expected to increase if the tumor observation were truly exposure-related. In addition, no increase was observed in tumor multiplicity.

As described earlier in the Methods and Study Design, the findings from the study pathologist were confirmed in a number of ways. The chronic study findings were peer-reviewed internally at LRRI and EPL, followed by a second, independent, review by a PWG organized by HEI. The peer review was conducted on all tissues of five males and five females from the high-level group and the same number of animals from the control group. It also included all lung and nose sections from all rats and all thyroid glands from all female rats. Any differences were resolved, and the PWG then reviewed the study. The role of the PWG was to evaluate the conclusions of the study pathologist (having already incorporated the pathology peer-review findings and input) and to compare the findings to previous studies of TDE and oxidant gases. The PWG was composed of five pathologists who were voting members, one non-voting member, and five observers, including two of the study pathologists and the HEI study monitor. The PWG examined in a blind fashion all neoplastic and representative non-neoplastic proliferative lesions of the nasal cavity and lung, including neoplastic nasal lesions previously identified at the interim sacrifices. The group also evaluated all proliferative lesions of the female rat thyroid glands. No primary lung tumors were found by the study pathologist, the peer-review pathologist, or the PWG. The PWG examined slides and agreed that three proliferative pulmonary lesions (one in a control female, one in a low-level-exposure female, and one in a high-level-exposure female) — diagnosed as *alveolar epithelial hyperplasia* by the study pathologist — were indeed hyperplasia and not pulmonary tumors. The group agreed that there was no evidence of increased tumors in the upper or lower respiratory tract of the rats after exposure to NTDE in this study. The PWG's conclusion was that the centriacinar regions of the rats exposed to control and mid-level NTDE that were analyzed were within normal limits for this age of animal and that periacinar hyperplasia was not present. The PWG opinion was that NTDE-related pulmonary lesions were restricted to rats exposed to the high level of NTDE.

Because the historical studies of TDE were a primary driver for the present study, it is useful to consider the contrast in biologic responses to the emissions from the two generations of technologies (see below). Further, the presence of the high concentrations of $NO_2$ in NTDE led to lesions that merit comparisons with previous inhalation

studies with reactive gases (also discussed below). Interestingly, the PWG noted that the minimal to mild periacinar lesions in the lungs of rats exposed to high levels of NTDE were similar to those reported in Wistar Han rats continuously exposed to 4 ppm $NO_2$ for 27 months in an earlier study (Kubota et al. 1987). In addition, the PWG noted that the accumulation of soot particles in the lung and the accompanying substantial sustained lung inflammation typical of TDE exposure in rats were absent in rats exposed to NTDE. The comparisons are consistent with the premise that there should be fewer chronic effects associated with the accumulation of DPM in the lung in the present study than in historical studies of TDE. Both neoplastic and non-neoplastic effects in the historical studies have largely been ascribed to the accumulation of large amounts of DPM, both as a cause of progressive lung hyperplasia and fibrosis and as a potential initiator and promoter of carcinogenesis (Hesterberg et al. 2012; Mauderly and Garshick 2009; McClellan et al. 2012; Brightwell et al. 1989; Heinrich et al. 1986, 1995; Stinn et al. 2005). It is reasonable to speculate that the markedly lower, and possibly nearly negligible, levels of exposure to DPM in the present study may preclude effects attributable to DPM. The potential for a different type of progressive lung remodeling, with lesser severity, associated with exposure to $NO_2$ in NTDE is less certain, but certainly plausible — especially at the high level of exposure used in this study.

For ease of comparison, Figure 5 provides histologic findings from the current study and previous studies as evaluated by the PWG (see also "Pathology Working Group Comparison Statement" later in this volume). The six panels show examples from the current study (panels A and B), TDE studies conducted by Mauderly and colleagues (1994; panel C) and Heinrich and colleagues (1986; panel D), a chronic $NO_2$ study (Mauderly et al. 1989; panel E), and a chronic study of ozone conducted by the National Toxicology Program (NTP 1994; panel F). In general, the TDE examples reflect the chronic responses in rats in all chronic studies of solid particles (including carbon black) described below. As illustrated in Figure 5, the differences in appearance between the lungs exposed to TDE and those exposed to NTDE are dramatic. The PWG concluded that these differences related to DPM accumulation were the most notable of those observed among the comparisons. The respiratory tract response to NTDE was similar in the type, location, and severity of lesions to that observed in previous chronic inhalation studies of rats exposed to the reactive gases $NO_2$ and ozone (Mauderly et al. 1989; NTP 1994). The PWG noted that the severity of the lesions found in the $NO_2$ study (Mauderly et al. 1989) was less than what was found in the current study with NTDE, but that the $NO_2$ study examined was shorter in duration and involved a lower cumulative dose of $NO_2$ (9.5 ppm $NO_2$, 7 hours/day for up to 24 months in the study by Mauderly and colleagues [1989] vs. 4.2 ppm $NO_2$, 16 hours/day for up to 30 months in the current study).

Perhaps the study closest in design to the present study was the one funded by HEI and the Department of Energy in which rats were exposed for 24 months to compare the carcinogenicity of TDE and carbon black at similar PM concentrations (Mauderly et al. 1994; Nikula et al. 1995). In that study, F344 rats were exposed 16 hours/day, 5 days/week to exhaust from 1988 GM LH6 6.2-L engines burning then-contemporary D-2 certification fuel (300+ ppm sulfur) and operating on a variable-duty cycle without exhaust after-treatment. As was typical of TDE, $NO_2$ constituted 10 to 20% of $NO_x$. Low- and high-level exposure atmospheres contained DPM (the concentration of which was estimated by subtracting the level of PM in control chambers from that in exposure chambers) at 2390 and 6280 µg/m$^3$ and $NO_2$ at 0.73 and 3.78 ppm, for $NO_2$/DPM mass ratios of 0.48:1 and 0.95:1, respectively. Those ratios were notably lower than the $NO_2$/DPM ratios in the present study. Lung tumors after long-term exposure were the focus of the study, but observations of tumors were limited in rats euthanized after 3, 6, 12, and 18 months of exposure. Exposure resulted in substantial accumulation of DPM in the lungs, accompanied by prominent lung inflammation and progressive epithelial and interstitial pulmonary pathology, including tumorigenesis. As illustrated in Figure 5, the most noticeable difference between the results of previous TDE studies (seen in panels C and D) and the present NTDE study (panels A and B) was the strikingly smaller accumulation of DPM in macrophages in the NTDE study. Figure 5 shows histologic findings from the study by Heinrich and colleagues (1986), which show a pattern of lung lesions in Wistar Han rats (the strain used in the present study) that is similar to that found in the F344 rats used in the study by Mauderly and colleagues (1989), results of which are shown in Figure 5C.

The characteristic lung pathology shown in Figure 5C and D that resulted from exposure to TDE was similar to those observed in several other TDE studies, including those in the Wistar Han rat (Brightwell et al. 1989; Heinrich et al. 1995; Stinn et al. 2005). Overall, the DPM exposure concentration–response relationship for the formation of tumors in chronically exposed rats was similar among those TDE studies (Mauderly and Garshick 2009). Lung carcinogenesis was strikingly less or absent in mice, hamsters, and guinea pigs exposed similarly. Exposure-related tumors in rats were observed only at high particle concentrations. Of interest is that similar concentrations of other inhaled solid

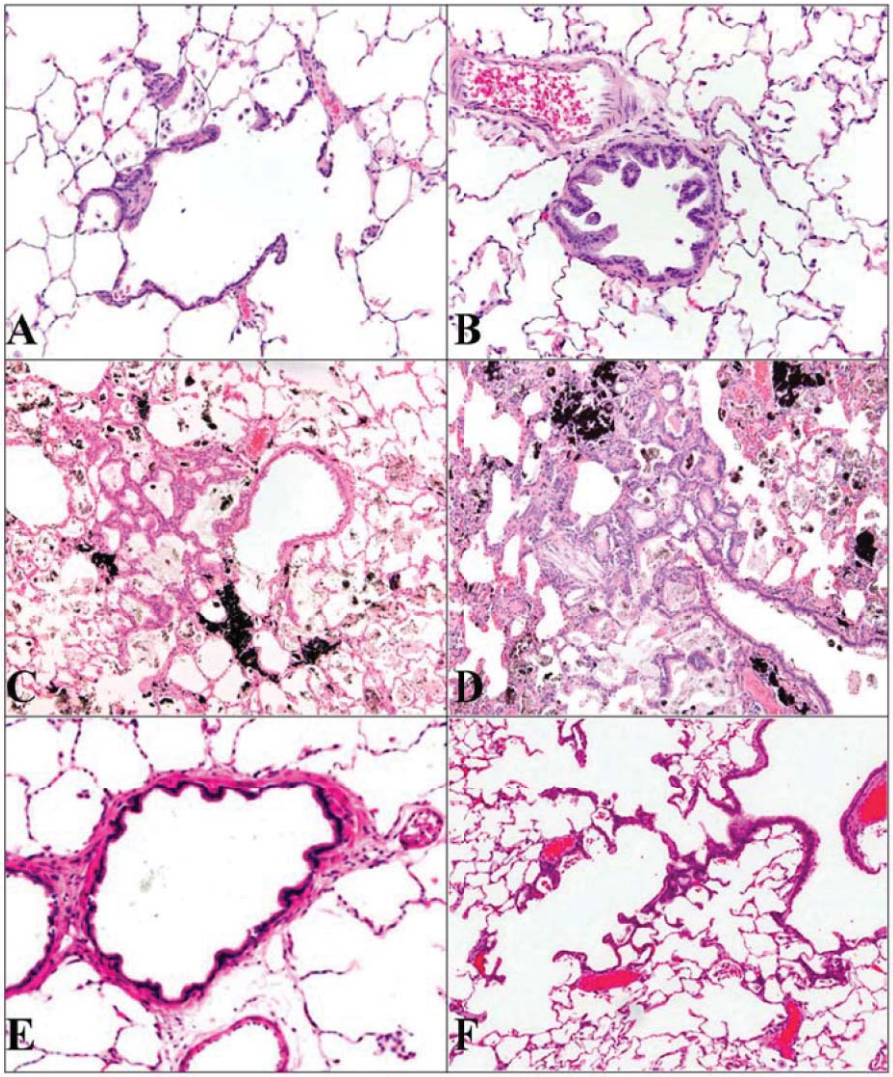


**Figure 5. Comparison of illustrative photomicrographs of rat lungs from the current study and chronic studies with other exposure atmospheres of interest** (for larger prints see Pathology Working Group Comparison Statement included in this volume): **(A) ACES investigation of NTDE (4.2 ppm $NO_2$, female Wistar Han, 30 months, original magnification 200×).** Minimal increase in thickening of alveolar walls with minimal increase in bronchiolar epithelium. While a few macrophages are present in this figure, inflammatory cells did not increase overall with exposure to the NTDE. These changes were found at only the highest exposures and not at the mid or low exposures (photograph by Rod Miller, EPL); **(B) ACES investigation of NTDE (4.2 ppm $NO_2$, female Wistar Han, 30 months, original magnification 200×).** Bronchiolar epithelial hyperplasia was an uncommon finding in rat lungs characterized by papillary projections into preterminal bronchiole in ACES (photograph by Rod Miller, EPL); **(C) LRRI TDE study (Mauderly et al. 1994) (6.5 mg/m³ PM, male F344/N, 24 months, original magnification 100×).** Rat lung after exposure to diesel exhaust for up to 2 years. Prominent black pigment free or within macrophages. Hyperplasia of bronchiolar epithelium extending into centriacinar alveoli. Numerous alveolar macrophages throughout the lung often containing pigment (lung slide provided by Andrew Gigliotti, LRRI; photograph by Rod Miller, EPL). Contrast with Panel A resulting from NTDE where increased pigment was absent; **(D) Fraunhofer TDE study (Heinrich et al. 1986) (4.2 mg/m³, female Wistar Han, 30 months, original magnification 100×).** Prominent black diesel soot particulates are present free in alveoli, in the numerous pulmonary alveolar macrophages, and in interstitial tissues. Centriacinar epithelial hyperplasia and bronchiolization were marked. Chronic inflammation, characterized by a mixed inflammatory cell infiltrate, fibrosis, and some sterol cleft formation, was marked. The entire lung was involved, and this picture is dramatically different from the findings in 2007 technology diesel (slide provided by Heinrich Ernst, Fraunhofer Institute; photograph by Rod Miller, EPL). Compare with Panel A; **(E) LRRI $NO_2$ study (Mauderly et al. 1989) (9.5 ppm $NO_2$, male F344, 24 months, original magnification 200×).** Preterminal bronchiole from the 24-month $NO_2$ rat study conducted at LRRI showing finding similar to ACES. These changes were uncommon in the $NO_2$ study and not as distinct as those shown in the Kubota et al. (1987) study in which animals were exposed to 4 ppm $NO_2$ for 27 months (lung slide provided by Andrew Gigliotti, LRRI; photograph by Rod Miller, EPL.); **(F) National Toxicology Program ozone study (NTP 1994) (1 ppm, male F344/N, 30 months, original magnification 100×).** Inhalation exposure up to 1 ppm for up to 30 months in F344/N male and female rats. The centriacinar area shows bronchiolar epithelial cells extending into centriacinar alveoli with minimal increase in thickening of alveolar walls and increased alveolar macrophages (photograph provided by Dr. Ron Herbert, U.S. National Toxicology Program, National Institute of Environmental Health Sciences).

particles used for comparison (e.g., carbon black and titanium dioxide) caused similar rates of tumor formation, suggesting that the formation of tumors was due to excess accumulation of particles and not to the composition of the particles per se (Heinrich et al. 1995; Hesterberg et al. 2012; Mauderly et al. 1994; Nikula et al. 1995).

Two previous HEI-funded studies of rats exposed repeatedly to $NO_2$ alone offer the closest comparison to the cumulative $NO_2$ exposures of the present study. In the first, Mauderly and colleagues (1987b) exposed 6-month-old male F344 rats 7 hours/day, 5 days/week for 6 months to $NO_2$ at 9.5 ppm as part of a project to compare the effects of DE and $NO_2$ in adult and developing rat lungs. The weekly cumulative exposure rate in that study was 332.5 ppm•hour, which was nearly identical to the design rate of 336 ppm•hour (4.2 ppm × 80 hours/week) and only somewhat less than the actual rate of 352 ppm•hour (4.4 ppm × 80 hours/week) for the average of the present study. In the 1987b study, after 6 months of exposure, lung weight was increased 7% compared with controls, but the increase was not statistically significant. The histologic appearance of the lungs was unremarkable, although cell proliferation was not assessed, and the appearance of epithelium in the centriacinar region was not specifically noted. Inflammatory cells were not increased in BALF, but other variables reflected cytotoxicity and oxidative stress. Pulmonary function did not differ significantly from control values. Thus, the structural and functional effects of 6 months of exposure of male F344 rats to $NO_2$ at a rate similar to that in the current study appear similar to the effects of the highest concentration of NTDE on male Wistar Han rats at 12 months in the present study. Considering the differences in rat strain, study design, and endpoints, the comparison might be interpreted as suggesting that $NO_2$ could have largely caused the minimal pulmonary pathology in the present study.

In the second HEI-funded $NO_2$ rat study (Mauderly et al. 1989, 1990), normal and emphysematous young adult male F344 rats were exposed to $NO_2$ to determine the influence of pre-existing emphysema on $NO_2$ effects. Those rats were also exposed 7 hours/day, 5 days/week to 9.5 ppm $NO_2$ (332.5 ppm•hour/week), but the exposures continued for 24 months. Body weight and mortality were unaffected, and no clinical morbidity was observed throughout the exposure. At 24 months, the lung/body weight ratio was increased by 25% compared with controls as a result of small changes in both variables. Morphometric measures of mean linear intercept and internal surface area gave no evidence of emphysematous changes from $NO_2$ alone. As illustrated in Figure 5E, there was mild hyperplasia of epithelium in terminal bronchioles and bronchiolization of proximal alveoli, accompanied by occasional foci of inflammatory cells in the same region. Overall, the inflammatory response was minimal. Responses in BALF endpoints reflected modest cytotoxicity and oxidative stress, and total lung collagen was increased. Clearance of inhaled radio-labeled tracer particles was not impaired. Two-way ANOVA identified significant effects of both $NO_2$ and emphysema on pulmonary function, but the effects were modest in magnitude. Lung volumes at standard inflation pressures and lung compliance were slightly increased, but differences were not significant by pairwise comparison. Three-way ANOVA indicated significant influences of $NO_2$ on lung volumes, but not compliance. Forced expiratory flows and $DL_{CO}$ were not reduced by $NO_2$. Overall, the impacts on pulmonary function of exposure for 24 months at a rate of 332.5 ppm•hour/week in the 1989 study were less than those of exposure for 24 months at a rate of 352 ppm•hour/week in the present study. The most striking difference was the lack of impact on forced expiratory flows in the earlier study, although the magnitude of functional impairment was small in both studies. Whether the greater functional impact of the present exposure was due to the 6% higher exposure rate, the presence of other pollutants in the exposure, or the difference in rat strain is not known.

Other studies have demonstrated significant biochemical and histopathologic effects of repeated exposure of rats to $NO_2$, but useful comparisons to the present study are challenged by differences in study design and endpoints, and many involved extremely high concentrations that were not relevant to the present study. Results from the following somewhat comparable studies support the plausibility that $NO_2$ may have been the primary driver of the histopathologic and functional effects in the present study.

Beginning in the early 1960s, Freeman and colleagues at Stanford University conducted a series of studies of 1-year-old male Sprague-Dawley rats exposed "continuously" (assumed for the present comparison to have been approximately 23 hours/day to allow for chamber maintenance), 7 days/week to $NO_2$ at concentrations ranging from 0.8 to 50 ppm (reviewed in Freeman et al. 1968a). After first exploring mortality associated with high-level exposure, investigators in subsequent studies focused primarily on the development of pulmonary emphysema. Exposure for 2 years at 12 ppm produced microscopically visible emphysema (Haydon et al. 1965), but exposures for 2 years at 2 or 0.8 ppm did not (Freeman et al. 1968a), although morphometric measures demonstrated a slight increase in alveolar diameter (Freeman et al. 1968b). Exposure to 0.8 ppm (approximately 129 ppm•hour/week) for 2 years or longer caused "suggestive but equivocal" changes in terminal bronchiolar epithelium (Freeman et al. 1966), and higher concentrations caused more distinct "hypertrophy" of epithelium in the terminal bronchiolar–alveolar duct region.

Bronchiolar epithelial hypertrophy was evident after only 16 weeks of exposure at 4 ppm (approximately 644 ppm•hour/week) (Haydon et al. 1965). In a more recent morphometric study (Juhos et al. 1980), the same group compared the diameters of the distal portions of terminal bronchioles in controls and rats exposed to 15.7 ppm $NO_2$ (approximately 2528 ppm•hour/week) for times ranging from 1 week to 17 months and estimated airflow rates assuming a standard driving pressure. Diameters and estimated flows were reduced at all times, compared with controls, and the effect was especially evident at 3 months and later. Although the $NO_2$ studies conducted by Freeman and colleagues offer no direct comparisons to the present study, the epithelial changes related to level of exposure in terminal airways and reduced estimated flows parallel somewhat the histologic changes in the terminal bronchiole–alveolar duct region and the reduced forced expiratory flows at the high exposure level (352 ppm•hour/week) in the present study.

Gregory and colleagues (1983) exposed male and female F344 rats to $NO_2$ at 0.95 or 4.95 ppm for 7 hours/day, 5 days/week for up to 15 weeks and reported effects on histopathology and a few BALF and lung tissue variables in data from combined sexes. They observed significant changes in BALF ALP, LDH, and glutathione peroxidase, and lung tissue glutathione balance variables at earlier time points in the high-level group, but no significant differences from control at 15 weeks. At 15 weeks, they observed subpleural macrophage accumulations accompanied by local hyperinflation in lung sections at the high exposure level. The 13-week observations in the present study (reported in McDonald et al. 2012) were closest in time to the 15-week observations by Gregory and colleagues. At those times, the cumulative $NO_2$ exposures were 2599 ppm•hour in the study by Gregory and colleagues and 863 and 4222 ppm•hour at the mid and high levels, respectively, in the present study. Somewhat similar to the Gregory findings, the highest level exposure in the present study caused significant exposure-related differences in lung tissue (but not BALF), glutathione variables in females, and the combined data at 4 weeks (Table E.7 in McDonald et al. 2012), but no significant differences at 13 weeks. In contrast, however, neither ALP nor LDH in BALF were significantly affected at either 4 or 13 weeks in the present study, and no subpleural macrophage accumulations were noted. Instead, significant incidences of periacinar epithelial hyperplasia were present in both sexes at the high level at 13 weeks (Table 7 in McDonald et al. 2012). Despite differences in experimental design, rat strain, and cumulative exposure to $NO_2$, the study by Gregory and colleagues, which found that BALF and lung tissue effects of $NO_2$ can resolve with continued exposure, supports the notion that the time courses of certain exposure effects in the present study may have reflected the effects of $NO_2$ in the NTDE.

Kubota and colleagues (1987) exposed male JCL/Wistar rats "24 hours/day" (assumed for the present comparison to have been 23 hours/day to allow for chamber maintenance) for 9, 18, or 27 months to $NO_2$ at 0.04, 0.4, or 4.0 ppm (approximately 6, 64, or 644 ppm•hour/week). They then used light and electron microscopy to characterize histopathologic responses. Exposure at 0.04 ppm produced no lesions evident by either technique. Exposure at 0.4 ppm produced electron microscopic evidence of hyperplasia of epithelium at the "bronchopulmonary junction" at 18 months, and the lesion was evident by light microscopy at 27 months. Exposure at 4.0 ppm produced epithelial hyperplasia evident by light microscopy at 9 months that was accompanied by evidence of interstitial fibrosis. The hyperplasia and fibrosis were somewhat progressive at 18 and 27 months. The study also reported changes in alveolar epithelium at 9 months, but that the lesion resolved at a later time.

In a study by Juhos and colleagues (1980), the epithelial hyperplasia and interstitial fibrosis that was observed after exposure to 4.0 ppm $NO_2$ were generally consistent with the nature and location of lesions observed at the highest exposure level of the current study in the terminal bronchiolar–alveolar duct region. The description in the paper by Juhos and colleagues suggests more severe lesions than observed at similar times in the present study, which is consistent with the higher exposure rate (644 vs. 352 ppm•hour/week).

There were mild increases in inflammatory and oxidative stress indicators in the present study. Most of the statistically significant findings were significant only by trend analysis, without significant differences by pairwise comparisons. Moreover, they often lacked corroboration from complementary measures by different outcome variables, findings at different times, and effects in both sexes. The large number of responses measured in this study combined with a criterion for statistical significance of $P \leq 0.05$ could have resulted in a small number of statistically significant differences from control by chance. Statistically significant differences that might be suspected to have occurred by chance include those accompanied by lack of evidence of an exposure–response trend, lack of corroboration by occurrence in both sexes, lack of changes in biologically related parameters, or lack of responses for which the minimal differences were large in relation to mean values.

One of the more interesting findings in the current study was the mild yet progressive decline in pulmonary function. Overall, the effects of exposure on pulmonary function were small and were manifested more strongly in females than males. The difference between sexes has been hypothesized

to result from a greater "dose" of pollutant per unit of lung size in female than in male rats, due to the greater ventilation per unit of lung size in females (Mauderly 1986). Exposure to NTDE acted to reduce forced flow performance somewhat, with a greater effect at the lower lung volumes. The tests used in this study do not determine the cause of the flow limitation, but the overall evidence is consistent with morphologic changes in the smallest airways (terminal bronchiolar–alveolar duct region) being a likely cause. The efficiency of gas transfer across the alveolar–capillary membrane was not measurably affected, but the volume of gas transferred per unit of time was slightly reduced in parallel with a slight reduction of the volume of test gas in the lung.

Most of the NTDE exhaust mass consists of $CO_2$ and $H_2O$. The remaining mass consists primarily of other inorganic gases such as CO, NO, and $NO_2$. DPM and VOCs account for only a very small fraction of the exhaust compared with those gases. Thus, the exposure atmospheres from this study and studies of newer TDE engines (e.g., McDonald et al. 2004) primarily consist of gaseous inorganic species with small amounts of PM and VOCs. The main differences between the exposure atmosphere in the present study and those of earlier TDE studies using pre-2007-compliant technologies were the concentration and composition of DPM relative to other pollutants. DPM mass comprised a significantly smaller portion of the total mass and had a markedly lower concentration in the present study than in earlier studies using TDE (e.g., Mauderly et al. 1987a; Nikula et al. 1995). However, there was a relatively high particle number concentration in the NTDE atmosphere. Indeed, the particle number concentration was similar to that of a previous inhalation study of TDE (McDonald et al. 2004). In the present study, the particle emissions occurred primarily during the trap regeneration. Because the nature of the observed biologic findings suggest that the responses may have been largely, if not entirely, attributable to a reactive gas (plausibly $NO_2$), it is doubtful that the particles played an important role in any of the observed effects.

The present study of NTDE also differs from earlier studies of TDE in that the concentration of $NO_2$ in NTDE was higher relative to concentrations of the other gases. The aftertreatment technology used in the present study oxidized NO to create $NO_2$, resulting in proportions of $NO_2$ that account for approximately 40 to 50% of the $NO_x$, compared with exhaust from previous technologies in which $NO_2$ comprised only 10% of the $NO_x$ (e.g., Cheng et al. 1984; McDonald et al. 2004).

In the present study, changes in the output of $NO_2$ occurred largely due to changes in trap performance over time. Because $NO_2$ was the primary dilution indicator, the resulting dilution of the test atmosphere changed over time. This resulted in only minor changes in the concentrations of many of the minor constituents; however, the concentrations of NO and CO increased somewhat over time. It is not thought that changes in these gases had an important impact on the outcome of the study, because NO and CO are not perceived to have played an important role in the biologic responses observed. Further, despite the fact that the dilution ratio changed throughout the study because of the change in $NO_2$, the atmospheres did not have large changes because of the low and variable concentrations of the majority of the constituents. As a result, the changing dilution ratio likely had little impact on the outcome of the study in terms of biologic response.

The temperature of the test atmospheres differed due to the introduction of different concentrations of the warmer exhaust into the cooler diluting (and control) air. The high-level exposure atmosphere was an average of approximately 2°C warmer than the control atmosphere over the course of the study. It is not thought that this magnitude of temperature difference had any impact on the biologic responses observed in this study.

Both DPM and $NO_2$ have historically been primary targets of concern for potential TDE-related health hazards, although certainly other components could also exert toxicity. The DPM and $NO_2$ concentrations at the highest level over the entire course of the present study averaged approximately 8 µg/m$^3$ and 4.4 ppm (6873 µg/m$^3$) (Table 3) for a $NO_2$/PM mass ratio of 859:1. The health studies of humans and animals exposed to TDE have mostly employed exposure atmospheres having very different $NO_2$/PM mass ratios. Mauderly (2010) reviewed the relevance of exposure atmospheres employed in published TDE studies to contemporary (TDE) emissions. At that time (mid-2010), the most contemporary engine system used in a published study was 19 years old and did not include aftertreatment to reduce PM emissions (Barath et al. 2010). The same group (Lucking et al. 2011) subsequently used the same engine (1991 Volvo TD40 GJE 4.0L) operated on a variable-duty cycle burning contemporary European fuel (5–7 ppm sulfur, 2–6% PAHs) and equipped with or without a continuously regenerating trap (CRT) for PM (DPF-CRT, Johnson Matthey, Royston, UK) to evaluate the effects of filtration on vascular responses in human subjects (Lucking et al. 2011). They reported that exposure to DE without the CRT (PM = 320 µg/m$^3$, $NO_2$ = 0.7 ppm, $NO_x$ = 6.4 ppm) significantly reduced the response of forearm blood flow to vasodilators and significantly increased ex vivo thrombus formation. Exposure to DE having passed through the CRT (PM = 7 µg/m$^3$, $NO_2$ = 3.4 ppm, $NO_x$ = 5.5 ppm) did not produce

significant responses. That study was the first to employ a $NO_2$/PM mass ratio (approximately 760:1) approaching that of the present study (859:1). Although the present study did not include the responses measured by Lucking and colleagues, the Lucking study clearly demonstrated that contemporary aftertreatment can reduce or eliminate certain biologic effects.

Overall, the findings of the present study of NTDE contrast markedly with those of similarly designed rat studies of TDE. The most notable differences were the absence of pre-neoplastic or neoplastic lung lesions, the lack of large accumulations of intra-alveolar macrophages filled with DPM, and the lack of lung inflammation, such as were observed in rats exposed to high concentrations of TDE. Although the highest exposure level was selected based on the $NO_2$ concentration, the dilution proved to be at or near the minimum at which chamber temperature could be maintained within the limits of current animal care guidelines.

The parallels between the present findings and results from chronic exposures of rats to $NO_2$, suggest that the biologic responses in the present study may have been caused largely, if indeed not entirely, by $NO_2$. In that regard, it is noteworthy that starting in 2010 in the United States, additional changes in technology in response to the more stringent $NO_2$ emissions standard have resulted in dramatic further reductions in $NO_x$, including $NO_2$. It is therefore reasonable to speculate that a similar chronic inhalation study involving 2010 NTDE technology may demonstrate no significant pathologic responses at the minimum exhaust dilution (maximum concentration) consistent with permissible animal housing conditions.

## SUMMARY

This report provides the results of biologic responses in Wistar Han rats exposed from young adulthood up to the end of their life span to inhalation exposures to combined tailpipe exhaust and crankcase emissions from a heavy-duty diesel engine system and fuel meeting U.S.-2007 on-road emission standards (NTDE). The highest exposure concentration (minimum exhaust dilution) was based on a target concentration of $NO_2$ that alone might be anticipated to elicit biologic responses. In addition to $NO_2$, the exposure atmosphere consisted of low concentrations of PM that had minimal "soot" content, small amounts of VOCs and SVOCs, and high concentrations of other gases such as CO and NO.

The major outcome of this study was the absence of pre-neoplastic lung lesions, primary lung neoplasia, and neoplasia of any type related to NTDE exposure. The minimal lung lesions that did result occurred only at the highest level of exposure and were characterized by an increased number (proliferation) and prominence of basophilic epithelial cells (considered reactive or regenerative) lining terminal bronchioles, alveolar ducts, and adjacent alveoli, with slight metaplastic change ("bronchiolization") noted in some animals. In addition to the epithelial proliferation, minimal to mild fibrosis occurred only around the centriacinar areas within the stroma underlying the epithelial change, and sometimes there was a subtle accumulation of pulmonary macrophages in affected areas. The histologic findings showed an increase in the extent of the tissue changes in the respiratory tract between 3 and 12 months (McDonald et al. 2012), but the lesions progressed little after 12 months. The type and extent of the lesions were similar to those observed in previous studies of $NO_2$ alone (e.g., Freeman et al. 1968a; Mauderly et al. 1989), which was a major constituent of the NTDE test atmosphere in the present study.

The rats exhibited statistically significant, exposure-level–related responses in indices that correlate with oxidative stress in the lung and had increased lung protein and cytokines that correlate with a mild inflammatory response. Similar to the lung histology findings, such responses have been observed in previous studies of $NO_2$. Pulmonary function tests revealed a limitation of forced expiratory flows, most pronounced at low lung volumes. The functional impairment was consistent with the mild histologic changes in the terminal airway and proximal alveolar region. There was an absence of several effects characteristic of responses to TDE, such as the extensive accumulation of DPM-containing alveolar macrophages and persistent inflammation that led to neoplastic lesions in rats.

## IMPLICATIONS OF FINDINGS

This was the first study to evaluate the biologic responses of rats to repeated, chronic inhalation of emissions from a fuel, engine, and aftertreatment system compliant with U.S. 2007 on-road standards. The primary motivation for this study was to investigate the potential for NTDE to cause pre-neoplastic lung lesions or primary lung neoplasia similar to those observed in previous studies of TDE. The literature suggests that the rat is the most sensitive laboratory animal species for evaluation of TDE, because of its sensitivity to high concentrations of particles (present in TDE), compared with other species (including humans) (Hesterberg et al. 2012; Mauderly 1995; McClellan et al. 2012). The outcome showed that the NTDE exposures resulted in markedly fewer and different

biologic responses than caused by similar exposures to TDE. Perhaps most important, the pre-neoplastic and neoplastic lung lesions characteristic of rats exposed chronically to TDE were absent in the present study of NTDE. These studies with NTDE were conducted in a rat strain (Wistar) that was shown in previous studies to develop neoplastic lesions in response to TDE exposures. Of additional importance is that the responses to NTDE might have been caused primarily or solely by $NO_2$. $NO_2$ emissions are now reduced considerably further under the current U.S. 2010 on-road emissions standards for DE.

In 2012 the International Agency for Research on Cancer (IARC) classified "diesel exhaust" as a class 1 carcinogen (IARC 2012). That conclusion was based on the epidemiologic and animal study literature on TDE, because no such literature existed for NTDE. IARC recognized the possibility that because NTDE has a composition different from that of TDE, there may be a corresponding change in the level of hazard. The IARC committee stopped short of making the distinction between TDE and NTDE, however, because of a lack of empirical evidence on the hazards of NTDE. Both McClellan and colleagues (2012) and Hesterberg and colleagues (2012) reviewed the rationale for distinguishing between the potential health hazards and risks from NTDE and TDE. They noted that in addition to the marked decrease in the concentrations of most individual components of emissions in NTDE compared with TDE, the composition of the exhaust is also quite different and that those differences may confer a difference in the hazard of the material. This report and the ancillary ACES reports included in this volume provide new empirical evidence supporting the importance of distinguishing between the potential health impacts of TDE and NTDE. The present findings strongly support the premise that advances in engine, fuel, and combustion technologies have substantially reduced the potential health impacts of DE and that estimates of hazard and risk based on laboratory or epidemiologic studies of the health impacts of TDE exposures most likely do not reflect either the hazards or the risks from NTDE.

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## MATERIALS AVAILABLE ON THE WEB

Appendices A through I and Additional Materials 1 and 2 contain supplemental material not included in the printed report. They are available on the HEI Web site at *http://pubs.healtheffects.org*.

Appendix A. Survival Rates for Rats in the Chronic Exposure Group

Appendix B. Body Weight

Appendix C. Organ Weights

Appendix D. Hematology/ Serum Chemistry and Coagulation Factors

Appendix E. Bronchoalveolar Lavage

Appendix F. Lung Tissue

Appendix G. Respiratory Function

Appendix H. Histopathology

Appendix I. Characterization of Exposure Atmospheres in the ACES Bioassay

Additional Materials 1: Memorandum on Rat Strain Decision

Additional Materials 2: ACES Phase 3B Protocol

## ABOUT THE AUTHORS

**Jacob D. McDonald** received a Ph.D. in environmental chemistry with an emphasis in atmospheric chemistry from the University of Nevada, Reno. He is the vice president for applied sciences as well as the director of the Environmental Respiratory Health Program at LRRI. He has oversight of all work conducted at the LRRI Applied Science facility (formerly the Inhalation Toxicology Research Institute facility). He served as principal investigator for Phase 3 of the ACES program.

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**Andrew P. Gigliotti**, D.V.M., D.A.C.V.P., also holds a Ph.D. in experimental pathobiology and is an associate contract scientist and veterinary pathologist in the LRRI Experimental Toxicology Program. He served as the necropsy/clinical pathology manager and the associate study pathologist for Phase 3 of ACES, working closely with Rodney Miller to ensure appropriate necropsy, gross observation, and tissue processing and management for the study. He is a board-certified veterinary pathologist who has served as study pathologist for many studies for government and industry sponsors, with an emphasis on the cardiovascular and respiratory systems.

**Judith Chow**, Sc.D., environmental science and physiology, is research professor and director of the Environmental Analysis Facility of the Desert Research Institute. She conducted analyses of metals and organics in emissions and test atmosphere samples for Phase 3 of ACES.

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**Joe L. Mauderly**, D.V.M., is an LRRI senior scientist emeritus. He was the original principal investigator and then served as a consultant to the HEI-funded ACES program. Mauderly was the principal investigator for all past subchronic and chronic studies of diesel emissions conducted at LRRI and has written extensively in the field. He supervised the assessments of pulmonary function.

**Steven K. Seilkop**, has an M.S. in statistics and holds an adjunct scientist appointment at LRRI. He also has served as a statistical consultant in the fields of health studies in animals, air pollution, and human health risks for more than 25 years. He served as principal investigator of a statistical support contract with NIEHS/NTP for the development

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**Rodney A. Miller**, D.V.M., D.C.A.V.P., is a board-certified veterinary pathologist at Experimental Pathology Laboratories, Inc. He served as the study pathologist for Phase 3 of ACES, with responsibility for histopathologic evaluations of all tissues. He worked closely with Dr. Gigliotti, the necropsy/clinical pathology manager, to ensure appropriate necropsy, gross observation, and tissue processing and management.

## OTHER PUBLICATION RESULTING FROM THIS RESEARCH

McDonald JD, Doyle-Eisele M, Gigliotti A, Miller RA, Seilkop S, Mauderly JL, et al. 2012. Part 1. Biologic responses in rats and mice to subchronic inhalation of diesel exhaust from U.S. 2007-compliant engines: report on 1-, 3-, and 12-month exposures in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES) Subchronic Exposure Results: Biologic Responses in Rats and Mice and Assessment of Genotoxicity. Research Report 166. Boston, MA:Health Effects Institute.

## ABBREVIATIONS AND OTHER TERMS

| | |
|---|---|
| ACES | Advanced Collaborative Emissions Study |
| ALP | alkaline phosphatase |
| ALT | alanine aminotransferase |
| ANOVA | analysis of variance |
| BAL | bronchoalveolar lavage |
| BALF | bronchoalveolar lavage fluid |
| CINC | cytokine-induced neutrophil chemoattractant |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| Cqs | quasistatic lung compliance |
| CRC | Coordinating Research Council |
| CRT | continuously regenerating trap |
| DAB | diaminobenzidine |
| DE | diesel exhaust |
| $DL_{CO}$ | lung diffusing capacity for carbon monoxide |
| DPBS | Dulbecco phosphate-buffered saline |
| DPF | diesel particle filter |
| DPM | diesel particulate matter |
| ELISA | enzyme-linked immunosorbant assay |
| EPA | U.S. Environmental Protection Agency |
| EPL | Experimental Pathology Laboratories |
| FEF | forced expiratory flow (at 10%, 25%, 50%, and 75% of total vital capacity) |
| $FEV_{0.1}$ | forced expiratory volume in 0.1 second |
| FVC | forced vital capacity |
| GLP | Good Laboratory Practices |
| GSH | glutathione |
| GSSG | oxidized glutathione |
| HO-1 | heme oxygenase 1 |
| IARC | International Agency for Research on Cancer |
| IL | interleukin |
| KC | keratinocyte-derived chemokine |
| LDH | lactate dehydrogenase |
| LRRI | Lovelace Respiratory Research Institute |
| µTP | micro–total protein |
| MIP-2 | macrophage inflammatory protein 2 |
| MMEF | mean mid-expiratory flow |
| NBF | neutral-buffered formalin |
| Ne | neon |
| NO | nitrogen monoxide |
| $NO_x$ | nitrogen oxides |
| $NO_2$ | nitrogen dioxide |
| NTDE | new-technology diesel exhaust |
| NTP | National Toxicology Program |
| PAHs | polyaromatic hydrocarbons |
| PBS | phosphate-buffered saline |
| PEFR | peak expiratory flow rate |
| PM | particulate matter |
| PMN | polymorphonuclear |
| $P_{tp}$ | transpulmonary pressure |
| PWG | Pathology Working Group |
| QC | quality control |
| SwRI | Southwest Research Institute |
| SSA | sulfosalicylic acid |
| SVC | slow vital capacity |
| SVOC | semivolatile organic compound |
| $T_{90}$ | time to reach 90% of the target atmosphere |
| TDE | traditional-technology diesel exhaust |
| TEAC | Trolox equivalent antioxidant capacity |
| TNF-α | tumor necrosis factor α |
| VA | alveolar volume |
| VOC | volatile organic compound |

# Pathology Working Group
# Report and Comparison Statement

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# PATHOLOGY WORKING GROUP REPORT AND COMPARISON STATEMENT

## PATHOLOGY WORKING GROUP REPORT

**Study Title**

Pathology Working Group (PWG) Report for Advanced Collaborative Emissions Study (ACES)

**Author**

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**Draft Report Issue Date**

10 July 2013

**Final Report Issue Date**

21 February 2014

**DISCUSSION**

A Pathology Working Group (PWG) met on 29 May 2013 in Chantilly, Virginia, to review pathology findings of the Advanced Collaborative Emissions Study (ACES), a 30-month inhalation study in rats. The testing facility was Lovelace Respiratory Research Institute (LRRI) Inhalation Toxicology Laboratory in Albuquerque, New Mexico. The study sponsor was the Health Effects Institute (HEI) of Boston, Massachusetts. The PWG review was held at the Covance-Chantilly facility in Chantilly, Virginia. The study pathologist responsible for the microscopic evaluation was Rodney Miller of Experimental Pathology Laboratories, Inc. Gary Boorman of Covance was the peer-review pathologist who selected slides for the PWG review. The list of participants is shown the table later in this section.

Annemoon van Erp presented an overview of the goals and objectives of ACES. Rodney Miller presented an overview of the lesions and the issues to the PWG members.

The purpose of ACES was to determine biologic responses of rats and mice to repeated inhalation exposure to exhaust from diesel engines compliant with U.S. 2007 emissions standards. Since mice were not exposed for more than 3 months and were not part of this review, further details are not provided.

**SIGNATURE PAGE**

I, the undersigned, hereby declare the work was performed under my supervision and the findings provide a true and accurate record of the results obtained.

Gary A. Boorman, DVM, MS, PhD, DABT, DACLAM
Diplomate, ACVP
Anatomic Pathologist and PWG Chair
Covance Laboratories Inc.

21 Feb 2014
Date

Male and female HsdRccHan:Wist rats were assigned to groups (140 rats/sex/exposure group) and exposed by inhalation (16 hours/day, 5 days/week) to exhaust at one of three dilutions from a diesel engine designed to meet 2007 on-road emissions standards of the United States. Exposures were based on nitrogen dioxide ($NO_2$) levels with target concentrations of 4.2, 0.8, and 0.1 ppm $NO_2$. The study included interim sacrifices of 10 animals/sex/exposure group at 1, 3, 12, and 24 months. The interim sacrifice pathology results have been subjected to peer review, and these slides were not included for PWG review, with the exception of several proliferative lesions of the lung and nasal cavity identified by the study pathologist at the 12- and 24-month interim sacrifices (see below). Phase 3B of ACES involved exposures up to 30 months in rats to determine potential carcinogenicity with exposure to this new-technology diesel exhaust. Approximately 100 animals/sex/exposure group were available for examination in the Phase 3B 30-month toxicology studies (actual numbers in each group varied between 93 and 102 rats/group). Because of decreasing survival, all remaining males were terminated at 28 months, while females reached the scheduled sacrifice at 30 months.

## PATHOLOGY WORKING GROUP PARTICIPANT SIGNATURES

PWG PARTICIPANTS' SIGNATURE PAGE
09-111 RAT ACES – Advanced Collaborative Emissions Study (ACES)

**Chair**

Gary Boorman, DVM, Diplomate ACVP, Ph.D.
Covance, Inc

5/29/2013
Date

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Date

The study pathologist performed a histopathologic examination on all tissues for the control and high-exposure animals, including five sections of lung and nasal cavity at four levels. For Groups 2 (low-exposure) and 3 (mid-exposure), five sections of lung and nasal cavity at four levels were examined as well as macroscopic lesions. The peer-review pathologist examined all lung and nasal cavity sections from all exposure groups. The peer-review pathologist examined thyroid from high-exposure (Group 4) and control (Group 1) animals and macroscopic lesions in the intermediate-exposure groups.

The PWG examined in a blind fashion all proliferative lesions of the nasal cavity and lung, including lesions previously identified at the interim sacrifices. Primary lung tumors were not found by the study pathologist, peer-review pathologist, or PWG members. The PWG examined the slides and agreed that three proliferative pulmonary lesions (one control female, one low-exposure female, and one high-exposure female) diagnosed as alveolar epithelial hyperplasia by the study pathologist were hyperplasia and not pulmonary tumors. Papilloma/adenomas of the nasal respiratory epithelium were found in one 12-month

PWG PARTICIPANTS' SIGNATURE PAGE
09-111 RAT ACES – Advanced Collaborative Emissions Study (ACES)

**Observers**

Ernest E. McConnell — 29 MAY 13
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[a] Participated in 30 May 2013 meeting only.

interim-sacrifice control male, one 24-month interim-sacrifice mid-exposure male, and one high-exposure male examined after 28 months of exposure. All potential nasal tumors were reviewed from the 12- and 24-month interim-sacrifice animals and from animals examined at the end of the 30-month study. The PWG agreed that no evidence of increased tumors was noted in the upper or lower respiratory tract of rats following exposure to 2007-technology diesel exhaust in this study.

The incidence of thyroid follicular cell adenomas and follicular cell carcinomas was higher in high-exposure females (8) compared with concurrent control females (1). An increased incidence of thyroid follicular cell tumors was not found in males in this study. The PWG members reviewed the thyroid follicular cell lesions (hyperplasia, adenoma, and carcinoma) from females, including the mid-exposure groups where only macroscopic lesions were examined. The PWG members generally agreed with the diagnoses of the study pathologist; thus, more thyroid follicular cell tumors were found in the high-exposure female group. The thyroids were examined in a coded fashion to mask group identity, and where the PWG consensus differed from the study pathologist, the diagnoses were changed to reflect the PWG opinion. The PWG recommendation was that the thyroid be examined from the low- and mid-exposure groups (Groups 2 and 3).

The PWG members evaluated slides of lungs from high-exposure males and females and assessed the severity of

the lesions found. The slides were selected to illustrate periacinar interstitial fibrosis, periacinar epithelial hyperplasia, and bronchiolization; these findings were considered by the study pathologist to be related to inhalation of 2007-technology diesel exhaust. These slides also included examples of focal alveolar histiocytosis, considered a common but incidental lesion. Most of the lesions were of minimal to slight severity, and the PWG agreed the histiocytosis was an incidental lesion not related to exposure. Periacinar interstitial fibrosis was usually a very minimal to mild lesion involving the wall at the terminal bronchiole and proximal alveolar ducts. Periacinar epithelial hyperplasia was characterized by increased number of airway epithelial cells and generally affected only a portion of the centriacinar regions on the slide (PWG Report Figure 1). A sometimes prominent feature was the small papillary-like projections into the lumen of preterminal and terminal bronchioles (PWG Report Figure 2). These projections were lined by epithelium, sometimes with a central stalk. The PWG members did not consider the periacinar epithelial hyperplasia a pre-neoplastic lesion but rather a response to the inhalation of the diesel exhaust. Bronchiolization was a less common finding, characterized by bronchiolar cells extending into alveolar ducts and centriacinar alveoli. Bronchiolization generally includes the presence of ciliated cells, Clara cells, and/or hypertrophied Type II alveolar cells in alveolar ducts and adjacent alveoli. For this study, the study pathologist used the presence of ciliated cells as a hallmark of bronchiolization. In some cases, increased numbers of macrophages accompanied bronchiolization, but a remarkable finding was the general lack of inflammatory cells associated with the inhalation of the 2007-technology diesel exhaust.

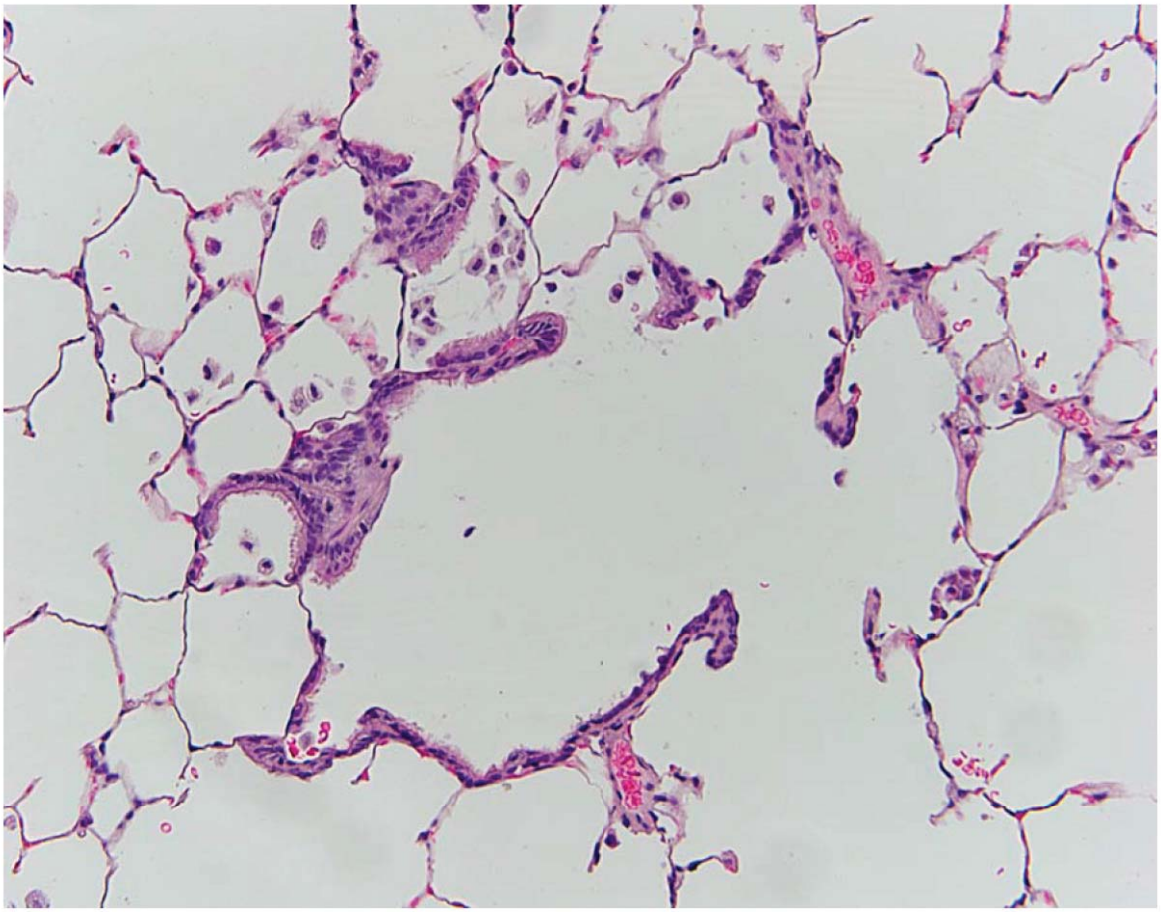
In addition, PWG members noted the presence of mucus-containing cells in the larger axial airways, which sometimes extended into small-diameter preterminal bronchioles, suggesting this lesion might be an uncommon metaplastic change.

Four high-exposure females had pinpoint focal dark spots on the lungs at necropsy when the lungs were examined under a dissecting microscope. Two lesions were examined by the PWG. These dark spots were subpleural foci of pigment-containing macrophages and considered incidental findings but were distinct from the alveolar histiocytosis found in most animals.

The PWG members evaluated slides of lungs from control and mid-exposure groups of male and female rats. Samples were selected from rats that had reached scheduled sacrifice and had 30 months (females) or 28 months (males) of exposure for 16 hours/day, 5 days/week. All lung sections from two mid-exposure animals diagnosed with peribronchiolar hyperplasia were also examined in a coded fashion. The PWG conclusion was that the centriacinar regions were within normal limits for this age of animal, and periacinar hyperplasia was not present. The PWG opinion was that diesel-exhaust–related pulmonary lesions were restricted to high-exposure animals.

The PWG examined slides of the nasal cavity for the presence of suppurative inflammatory lesions and the presence of degeneration of olfactory epithelium. The PWG agreed with the diagnoses of suppurative inflammation and olfactory epithelial degeneration. It was noted that olfactory lesions were very small, focal, usually unilateral, and showed no pattern related to diesel exposure. Often, only one small focus was present in the four sections of the nasal cavity. Olfactory epithelial degeneration was considered an incidental finding. It was also noted that this might have been an aging phenomenon and that these rats were up to 30 months old. Suppurative inflammation generally occurred only at the Level I nasal section, and the incidence was not exposure-related. The PWG members noted an increase of mucous cells on the nasal septum and lateral wall. The PWG members recommended evaluation of the nasal cavity from a subset of untreated control animals and high-exposure animals for the presence of mucous cells to determine whether mucous cell hyperplasia/metaplasia was incidental or exposure-related.

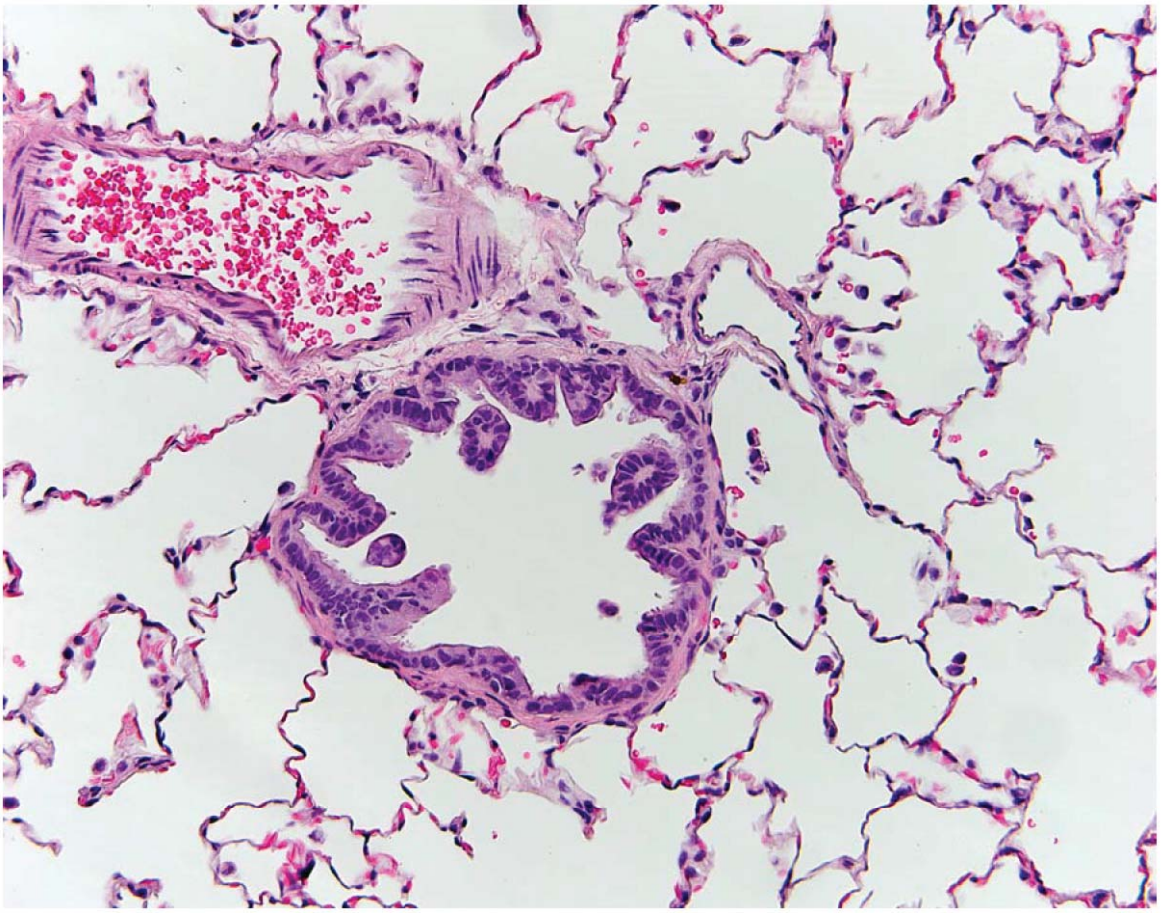
Following the PWG review, the chair and study pathologist reviewed a subset of nasal cavity slides containing a Level I section from control and high-exposure animals from the end of the 30-month study. Slides containing a Level I section of the nasal cavity were selected randomly from 10 animals/sex/exposure group for control and high-exposure rats and coded to mask group identity. The presence of mucous cells in the epithelium of the nasal section and the lateral wall at Level I was graded independently and in a blind fashion by the study and peer-review pathologists. There was good agreement on the independent review by the two pathologists for incidence and severity of lesions. The review did not reveal a clear difference between controls and high-exposure animals for incidence and/or severity of lesions. Mucous cells in the epithelial lining of the nasal cavity were usually part of a complex of lesions that included suppurative inflammation, squamous metaplasia, and respiratory epithelial hyperplasia. Squamous metaplasia and respiratory epithelial hyperplasia were recorded separately for the nasal septum and for the lateral wall in the study. The review suggested mucous cells, mostly in the nasal cavity but also in the pulmonary airways, were not uncommon in the study and may have been related to the strain of rat and/or length of the study.



**PWG Report Figure 1. ACES 2007-technology diesel exhaust study (4.2 ppm $NO_2$, female Wistar Han, 30 months, original magnification 200×).** Minimal increase in thickening of alveolar walls with minimal increase in bronchiolar epithelium. While a few macrophages are present in this figure, no overall increase in inflammatory cells was noted with exposure to the 2007-technology diesel exhaust. These changes were found at only the highest exposures and not at the mid or low exposures. (Photograph by Rod Miller, EPL.)

## CONCLUSION

Overall, the study was considered well conducted and was a good test for potential carcinogenicity with approximately 100 animals/exposure group and exposures of up to 30 months. The PWG concluded that no evidence of carcinogenicity in the respiratory tract was noted with exposure to exhaust from U.S. 2007-compliant diesel technology in this study. The thyroid follicular cell tumors in female rats were considered of uncertain significance. Examination of mid-exposure males and females may provide some evidence for the presence or lack of an exposure–response relationship. It was noted that the incidence of these tumors in high-exposure females was not unlike historical control rates for this strain in 24-month studies. Little historical control data are available for this strain in comparable 30-month studies. Pulmonary lesions were restricted to high-exposure animals, were often slight to minimal severity, and affected a subpopulation of the acinar regions. The PWG noted the lungs were dramatically less affected than those in the reported studies of exposure to



**PWG Report Figure 2. ACES 2007-technology diesel exhaust study (4.2 ppm $NO_2$, female Wistar Han, 30 months, original magnification 200×).** Bronchiolar hyperplasia was an uncommon finding in rat lungs in ACES, characterized by papillary projections into preterminal bronchioles. (Photograph by Rod Miller, EPL.)

old-technology diesel exhaust in the literature, where particulate overload was often a problem. Interestingly, it was noted by the panel that the minimal to mild periacinar lesions in the lungs of high-exposure rats were similar to those previously reported in Wistar rats continuously exposed to 4 ppm $NO_2$ for 27 months (Kubota et al. 1987).

## ARCHIVE STATEMENT

The original copy of this report will be stored in the Covance archives for at least 5 years.

## REFERENCE

Kubota K, Murakami M, Takenaka S, Kyono H. 1987. Effects of long-term nitrogen dioxide exposure on the rat lung: morphological observations. Environ Health Perspect 73:157–169.

## PATHOLOGY WORKING GROUP COMPARISON STATEMENT

### Study Title

Pathology Working Group (PWG) Statement Comparing Pulmonary Morphology from the Advanced Collaborative Emissions Study (ACES) with the National Toxicology Program (NTP) 30-Month Ozone Study, Lovelace Respiratory Research Institute (LRRI) Diesel Exhaust Study, LRRI Nitrogen Dioxide ($NO_2$) Study, and the Fraunhofer Institute Long-term Inhalation of Filtered and Unfiltered Diesel Engine Emissions Study

**SIGNATURE PAGE**

I, the undersigned, hereby declare the work was performed under my supervision and the findings provide a true and accurate record of the results obtained.

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Anatomic Pathologist and PWG Chair
Covance Laboratories Inc.

21 Feb 2014
Date

The PWG members and observers participated in drafting of the report.

PWG PARTICIPANTS' SIGNATURE PAGE
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## DISCUSSION

A Pathology Working Group (PWG) met on 30 May 2013 in Chantilly, Virginia, to compare the pulmonary pathology findings of the Advanced Collaborative Emissions Study (ACES), a 30-month inhalation study of 2007-technology diesel exhaust in rats, with previous inhalation studies examining other air toxicants. The day prior, the PWG members reviewed the lungs of rats in the ACES bioassay as well as other tissues of interest. The goal of the second day was to compare the lung lesions in rats from ACES with lung lesions in rats exposed to other inhalation toxicants. This review was held at the Covance-Chantilly facility in Chantilly, Virginia. The PWG members and participants (see list in PWG Report table earlier in this volume) reviewed scanned lung slides from the National Toxicology Program (NTP) 30-month ozone lifetime study in rats (NTP 1994). In addition, they reviewed histologic slides of the lung from rats that had been exposed for 24 months to old-technology diesel exhaust (Mauderly et al. 1994) and to nitrogen dioxide ($NO_2$; Mauderly et al. 1989), both conducted at the Lovelace Respiratory Research Institute (LRRI).

Subsequent to the 30 May 2013 slide review, Drs. Rod Miller and Gary Boorman reviewed additional slides from the $NO_2$ study at lower levels of exposure, additional low-exposure slides from the LRRI study of old-technology diesel exhaust (Mauderly et al. 1994), and slides from a 1986 Fraunhofer Institute lifetime inhalation study in which rats had been exposed to clean air, filtered diesel exhaust without particulate matter (PM), or unfiltered diesel exhaust (including PM; Heinrich et al. 1986). Dr. Miller took photographs of representative lesions from ACES, the $NO_2$ study, the Fraunhofer Institute diesel exhaust study, and from scanned slides from the NTP 30-month ozone inhalation study. These photomicrographs are used in this report to illustrate differences and similarities between ACES and other air toxicant studies.

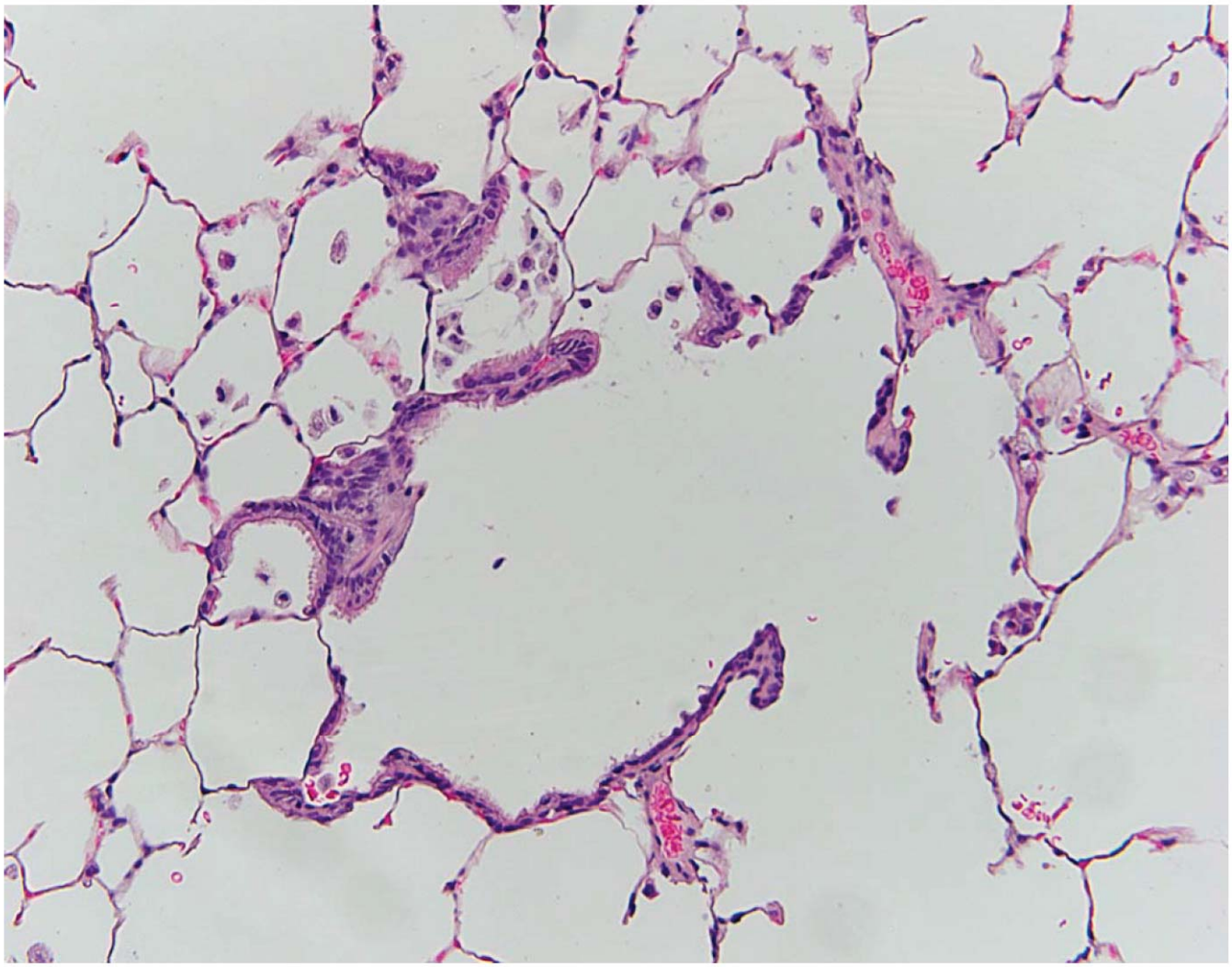
### ACES Investigation of 2007-Technology Diesel Exhaust

The PWG reviewed slides from ACES (McDonald et al. 2014) as described in the accompanying PWG report. In brief, high-exposure (4.2 ppm $NO_2$) male and female Wistar Han rats had periacinar interstitial fibrosis, periacinar epithelial hyperplasia, and bronchiolization considered related to inhalation of 2007-technology diesel exhaust. Most of the lesions were of minimal to mild severity. Periacinar interstitial fibrosis was usually a very minimal to mild lesion involving the wall at the terminal bronchiole and proximal alveolar ducts. Periacinar epithelial hyperplasia was characterized by increased number of airway epithelial cells and generally affected only a portion of the centriacinar regions on the slide (PWG Comparison Statement Figure 1). An occasional finding was the small papillary-like projections into the lumen of preterminal and terminal bronchioles (PWG Comparison Statement Figure 2). These projections were lined by epithelium, sometimes with a central stalk. These bronchiolar lesions were uncommon and not present in most slides. Bronchiolization was a less common finding characterized by bronchiolar cells extending into alveolar ducts and centriacinar alveoli. Bronchiolization generally included the presence of ciliated cells, Clara cells, and/or hypertrophied Type II alveolar cells in alveolar ducts and adjacent alveoli. A remarkable finding was the general lack of inflammatory cells associated with inhalation of the 2007-technology diesel exhaust and lack of pigment in the lung.

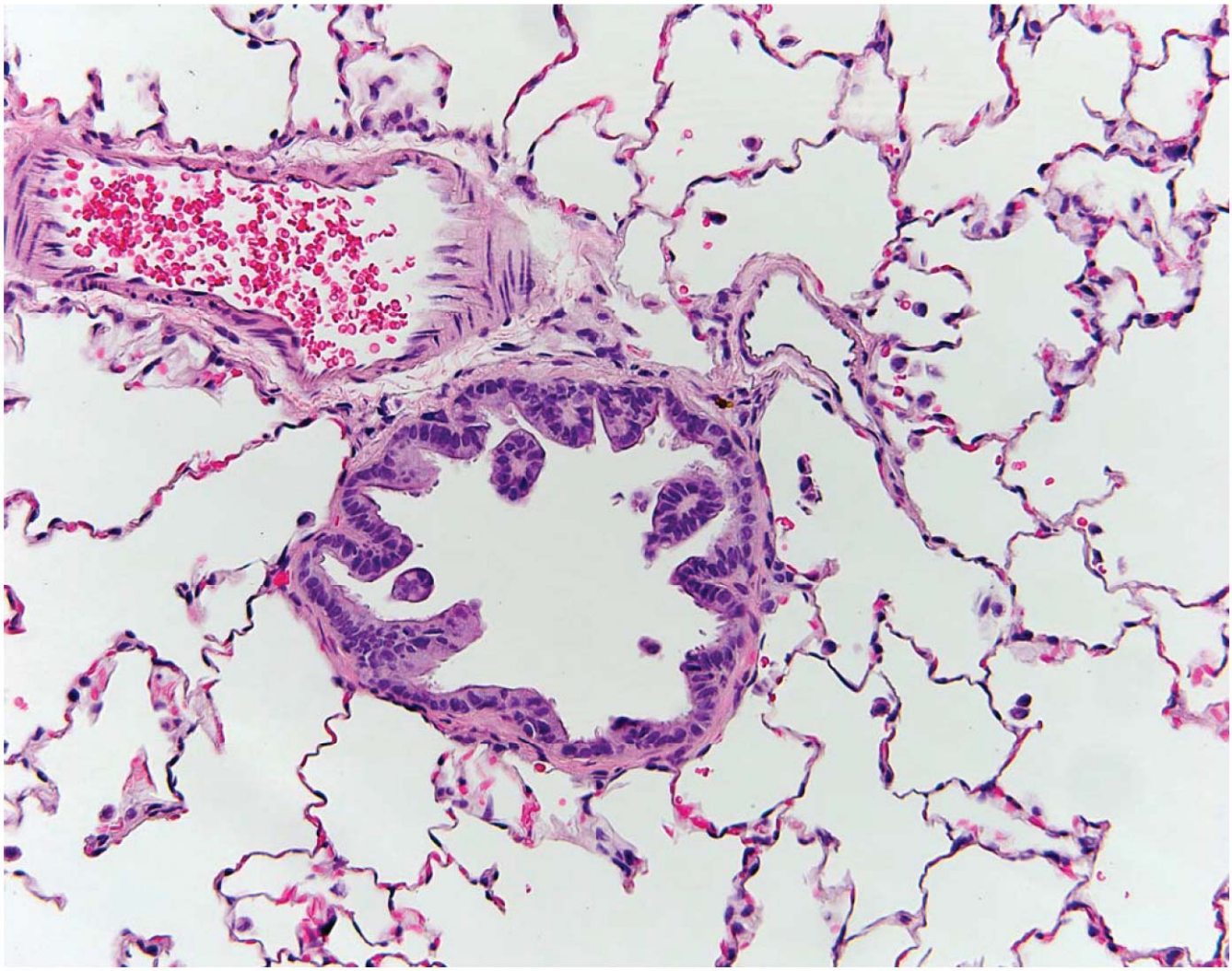
The PWG members concluded that the lungs of low-exposure (0.1 ppm $NO_2$) and mid-exposure (0.8 ppm $NO_2$) rats were within normal limits for the age of the animals, and periacinar hyperplasia was not present. The PWG opinion was that diesel-exhaust–related pulmonary lesions were restricted to high-exposure animals.

### NTP 30-Month Rat Ozone Study

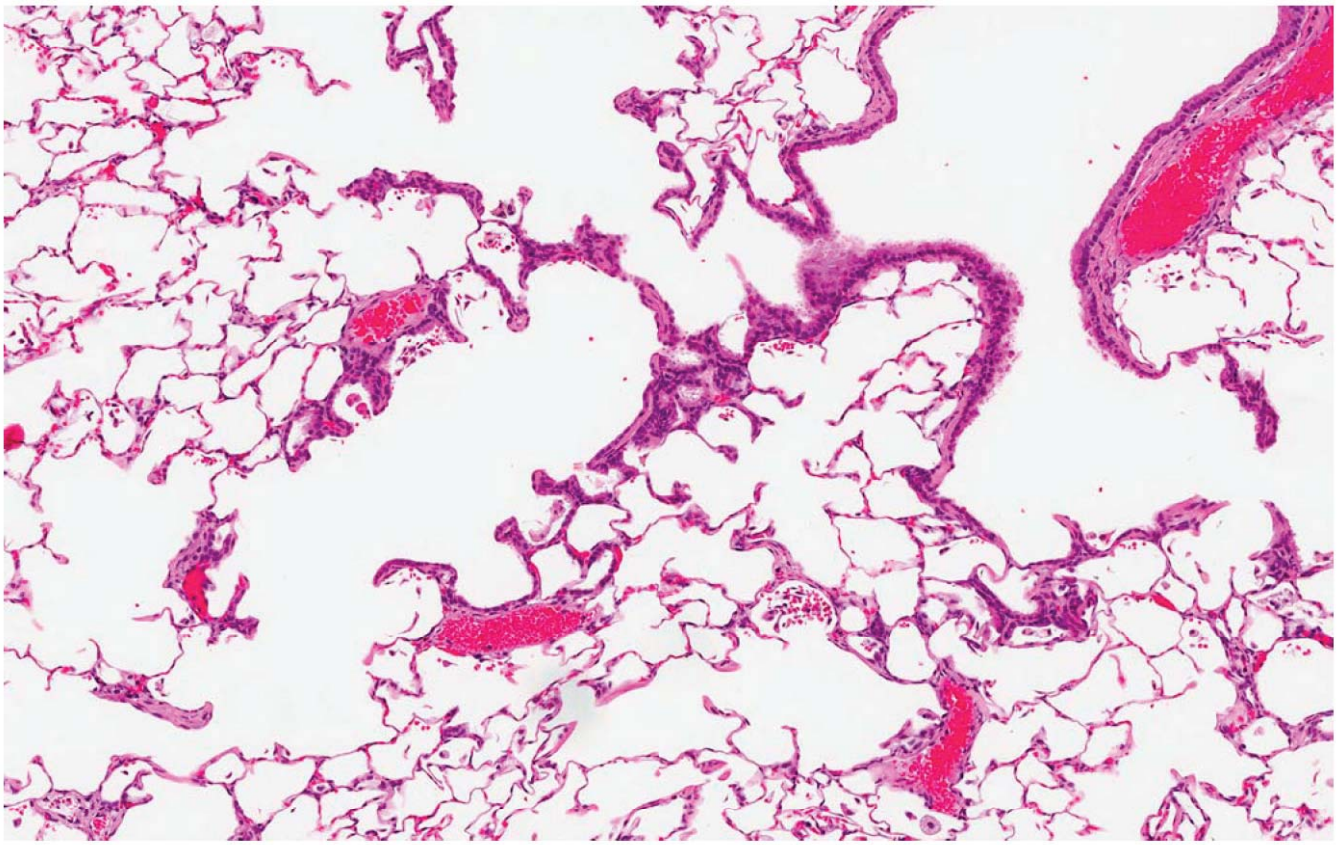
The PWG reviewed scanned slides of the NTP ozone study, in which male and female F344/N rats were exposed to 0.5 or 1 ppm ozone for 6 hours/day, 5 days/week for up to 30 months, with remote access to slides on file at NTP (courtesy of Dr. Ron Herbert). The lungs of rats exposed to 1 ppm ozone showed minimal centriacinar changes. The changes were characterized by few centriacinar alveolar macrophages and slight thickening of the centriacinar wall. Preterminal lesions, as seen in ACES, were not seen in scanned slides from ozone-exposed animals. However, centriacinar lesions (PWG Comparison Statement Figure 3) were seen in these animals, not unlike those in



**PWG Comparison Statement Figure 1. ACES 2007-technology diesel exhaust study (4.2 ppm $NO_2$, female Wistar Han, 30 months, original magnification 200×).** Minimal increase in thickening of alveolar walls with minimal increase in bronchiolar epithelium. While a few macrophages are present in this figure, no overall increase in inflammatory cells was noted with exposure to the 2007-technology diesel exhaust. These changes were found at only the highest exposures and not at the mid or low exposures. (Photograph by Rod Miller, EPL.)



**PWG Comparison Statement Figure 2. ACES 2007-technology diesel exhaust study (4.2 ppm $NO_2$, female Wistar Han, 30 months, original magnification 200×).** Bronchiolar hyperplasia was an uncommon finding in rat lungs in ACES, characterized by papillary projections into preterminal bronchiole. (Photograph by Rod Miller, EPL.)

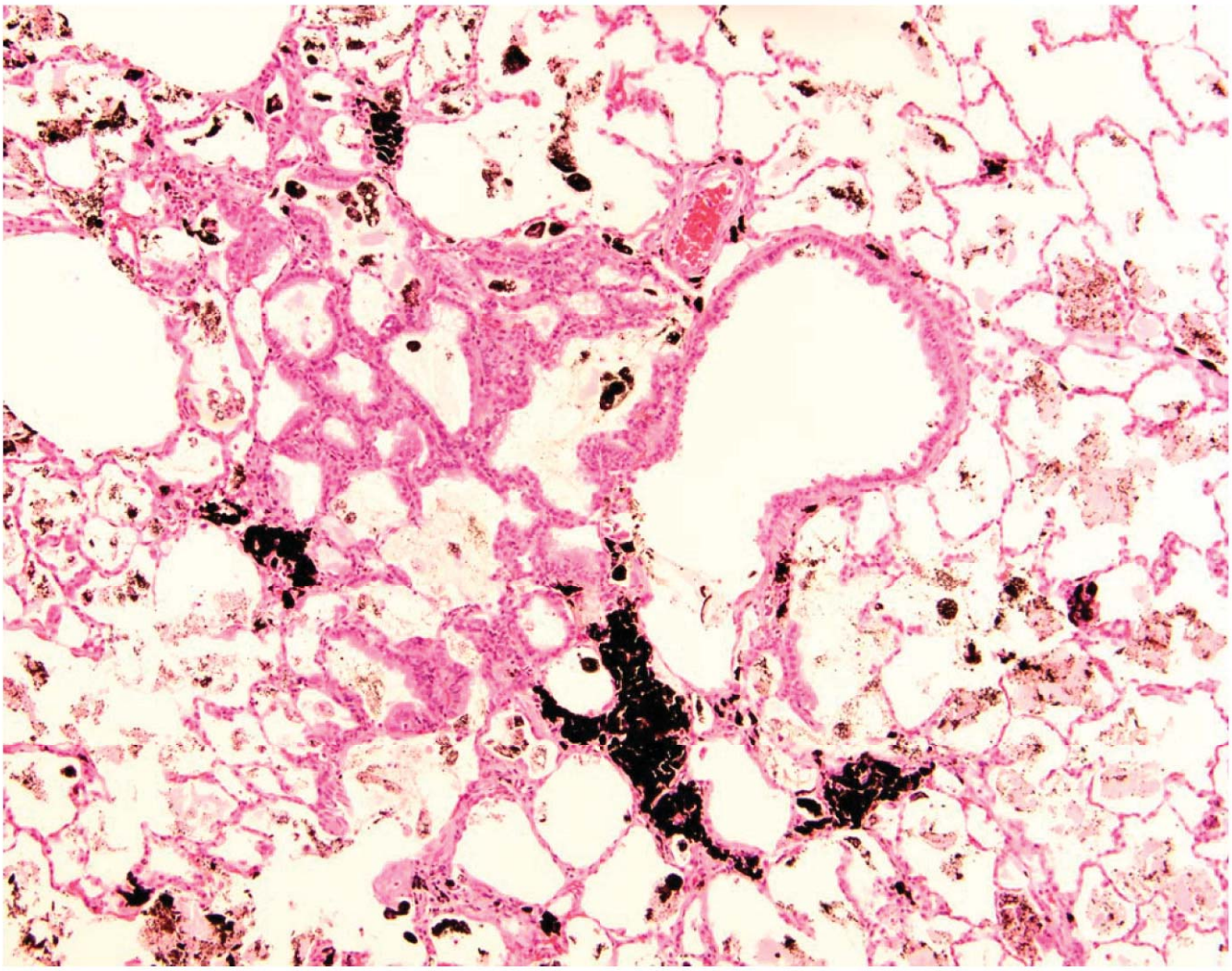


**PWG Comparison Statement Figure 3. NTP ozone study (NTP 1994) (1 ppm, male F344/N, 30 months, original magnification 100×).** Inhalation exposure up to 1 ppm for up to 30 months in F344/N male and female rats. The centriacinar area shows bronchiolar epithelial cells extending into centriacinar alveoli with minimal increase in thickening of alveolar walls and increased alveolar macrophages. (Photograph provided by Dr. Ron Herbert of the U.S. National Toxicology Program, National Institute of Environmental Health Sciences.)

ACES. The NTP report (1994) described the ozone lesions as multifocal and centriacinar. The ozone lesions in rats exposed up to 30 months were characterized by the presence of cuboidal epithelium (ciliated and nonciliated) along the alveolar ducts where Type I epithelium is normally present. Histiocytic infiltration and interstitial fibrosis were also noted.

### LRRI Old-Technology Diesel Exhaust Study

Seven slides were available from the old-technology diesel exhaust study conducted at LRRI (Mauderly et al. 1994) in which male and female F344/N rats were exposed to diesel exhaust at PM concentrations of 2.5 or 6.5 mg/m$^3$ for 16 hours/day, 5 days/week, for 24 months. The PWG members agreed the lungs of high-exposure animals were strikingly different from those in ACES. Alveoli containing numerous pigment-laden macrophages, squamous metaplasia, and squamous cell carcinomas were present in some lungs. Inflammation and respiratory epithelial hyperplasia are shown in PWG Comparison Statement Figure 4. The pulmonary lesions were very similar to those observed in the Fraunhofer Institute study in which rats were exposed to whole diesel exhaust including PM (see later section on the

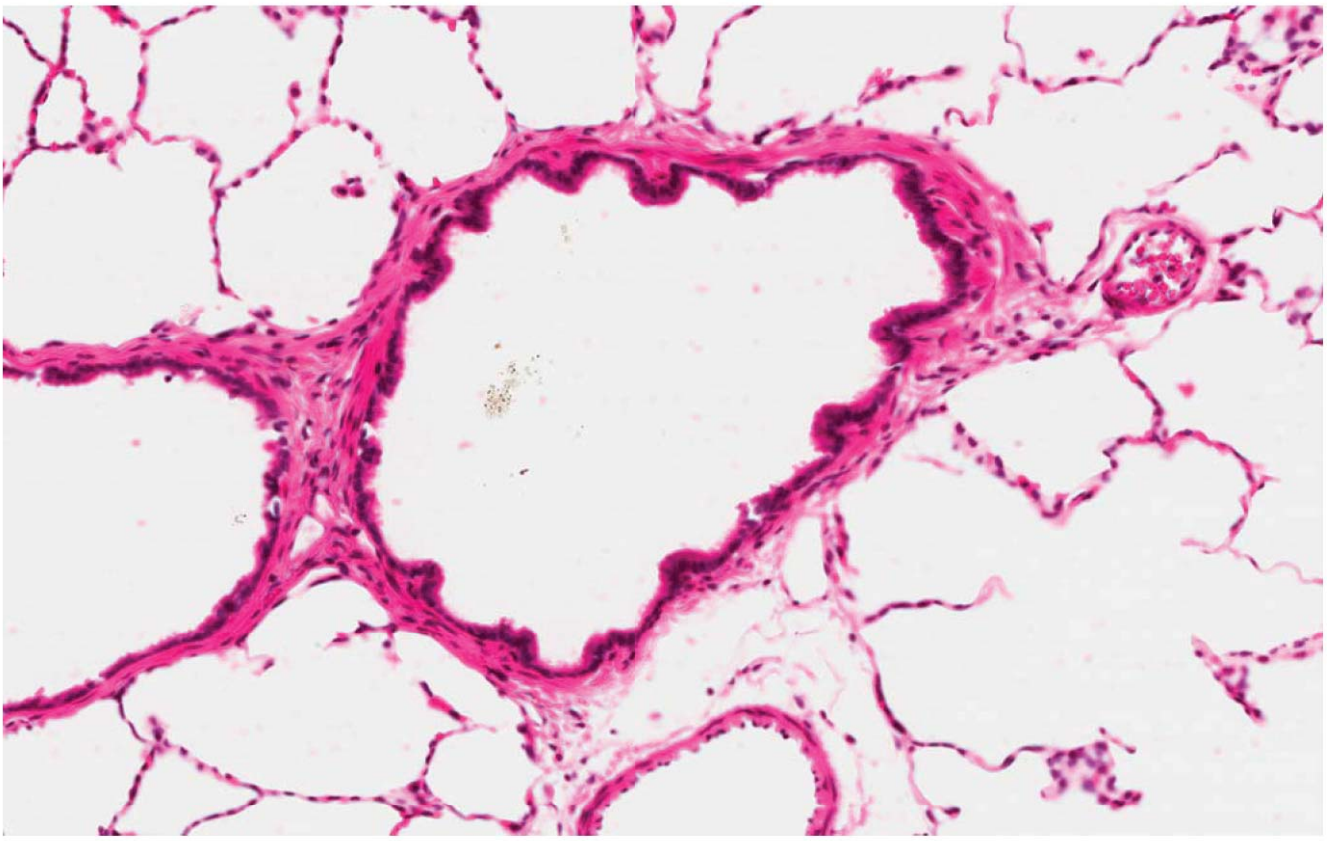


**PWG Comparison Statement Figure 4. LRRI old-technology diesel exhaust study (Mauderly et al. 1994) (6.5 mg/m$^3$ PM, male F344/N, 24 months, original magnification 100×).** Rat lung after exposure to diesel exhaust for up to 2 years, showing prominent black pigment free or within macrophages, hyperplasia of bronchial epithelium extending into centriacinar alveoli, and numerous alveolar macrophages throughout the lung often containing pigment. Contrast with Figure 1 from the 2007-technology diesel exhaust study where increased pigment was not present. (Lung slide provided by Andrew Gigliotti, LRRI; photograph by Rod Miller, EPL.)

Fraunhofer Institute study). However, the lungs of rats in the LRRI old-technology diesel exhaust study were dramatically different from those in ACES, in which only slight to minimal lesions were seen with no pigment and no evidence of cancer or precancerous lesions. Even the low-exposure animals reviewed by Drs. Rod Miller and Gary Boorman at a later date had marked deposition of pigment, numerous macrophages, and hyperplasia that was less than that in the high-exposure animals, but again the lungs were dramatically more affected than the lungs from high-exposure animals in ACES.

### LRRI Nitrogen Dioxide Study

Five slides were available from the $NO_2$ rat study conducted at LRRI (Mauderly et al. 1989) in which male F344/N rats were exposed to up to 9.5 ppm $NO_2$ for 7 hours/day, 5 days/week, for up to 2 years. Animals reviewed by the PWG were from the 24-month study. The PWG members

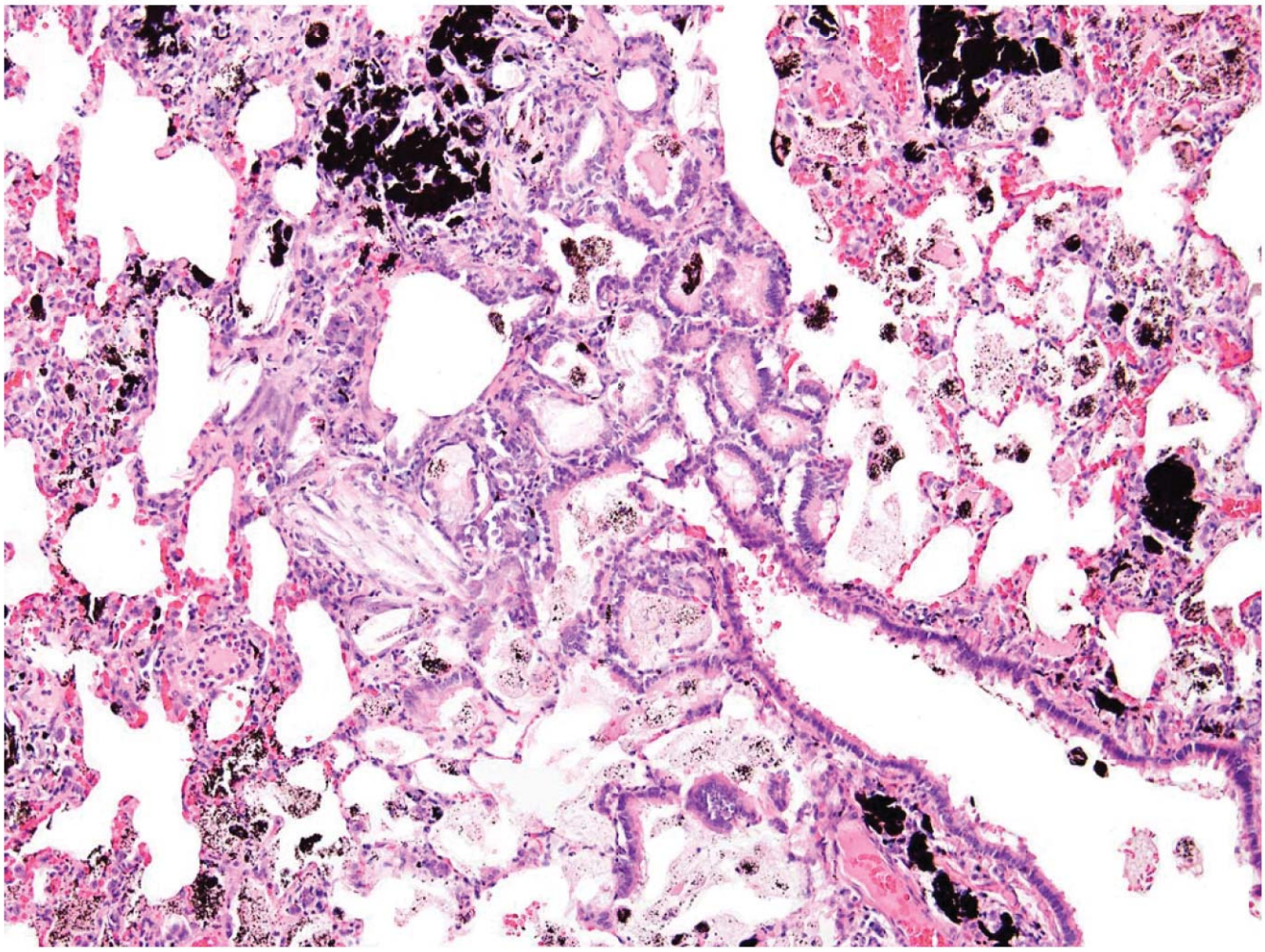


**PWG Comparison Statement Figure 5. LRRI $NO_2$ study (Mauderly et al. 1989) (9.5 ppm $NO_2$, male F344, 24 months, original magnification 200×).** Preterminal bronchiole from the 24-month $NO_2$ rat study conducted at LRRI showing findings similar to ACES. These changes were uncommon in the $NO_2$ study and not as distinct as those shown in the Kubota et al. study (1987) in which animals were exposed to 4 ppm $NO_2$ for 27 months. (Lung slide provided by Andrew Gigliotti, LRRI; photograph by Rod Miller, EPL.)

found very few minimal centriacinar lesions that had some resemblance to those in ACES with slight thickening of the centriacinar walls. A review of the literature (Kubota et al. 1987) showed that Wistar rats continuously exposed to 4 ppm $NO_2$ for 27 months had papillary-like projections into the lumen of preterminal and terminal bronchioles similar to what was seen in ACES (compare PWG Comparison Statement Figure 2 with Figure 2 in Kubota et al. 1987). Further review of additional lung slides from the $NO_2$ study also showed very minimal papillary-like projections into the lumen of preterminal and terminal bronchioles (PWG Comparison Statement Figure 5). Since the Kubota et al. study was 27 months of continuous exposure (24 hours/day) and ACES was 28 to 30 months with 16 hours of exposure, the length of exposure may have been important for the development of the papillary-like projections into the lumen of preterminal and terminal bronchioles. The LRRI $NO_2$ inhalation slides examined by the PWG members were from rats exposed only 7 hours/day for 2 years, and the papillary projections were quite minimal.

### Fraunhofer Institute Old-Technology Diesel Exhaust Study

Drs. Rod Miller and Gary Boorman reviewed 77 slides from a Fraunhofer Institute diesel exhaust study in which rats were exposed to clean air, filtered diesel exhaust, or the complete unfiltered diesel exhaust mixture (Heinrich et al. 1986). Female Wistar Han rats were exposed to whole diesel exhaust (4.2 mg/m$^3$ PM) or filtered exhaust (1.2 ppm $NO_2$) for 17 hours/day, 5 days/ week, for 30 months. Animals exposed to filtered diesel exhaust (without PM) had minimal increase in centriacinar macrophages and very minimal thickening of the alveolar walls in the centriacinar regions (not shown). These changes were not unlike what was found in ACES with no pigment and very minimal centriacinar



**PWG Comparison Statement Figure 6. Fraunhofer Institute old-technology diesel exhaust study (Heinrich et al. 1986) (4.2 mg/m$^3$, female Wistar Han, 30 months, original magnification 100×).** Prominent black diesel soot particulates are present free in alveoli, in the numerous pulmonary alveolar macrophages, and in interstitial tissues. Marked centriacinar epithelial hyperplasia and bronchiolization occurred. Marked chronic inflammation also occurred characterized by a mixed inflammatory cell infiltrate, fibrosis, and some sterol cleft formation. The entire lung was involved, and this picture is dramatically different from what was found in the 2007-technology diesel exhaust study. Compare with PWG Comparison Statement Figure 1. (Lung slide provided by Heinrich Ernst, Fraunhofer Institute; photograph by Rod Miller, EPL.)

changes. In contrast, rats exposed to the complete diesel exhaust mixture had lungs with extensive infiltrates of inflammatory cells, proliferation and extension of bronchiolar cells into the centriacinar alveoli, and extensive deposition of pigment (PWG Comparison Statement Figure 6). Lung lesions observed in the Fraunhofer Institute and LRRI old-technology diesel exhaust studies in rats were very similar. One representative figure of the Fraunhofer Institute study is shown here. The difference between the lungs from the ACES rat bioassay and the LRRI or Fraunhofer Institute studies was striking.

## CONCLUSION

The pulmonary lesions in ACES were dramatically different from those in the old-technology diesel exhaust studies. Many of the acini appear normal in the lungs of high-exposure ACES rats with minimal thickening of

alveoli walls in some centriacinar regions. The ACES lungs lacked the prominent inflammation, pigment accumulation, hyperplasia, and neoplasia seen in the old-technology diesel exhaust studies. Changes in the lungs in ACES were more similar to those in the $NO_2$ study in which centriacinar thickening and occasional preterminal bronchiole hyperplasia were found. The $NO_2$ bronchiolar hyperplasia in the 24-month exposure studies that Drs. Rod Miller and Gary Boorman examined was less than seen in ACES. In ACES, animals were exposed to 4.2 ppm $NO_2$ (as part of the diesel exhaust mixture) 16 hours/day for up to 28 months (males) or 30 months (females). In the $NO_2$ study, exposure concentrations were higher (9.5 ppm), but the exposure duration was for 7 hours/day for up to 24 months. It was interesting that the bronchiolar lesion most like that in ACES was reported in the 24-hours/day, 27-month $NO_2$ study (Kubota et al. 1987).

The PWG members noted that the most dramatic differences were between the new 2007-technology diesel exhaust study, in which few, and mostly minimal, lesions were found, and the old-technology diesel exhaust studies in which the lungs were loaded with pigment, inflammatory changes, hyperplasia, and cancer.

## ARCHIVE STATEMENT

The original copy of this report will be stored in the Covance archives for 5 years.

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# Part 2. Assessment of Micronucleus Formation in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay

Jeffrey C. Bemis, Dorothea K. Torous, and Stephen D. Dertinger

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# INVESTIGATORS' REPORT

## Part 2. Assessment of Micronucleus Formation in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay

Jeffrey C. Bemis, Dorothea K. Torous, and Stephen D. Dertinger

*Litron Laboratories, Rochester, New York, USA*

ABSTRACT

The formation of micronuclei (MN*) is a well-established endpoint in genetic toxicology; studies designed to examine MN formation in vivo have been conducted for decades. Conditions that cause double-strand breaks or disrupt the proper segregation of chromosomes during division result in increases in MN formation frequency. This endpoint is therefore commonly used in preclinical studies designed to assess the potential risks to humans of exposure to a myriad of chemical and physical agents, including inhaled diesel exhaust (DE). As part of the Advanced Collaborative Emissions Study (ACES) Phase 3B, which examined numerous additional toxicity endpoints associated with lifetime exposure to DE in a rodent model, this ancillary 24-month investigation examined the potential of inhaled DE to induce chromosome damage in chronically exposed rodents.

The ACES design included exposure of both mice and rats to DE derived from heavy-duty engines that met U.S. Environmental Protection Agency (EPA) 2007 standards for diesel-exhaust emissions (new-technology diesel exhaust). The exposure conditions consisted of air (the control) and three dilutions of DE, resulting in four levels of exposure. At specific times, blood samples were collected, fixed, and shipped by the bioassay staff at Lovelace Respiratory Research Institute (LRRI) to Litron Laboratories (Rochester, NY) for further processing and analysis. In recent years, significant improvements have been made to MN scoring by using objective, automated methods such as flow cytometry, which allows the detection of micronucleated reticulocytes (MN-RET), micronucleated normochromatic erythrocytes (MN-NCE), and reticulocytes (RET) in peripheral blood samples from mice and rats. By using a simple staining procedure coupled with rapid and efficient analysis, many more cells can be examined in less time than was possible using traditional, microscopy-based MN assays. Thus, for each sample in the current study, 20,000 RET were scored for the presence of MN. In the chronic-exposure (12 and 24 months) bioassay, blood samples were obtained from separate groups of exposed animals at specific time points throughout the course of the study. The automated method using flow cytometry has found widespread use in safety assessment and is supported by regulatory guidelines, including International Conference on Harmonisation (ICH) S2(R1) (2011). Statistical analyses included the use of analysis of variance (ANOVA) to compare the effects of sex, exposure condition, and duration, as well as the interactions between them.

Analyses of blood samples from rats combined data from our earlier 1- and 3-month exposure studies (Bemis et al. 2012) with data from our current 12- and 24-month exposure studies. Consistent with findings from the preliminary studies, no sex-based differences in MN frequency were observed in the rats. An initial examination of mean frequencies across the treatment groups and durations of exposure showed no evidence of treatment-related increases in MN at any of the time points studied. Further statistical analyses did not reveal any significant exposure-related effects.

This Investigators' Report is one part of Health Effects Institute Research Report 184, which also includes a Commentary by the HEI ACES Review Panel and an HEI Statement about the research project. Correspondence concerning the Investigators' Report may be addressed to Dr. Jeffrey C. Bemis, Litron Laboratories, 3500 Winton Place, Rochester, NY 14623; e-mail: *jbemis@ litronlabs.com.*

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* A list of abbreviations and other terms appears at the end of the Investigators' Report.

An examination of the potential genotoxic effects of DE is clearly valuable as part of a large-scale chronic exposure bioassay. The results described in this report provide a comprehensive examination of chronic exposure to DE in a rodent model. Our investigation of chromosomal damage also plays an important role in the context of ACES, which was designed to assess the safety of emissions from 2007-compliant diesel engines.

## INTRODUCTION

### BACKGROUND ON GENOTOXICITY ASSESSMENT

The exposure of humans to by-products of combustion engines is an unavoidable fact of modern life. The potential effects of such exposure, both in the environment and in the workplace, are of continuing concern for public health agencies and industry alike. The development, characterization, and safety testing of newer heavy-duty diesel engines are important aspects of reducing or eliminating the risks associated with the use of such devices. However, regulatory agencies require extensive testing of new engines in order to determine if their designs meet or exceed established standards. As a means of obtaining a sufficient assessment of the potential risks to human populations associated with exposure to DE, a large-scale, multi-endpoint study such as ACES must be conducted. One important component of this study is the examination of the genotoxicity associated with exposure to DE.

Regulatory guidelines require the implementation of several genotoxicity tests as part of the routine screening and safety programs that exist in pharmaceutical and industrial chemical manufacturing environments (Zeiger 1998). The in vivo mammalian erythrocyte MN test is one of the more commonly employed tests described in these guidelines (ICH 2011). MN formation can indicate the effect of a treatment or exposure on the structure and function of the chromosomes in the erythrocyte. Any effect on the strictly regulated chromosomal processes can have both immediate and long-lasting consequences for the cell and for the organism as a whole. Outcomes such as genomic instability and cancer are often associated with the damage indicated by MN formation. MN formation can thus be considered a short-term indicator of damage that can lead to long-term effects, and the MN test has become a well-established part of the safety and risk assessments used for human exposure to numerous agents, including drugs, cosmetics, food products, and inhaled pollutants (Brown et al. 1997; Kirkland et al. 2005; Soni et al. 2006).

MN are formed after the division of cells that have experienced direct damage to chromosomes (e.g., double-strand breaks) or indirect damage that disrupts proper chromosome handling and segregation (e.g., lagging whole chromosomes) (Cimini and Degrassi 2005). The rodent MN test is designed to examine peripheral blood samples from rodents exposed to the agent(s) of interest by way of various routes. Although some MN tests use bone-marrow–derived erythrocytes for analysis, peripheral blood samples have the advantages of ease of integration into chronic animal studies and ease of collection. Historically, microscopy-based analyses were done on bone-marrow samples collected for MN enumeration and involved manual scoring. This process was labor intensive, required specialized training, and suffered from the inherent subjectivity of the human operator. Litron Laboratories developed an automated, flow cytometry–based method for analyzing MN-RET that provides greater speed, efficiency, and accuracy when compared with the microscopy-based method. Known commercially as In Vivo MicroFlow, it has been in use since 1996. It has been used to assess chromosomal damage in mouse blood in support of Food and Drug Administration (FDA) reviews for the registration of new pharmaceutical agents. It is also recognized in Organisation for Economic Co-operation and Development (OECD) Guideline 474 as a suitable alternative to the microscopy-based method. For rodent blood analyses, this method has gained the acceptance of expert working groups, such as the one assembled at the Fourth International Workshop for Genotoxicity Testing (Hayashi et al. 2007), and is also recognized as a suitable sample type in the recent ICH S2(R1) guidelines (ICH 2011).

Two of the advantages of the automated flow cytometry–based method, as compared with the traditional method, are the greater objectivity it affords and the greater number of cells scored in markedly less time. Thus, while a typical microscopist can take up to 30 minutes to score 2000 cells, the flow cytometry–based method routinely takes approximately 2 minutes to count 20,000 cells.

In addition to measuring MN-RET frequency, the flow cytometry–based method can count MN in NCE. This more mature population of red blood cells can be used to examine long-term or cumulative damage in mice. However, because of differences in the splenic morphology of rats that result in the removal of MN-NCE from circulation, MN-NCE are not a reliable indicator of chromosome damage in rats (and data on MN-NCE for samples derived from rats are not shown in the current study).

## RATIONALE FOR MICRONUCLEUS ASSESSMENT AFTER DIESEL EXHAUST EXPOSURE

A large body of literature describes the genotoxic or carcinogenic potential of DE in various in vivo and in vitro models (see examples below). MN tests (especially rodent in vivo MN tests) were often used in these studies, thus it is useful to consider the existing body of work in the context of the current report.

Previous studies designed to investigate the genotoxic effects of DE have yielded equivocal results. Although it is quite common for DE or its derivatives to test positive in bacterial mutation assays (Oh and Chung 2006) and in in vitro mammalian cell genotoxicity assays (Dybdahl et al. 2004), in vivo carcinogenicity studies show both positive and negative results depending on the species evaluated (Mauderly et al. 1996). Studies that demonstrated a positive correlation between DE exposure in vivo and carcinogenicity typically used much older engine designs and considerably higher concentrations of DE (Ishinishi et al. 1986; Mauderly et al. 1994) than those used in ACES. Older engine designs can be expected to have considerably different emission profiles than present-day or future engines. Indeed, the characterizations of DE constituents associated with the current study demonstrated that 2007-compliant diesel engines yielded significant reductions in, for example, particulate matter (PM) (Mauderly and McDonald 2012). Also, many of the previous studies exposed rodents to much higher concentrations of DE than would be found in normal ambient or even extreme occupational conditions (U.S. EPA 2002). Finally, epidemiologic data on the carcinogenicity of DE in humans has provided only weak evidence of effects in occupationally exposed workers (Jarvholm and Silverman 2003).

The study whose design perhaps most closely resembled that of ACES was conducted by Reed and colleagues (2004) at LRRI (Albuquerque, NM). The investigators exposed mice and rats by whole-body inhalation to DE for 7 days per week, 6 hours per day, for 6 months. Genotoxic effects were studied in the mice only, and the endpoints examined were MN-RET counts and the proliferation of adenomas. Compared with controls, no significant changes in results for either endpoint were found. The study was part of a larger effort organized by the National Environmental Respiratory Center and sought to compare the effects of numerous inhalation conditions to which humans are regularly exposed (Reed et al. 2006).

The specificity of the MN endpoint in characterizing chromosome damage makes the MN test a powerful tool for predicting the potential of a chemical or exposure condition to induce damage that might lead to cancer. However, no single test conducted in isolation is an acceptable indicator of carcinogenic potential, especially when the results must be extrapolated from a rodent model to humans. Perhaps the greatest advantage of using the In Vivo MicroFlow method for MN testing in a study such as ours was that we were routinely able to evaluate 10 times the number of cells examined using the standard microscopy method, allowing the reliable detection even of weak responses and providing increased confidence in negative results.

It should be noted that the peripheral-blood MN test as described in the current report was a direct indicator of the impact of exposures on hematopoiesis in bone marrow. Any impact of exposures that do not directly target bone marrow should be considered a response to systemic effects of the exposure conditions being investigated. In the case of inhalation exposures to what could be considered primarily a lung-targeting agent, there are examples of increased peripheral-blood MN frequencies associated with exposure to cigarette smoke (De Flora et al. 2007; Marchetti et al. 2011). There have also been numerous studies of the systemic effects of DE or DE constituents. Burchiel and colleagues (2004), for example, found systemic immunotoxicity in mice after whole-body exposure to DE, and Song and Ye (1995) found increased frequencies of peripheral-blood MN-RET in mice after exposure to DE extracts. Arlt and colleagues (2008) examined genotoxicity in a transgenic mouse model after exposure to 3-nitrobenzanthrone, a carcinogen found in DE, and its metabolite 3-aminobenzanthrone. They reported elevated mutation frequencies in liver and bone marrow but not lung tissue. In terms of hazard identification, the in vivo MN test is very commonly used across numerous disciplines and industries; it continues to be an important part of regulatory guidelines and risk assessment for many types of exposure conditions.

## VALIDATION OF FLOW-CYTOMETRY MICRONUCLEUS TESTING

Litron Laboratories has an extensive history of conducting in vivo rodent MN testing and analysis. During the development of the In Vivo MicroFlow assay, multiple interlaboratory validation trials were conducted that demonstrated the portability and reproducibility of the assay across laboratories (Torous et al. 2001, 2005). Table 1 shows an aggregate correlation coefficient of 0.943 for a nine-laboratory trial that examined the MN-RET response of mice exposed to various chemical genotoxicants.

In addition to these validation trials, considerable testing was done to compare MN-RET scoring by the microscopy and flow-cytometry methods (Table 1, Figure 1). Both inter- and intra-laboratory studies showed excellent agreement between results for the two methods (Dertinger et al. 2006).

**Table 1.** MN-RET Data and Spearman Correlation Coefficients

| Laboratory | Chemical | FCM vs. Microscopy Correlation[a] | Correlation Between FCM Labs[b] |
|---|---|---|---|
| 1 | Benzo[*a*]pyrene | 0.903 | 0.961 |
| 2 | 5-Fluorouracil | 0.529 | 0.755 |
| 3 | Cyclophosphamide | 0.884 | 0.902 |
| 4 | Benzo[*a*]pyrene | 0.842 | 0.903 |
| 5 | Methotrexate | 0.434 | 0.723 |
| 6 | Methotrexate | 0.818 | 0.832 |
| 7 | Cyclophosphamide | 0.624 | 0.876 |
| 8 | Vincristine | 0.945 | 0.923 |
| 9 | 5-Fluorouracil | 0.714 | 0.690 |
| Aggregate[c] | | 0.922 | 0.943 |

[a] Non-parametric Spearman correlation coefficients ($r_s$) describing the relationship between microscopy-based and corresponding MN-RET values. FCM = flow cytometry.

[b] Non-parametric Spearman correlation coefficients ($r_s$) describing the relationship between reference laboratory FCM-based and corresponding laboratory (1–9) FCM-based MN-RET values. For vincristine, Litron sent replicate samples to Laboratory 1 for an independent reading.

[c] These aggregate values were calculated by pooling MN-RET frequencies for the entire set of nine experiments ($n$ = 252 and 248 for FCM vs. microscopy correlation, and correlation between FCM labs, respectively).

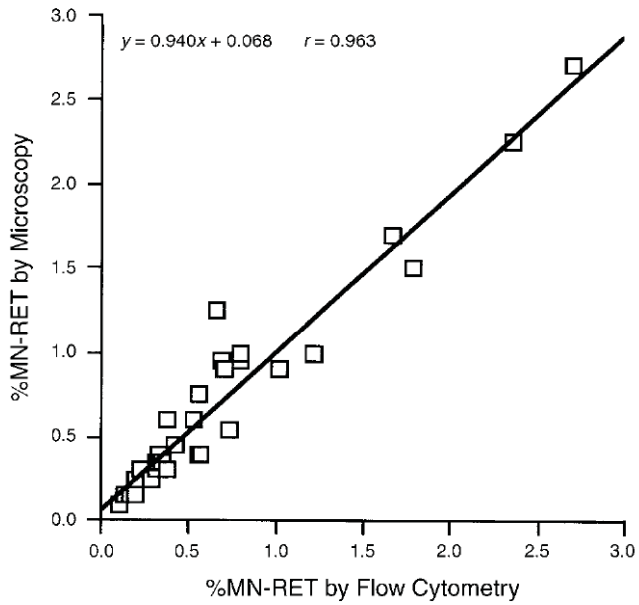


**Figure 1. Comparison between microscopy and flow-cytometry analyses of frequency of MN-RET in mouse blood after consecutive 3-day exposures to various doses of cyclophosphamide ($r$ = bivariate Spearman correlation coefficient).**

The previous studies were conducted using mice; however, In Vivo MicroFlow technology can also be used to analyze rat blood samples (Torous et al. 2003). Both MacGregor and colleagues (2006) (Figure 2) and Hayashi and colleagues (2007) reported the ability to count genotoxicant-induced MN-RET reliably and accurately in the peripheral blood of rats.

Figure 2 also shows the transient nature of MN-RET frequencies (%MN-RET) after a bolus administration of a chromosome-damaging agent; the frequencies peaked at about 48 hours. This means that when measured in the context of a chronic study, the MN-RET frequency reflects the most recent (i.e., past several days) exposure.

As the In Vivo MicroFlow method gained greater acceptance, more investigators began using it in their studies. It was used by De Boeck and colleagues (2005), for example, who conducted a multiple-sampling time-course study in mice exposed to various mutagens, and by Cammerer and colleagues (2007), who compared the responses of mice and rats to aneugenic compounds. In addition, as part of its efforts to evaluate the genotoxicity of substances of public health concern, the National Toxicology Program compared the microscopy and flow-cytometry methods to validate the use of the latter as a replacement for the former (Witt et al. 2008). The In Vivo MicroFlow method was also used in the chronic inhalation studies of Reed and colleagues (2004, 2006) to investigate the incidence of MN-RET in the peripheral blood of mice exposed to DE or wood smoke.

In addition to the efforts made to validate the In Vivo MicroFlow method, an HEI-funded pilot study was conducted that demonstrated the ability of the method to detect genotoxicant-induced changes in MN-RET frequencies in older rats (see Additional Materials 2, available on the HEI Web site at *http://pubs.healtheffects.org*). Blood samples from male and female rats ranging in age from 10 to 21 months showed cyclophosphamide-induced increases in MN-RET frequencies. Thus, for rats at ages approximately equivalent to those we studied in the 12- and 24-month ACES exposures, the HEI pilot study showed that the In Vivo MicroFlow method was able to identify a genotoxic response in peripheral blood cells.

Kissling and colleagues (2007) assessed the statistical power and sensitivity of the in vivo MN test across several

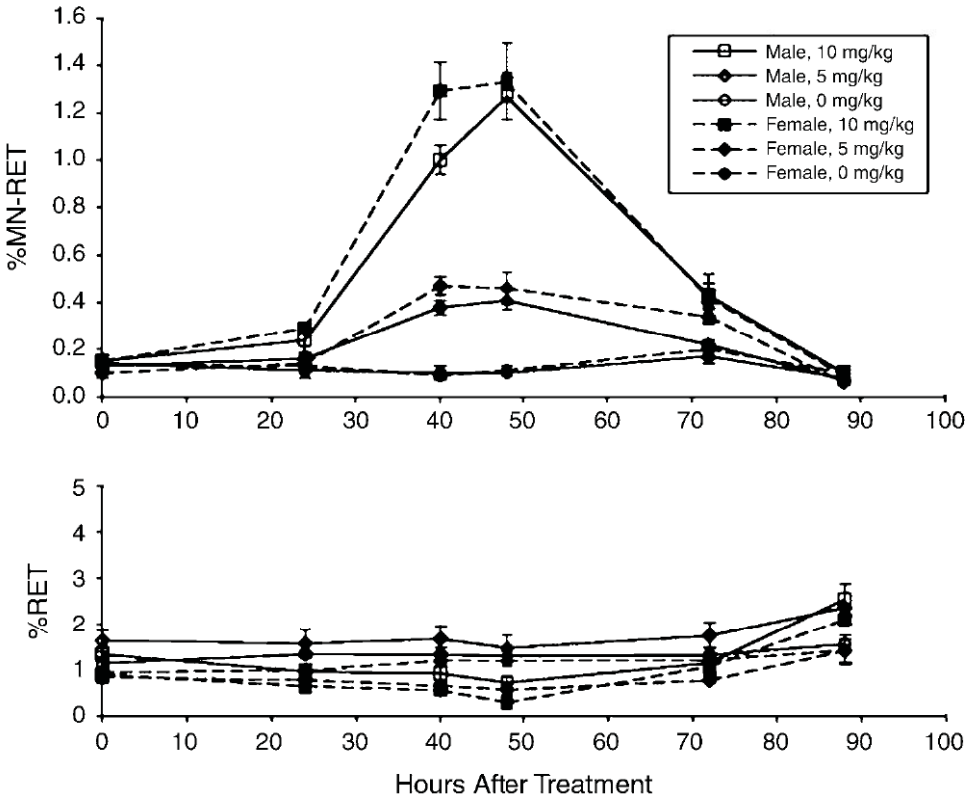


**Figure 2. Time course of the frequency of MN-RET in rat blood after a single oral dose of 5 or 10 mg/kg cyclophosphamide.** (Reprinted from MacGregor et al. 2006 with permission of Kluwer Academic Publishers [Dordrecht].)

species and experimental parameters. The investigators used a standard experimental design of five animals per group and examined factors such as background MN-RET frequency, inter- and intra-animal variation, number of cells scored, and associated counting errors in order to determine the statistical power of the test. As shown in Table 2, for the rat model with a spontaneous MN-RET frequency of 0.10 (standard deviation [SD] = 0.045), scoring 20,000 RET can resolve a 2.2- or 3.0-fold increase above baseline at 90% power with a significance level of $P \leq 0.05$ or $P \leq 0.01$, respectively. The reported baseline values from Kissling and colleagues (2007) were similar to those observed in the current study, in which the spontaneous frequency of MN-RET in the control rats (pooled across sex and duration, $n = 40$) was 0.12% (SD = 0.033), and the MN-RET frequency for all the rats in the study ($n = 158$) was 0.12% (SD = 0.039) (see also Additional Materials 1 on the HEI Web site at *http://pubs.healtheffects.org*).

It is generally accepted that for regulatory submission purposes, such as those involving pharmaceuticals for human use, a positive response in genotoxicity tests requires a doubling of the background MN frequency. Adler and colleagues (1998) argued that a suitable minimum standard for in vivo mutagenicity tests (which include the in vivo MN test) is "the ability to detect a doubling of the observed endpoint at an α-level of 0.05 and a power of 80%." They offered the following as a rationale for this approach: "the increment in mutational events over the spontaneous level to be recognized is determined by biologic criteria rather than by purely statistically achievable precision." As reported by Kissling and colleagues (2007), the currently employed analytic approach (i.e., the standard In Vivo MicroFlow approach based on an analysis of 20,000 RET) can resolve a two- to threefold increase from baseline with 90% power at a significance level of 0.05.

OECD Guideline 474 (1997), which defined operating parameters for the in vivo MN test, stated that five animals per dose group were sufficient. For the current study, the majority of experiments met this OECD minimum requirement. In fact, because the rat data could be pooled across

**Table 2.** Minimum Detectable Increases in MN-RET Frequency in Groups of Five Animals as a Function of Spontaneous Frequency and Number of RET Scored[a,b]

| Spontaneous Frequency (%MN-RET) | RET Scored ($n$) | Minimum Detectable Fold-Increase in Spontaneous Frequency | | | |
|---|---|---|---|---|---|
| | | 90% Probability | | 95% Probability | |
| | | $P \leq 0.05$ | $P \leq 0.01$ | $P \leq 0.05$ | $P \leq 0.01$ |
| 0.05 (SD = 0.020) | 2,000 | 4.5 | 6.8 | 5.6 | 9.3 |
| | 4,000 | 3.5 | 5.5 | 4.0 | 6.3 |
| | 20,000 | 2.3 | 3.1 | 2.4 | 3.4 |
| | ∞ | 1.8 | 2.1 | 1.9 | 2.2 |
| 0.1 (SD = 0.045) (rat peripheral blood) | 2,000 | 3.3 | 4.8 | 4.1 | 6.4 |
| | 4,000 | 2.9 | 4.2 | 3.2 | 4.7 |
| | 20,000 | 2.2 | 3.0 | 2.4 | 3.2 |
| | ∞ | 1.8 | 2.0 | 2.1 | 2.4 |
| 0.20 (SD = 0.070) (mouse peripheral blood) | 2,000 | 2.7 | 3.9 | 3.0 | 4.5 |
| | 4,000 | 2.3 | 3.2 | 2.4 | 3.5 |
| | 20,000 | 1.9 | 2.5 | 2.2 | 2.7 |
| | ∞ | 1.7 | 2.0 | 1.8 | 2.1 |
| 0.20 (SD = 0.059) (rat bone marrow) | 2,000 | 2.7 | 3.9 | 2.9 | 4.4 |
| | 4,000 | 2.2 | 3.1 | 2.4 | 3.3 |
| | 20,000 | 1.8 | 2.3 | 1.9 | 2.5 |
| | ∞ | 1.6 | 1.8 | 1.7 | 1.9 |
| 0.30 (SD = 0.092) (dog peripheral blood) | 2,000 | 2.4 | 3.4 | 2.6 | 3.7 |
| | 4,000 | 2.1 | 2.8 | 2.2 | 3.0 |
| | 20,000 | 1.8 | 2.3 | 1.9 | 2.4 |
| | ∞ | 1.6 | 1.8 | 1.7 | 1.9 |

[a] Based on data from Kissling et al. 2007.

[b] Values for the cases of infinite cell counts are calculated based on the observed inter-animal variability (SD from Table 1 of Kissling et al. 2007) for the species stated, assuming no counting error; the inter-animal variability for frequency 0.05% is assumed to be 0.02%. The detectable increase depends on the relative magnitudes of the counting error and the inter-animal variability. Although counting error can be reduced by scoring more RET, the minimum detectable increase cannot go below a bound determined by the inter-animal variability (i.e., the value given in the infinite cell count rows). Species entries correspond to the appropriate spontaneous frequency and associated inter-animal SD in the species specified in Table 1 of Kissling et al. 2007.

sex, most experimental conditions exceeded the requirement, examining up to 10 animals per exposure group. The experimental groups in the current report that did not meet the recommended five animals per group are clearly identified.

The studies described in this section demonstrated that the In Vivo MicroFlow method can be used to investigate chromosomal damage in mice and rats in a rapid and efficient manner. The method is easily incorporated into a standard chronic bioassay, as is readily apparent from the examples described above.

## SPECIFIC AIMS

The broader goal of the ACES bioassay was to provide information on the safety of 2007-compliant heavy-duty diesel engines. As one of the ancillary ACES bioassay studies associated with ACES, our study sought to evaluate MN formation, a specific biomarker of chromosome damage, as a means to assess the genotoxic potential of DE emitted by these engines. As a biomarker of chromosome damage and an accepted indicator of carcinogenic potential, MN formation is regularly assessed in animal studies designed to predict human health effects of exposure to various chemical or physical agents. The study used a rapid and efficient automated flow-cytometry–based

method to accurately enumerate MN-RET in the blood of rodents exposed to DE by inhalation.

In this report, the assessment of MN was performed in rats exposed to DE for 1, 3, 12, or 24 months. In order to assess the potential impact of DE over the complete time course of ACES, the data previously reported for the 1- and 3-month exposure groups (Bemis et al. 2012) were combined with new data from the 12- and 24-month exposure groups.

## METHODS AND STUDY DESIGN

### ANIMALS AND EXPOSURE CONDITIONS

All animal exposures, handling, and blood collection and fixation were performed by the bioassay staff at LRRI after approval from LRRI's Institutional Animal Care and Use Committee. McDonald and colleagues (Mauderly and McDonald 2012; McDonald et al. 2012) provided detailed descriptions of the exposure facility, engine specifications, DE characterization, and animal exposure conditions. For the MN data reported here, blood samples were obtained from male and female Wistar Han rats under four DE exposure conditions (i.e., air control and low, mid, and high exposures). These exposure levels were based on dilutions of the whole engine exhaust to achieve 0.1, 0.8, and 4.2 ppm $NO_2$ in the low, mid, and high exposures, respectively. All inhalation exposures were whole-body and occurred under the conditions described by McDonald and colleagues (2012). For the majority of experiments in the current study, each exposure group consisted of five males and five females. However, there was an error in the 12-month exposures, with the result that the numbers of animals in the control and low-, mid-, and high-exposure groups were 5, 4, 5, and 5 for the males and 5, 6, 5, and 5 for the females, respectively. There was also an error in the 24-month exposures, with the result that the numbers of animals in the control and low-, mid-, and high-exposure groups were 5, 5, 5, and 4 for the males and 5, 5, 4, and 6 for the females, respectively. In addition, one female rat in the mid-exposure group died before the 24-month endpoint.

### ANALYSIS OF MICRONUCLEATED ERYTHROCYTES BY FLOW CYTOMETRY

All of the solutions and materials discussed below are commercially available as part of In Vivo MicroFlow kits (Litron Laboratories). The procedures for using them are the same for samples derived from mice and rats unless otherwise noted.

#### Sample Collection and Fixation

Whole-blood samples from rats were collected at LRRI into anticoagulant solution and well mixed. A portion of these diluted blood samples was fixed by rapid introduction into ultracold (−80°C) methanol fixative and stored at −80°C until further processing. After the samples were in the fixative a minimum of 48 hours, the methanol was washed out of the samples using the kit's wash buffer and transferred to the kit's long-term storage solution. The samples were maintained at −80°C until they were shipped to Litron Laboratories under controlled-cold conditions (−20°C ice packs) for further processing and analysis.

#### Sample Processing and Staining

At Litron Laboratories, the samples were stored at −80 to −90°C until scheduled for analysis. Samples were first washed to remove the long-term storage solution and then labeled with anti-CD71-FITC and anti-CD61-PE antibodies (see below) in the presence of RNase. DNA-staining solution was added to the antibody-labeled samples just before analysis by flow cytometry.

#### Flow-Cytometry Instrument Set-up and Calibration

Before analyzing the samples, the flow cytometer was calibrated with a $CD71^-$ blood sample and a malaria biostandard that were provided with the kit. This calibration was done daily and ensured that instrument parameters, such as photomultiplier voltages and compensation settings, were appropriately and consistently applied to all subsequent analyses. The $CD71^-$ blood samples and malaria biostandard were processed in parallel with the experimental samples.

### ANALYSIS OF EXPERIMENTAL SAMPLES

A more detailed description of sample processing and analysis can be found in Dertinger and colleagues (2004). The analytic scheme was based on the selection and enumeration of specific cells of interest (i.e., RET and MN-RET) using flow-cytometry software and a specialized template. The fluorescent labeling of cells depended on three main cell markers (CD61, propidium iodide [PI], and CD71). CD61 is expressed on platelets and, in conjunction with light scatter, is a marker used to exclude platelets from analysis. The DNA stain noted above contains PI, which labels both DNA and RNA, but the inclusion of RNase in the sample processing made the staining DNA-specific. This allowed the PI fluorescence to be used as a marker for all nucleated cells as well as red blood cells that contained MN. With this staining, nucleated cells exhibit very bright fluorescence in comparison with the absent or

dim staining associated with normal red blood cells and those that contain MN. The bright fluorescence of the stained nucleated cells allows them to be excluded from analysis. The third marker, CD71, is expressed on the surface of RET and is gradually lost as these cells mature; the anti-CD71 fluorescent label thus permits the differentiation of RET from mature NCE. This labeling and selection scheme was executed by way of an assembly of gates and inclusion–exclusion logic in the software template. Figure 3 shows two examples of final plots in the template used to quantify the number of events in the respective quadrants that correspond to RET ($CD71^+$, $PI^-$), MN-RET ($CD71^+$, $PI^+$), NCE ($CD71^-$, $PI^-$), and MN-NCE ($CD71^-$, $PI^+$). The plot on the left was obtained from a control-exposed rat; the plot on the right was from a rat exposed to a known genotoxic agent. In the plot on the right, the obvious increase in the frequency of MN-RET in the upper right quadrant is a consequence of MN formation in the bone marrow and indicates that chromosomal damage has occurred.

Once the flow cytometer was properly calibrated using the malaria biostandard, the processed experimental samples were analyzed. Instrument settings and gating were kept consistent across all the samples in a given analytic run. The typical stop point for each analysis was the collection of 20,000 RET per sample.

## STATISTICAL METHODS AND DATA ANALYSIS

After the experimental samples were analyzed, the data were transferred to a spreadsheet (Excel 2008 for Mac; Microsoft, Redmond, WA). These data were used to calculate the percentages of RET (%RET) and MN-RET (%MN-RET), based on the number of events found in each of the defined quadrants (see Figure 3) — upper left (UL), upper right (UR), lower left (LL), and lower right (LR). %RET was calculated as %RET = [(UL + UR) / (UL + UR + LL + LR)] × 100, and %MN-RET was calculated as %MN-RET = [(UR) / (UR + UL)] × 100.

The means and standard errors of the means were then calculated. Once these initial calculations were made, the %MN-RET values were converted to a proportion, and an arcsinSqrt transformation was made in Excel using the following equation: new_value = ASIN(SQRT(old_value)). This transformation was used to stabilize group variance and normalize the data and is based on a consensus opinion of experts in genetic toxicology statistics associated with the Pharmaceutical Research and Manufacturers of America consortium. Because the arcsinSqrt transformation did not achieve a suitably normal distribution for the %RET data, an alternative strategy was used. The values for %RET were transformed by taking the natural log, applying a consistent correction factor to shift the data into positivity, and then taking the natural log again. This double-logarithmic transformation yielded the best

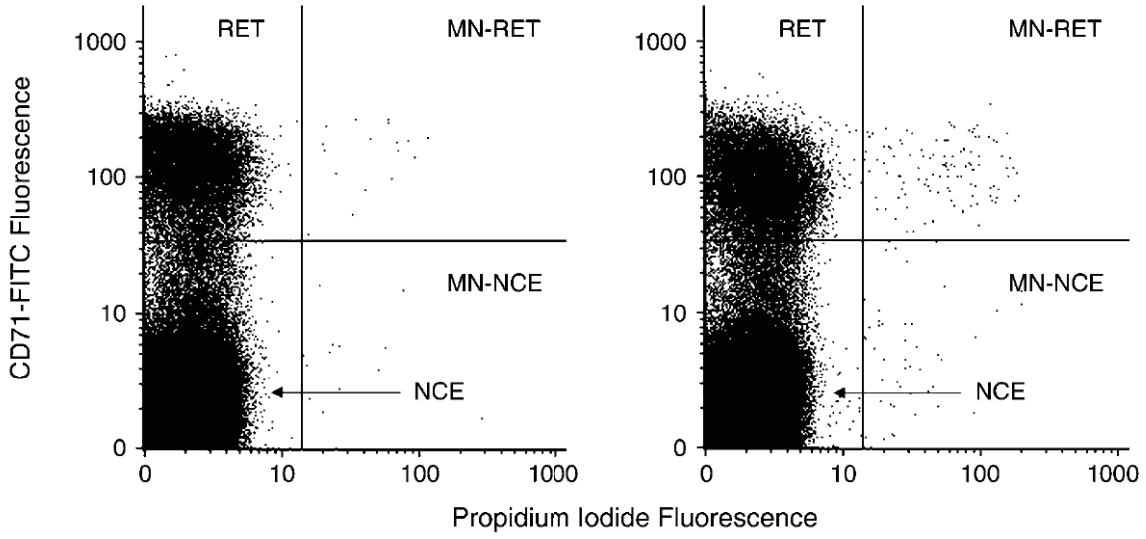


**Figure 3. Representative flow-cytometry plots of blood samples obtained from a rat treated with vehicle control (left) or a rat treated with a known genotoxic agent (right).** In each plot, the upper left quadrant corresponds to RET, the upper right to MN-RET, the lower left to NCE, and the lower right to MN-NCE.

approximation of a normal distribution for rat data sets. After transformation, the data were imported into a statistics program (JMP, v.8 for Mac; SAS, Cary, NC) for further statistical analysis.

For the statistical analyses associated with ACES, the ANOVA model was chosen as the preferred method for comparison. The data in the Results section, below, were analyzed using a three-way ANOVA that included the factors of sex, exposure condition, and exposure duration. Significance was set at $P \leq 0.05$. As described above, the data for male and female rats were pooled in order to maximize the number of animals per exposure group, such that there were 10 animals per exposure condition, unless otherwise noted.

## RESULTS

Summary tables of the raw and calculated data for rats are shown in Additional Materials 1 (available on the HEI Web site). The raw data were used for the figures in this report; the calculated data were used for the statistical analyses.

Table 3 and Table 4 show the results of the three-way ANOVA analyses performed on the %MN-RET and %RET values, respectively, comparing sex, exposure condition, and duration of exposure.

For the %MN-RET data, there was a statistically significant increase in %MN-RET associated with an increase in

**Table 3.** Three-Way ANOVA for Rat %MN-RET Data[a]

| Source | Nparm | Degrees of Freedom | Sum of Squares | *F* Ratio | Prob > *F* |
|---|---|---|---|---|---|
| Sex | 1 | 1 | 0.00003438 | 1.1429 | 0.2871 |
| Exposure condition | 3 | 3 | 0.00001085 | 0.1202 | 0.9481 |
| Duration of exposure | 3 | 3 | 0.00052674 | 5.8370 | 0.0009[b] |
| Sex × Exposure condition | 3 | 3 | 0.00003610 | 0.4000 | 0.7532 |
| Sex × Duration of exposure | 3 | 3 | 0.00006108 | 0.6768 | 0.5678 |
| Exposure condition × Duration of exposure | 9 | 9 | 0.00029573 | 1.0923 | 0.3731 |
| Sex × Exposure condition × Duration of exposure | 9 | 9 | 0.00015661 | 0.5785 | 0.8127 |

[a] Nparm indicates the number of parameters associated with the effect; *F* ratio indicates the *F* statistic for testing that the effect is zero; Prob > *F* indicates the significance probability for the *F* ratio.

[b] Significant at $P \leq 0.05$.

**Table 4.** Three-Way ANOVA for Rat %RET Data[a]

| Source | Nparm | Degrees of Freedom | Sum of Squares | *F* Ratio | Prob > *F* |
|---|---|---|---|---|---|
| Sex | 1 | 1 | 0.00625716 | 0.1593 | 0.6905 |
| Exposure condition | 3 | 3 | 0.17289149 | 1.4673 | 0.2267 |
| Duration of exposure | 3 | 3 | 0.22519773 | 1.9112 | 0.1311 |
| Sex × Exposure condition | 3 | 3 | 0.07739805 | 0.6568 | 0.5801 |
| Sex × Duration of exposure | 3 | 3 | 0.18165203 | 1.5416 | 0.2070 |
| Exposure condition × Duration of exposure | 9 | 9 | 0.31298205 | 0.8854 | 0.5403 |
| Sex × Exposure condition × Duration of exposure | 9 | 9 | 0.18009236 | 0.5095 | 0.8655 |

[a] Nparm indicates the number of parameters associated with the effect; *F* ratio indicates the *F* statistic for testing that the effect is zero; Prob > *F* indicates the significance probability for the *F* ratio.

the duration of exposure (Table 3 and Figure 4). Elevated MN-RET frequency is commonly observed with increased age (Kaspler et al. 2011; Sato et al. 1995). However, when duration of exposure was combined with sex, exposure condition, or sex and exposure condition together, the effect was no longer significant.

For the %RET data, only two individual rats in the low- and mid-level exposure groups of the 12-month studies had high RET frequencies. The %RET data obtained as part of our MN analysis were corroborated by data from similar analyses performed at LRRI (see Part 1 of this volume). Analysis of the data for the effect of DE on %RET as a marker of general bone-marrow toxicity did not reveal any statistically significant effects after any of the exposure conditions examined (Table 4 and Figure 5).

## DISCUSSION AND CONCLUSIONS

This study examined the potential for DE to cause chromosome damage in Wistar Han rats after 1-, 3-, 12-, or 24-month exposures. Peripheral-blood MN-RET, a well-established indicator of chromosome damage, was analyzed by flow-cytometry methods. The study was conducted as one of the ancillary studies associated with the core ACES Phase 3B chronic-inhalation study (see Part 1 of this volume).

Our overall conclusion was that there was no apparent effect of the study's DE exposures on the chromosome-damage endpoint tested. Thus, although some comparisons in the ANOVA analyses resulted in statistically significant effects for various factors, additional comparisons did not support interactions that were related to the exposure

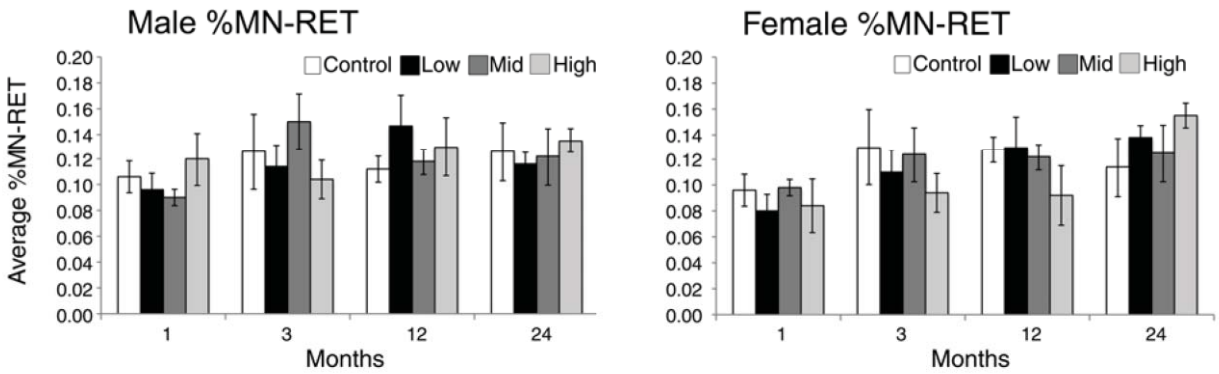


**Figure 4. Mean frequency of MN-RET in rats exposed to DE for 1 to 24 months.** Control, low, mid, and high correspond to the air control, low, mid, and high levels of DE as described in the text. Error bars indicate standard error of the mean.

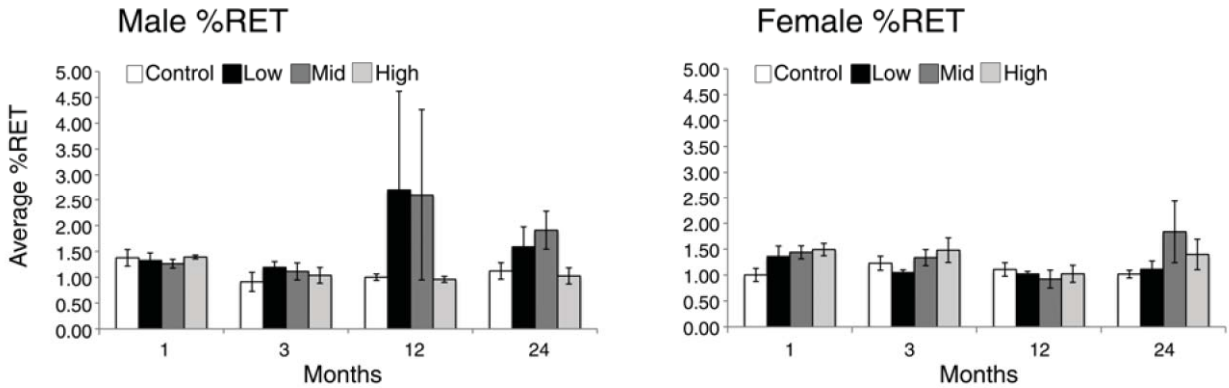


**Figure 5. Mean frequency of RET in rats exposed to DE for 1 to 24 months.** Control, low, mid, and high correspond to the air control, low, mid, and high levels of DE as described in the text. Error bars indicate standard error of the mean.

conditions or that demonstrated a consistent exposure–response relationship. As mentioned earlier, biologically relevant responses of these genotoxicity markers are typically described as being on the order of a twofold increase from baseline. The data collected for the current study did not show any effects that approached this magnitude (Figure 4). The lack of any obvious increases in the chromosome-damage endpoint associated with increasing exposure levels, even after 24 months of exposure, strongly suggests that under the experimental conditions studied here whole-body DE exposures had no discernible genotoxic impact on hematopoietic cells.

## IMPLICATIONS OF FINDINGS

Our data have demonstrated an apparent lack of effect of DE inhalation on MN-RET levels in the peripheral blood of rats after 1, 3, 12, or 24 months of exposure. This lack of genotoxicity extends observations made in the subchronic study (Bemis et al. 2012) and shows that chronic exposure to DE from 2007-compliant engines at the levels tested does not elicit a systemic chromosome-damage response, as indicated by the in vivo MN test. These observations should be interpreted in the context of ACES Phase 3B as a whole, which examined numerous additional toxicity endpoints associated with lifetime exposure to DE in a rodent model.

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## ADDITIONAL MATERIALS AVAILABLE ON THE WEB

Additional Materials 1 and 2 are supplemental materials not included in the printed report. They are available on the HEI Web site at *http://pubs.healtheffects.org*.

Additional Materials 1: Summary Tables of Raw and Calculated Data

Additional Materials 2: ACES Pilot Study to Determine Efficacy of Flow Cytometric Assessment of Chromosome Damage in Aged Rats

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**Jeffrey C. Bemis** received his Ph.D. in environmental health and toxicology from the School of Public Health, University at Albany–State University of New York, in Albany, New York. His thesis focused on the effects of combined exposures to environmental contaminants such as polychlorinated biphenyls and methyl mercury on central neurotransmitter systems. He then spent three years as a postdoctoral fellow in the Department of Environmental Medicine at the University of Rochester School of Medicine and Dentistry in Rochester, New York, where he studied the effects of polychlorinated biphenyls and dioxin on the nervous and immune systems and identified target tissues in the developing fetus. He joined Litron Laboratories in 2006 as a research scientist and is currently the director of clinical studies.

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## OTHER PUBLICATION RESULTING FROM THIS RESEARCH

Bemis JC, Torous DK, Dertinger SD. 2012. Part 2. Assessment of genotoxicity after exposure to diesel exhaust from U.S. 2007-compliant diesel engines: report on 1- and 3-month exposures in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES) Subchronic Exposure Results: Biologic Responses in Rats and Mice and Assessment of Genotoxicity. Research Report 166. Boston, MA:Health Effects Institute.

## ABBREVIATIONS AND OTHER TERMS

| | |
|---|---|
| %MN-RET | percentage of micronucleated reticulocytes |
| %RET | percentage of reticulocytes |
| ACES | Advanced Collaborative Emissions Study |
| ANOVA | analysis of variance |
| ASIN | arcsine |
| DE | diesel exhaust |
| FDA | Food and Drug Administration |
| ICH | International Conference on Harmonisation |
| LL | lower left |
| LR | lower right |
| LRRI | Lovelace Respiratory Research Institute |
| MN | micronuclei |
| MN-RET | micronucleated reticulocytes |
| MN-NCE | micronucleated normochromatic erythrocytes |
| NCE | normochromatic erythrocytes |
| OECD | Organisation for Economic Co-operation and Development |
| PI | propidium iodide |
| PM | particulate matter |
| RET | reticulocytes |
| SD | standard deviation |
| UL | upper left |
| UR | upper right |
| U.S. EPA | United States Environmental Protection Agency |

# Part 3. Assessment of Genotoxicity and Oxidative Damage in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay

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Bill T. Ameredes, and Jeffrey K. Wickliffe

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# INVESTIGATORS' REPORT

## Part 3. Assessment of Genotoxicity and Oxidative Damage in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay

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ABSTRACT

In 2001, the U.S. Environmental Protection Agency (EPA*) and the California Air Resources Board (CARB) adopted new standards for diesel fuel and emissions from heavy-duty diesel engines. By 2007, diesel engines were required to meet these new standards for particulate matter (PM), with other standards to follow. Through a combination of advanced compression ignition engine technology, development of exhaust aftertreatment systems, and reformulated fuels, stringent standards were introduced.

Before the 2007 standards were put in place by the EPA, human health effects linked to diesel exhaust (DE) exposure had been associated with diesel-fuel solvent and combustion components. In earlier research, diesel engine exhaust components were, in turn, linked to increased mutagenicity in cultures of *Salmonella typhimurium* and mammalian cells (Tokiwa and Ohnishi 1986). In addition, DE was shown to increase both the incidence of tumors and the induction of 8-hydroxy-deoxyguanosine (8-OHdG) adducts in rodents (Ichinose et al. 1997) and total DNA adducts in rats (Bond et al. 1990). Furthermore, DE is composed of a complex mixture of polycyclic aromatic hydrocarbons (PAHs) and particulates. One such PAH, 3-nitrobenzanthrone (3-NBA), is also found in urban air. 3-NBA has been observed to induce micronucleus formation in the DNA of human hepatoma cells (Lamy et al. 2004).

The current study is part of the Advanced Collaborative Emissions Study (ACES), a multidisciplinary program carried out by the Health Effects Institute and the Coordinating Research Council. Its purpose was to determine whether recent improvements in the engineering of heavy-duty diesel engines reduce the toxicity associated with exposure to DE components. To this end, we evaluated potential genotoxicity and induction of oxidative stress in bioassays of serum and tissues from Wistar Han rats chronically exposed — for up to 24 months — to DE from a 2007-compliant diesel engine (new-technology diesel exhaust, or NTDE). Genotoxicity was measured as DNA strand breaks in lung tissue, using an alkaline-modified comet assay. As a correlate of possible DNA damage evaluated in the comet assay, concentrations of the free DNA adduct 8-OHdG were evaluated in serum by a competitive enzyme-linked immunosorbent assay (ELISA). The 8-OHdG fragment found in the serum is a specific biomarker for the repair of oxidative DNA damage. In addition, an assay for thiobarbituric acid reactive substances (TBARS) was used to assess oxidative stress and damage in the form of lipid peroxidation in the hippocampus region of the brains of the DE-exposed animals. These endpoints were evaluated at 1, 3, 12, and 24 months of exposure to DE or to a control atmosphere (filtered air).

At the concentrations of DE evaluated, there were no significant effects of exposure in male or female rats after 1, 3, 12, or 24 months in any measure of DNA damage in the comet assay (%DNA in tail, tail length, tail moment, or olive moment).

This Investigators' Report is one part of Health Effects Institute Research Report 184, which also includes a Commentary by the HEI ACES Review Panel and an HEI Statement about the research project. Correspondence concerning the Investigators' Report may be addressed to Dr. L. M. Hallberg, Environmental Toxicology, Department of Preventive Medicine and Community Health, University of Texas Medical Branch, 301 University Blvd., Galveston, Texas 77555-1110; e-mail: *lmhallbe@utmb.edu*.

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* A list of abbreviations and other terms appears at the end of the Investigators' Report.

The comparison of exposure groups versus control and the comparison of groups by sex for 1 and 3 months of exposure showed no significant differences in serum 8-OHdG concentrations ($P > 0.05$). The concentrations of 8-OHdG in all exposure groups at 3 months were higher than those in exposure groups at any other time point ($P < 0.05$). Looking at the levels of 8-OHdG in serum in the 12-month and 24-month groups, we saw a significant difference from control in the 12-month group at the mid and high levels ($P < 0.05$), as well as some other scattered changes. Sex differences were noted in the 12-month high-level group ($P < 0.05$). However, these differences did not follow an exposure-dependent pattern. All other comparisons were not significant ($P > 0.05$).

Hippocampal concentrations of TBARs, measured as malondialdehyde (MDA), showed some small and scattered changes in groups exposed to different levels of DE and at different time points, but we did not consider these to be exposure-related. We concluded that exposure to DE in these rats did not produce any significant increase in oxidative damage to lipids or damage to DNA in the form of strand breaks.

## INTRODUCTION

In 2001, the EPA and CARB adopted new standards for diesel fuel and emissions from heavy-duty diesel engines. By 2007, diesel engines were required to meet this new standard for PM and, in 2010, to conform to an additional standard for nitrogen oxides ($NO_x$). A combination of advanced compression-ignition engines, exhaust aftertreatment systems, and reformulated fuels was used to meet these stringent standards, which are expected to result in substantially reduced emissions of PM, $NO_x$, and other exhaust constituents. These changes were anticipated to reduce emissions by 90% compared with those of pre-2007 heavy-duty diesel engines, providing substantial public health benefits.

The study known as ACES was designed in an effort to assess the potential health effects of these engineering advances in diesel engines. ACES was carried out in three phases: Phase 1, conducted at Southwest Research Institute in San Antonio, Texas, was an extensive characterization of the emissions of production-ready heavy-duty diesel engines designed to meet the 2007 standards. One engine was chosen (see the ACES Final Plan for Engine Selection in Appendix A of HEI Communication 17 [Mauderly and McDonald 2012], available on the Web at *http://pubs.healtheffect.org*) to be used in the health effects assessments during Phase 3, conducted at Lovelace Respiratory Research Institute (LRRI) in Albuquerque, New Mexico. (In Phase 2, investigators at the Southwest Research Institute characterized emissions from a group of diesel engine and control systems designed to meet the more stringent 2010 standards.) Phase 3 was separated into two parts. Phase 3A carefully characterized the emission profile in the exposure chambers of the selected engine, which was then used in Phase 3B as the emission source for animal exposure studies.

The current study conducting research on the genotoxicity of DE emissions from 2007-compliant diesel engines was a part of Phase 3B. In this report we describe the results from our testing of 1-, 3-, 12-, and 24-month exposures.

Human health effects linked to DE exposure have been associated with both diesel-fuel solvent and combustion components. In the past, DE components have been linked to increased mutagenicity in cultures of *Salmonella typhimurium* and mammalian cells (Tokiwa and Ohnishi 1986). In addition, DE has been shown to increase both the incidence of tumors and the induction of 8-OHdG adducts in rodents (Ichinose et al. 1997). DE is a complex mixture of PAHs and particulates. One such PAH, 3-NBA, has been identified in DE and is found in urban air. 3-NBA has been observed to induce micronucleus formation in the DNA of human hepatoma cells (HepG2) (Lamy et al. 2004). Thus, the purpose of the current research was to determine if improvements in the engineering of heavy-duty diesel engines have reduced the oxidative stress and genotoxic risk associated with DE components. To this end, the genotoxicity of DE from an improved diesel engine was evaluated in bioassays of tissues from Wistar Han rats exposed to DE. The endpoints measured included those of the comet assay used to examine DNA damage in the lung, the primary target tissue, as indicated by strand breaks. To correlate possible DNA damage found by the comet assay, DNA adduct formation was measured by a competitive ELISA assay to determine the levels of free 8-OHdG found in serum. 8-OHdG is a specific modified base that indicates an oxidative type of DNA damage to DNA nucleotides. In addition, a TBARS assay was used to assess oxidative stress and damage in the form of lipid peroxidation in the hippocampus of the brains of DE-exposed animals.

Historically, exposure to DE (which includes volatile organic compounds [VOCs], PAHs, divalent metals, and PM components) has been associated with human health concerns. In particular, it is suspected of contributing to lung cancer and cardiopulmonary diseases (Pope et al. 2002). To strengthen this suspicion, DE would have to be linked to increased mutagenicity, because the induction of mutagenic or tumorigenic events is likely involved in carcinogenesis. Such mutagenicity has been observed in both bacterial and mammalian cell systems (Tokiwa and

Ohnishi 1986). In studies of human–hamster hybrid (A/L) cells it has been demonstrated that National Institute of Standards and Technology Standard Reference Material 2975 DE particulates (DEP) can be transported inside cells through phagocytic action and that this transport resulted in a greater than twofold increase in mutation frequency (Bao et al. 2007). DE includes a complex mixture of PAHs, including 3-NBA, which has been identified in urban air and has been found to induce micronucleus formation in HepG2 cells (Lamy et al. 2004). Additionally, studies have shown increases in both the incidence of tumor formation and the formation of 8-OHdG adducts after exposure to DE and DEP in rodents (Ichinose et al. 1997). Other studies in rodents have demonstrated increased 8-OHdG adduct formation in lung tissue after a single exposure to DEP. In these experiments, DNA single-strand breaks also increased in bronchoalveolar lavage cells after repeated DEP exposure (Risom et al. 2003). Observations in animal models, cell culture experiments, and cell-free systems have suggested that exposure to DE initiates oxidative DNA damage through generation of reactive oxygen species (ROS) or induction of inflammatory responses with resultant recruitment of macrophages, which in turn can generate ROS and oxidative damage (Tokiwa et al. 1999, 2005). Because macrophage recruitment can induce cellular oxidative stress, it has been implicated as one of the underlying mechanisms behind DE's genotoxic effects. This oxidative potential can oxidize DNA nucleotides such as guanine. Exposure to PM with an aerodynamic diameter $\leq 2.5$ µm ($PM_{2.5}$) and smaller ultrafine particles (UFPs; PM with an aerodynamic diameter $\leq 0.1$ µm) has been correlated with guanine oxidation in DNA (Risom et al. 2005). This evidence has prompted the use of biomarkers of oxidative stress and DNA damage as a means of human biomonitoring for exposure to DE.

In proposing its standards, the EPA anticipated that improvements in the engineering of 2007-compliant diesel engines and in the reformulation of diesel fuel would result in reduced emissions. Reduction in these emissions might then result in reduced genotoxicity compared with that of older diesel engines. If advances in diesel engine design effectively reduce total emissions, as anticipated, then the hypothesized reductions in the levels of oxidized nucleotides and adduct formation would be observed. This in turn would result in reductions in the numbers of mutagenic lesions, abasic (apurinic/apyrimidinic) sites, and resultant strand breaks. However, although the new engineering standards might reduce particulate and total DE emissions, it is possible that even these lower emissions levels could still be significantly genotoxic and mutagenic. It is also possible that chronic exposure to these lower levels might continue to result in a cumulative genotoxic effect. Either of these scenarios suggests that the lower levels could still pose a significant genotoxic risk.

The exact mechanism by which DE induces or enhances mutagenic and carcinogenic events is not well understood. However, evidence points to the generation of oxidative stress either directly, through production of ROS, or indirectly, through induction of the inflammatory response, as a major underlying mechanism (Donaldson et al. 2002; Riedl and Diaz-Sanchez 2005; Terzano et al. 2010). This being the case, the use of endpoints that indicate oxidative-type DNA damage, as was done in the past, should be effective in determining the potential, or lack thereof, of newly engineered diesel engines to induce genetic damage in exposed populations. If exhaust from these new engines can be shown to have a reduced ability to damage DNA, then this would point to a reduced negative impact on health. The guidelines for 2007 and later diesel engines require a reduction in total particulate emissions. It has been shown that $PM_{2.5}$ induces damage directly or indirectly (Dybdahl et al. 2004; Kenyon and Liu 2011; Risom et al. 2005). For example, one direct mechanism is the induction of ROS by the particle surface, which contains redox-reactive metal. UFPs are phagocytized by alveolar macrophages and can elicit macrophage-induced inflammatory responses — resulting in ROS production, oxidative stress, and resultant DNA damage (Beck-Speier et al. 2005; Lundborg et al. 2007). However, if this reduction is limited to larger particulates, then UFPs could potentially continue to have a health impact. For example, it has been observed that UFPs are inhaled deeper into the lungs, from where they can pass into the circulatory system (Mühlfeld et al. 2008). These particles can also pass through the blood–brain barrier, inducing a neurologic inflammatory response (Chen et al. 2007; Peters et al. 2006). Because the majority of health effects caused by UFPs arise from apparent increased oxidative stress, the endpoints we selected for the current study should be suitable for investigating this effect.

## SPECIFIC AIMS

Numerous studies have shown associations between exposure to air pollutants and environmental health effects. Among the pollutants of concern are the criteria pollutants sulfur dioxide ($SO_2$), $NO_x$, and PM. These pollutants are combustion products of diesel engines. Improvements in diesel engine engineering and fuel formulations have led to reductions in many combustion products of concern. However, the formation of PM and $NO_x$ species continues to be a concern. As diesel engine

design continues to improve, we need to monitor the effects of diesel combustion products on health outcomes for the general population. One way to do this is to evaluate the effects of long-term-exposure testing of newly engineered diesel engines. Induction of oxidative stress in the human body can result from exposure to various components of DE, including organic and inorganic gases, metals, and PM. A result of this induction could be the production of oxidative damage in DNA, proteins, and lipids. This project was therefore designed to answer the following questions:

1. Does exposure of a primary target tissue, the lung, to DE from a 2007-compliant diesel engine lead to oxidative damage of DNA, resulting in the formation of strand breaks, adducts, or abasic sites, in an exposure-dependent manner?
2. Does exposure to DE from a 2007-compliant diesel engine lead to oxidative damage to lipids in the brain, particularly in the region of the hippocampus, resulting in lipid peroxidation and the formation of TBARs?

***Specific Aim 1: Determine whether exposure to DE results in the induction of DNA damage.*** We used the comet assay to determine whether oxidative damage occurred in the DNA of exposed animals. We used the alkaline-modified comet assay to determine the presence of DNA strand breaks in lung tissue. To support the findings of the comet assay, we performed an 8-OHdG assay to measure 8-OHdG residues, a result of the repair of DNA adducts, in serum.

***Specific Aim 2: Determine whether exposure to DE results in the induction of lipid damage.*** We used the TBARS assay to detect the presence of TBARS, which result from lipid peroxidation. This assay involves testing tissues from the sensitive hippocampus region of the brain.

These endpoints were measured in samples of serum, lung, and brain tissue at multiple exposure time points (1, 3, 12, and 24 months).

## METHODS AND STUDY DESIGN

### EXHAUST DILUTIONS

Four chamber-exposure levels were used for the rat bioassays: low, medium, and high DE concentrations and clean air. The ACES Oversight Committee based dilutions of DE on predetermined nitrogen dioxide ($NO_2$) concentrations. $NO_2$ is the pollutant with the highest concentration in the exhaust of 2007-compliant engines and is known to be associated with noncancer effects similar to those that have been observed with whole DE from older engines. An additional issue considered in setting the highest chamber concentration was the chamber temperature. The acceptable range of temperatures when the animals were in the chamber was set at 75 ± 3°F. The $NO_2$ concentrations selected and the rationales for selecting them were as follows:

1. The highest concentration of $NO_2$ was 4.2 ppm. This concentration was derived from an earlier study of chronic $NO_2$ exposures (Mauderly 1989) in which animals were exposed to 9.5 ppm $NO_2$ for 7 hours per day, 5 days per week, for 24 months. This concentration served as the maximum tolerated dose; the equivalent concentration for ACES, with a 16-hour exposure duration, would be 4.15 ppm. Given that actual concentrations could vary during the 16-hour exposures and might have ended up slightly below or above the target, the ACES Oversight Committee recommended targeting 4.2 ppm, with the understanding that concentrations should not go below 4.0 ppm. It was thought that it was possible at this concentration to maintain the exposure chamber temperature within the specified range.
2. The targeted medium concentration of $NO_2$ was 0.8 ppm. The ACES Oversight Committee recommended targeting 0.8 ppm (but not exceeding it) and going no lower than 0.7 ppm.
3. The lowest concentration of $NO_2$ was 0.1 ppm, or as close as possible to this, to provide a concentration that would likely have no observed adverse effect. This concentration was near the EPA ambient $NO_2$ air quality standard of 0.053 ppm. Concentrations in this range would be expected to be quite variable because of the high dilution ratio.

### SELECTION OF THE RAT STRAIN

The criteria considered in selecting a rat strain were longevity, whether a strain had been used previously in studies of chronic inhalation (particularly of DE), whether there existed a historical database of cancer incidence in the strain (based on control groups from studies of chronic exposure using inhalation or other methods of administering toxic compounds), and the maximum body weight reached by males (because it affects housing in inhalation chambers with limited available space). The final recommendation of the ACES Oversight Committee was to use Wistar Han rats. (See Additional Materials 1 in Part 1 of this volume.)

### NUMBER OF ANIMALS

We determined the number of animals needed to perform our statistical analysis based on a power analysis of

data from our previous studies (see Hallberg et al. 2012). We found that four animals would be sufficient to detect differences between exposure levels (Table A.1 in Appendix A on the HEI Web site, at *http://pubs.healtheffects.org*), but we increased the number to five animals of each sex to look for sex differences. Further discussion of the rationale for this power calculation is provided in Appendix A. All assays were performed blind. If our findings showed that our assays were unable to detect any differences by sex associated with DE exposure, we pooled the data for the males and females, giving us an $n = 10$, and repeated the analysis.

## MODIFIED COMET ASSAY

The comet assay is a sensitive technique that is able to detect DNA damage at the cellular level. It is now a standard laboratory tool for the evaluation of DNA damage and repair and genotoxicity testing and biomonitoring. Samples for the comet assay were processed at LRRI. Data from LRRI showed that animal tissues were processed within 1.5 to 4 hours after exposure. The standard neutral comet assay, which is a single-cell gel electrophoresis assay used to asses DNA damage, was slightly modified to incorporate an alkaline nucleus treatment before electrophoresis. (The neutral comet assay does not incorporate this modification and is primarily capable of detecting only genomic double-strand breaks.) The alkaline modification, used in our analysis of lung tissues from rats exposed to defined dilutions of DE, theoretically increases the sensitivity of the assay, allowing for increased resolution of both double- and single-strand DNA breaks. In addition, some fraction of alkali-sensitive sites can also be resolved using this modified assay. However, use of the modified assay does not allow for distinctions between single- and double-strand breaks or alkali-sensitive sites.

Cell suspensions were generated by manually mincing lung tissue in cold phosphate-buffered saline (PBS) containing calcium and magnesium ions on a clean glass surface with a clean razor blade. To determine the optimal amount of starting material necessary for generating an adequate cell suspension, various sizes of blocks of frozen lung tissue from a laboratory rodent (not one from the experimental groups) were minced, and cells were counted on a hemocytometer. Intact cells were embedded in agarose on microscope slides and lysed in situ. The manufacturer's suggested procedure for the neutral comet assay was followed, modified by way of an additional step in which the agarose-immobilized nuclei on microscope slides were immersed in an alkaline solution (pH > 13) for 60 minutes in the dark at room temperature. The slides were then rinsed twice in distilled water and placed in a neutral electrophoresis buffer for 5 minutes at room temperature. The remaining steps of the standard neutral comet assay were then followed.

The nuclei were imaged and captured using a microscope (Eclipse 90i, Nikon Instruments, Melville, NY) at 10× magnification fitted with a camera (SensiCam QE, PCO, Kelheim, Germany) using image-capturing software (version 3.7, IP Labs, Bonn, Germany). All images were autoexposed before capture to objectively minimize variable background staining among the images. Pyknotic (shrunken and condensed) nuclei, which are characteristic of degenerate or dying cells, can result from biologic phenomena such as apoptotic processes or from technical deficiencies in sample processing and handling. In the comet assay, pyknotic nuclei were distinguished from normal nuclei by the smaller size of their head diameter.

Comet profiles were fitted to captured images, and associated metrics (%DNA in tail, defined as the percentage of DNA in the comet tail and computed as the total comet tail intensity divided by the total comet intensity, multiplied by 100; tail moment, computed as the %DNA in the comet tail multiplied by the tail length; tail length, computed as the comet head diameter subtracted from the overall comet length; and olive moment, computed as the summation of each tail intensity integral value, multiplied by its relative distance from the center of the head [the point at which the head integral was mirrored], and divided by the total comet intensity) were estimated using specialized software (CASP version 1.2.2, Comet Assay Software Project, *http://casplab.com/*). To verify that this freely available software was suitable, five randomly selected samples of rat lung were analyzed using it and commercially available software (CometScore, TriTek Corp., Sumerduck, VA). Correlation coefficients for the two software programs were > 95% for the comet assay metrics tail moment, tail length, and olive moment. Preparation of samples, imaging, capture, and analysis were conducted using a double-blind approach.

Controls for the modified comet assay are discussed in Appendix C (on the HEI Web site, at *http://pubs.healtheffects.org*).

## BRADFORD PROTEIN ASSAY

To normalize data for the 8-OHdG ELISA assay, DNA quantification was considered. However, in a small pilot study, we were not able to isolate sufficient amounts of DNA to allow for duplicate samples when assaying for 8-OHdG. The decision was therefore made to use whole serum and to use protein content to correct the results. In addition, because the TBARS assay would need to be normalized based on protein content, we decided to use protein as the normalizing factor for both the 8-OHdG and

TBARS assays. The Bradford protein microassay (Cell BioLabs, San Diego, CA) was therefore used, per the manufacturer's instructions.

### Preparation of Standards

Bovine serum albumin (BSA) (Sigma, St. Louis, MO) was used to produce a standard curve for the analysis of protein content, as follows. The BSA was weighed and then diluted with molecular-grade water to prepare a concentrated (> 10 mg/mL) solution. The actual protein concentration of the stock solution was determined spectrophotometrically at a wavelength of 280 nm. Once the actual concentration was determined, the solution was further diluted to give a final concentration of 10 mg/mL based on the 280-nm spectrophotometric reading. The standard was aliquoted and kept frozen until use. On the day of the assay the 10 mg/mL stock solution was diluted with molecular-grade water to 1.6 mg/mL, which was then further diluted to prepare additional standard solutions of 800, 400, 200, and 100 µg/mL. The remaining standards were prepared by serially diluting the 1.6 mg/mL solution 1:1 with water. Twenty-five µL of these standards were aliquoted into tubes, in which they were mixed with 6.25 µL Bradford dye reagent concentrate (Bio-Rad, Hercules, CA) and incubated for 5 minutes at room temperature before being read in a spectrophotometer (Nanodrop, Thermo Scientific, Waltham, MA) in the Bradford mode (595 nm). Triplicate samples of the standards were read to establish the standard curve.

### Preparation of Samples for Assay

A 5-µL aliquot of serum or cell lysate from each animal was transferred to a 1-mL centrifuge tube (Eppendorf North America, New York, NY) and diluted 1:10 with molecular-grade water, free of DNase and RNase, to a final volume of 50 µL. The samples were assayed in small batches to prevent long-term incubation. Bradford dye reagent concentrate (6.25 µL) was added to each batch as in the standard preparation protocol and mixed, and the mixture was allowed to incubate for 5 minutes at room temperature. Three-µL aliquots were placed on the platform of the spectrophotometer and were measured in duplicate at a wavelength of 595 nm.

## 8-OHdG ELISA ASSAY

DNA oxidative damage occurs physiologically through endogenous as well as exogenous exposure to ROS, as a result of exposure to carcinogenic compounds. The formation of 8-OHdG, a byproduct of the removal of oxidative DNA damage by exonucleases, serves as a useful biologic marker of DNA oxidative damage. After excision, 8-OHdG is excreted without being metabolized further. For the detection and quantitation of 8-OHdG in serum samples, we used a competitive enzyme immunoassay (OxiSelect Oxidative DNA Damage ELISA Kit; Cell BioLabs, San Diego, CA) according to the manufacturer's recommendations. In this immunoassay, an 8-OHdG standard curve, measured at 450 nm, was used to quantify 8-OHdG in the samples. The sensitivity range of the immunoassay was 100 to 2000 pg/mL, and concentrations of 8-OHdG in samples were expressed as pg/mL/mg protein.

Controls for the 8-OHdG assay are discussed in Appendix C.

## TBARS ASSAY

Cellular damage as a result of lipid peroxidation is well defined in animal cells and is an indication of oxidative stress. As a result of lipid peroxidation, naturally occurring lipid peroxides are formed but are unstable, decomposing to form more complex and reactive compounds, such as MDA. The measurement of lipid peroxide byproducts is one of the most widely accepted assays for oxidative damage. We used a commercial assay (OxiSelect TBARS Assay, Cell BioLabs) to assess lipid peroxidation by the direct quantitative measurement of MDA in brain tissue. MDA-containing samples were reacted with thiobarbituric acid and then read spectrophotometrically at the wavelength of 532 nm. The MDA content in samples was determined by comparison with an MDA standard curve. The TBARS concentrations in samples were expressed as µM MDA/mg protein in tissue.

### Preparation of Samples for Assay

Whole-brain tissues from rats were rapidly extracted and snap frozen at −80°C. Tissues were received from LRRI and were stored at −80°C. For processing, whole or half brains were thawed and then dissected in chilled PBS supplemented with 1× butylated hydroxytoluene (BHT) (to inhibit further oxidation of the tissue during excision and assay) to isolate hippocampi. The hippocampi were then processed for the TBARS assay by homogenizing tissue on ice in PBS containing 1× BHT (75 mg/mL). The homogenate was then centrifuged at 10,000*g* for 5 minutes, and the supernatant was transferred to a new tube for protein and TBARS analysis.

Controls for the TBARS assay are discussed in Appendix C.

## STATISTICAL METHODS AND DATA ANALYSIS

### Comet Assay

Differences among treatment groups at the specific time points were tested using general linear models (analysis of variance, or ANOVA). Post-hoc comparisons were made only when the overall ANOVA was significant using a Bonferroni correction. In those cases, interactions among other factors (e.g., sex) could be examined as well. These analyses were conducted using statistical software (SPSS 16.1, IBM, Armonk, NY). A $P$ value of less than 0.05 was used as our cutoff for statistical significance.

We also analyzed a subset of the data with and without pyknotic nuclei to explore possible differences in statistical test outcomes. Whether or not samples with such nuclei were included did not affect the results or statistical test outcomes. Pyknotic samples were not restricted to any one treatment group, exposure duration, or sex.

### 8-OHdG Statistical Analysis

We first examined the distribution of the 8-OHdG data. Descriptive statistics were used to examine the mean and standard error (SE) of the outcomes by sex, exposure groups (low, mid, and high exposures versus control), and duration. ANOVA was used when the data were normally distributed. If the data did not meet normality or variance criteria, the Student–Newman–Keuls nonparametric method was used to examine the exposure effects, controlling for sex and stratifying by duration. Because the analysis of the total data set showed the main effect to be from duration, individual duration time-point data were subjected to two-way ANOVA comparing sex and exposure effects. If the data did not meet normality or variability criteria, the Student–Newman–Keuls method was again used for comparisons. The concentrations of 8-OHdG (expressed as pg/mL/mg protein) were analyzed using general linear models in data analysis software (SigmaPlot, version 11, SYSTAT, San Jose, CA).

### TBARS Statistical Analysis

The distribution of the TBARS data was examined. Descriptive statistics were used to examine the mean and standard deviation (SD) of the outcomes (TBARS corrected for protein, expressed as μM MDA/mg tissue) by sex, exposure groups (low, mid, and high exposures versus control), and duration. ANOVA was used when data were normally distributed. If the data did not meet normality or variance criteria, the Student–Newman–Keuls nonparametric method was used to examine the exposure effects, controlling for sex and stratifying by duration. Because the analysis of the total data set showed the main effect to be from duration, individual duration time-point data were subjected to two-way ANOVA comparing sex and exposure effects. If the data did not meet normality or variability criteria, the Student–Newman–Keuls method was again used for comparisons. Analysis was performed using SigmaPlot software.

# RESULTS

## DNA DAMAGE: MODIFIED COMET ASSAY IN LUNG TISSUE

The modified comet assay was performed on the lung tissue from a total of 155 rats. Samples were obtained from five animals of each sex in each (exposure or control) group at every exposure time point, except at 1 month, when there were only 4 females in each group and 4 males in the highest DE group. Analysis of the data from the assay was conducted on tail length (i.e., the comet head diameter subtracted from the overall comet length) and %DNA in tail. Analyses of exposure groups, exposure duration, and sex effects were also performed.

### 1- and 3-Month Exposures

After 1 month of exposure in rats, no significant differences were noted in any comparisons of groups exposed to various levels of DE and the control animals, nor were there any statistically significant effects by sex when tail moment data were used (Table B.1 in Appendix B, available on the HEI Web site; Figure 1A). Similar results were observed for tail length data (Table B.2; Figure 2A). All samples were visually screened for the presence of pyknotic cells (Figure 3). Pyknotic cells were scored, along with non-pyknotic cells, because of the blind manner in which the data were collected. Analyses of comet measures were conducted both with and without the pyknotic cells. No significant differences with respect to sex or exposure levels versus the controls were noted for the %DNA in the tail in the 1-month group (Table B.3; Figure 4A).

After 3 months of exposure in rats, no significant differences were noted using either tail moment (Table B.4; Figure 1B) or tail length (Table B.5). No significant differences with respect to sex or exposure levels versus the controls were noted for the %DNA in the tail in the 3-month group (Table B.6; Figure 4B).

Our results showed no significant differences between the 1- and 3-month samples and no significant interactions among the factors. A few samples had cells with pyknotic nuclei (i.e., four rats in the 1-month group, including one control and three in the high-exposure group, and five rats in the 3-month group, including one in the low-exposure

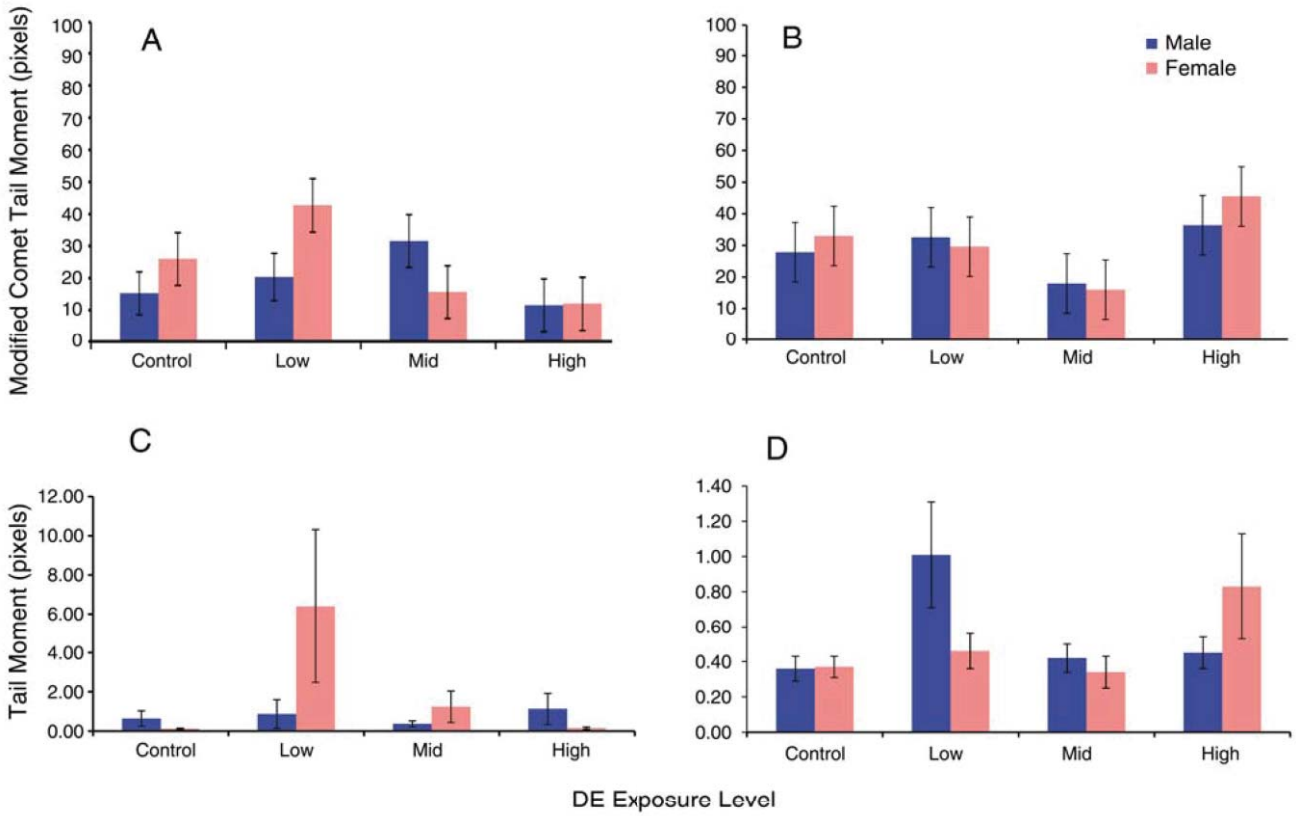


**Figure 1. Tail moment data from modified comet assay in rat lung tissue (for details on analyses see Methods section).** No significant differences were found for **(A)** the 1-month-exposure group, **(B)** the 3-month-exposure group, **(C)** the 12-month-exposure group, and **(D)** the 24-month-exposure group. (Please note differences in *y*-axis scales.) No values significant; all *P* values > 0.05.

group, three in the mid-exposure group, and one in the high-exposure group), but these were not restricted to any exposure group, sex, exposure duration, or sample processing batch. Analyses of the %DNA in the tail were done with and without these samples. The results were unchanged (Figure 4).

### 12- and 24-Month Exposures

Forty rat samples (20 female and 20 male) in each of the 12- and 24-month-exposure experiments were prepared and analyzed. Two rats in each experiment had pyknotic nuclei and were excluded from further analyses. One rat in each experiment failed to yield an adequate sample after multiple attempts and was also excluded from further analyses. In the 12-month-exposure experiment, an average of 68.8 nuclei (ranging from 57 to 94 nuclei) per rat sample were analyzed. In the 24-month-exposure experiment, an average of 60.0 nuclei (ranging from 46 to 86 nuclei) per rat sample were analyzed, with the exception of two rat samples in which a total of 25 and 26 nuclei, respectively, were analyzed.

In the 12-month experiment, there were no significant differences in comet assay measures between females and males (tail moment [Table B.7; Figure 1C], tail length

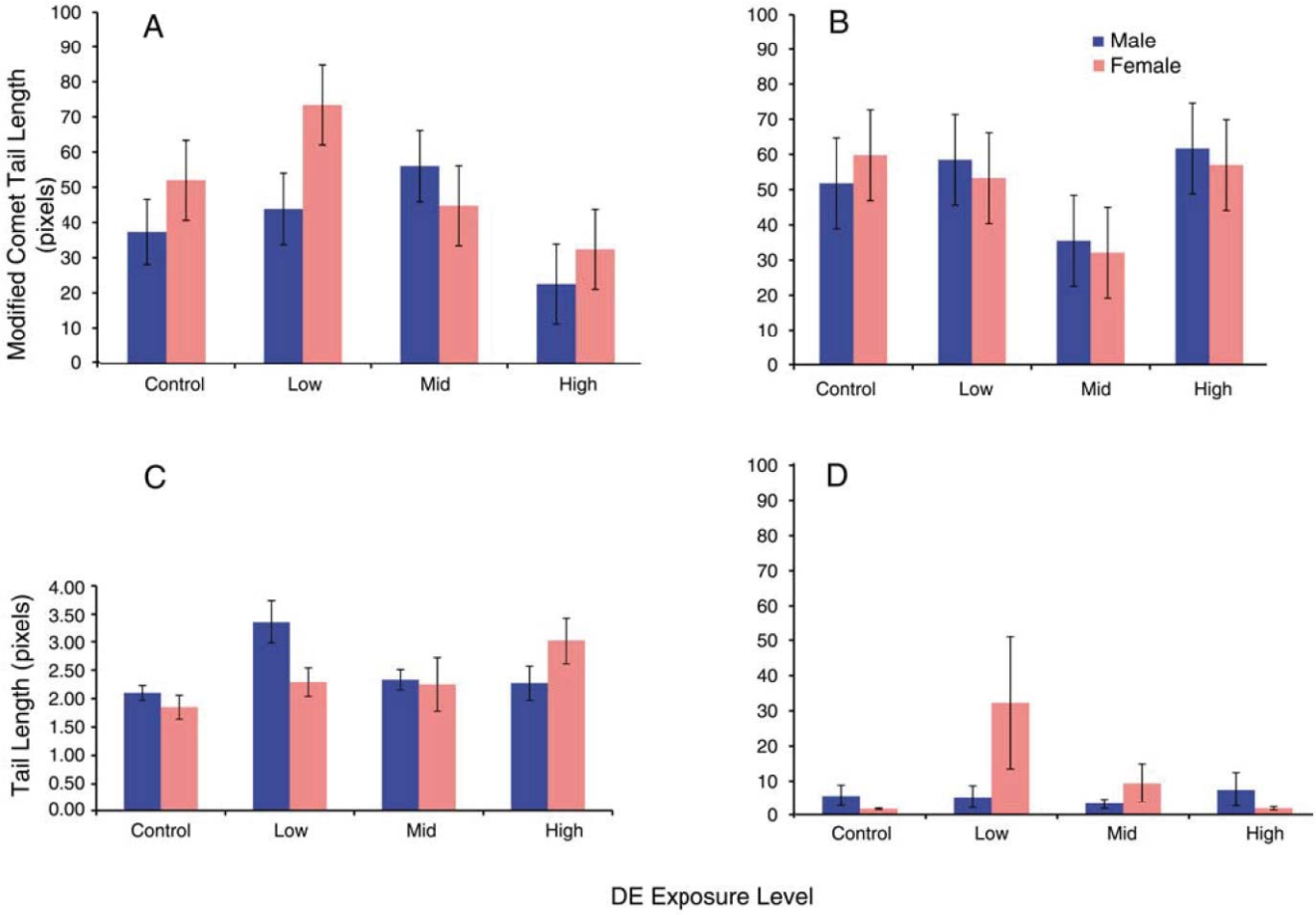


**Figure 2. Tail length data from modified comet assay in rat lung tissue.** For the 1-month exposure group **(A)**, a significant difference was found between the low- and high-exposure levels ($P = 0.04$). For the 3-month **(B)**, 12-month **(C)**, and 24-month **(D)** exposure groups, no values were significant; all $P$ values > 0.05. (Please note differences in $y$-axis scales.)

[Table B.8; Figure 2C], %DNA in tail [Table B.9; Figure 5A], and olive moment [Table B.9; Figure 6A). Likewise, in the 24-month experiment, there were no significant differences in comet measures between females and males (tail moment [Table B.10; Figure 1D], tail length [Table B.11; Figure 2D], %DNA in tail [Table B.12; Figure 5B], and olive moment [Table B.12; Figure 6B]). For all subsequent statistical testing, the sexes were combined. No significant differences were observed in the 12-month experiment among any of the exposure groups (for tail length, %DNA in tail, tail moment, and olive moment). Similarly, no significant differences were observed in the 24-month experiment among any of the exposure groups (for tail length, for %DNA in tail, for tail moment, and for olive moment).

### DNA DAMAGE: 8-OHdG ELISA ASSAY IN SERUM

Samples of serum from 151 rats were analyzed using the 8-OHdG assay. The samples were obtained from five animals of each sex from each exposure group (including the control) and each exposure duration, except the 12-month exposure group (which had four males and four females in the control and low-exposure groups, four males and three females in the mid-exposure group, and three males in the

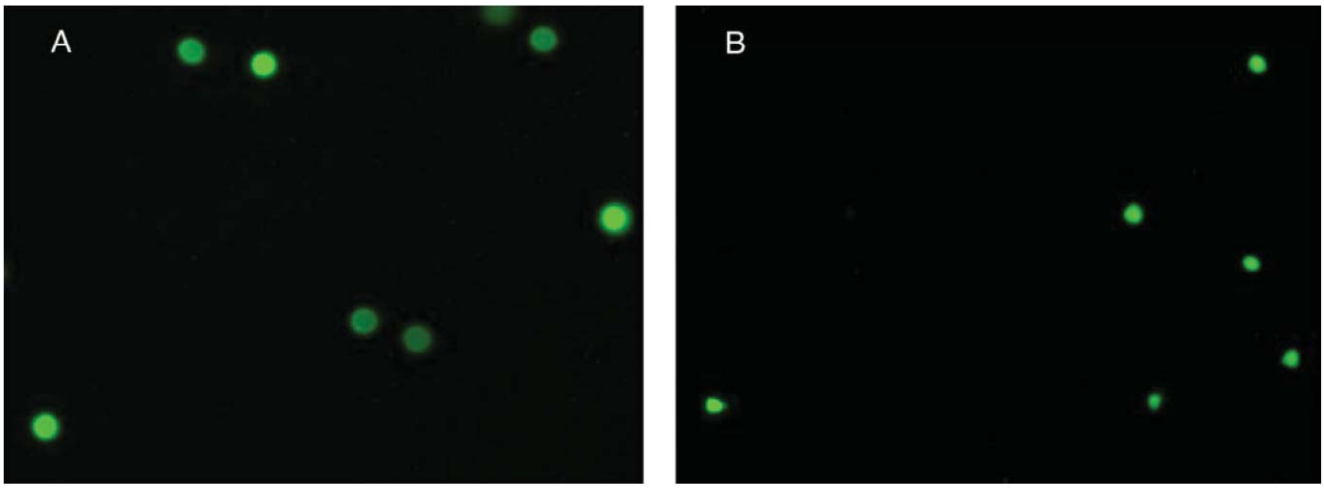


**Figure 3. Representative photographs of comet assay results showing non-pyknotic and pyknotic nuclei. (A)** Typical nuclei that were not considered to be comparatively pyknotic (average head diameter = 105 pixels). **(B)** A rare sample considered to be comparatively pyknotic (average head diameter = 44 pixels).

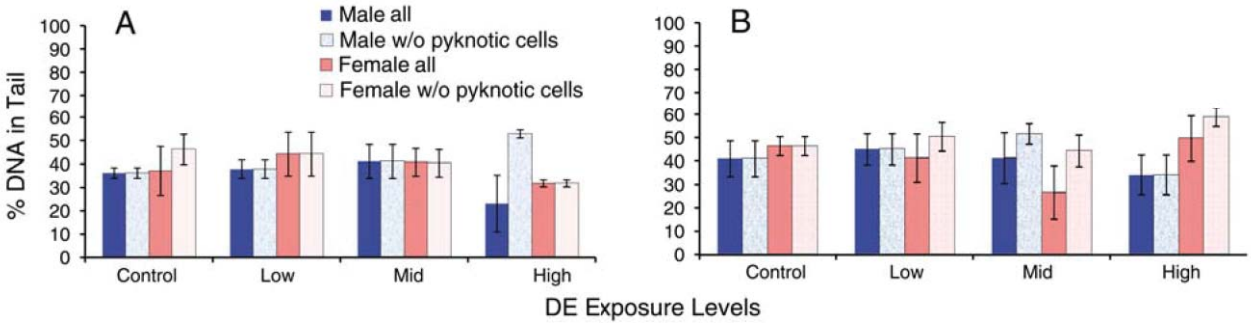


**Figure 4. %DNA tail data from modified comet assay in rat lung tissue. (A)** For 1-month-exposure group. **(B)** For 3-month-exposure group. Data were analyzed with or without pyknotic cells. No significant differences were noted between exposure levels and control. Data shown are the mean %DNA ± SEM.

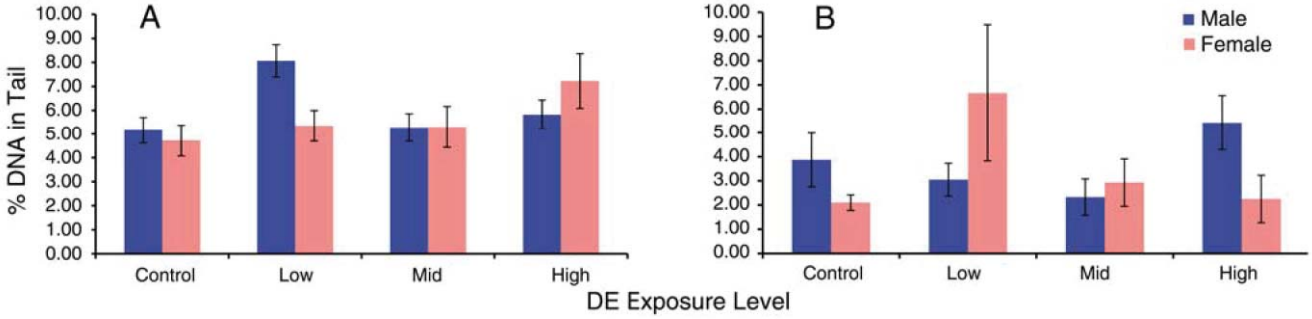


**Figure 5. %DNA tail data from modified comet assay in rat lung tissue. (A)** For 12-month-exposure group. **(B)** For 24-month-exposure group. No values significant; all $P$ values > 0.05.

high-exposure group). Table B.13A shows the results for the 1- and 3-month exposure durations. There were no significant differences between controls and exposure groups or differences by sex (Table B.13B; Figure 7A and B; $P > 0.05$). The concentrations of 8-OHdG in all exposure groups at 3 months were higher than those of exposure groups at any other time point ($P < 0.05$). Looking at the levels of 8-OHdG in serum in the 12- and 24-month groups, we saw a significant difference from control in the 12-month group at the mid level in males and at the high level in

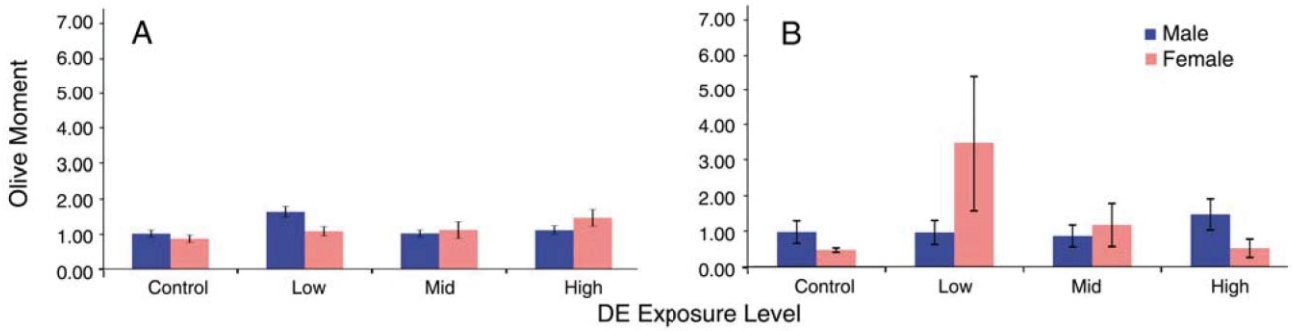


**Figure 6. Olive moment data from modified comet assay in rat lung tissue. (A)** For 12-month-exposure group. **(B)** For 24-month-exposure group. No values significant; all $P$ values > 0.05.

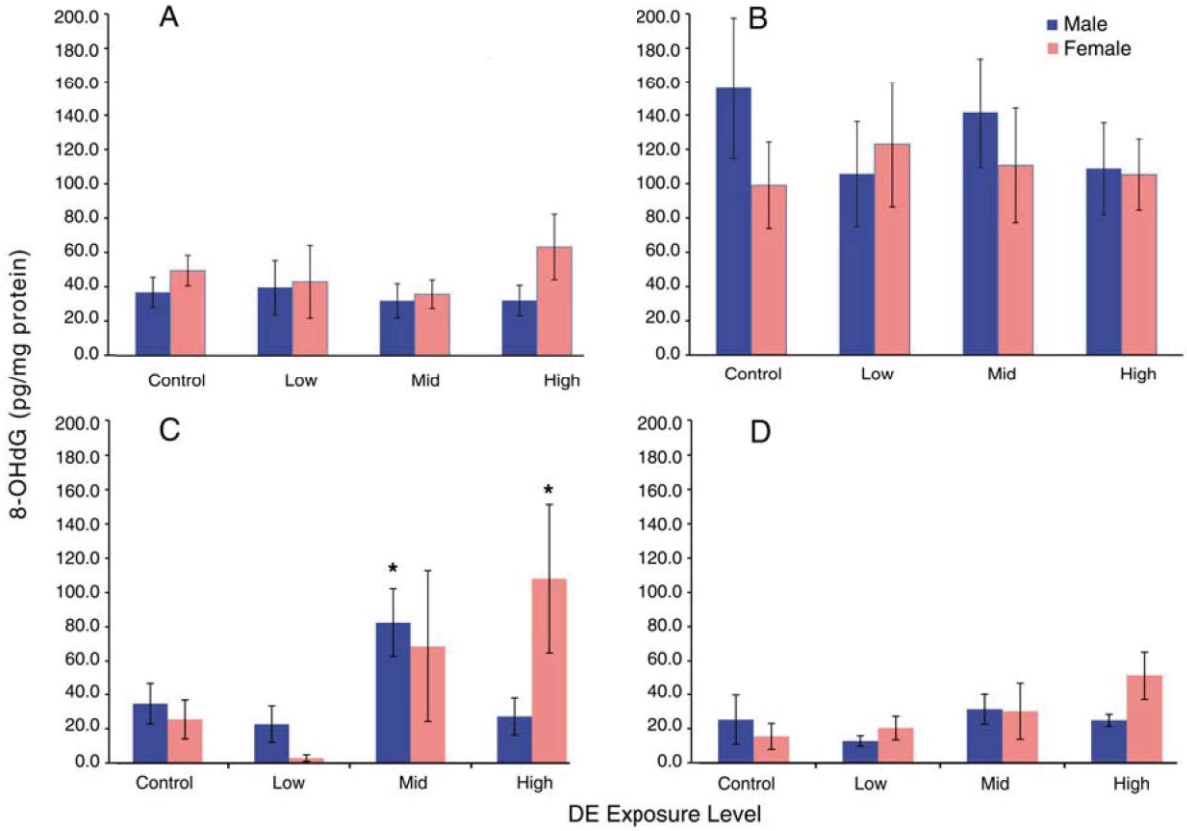


**Figure 7. 8-OHdG assay data in rat serum. (A)** For 1-month-exposure group, **(B)** for 3-month-exposure group, **(C)** for 12-month-exposure group, and **(D)** for 24-month-exposure group. * $P < 0.05$.

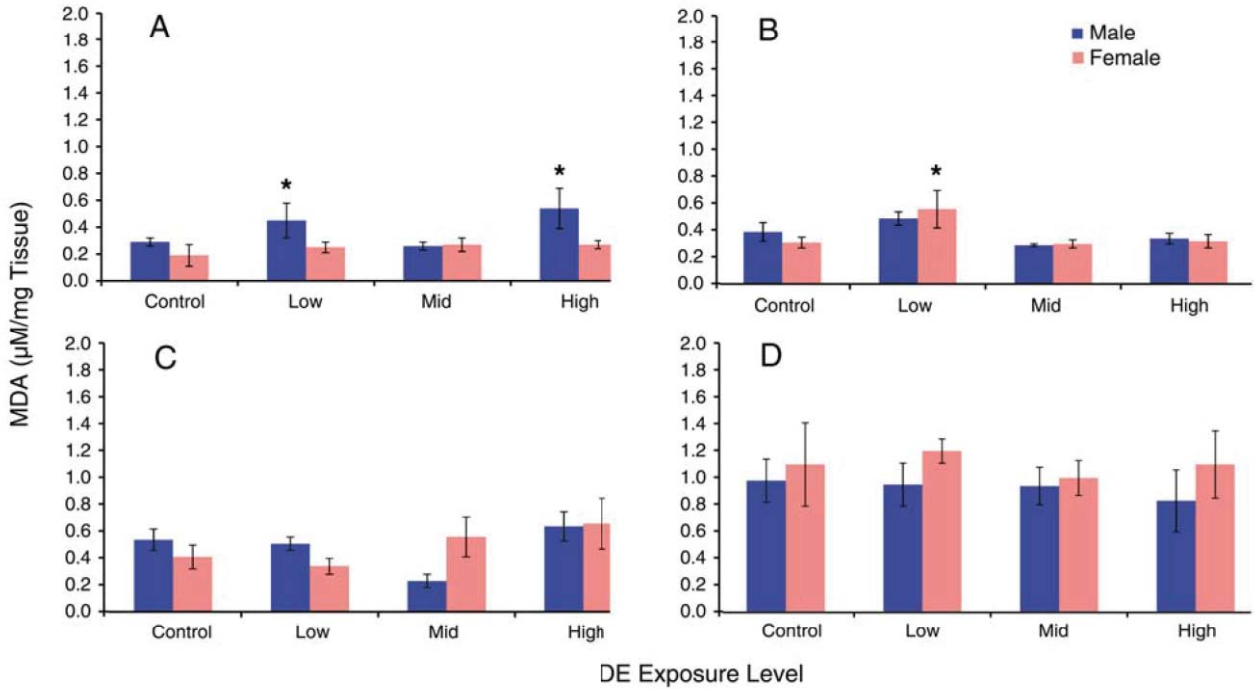


**Figure 8. TBARs assay data in rat hippocampal tissue. (A)** For 1-month-exposure group (* $P < 0.05$ for the low and high groups, males), **(B)** for 3-month-exposure group (*$P < 0.05$ for the low group, females), **(C)** for 12-month-exposure group, and **(D)** for 24-month-exposure group.

females ($P < 0.05$), as well as some other scattered changes. Sex differences were noted in the 12-month high-level group ($P < 0.05$). However, these differences did not follow an exposure-dependent pattern. All other comparisons were not significant (Tables B.14A and B.14B; Figure 7C and D; $P > 0.05$).

### LIPID PEROXIDATION: TBARS ASSAY IN HIPPOCAMPUS

Samples of cells from the hippocampi of 158 rats were analyzed using the TBARS assay. The samples were obtained from five rats of each sex in each exposure group (including the control) and each exposure duration, except the 3-month exposure group, which had only four males in the control and mid-exposure groups. Figure 8 and Tables B.15A (1 and 3 months) and B.16A (12 and 24 months) show the results for all time points. Analysis (see Methods section) of the TBARS data (Tables B.15B and B.16B) showed some small and scattered changes in groups exposed to different levels of DE and at different time points, but we did not consider these to be exposure-related. There was a duration effect — specifically, the baseline MDA levels in all groups at 24 months were higher than at 1, 3, and 12 months.

## DISCUSSION AND CONCLUSIONS

### GENOTOXIC COMPONENTS OF DE

The adverse health effects of air pollution are generally attributed to oxidative stress (Ayres et al. 2008; Lai et al. 2005). For the past several decades, adverse effects of DE have also been attributed to its ability to induce genotoxicity, caused to a large extent by DE's particulate fraction, especially UFPs (Peters et al. 2006; Risom et al. 2005). This attribution is based on the supposition that particulates can exert their effects either directly on tissue, by producing oxidative damage to lipids, proteins, or DNA, or indirectly, by the induction of an inflammatory response and the recruitment of inflammatory cells that in turn induce oxidative damage. UFPs tend to be deposited deeper in the lungs than larger particulates and to have easier access to the bloodstream and tissue. DEPs, in particular, have hundreds of chemicals adsorbed onto them (Lai et al. 2005), including PAHs, which are thought to be a substantial contributor to the health effects of PM from motor vehicles (Lewtas 2007).

VOCs, including benzene and 1,3-butadiene, are also components of DE. These are gaseous in nature and are usually inhaled into the respiratory tract. Other gaseous components include $NO_x$ and carbon monoxide (CO). The main sources of anthropogenic emissions of $NO_x$ into the air include heating, power generation, and motor vehicles. $NO_x$ can be transformed into $NO_2$ in the presence of ozone (WHO 2000). In vitro and in vivo studies in humans and animals all demonstrate that $NO_2$ can activate oxidant pathways (Bayram et al. 2001).

Earlier research into the adverse effects of DE on human health has revealed that DNA damage and lipid peroxidation can be induced in the presence of DE. In the current study, we sought to determine whether DNA damage and lipid peroxidation would continue to be problematic with emissions from 2007-compliant engines.

Our approach to answering this question was to determine the extent of DNA damage as a function of adduct formation and strand breaks in male and female rats exposed to DE. Additionally, we wanted to confirm our findings by looking for the stable DNA-adduct excision products resulting from DNA repair found in serum in the form of 8-OHdG, a ubiquitous marker of oxidative stress. 8-OHdG is physiologically formed and can be increased by the exposure of DNA to toxicants. It is formed during the repair of damaged DNA in vivo by exonucleases and can then be eliminated without being further metabolized. 8-OHdG can be found circulating in the blood and in the urine, where it is finally excreted.

To further confirm the presence of systemic oxidative stress, we investigated whether DE-induced oxidative stress could occur in the brain. Previous studies (Calderón-Garcidueñas et al. 2003, 2010) have indicated that toxicants might be able to find their way into the brain, by either bypassing the blood–brain barrier or passing along the olfactory bulb and migrating into the hippocampus. We therefore investigated whether lipid peroxidation, a well-defined mechanism of cellular damage in animals, was taking place in the hippocampal region. Lipid peroxides, formed by peroxidation, are unstable indicators of oxidative stress that decompose to form more complex and reactive compounds, such as MDA and 4-hydroxynonenal, natural byproducts of lipid peroxidation.

When our study was first proposed, we hypothesized that the induction of oxidative damage would be the result of exposure to DE gases and especially DEP. However, as the characterization of the test engine proceeded, it was determined that the design of the newer engine had reduced DEP to almost ambient levels. With this information, we realized that the possibility of DEP-induced oxidative stress would likely decrease, because it was DEP and in particular its PAH components that were most often associated with the observed health effects. However, because $NO_x$ was still present in DE and could induce oxidative stress, it remained a concern for adverse health effects.

The assays we used in this study were selected based on the experience and expertise in our group. There was some concern that these assays would record only short-term damage from the exposures, and to a certain extent this is true. However, if the body suffers an exposure to a genotoxicant, thus damaging DNA, but is able to repair the damage efficiently by way of a mechanism with a low error rate, then the exposure might be of reduced biologic relevance.

## GENOTOXICITY OF DE IN RATS AND HUMANS

The comet assay is an appropriate test for DNA damage, because it examines a broad range of oxidized purines and pyrimidines in DNA (Møller 2006). Using the comet assay, a study of bus drivers and garage workers in Prague, Czech Republic, found the level of double-strand breaks in the DNA of lymphocytes to be higher among the workers than among the controls (Bagryantseva et al. 2010). Similarly, in a Danish study using the comet assay, increased DNA damage was detected in people who bicycled in traffic (Vinzents et al. 2005). The results were attributed to UFPs in the air. UFP concentrations were associated with CO concentrations, temperature, and $NO_2$ concentrations, as measured at fixed stations. In a study by Müller and colleagues (2004), Big Blue rats exhibited higher levels of strand breaks in their lungs after oral ingestion of DEP.

The results of the current study did not show any significant exposure-related increases in DNA damage in rats as measured by the comet assay, compared with controls. Further, no differences in DNA damage were found between sexes or in comparisons between the exposure groups. It was noted that the background (i.e., control) levels for the comet assay for the 1- and 3-month samples on the one hand and the 12- and 24-month samples on the other hand were different. It is possible there is some age-related biologic explanation for these differences. However, we are not aware of any study specifically examining age-related changes in genomic damage as measured by the comet assay in rodent lung tissues to either support or refute this possibility. No changes were made to the laboratory methods or source materials used for the comet assay.

Another possible explanation for the difference is that we had to change microscope platforms during the experiments. The long-term nature of the study and normal problems with core equipment dictated that we make this switch.

For the 1- and 3-month samples, which were all processed at the same time, data were captured using the core (standard fluorescent) microscope in the J. Bennett Johnson facility at Tulane University in New Orleans, Louisiana. For the 12- and 24-month samples, processed together but not at the same time as the 1- and 3-month exposure samples, data were captured using the new core (inverted fluorescent) microscope in the Louisiana Cancer Research Consortium facility in New Orleans. Our interpretation is that the differences between background (control) concentrations in the 1- and 3-month samples and the 12- and 24-month samples likely resulted from technical differences in sample preparation and data capture. Consequently, comparing results from the 1- and 3-month samples with those from the 12- and 24-month samples is not advised or should be undertaken with caution. However, comparing exposure–response data within individual duration groups, across the 1- and 3-month groups, and across the 12- and 24-month groups, would be appropriate.

We also analyzed the data for samples with and without the pyknotic nuclei to explore possible differences in statistical test outcomes. This approach did not affect the results or statistical test outcomes.

The comet assay as conducted under these conditions can detect a limited number of types of known DNA damage. If there are repair processes for these types of damage, then we would argue that the repaired damage poses little or no future health or disease risk. This argument assumes that the rats used in our study adequately modeled the complexity of human DNA repair processes — an assumption that is likely not justified for all possibilities when considering the variations in human responses to toxicologic and genotoxicologic insults. We would argue that every exposure has relevance, though whether every exposure results in an increased health risk to the exposed individuals is a separate issue. It is possible that other types of DNA damage occurred as a result of the exposures in the study that our assays were incapable of detecting. If that is the case, these undetected or undetectable instances of DNA damage might well pose a future health or disease risk in exposed individuals. Variation in 8-OHdG concentrations has been noted in epidemiologic studies in populations exposed to DE. In a recent study (Lee et al. 2012), it was observed that an increase in urinary 8-OHdG in DE emissions inspectors was correlated with increases in PAH concentrations, but in a study by Harri and colleagues (2005), no differences in urinary 8-OHdG were observed between garage workers, waste collectors, and controls. Our findings using the 8-OHdG assay supported the lack of DNA damage (with no sex effects) seen in the comet assay in all four exposure-duration groups at all three exposure levels.

## LIPID PEROXIDATION IN BRAIN TISSUE

Acute, subchronic, and chronic exposures to PM and pollutant gases can affect people (Anderson et al. 2012). Furthermore, respiratory tract inflammation can produce mediators that are capable of reaching the brain. Systemic circulation of PM and disruption of the nasal respiratory and olfactory barriers also are possible in exposed populations. In a study by Calderón-Garcidueñas and colleagues (2003), DNA damage in healthy dogs exposed to urban air in Mexico City was evaluated. The researchers found that nasal, respiratory, and olfactory epithelia were early targets of air pollution. Both the olfactory bulbs and the hippocampi of the exposed dogs were found to have significantly higher numbers of abasic sites than those of the control animals. Additionally, increased inflammation-distress proteins were found in the brains of the exposed dogs, providing evidence that respiratory tract inflammation and deterioration of the olfactory barrier might play an important role in this neuropathy. Calderón-Garcidueñas and colleagues (2004) found that autopsied human brain tissue from cognitively and neurologically intact individuals who had been exposed to high concentrations of air pollution had significantly higher COX-2 expression in the frontal cortex of the hippocampus compared with the brain tissue of individuals who had been residents of cities with no air pollution (controls). These findings suggest that exposure to severe air pollution is associated with inflammation responses in the brain (Calderón-Garcidueñas et al. 2004). Additionally, Mexico City residents exposed to severe air pollution exhibited olfactory-bulb inflammation and endothelial hyperplasia. UFPs were observed in olfactory endothelial cytoplasm and basement membranes (Calderón-Garcidueñas et al. 2010). Furthermore, Gerlofs-Nijland and colleagues (2010) investigated the effects of controlled exposure to DE in rats. The rats were exposed to DE in a nose-only exposure chamber for 6 hours a day, 5 days a week, for 4 weeks. After the final exposure, the brains were dissected into cerebellum, frontal cortex, hippocampus, olfactory bulb and tubercles, and striatum. Baseline levels of pro-inflammatory cytokines, tumor necrosis factor alpha, and interleukin-1 alpha were dependent on the region analyzed and were found to increase in the striatum after exposure to DE. These results indicated that different brain regions might respond differently to changes induced by exposure to DE. Our study of the inflammatory effects of DE on the hippocampus in rats revealed no significant differences between exposed groups. A nearly significant difference between sexes in the rats was observed.

## STUDY LIMITATIONS

A critical limitation of the study we conducted was the lack of a DE-positive control. One approach could have been to use, as a positive control, samples from a group exposed to an older type of diesel engine. Running those samples with the current samples might have given us a better benchmark for the effects of the engineering changes associated with the newer type of engine. Nonetheless, the use of cumulative $NO_2$ exposures in our study that were very similar to those of earlier studies by Mauderly and colleagues (1987, 1989) was a key feature that facilitated comparisons between the studies.

In the newer engines, particles in the range of 2 to 10 µm would be decreased in level, but would still emit UFPs, possibly even at a higher level than in the older engines, leaving open the possibility of adverse health effects as a result of particle-associated oxidative stress. Because the DE in our study was not aged, as might normally be encountered in ambient air, we speculated that any particulates released by the study engine would be more reactive and therefore more potent than those in aged DE. Thus, the lack of oxidative-type damage, as assessed by our study, provides evidence that the newer engines appear to be running cleaner, with less induction of stress-associated effects.

Another concern involved the amount of time between the end of the exposures and the harvesting of tissues. It was pointed out that this was a possible confounder, that is, a possible explanation for the lower levels of oxidative damage noted in the study, in that from the time the exposures ended until the tissue samples were processed cellular DNA was being repaired. We therefore measured the time between the end of exposures and the end of sample processing. In the rats exposed for 1 month, the processing of samples from females averaged 2 hours and 31 minutes and of samples from males, 3 hours and 41 minutes. In the rats exposed for 3 months, the processing of samples from females averaged 4 hours and 11 minutes (which was longer than the averages for the other groups because one female was processed earlier in the day than the rest) and of samples for males, 3 hours and 21 minutes. In summary, processing time ranged from 1 hour and 23 minutes to 4 hours and 11 minutes for the females and from 1 hour and 37 minutes to 3 hours and 42 minutes for the males. It would be expected that DNA repair mechanisms would continue to mitigate damage caused by the exposure to DE during these processing times. However, two points need to be made: (1) if DNA was being repaired during these times, one would expect that 8-OHdG concentrations would have increased in the serum as a result of the repairs and should have been detected; and (2) if any damage induced by the exposure could be repaired in an efficient, error-free manner in such a short amount of time, it is our contention that it could be considered biologically irrelevant. The more important concern would involve DNA damage that was persistent. This type of damage would have several biologic fates: (1) it could induce cell-cycle delay, insofar as the damage was repaired, in which case there would be no change in phenotype, or (2) damaged cells would continue through the cell cycle and fix the damage as a mutation. Mutation could lead to an increased risk of the cells developing DNA instability, invoking a change in cellular phenotype, which could lead to some adverse health effects. Additionally, as stated in our discussion above, this assumes that the rats used in the study adequately modeled the complexity of humans in terms of DNA repair processes — an assumption that is likely not justified for all possibilities when considering the variations in human responses to toxicologic and genotoxicologic insults. We would argue that every exposure has relevance, though whether every exposure results in an increased health risk to the exposed individual is a separate issue. It is possible that other types of DNA damage occurred as a result of the exposures in the study that our assays were incapable of detecting. If that were the case, these undetected or undetectable instances of DNA damage might well pose a future health or disease risk in exposed individuals.

## IMPLICATIONS OF FINDINGS

In our experimental design, we anticipated that the presence of particulates, $SO_2$, and $NO_x$ in the DE exposures evaluated, which have been implicated in the induction of oxidative stress, might result in DNA damage. No statistically significant differences between results for controls and exposure levels were observed, and there were no statistically significant differences in any of the DE exposure groups we tested, as compared with controls. Thus, although a few of our analyses showed statistically significant differences between some groups — and are intriguing as observations — they are not likely to be biologically important from the perspective of DE effects.

The exposures in this study were chronic and continuous in nature and not short-term or acute. There was not a lengthy recovery period following the exposures, based on our understanding of the exposure design. The assays we used might thus record a chronic or continuous increase in oxidative stress or DNA damage that might result from such exposures. The exposures ended just before killing the rats and harvesting their tissue. It is possible that oxidative stress or DNA damage was induced either early in

the exposures or throughout. If the oxidative stress or DNA damage occurred early and the animals adapted in some way to mitigate either or both biomarkers, then our assays would not have been able to measure these processes, and we would not have found increases in either biomarker. If the increased oxidative stress or DNA damage occurred throughout the exposures but antioxidant capacity or DNA repair were upregulated, it is possible that the brief time between the end of the exposures and death might have allowed for mitigation of such chronic effects. In this case, too, our assays would not have found increases in their respective endpoints. It is also possible that such adaptations simply restored the biomarker responses as we measured them to levels that resembled those of the controls. Therefore, based on the endpoints we evaluated and the assays used, we conclude that the 2007-compliant DE did not produce significant or persistent oxidatively induced DNA damage to rats at the exposure levels we tested.

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## MATERIALS AVAILABLE ON THE WEB

Appendices A, B, and C contain supplemental material not included in the printed report. They are available on the HEI Web site *http://pubs.healtheffects.org*.

Appendix A. Power Calculation

Appendix B. Data Tables for All Results

Appendix C. Positive Technical Controls

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## OTHER PUBLICATION RESULTING FROM THIS RESEARCH

Hallberg LM, Ward JB, Hernandez C, Ameredes BT, Wickliffe JK. 2012. Part 3. Assessment of genotoxicity and oxidative stress after exposure to diesel exhaust from U.S. 2007-compliant diesel engines: report on 1- and 3-month

exposures in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES) Subchronic Exposure Results: Biologic Responses in Rats and Mice and Assessment of Genotoxicity. Research Report 166. Boston, MA:Health Effects Institute.

## ABBREVIATIONS AND OTHER TERMS

| | |
|---|---|
| 3-NBA | 3-nitrobenzanthrone |
| 8-OHdG | 8-hydroxy-deoxyguanosine |
| ACES | Advanced Collaborative Emissions Study |
| A/L | human–hamster hybrid |
| ANOVA | analysis of variance |
| BHT | butylated hydroxytoluene |
| BSA | bovine serum albumin |
| CARB | California Air Resources Board |
| CO | carbon monoxide |
| DE | diesel exhaust |
| DEP | diesel exhaust particulate |
| ELISA | enzyme-linked immunosorbent assay |
| EPA | (U.S.) Environmental Protection Agency |
| HepG2 | a human hepatoma cell line |
| LRRI | Lovelace Respiratory Research Institute |
| MDA | malondialdehyde |
| $NO_2$ | nitrogen dioxide |
| $NO_x$ | nitrogen oxides |
| NTDE | new-technology diesel exhaust |
| PAHs | polycyclic aromatic hydrocarbons |
| PBS | phosphate-buffered saline |
| PM | particulate matter |
| $PM_{2.5}$ | particulate matter $\leq$ 2.5 µm in aerodynamic diameter |
| ROS | reactive oxygen species |
| SD | standard deviation |
| SE | standard error |
| SEM | standard error of the mean |
| $SO_2$ | sulfur dioxide |
| TBARS | thiobarbituric acid reactive substances |
| UFP | ultrafine particle ($\leq$ 0.1 µm in aerodynamic diameter) |
| UTMB | University of Texas Medical Branch |
| VOCs | volatile organic compounds |

# Part 4. Assessment of Plasma Markers and Cardiovascular Responses in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay

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# INVESTIGATORS' REPORT

## Part 4. Assessment of Plasma Markers and Cardiovascular Responses in Rats After Chronic Exposure to New-Technology Diesel Exhaust in the ACES Bioassay

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## ABSTRACT

Although epidemiologic and experimental studies suggest that chronic exposure to diesel exhaust (DE*) emissions causes adverse cardiovascular effects, neither the specific components of DE nor the mechanisms by which DE exposure could induce cardiovascular dysfunction and exacerbate cardiovascular disease (CVD) are known. Because advances in new technologies have resulted in cleaner fuels and decreased engine emissions, uncertainty about the relationship between DE exposure and human cardiovascular health effects has increased. To address this ever-changing baseline of DE emissions, as part of the larger Advanced Collaborative Emissions Study (ACES) bioassay studying the health effects of 2007-compliant diesel engine emissions (new-technology diesel exhaust), we examined whether plasma markers of vascular inflammation, thrombosis, cardiovascular aging, cardiac fibrosis, and aorta morphometry were changed over 24 months in an exposure-level-, sex-, or exposure-duration-dependent manner. Many plasma markers — several recognized as human CVD risk factors — were measured in the plasma of rats exposed for up to 24 months to filtered air (the control) or DE. Few changes in plasma markers resulted from 12 months of DE exposure, but significant exposure-level-dependent increases in soluble intercellular adhesion molecule 1 (sICAM-1) and interleukin-6 (IL-6) levels, as well as decreases in total and non-high-density-lipoprotein cholesterol (non-HDL) levels in plasma, were observed in female rats after 24 months of DE exposure. These effects were not observed in male rats, and no changes in cardiac fibrosis or aorta morphometry resulting from DE exposure were observed in either sex. Collectively, the significant changes may reflect an enhanced sensitivity of the female cardiovascular system to chronic DE exposure; however, this conclusion should be interpreted within both the context and limitations of the current study.

## INTRODUCTION

Air pollution exposure is associated with increased cardiovascular morbidity and mortality, and is especially associated with ischemic heart disease in elderly populations (Brook et al. 2010; Pope and Dockery 2006; Pope et al. 2004). Although most air pollution studies have focused on the association between airborne $PM_{2.5}$ (particulate matter ≤ 2.5 µm in aerodynamic diameter) and cardiovascular outcomes, the specific contribution of traffic pollutants to this relationship has not been fully elucidated (Brunekreef and Russell 2009; Rosenbloom et al. 2012). Moreover, because of the recent introduction of new engine technologies and fuel reformulations, the contribution of any given mobile-source pollutant to human cardiovascular risk must be reassessed repeatedly. Previous studies have shown that acute and chronic DE exposures alter plasma cholesterol levels in rodents (Reed et al. 2004, 2006b), perhaps reflecting the activation of an acute phase response (APR) as observed in sepsis (Harris et al. 2000). Moreover, DE-induced changes in cholesterol level can

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* A list of abbreviations and other terms appears at the end of the Investigators' Report.

include lipoprotein function and oxidation state (Araujo et al. 2008). For example, cholesterol levels may be increased or decreased, but more subtle changes may be restricted to one lipoprotein class (e.g., very low-density lipoprotein, low-density lipoprotein [LDL, oxidized LDL], or HDL that may remain unidentified. Additionally, in normolipidemic rodents, the majority of circulating cholesterol is carried by HDL not by LDL, as it is in humans. Thus, decreased total cholesterol (CHOL) level in rodents could very well be the result of a loss of HDL (or "good cholesterol"), as proposed in studies of acrolein exposure in mice (Shao et al. 2005a, 2005b), or of no change in CHOL but a loss of HDL antioxidant capacity (Araujo et al. 2008). Because a decreased cholesterol level in rodents has been reported in previous studies of DE exposure (Reed et al. 2004, 2006a), lipid levels should be monitored and changes carefully interpreted.

The mechanism or mechanisms by which air pollution increases human CVD risk are unknown, although several hypotheses have been proposed (Brook et al. 2010). Time-series analyses of epidemiologic data have shown that CVD risk increases chronically and also acutely within discrete time lags following exposure to peak air pollution. Changes in plasma markers may precipitate or reflect cardiovascular injury or causally induce long-term structural changes; thus, evaluating changes in plasma markers can contribute to the understanding of the mechanisms by which air pollution leads to subsequent pathogenic events. Moreover, chronic changes in plasma markers indicate that three general and overlapping mechanisms are likely to participate in the precipitation of cardiovascular morbidity and mortality associated with exposure to air pollutants. These include (1) increased thrombogenicity, (2) increased vascular inflammation, and (3) induction of APR (systemic inflammation) (Brook 2008; Brook et al. 2010). The overlap between these pathways is incontrovertible, and yet studying the initiation and sequence of the events that govern the long-term relationship between these pathways is likely critical to unraveling the complex actions of air pollution (Esmon et al. 1999; Hukkanen et al. 2009).

Epidemiologic studies have associated increased plasma APR reactants (e.g., C-reactive protein [CRP], fibrinogen) with exposure to PM pollution in groups of humans, especially aging populations (Peters et al. 2001; Pope et al. 2004). Certain markers reflect a coordinated biologic response — as in an APR (e.g., serum amyloid A [SAA]) (Cabana et al. 1999; Kindy et al. 2000), vascular inflammation (e.g., sICAM-1) (Kitagawa et al. 2002), or thrombosis (e.g., platelet factor 4) (Sithu et al. 2010; Srivastava et al. 2011) — whereas some markers participate in more than one pathway. For example, fibrinogen, a soluble plasma protein, is converted to fibrin when the coagulation cascade is activated and represents a general marker of thrombosis (Reinhart 2003). Fibrinogen is also an APR reactant, as its level of expression is increased during the APR via transcriptional upregulation in the liver that is dependent on IL-6 (Gervois et al. 2004; Zambon et al. 2006).

A variety of cytokines and chemokines, including tumor necrosis factor-α (TNF-α), IL-6, monocyte chemotactic protein 1 (MCP-1), and keratinocyte-derived chemoattractant (KC) (also called CXCL1), have been associated with pulmonary injury following exposure to pollutants such as DE emissions (Arimoto et al. 2007; Fujimaki et al. 2006; Hiramatsu et al. 2003; Inoue et al. 2006; Li et al. 2007; Saber et al. 2006; Saito et al. 2002; Seagrave et al. 2005). The association of these markers with cardiovascular injury and systemic inflammation, however, requires more investigation (Erdely et al. 2011). For example, vascular injury and endothelial activation are typically reflected in increased plasma levels of endothelial cell markers, such as vascular endothelial growth factor (VEGF), and soluble adhesion molecules, such as sICAM-1, that are secreted or shed into the blood. VEGF is a chemokine and a growth factor that reflects acute endothelium injury and is also a marker of hypoxia and sepsis; secreted VEGF increases vascular permeability, mobilization of endothelial progenitor cells, and angiogenesis (Bateman et al. 2007; Grad et al. 1998; Nolan et al. 2004; Pickkers et al. 2005; Yano et al. 2006). However, even though pollutant exposure causes endothelium injury, it may not necessarily increase VEGF and sICAM-1. Our recent studies show that acrolein, a gaseous pollutant that results from frying food and is found in tobacco smoke, decreases plasma levels of sICAM-1 in vivo (Conklin et al. 2011b) and that this may result from the inhibition of intercellular adhesion molecule-1 (ICAM-1) shedding from endothelial cells (Tsakadze et al. 2004), which would increase the level of ICAM-1 expressed on the endothelium. Moreover, cardiovascular and systemic "VEGF resistance" has been reported in mice exposed short term to concentrated ambient particles (CAPs) or to acrolein (Haberzettl et al. 2012; Wheat et al. 2011). In these studies, neither CAPs nor acrolein exposure had an effect on blood levels of VEGF. This indicates that plasma marker levels may not change even under conditions that promote endothelium injury, which implies that the overall utility of plasma markers for detection of endothelium injury perhaps is limited.

On the other hand, some markers also influence other systemic functions; for example, leptin is considered a positive APR reactant but also is an important regulator of feeding behavior and overall body metabolism (Fantuzzi and Faggioni 2000). Increased systemic or pulmonary oxidative stress has been reported in a number of pollutant-exposure models and has been linked to injury of extrapulmonary targets and cardiovascular disease progression (Campen et al. 2010; Hirano et al. 2003; Ikeda et al. 1995a, 1995b; Reed et al. 2004; Seagrave et al. 2005). Because of the importance of

structural remodeling of the aorta and heart in chronic CVD such as atherosclerosis, hypertension, cardiomyopathy, and heart failure — and especially given the identified effects of pollutant exposures on these endpoints in rodents (Chen et al. 2013; Kodavanti et al. 2011; Wold et al. 2012; Ying et al. 2009) — we also assessed the aging thoracic aorta and heart. Thus, the purpose of this study was to analyze the effects of chronic DE exposure on the APR, vascular inflammation, and thrombosis pathways as well as on structural changes in the heart and aorta that may provide evidence of direct or indirect cardiovascular toxicity. Our study will provide the basis for subsequent studies assessing how real-world DE exposure contributes to increased human CVD risk (Channell et al. 2012; Ghio et al. 2012).

## MATERIALS AND METHODS

### EXPERIMENTAL DESIGN

#### Core Study

The experimental time course and levels of exposure to DE emissions from 2007-compliant diesel engines followed the procedure carried out at the Lovelace Respiratory Research Institute (LRRI) for the DE-exposure chronic bioassay study, as described elsewhere (see Part 1 of this volume). In brief, young, healthy male and female Wistar Han rats (12 weeks old) were used for all exposures. Up to 14 rats were assigned to one of four exposure groups: those exposed to filtered air (the control), or low (0.1 ppm nitrogen dioxide [$NO_2$], mid (0.8 ppm $NO_2$), or high (4.2 ppm $NO_2$) levels of DE. Rats were exposed 16 hr/dy, 5 dy/wk from approximately 1600 to 0800 hours on Sunday through Thursday, and tissues and blood sample were taken at 1, 3, 12, and 24 months (see Part 1). Plasma samples were shipped overnight on dry ice from LRRI to the University of Louisville.

#### Positive Controls

Plasma samples (from rats) stored frozen at −80°C from previously conducted studies at the University of Louisville were used for internal validation of plasma markers. That is, plasma samples were initially collected 24 hours after 12- to 16-week-old male Sprague Dawley rats were gavage fed either water ($n = 3$) or acrolein (0.5 mg/kg; $n = 3$) (Conklin et al. 2011a). Samples were thawed and assayed in parallel with plasma samples from the current study. Control values and those of acrolein-treated rats were compared using the Student $t$-test (unequal variance), and a $P$ value $< 0.05$ was considered statistically significant. Measures of acrolein-dependent changes in some blood markers (see Additional Materials 3) were similar to those reported previously (Conklin and Kong 2012).

### PLASMA MARKERS

Groups of 10 rats were used for all measurements of lipids, albumin (ALB), total protein (TP), cytokines and chemokines, and systemic markers of toxicity except where indicated in the tables in the Results section.

#### Plasma Lipids and Proteins

Lipids and proteins in 150 µL of previously frozen plasma were measured using a Cobas Mira Plus clinical chemistry autoanalyzer (Roche, Indianapolis, IN) with calibrated standards and clinical quality reagents (Wako Chemicals; Randox; ThermoElectron) (Conklin et al. 2010). CHOL, HDL cholesterol, LDL cholesterol, and triglycerides (TRIG) were measured in mg/dL. Based on Wako's insert, HDL cholesterol was measured using an apolipoprotein-specific precipitating antibody, and LDL cholesterol was measured by first oxidizing all non-LDL cholesterol. TP and ALB (g/dL) were measured using Bradford and Bromocresol Green reagents, respectively (Randox) (Conklin et al. 2010).

#### Cytokines, Chemokines, and Other Plasma Proteins

For measuring chemokines, cytokines, and growth factors (Saber et al. 2005, 2006), plasma thawed for lipid and protein analyses, as described above, was refrozen in 100-µL aliquots and shipped overnight on dry ice to AssayGate (Ijamsville, MD). AssayGate used a bead-based antibody technology and a custom-designed array to measure protein levels of the following rat plasma markers: granulocyte-macrophage colony-stimulating factor (GM-CSF), MCP-1, interleukin-1β (IL-1β), IL-6, interleukin-10 (IL-10), interferon-γ (IFN-γ), KC, TNF-α, VEGF, sICAM-1, fibrinogen, leptin, and CRP.

#### Thrombosis Markers

Fibrinogen was measured as part of the commercial cytokine and chemokine array (see the previous section). sICAM-1 was also measured by commercial array (AssayGate). Array values of sICAM-1 for positive controls (those treated with acrolein) were compared with data generated using an in-house sICAM-1 enzyme-linked immunosorbent assay (ELISA) system (Sithu et al. 2010). Notably, significant concordance was found between the values measured by commercial array and those values measured by in-house ELISA (Conklin and Kong 2012).

#### Systemic Organ Toxicity Markers

To discern whether DE exposure stimulated general or specific organ toxicity, multiple plasma markers were measured simultaneously during lipid- and protein-panel measurements (see the section Plasma Lipids and Proteins) using a semiautomated Cobas Mira Plus analyzer. The following

were measured: plasma alanine aminotransferase (ALT) and aspartate aminotransferase (AST), both associated with the liver (Infinity, Thermo Electron); creatine kinase (CK), associated with striated muscle (CK, Thermo Scientific); lactate dehydrogenase (LDH), associated with nonspecific cell toxicity (LDH-L, Pointe Scientific); and creatinine (CREA), associated with the kidneys (Infinity, Thermo Scientific) (Conklin and Kong 2012).

## CARDIOVASCULAR ORGAN HISTOPATHOLOGIC ANALYSES

### Cardiac Fibrosis

The hearts of male and female Wistar Han rats ($n$ = 7/group) exposed to air or DE emissions for 12 or 24 months were isolated, cut longitudinally into dorsal and ventral halves, and formalin-fixed and paraffin-embedded for sectioning. Longitudinal sections (5 µm) were stained with Sirius Red (RA Lamb LLC; Apex, NC) and Fast Green FCF (Sigma-Aldrich) to detect collagen fibers (red staining). Slides were viewed on an Olympus IOM microscope and imaged with a SPOT camera and SPOT advanced image-capture software (20× magnification; SPOT Imaging Solutions, Sterling Heights, MI). Three images were taken (base, midventricle, apex), and each digital image was embedded with a SPOT software-generated calibration line (1000 µm) stamp for subsequent image analysis (see Additional Materials 2, Figure B.1.A, available on the HEI Web site).

### Aortic Remodeling

The proximal thoracic aorta of male and female Wistar Han rats ($n$ = 7/group) exposed to air or DE emissions for 1, 3, 12, or 24 months were isolated, cut into sections (up to three), and formalin-fixed and paraffin-embedded for sectioning. Cross sections (5 µm) were stained with Sirius Red and Fast Green FCF to demarcate the outer elastic lamina (OEL; border) between the tunica media and tunica adventitia. Up to three cross sections were viewed on an Olympus IOM microscope and imaged with a SPOT camera and SPOT advanced image-capture software (40× magnification). Each image was embedded with a SPOT software-generated calibration line (1000 µm) stamp for subsequent image analysis (see Figure 1; Additional Materials 2, Figure B.2.B, inset).

### Image Analysis

Cardiac fibrosis and aortic structural analyses were performed using the National Institutes of Health free software ImageJ, version 1.45s (Schneider et al. 2012). Each digital photomicrograph (with up to three different aorta sections per slide) was analyzed as follows:

***Heart*** The extent of fibrosis was the red-stained area measured as the percentage of the total area assessed. Following a standard protocol (using ImageJ; see examples given by the National Institutes of Health at *http://rsbweb.nih.gov/ij/docs/examples/stained-sections/index.html*), images were split into red, green, and blue channels, and the green channel (red staining) was thresholded for appropriate contrast. The numerical threshold level was recorded for each image. Because red staining (i.e., Sirius Red-stained collagen fibers) was measured as a function of a threshold setting (i.e., numerical contrast) in ImageJ, two validation tests were performed. For test 1, 10 different images were measured for the percentage of fibrosis at variable thresholds chosen by the observer, and the results were compared with those at a single preset threshold level. For test 2, 10 different images were thresholded for the percentage of fibrosis at three different prechosen threshold levels (e.g., 170, 175, 180), which encompassed the typical threshold range used when the observer was allowed to choose a threshold by eye. The results of test 1 indicated that allowing the observer to choose the threshold resulted in less variation around the mean compared with using a single preset threshold level (data not shown). The results of test 2 showed that the percentage of fibrosis was a linear function of the threshold setting (data not shown). Based on these tests, we chose to have the observer set the threshold level by eye. Each image was analyzed for total, vascular, and avascular fibrosis as a percentage of the area covered. Vascular fibrosis comprised all easily identifiable blood vessels (> 50 µm diameter) and their surrounding connective tissue. Avascular fibrosis was assessed in cardiac tissue absent of obvious relatively large diameter vasculature (vessels ≥ 100 µm).

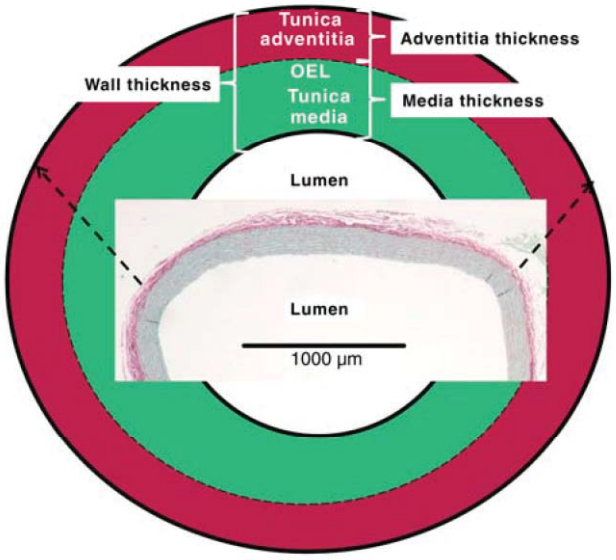


**Figure 1. Schematic of aortic cross section used for analysis of aorta wall morphometry.** Cross sections (5 µm) were stained with Sirius Red and Fast Green to demarcate the OEL (border) between the tunica media (green) and tunica adventitia (red). *Inset*: Portion of rat thoracic aorta wall stained with Sirius Red (adventitia) and Fast Green (media). The image is stamped with a calibration line (1000 µm).

***Aorta*** Area (in $\mu m^2$) was measured for the following: lumen, wall, media, and adventitia. Thickness (in µm) was measured for the following: wall, media, and adventitia. The measurements of some parameters were used to calculate other parameters, as described next (see Figure 1).

*Luminal Area* The luminal area (LA) was measured by tracing the inner border (intima) of the aorta.

*Wall Area* The aortic wall area (WA) was calculated by first measuring the area of the aortic cross section (i.e., the outer circumference of the aorta was traced) and then subtracting the LA.

*WA/LA Ratio* This was the WA divided by the LA.

*Media Area* The media area was measured by first tracing the OEL to get the OEL area and then subtracting the LA from the OEL area.

*Adventitia Area* The adventitia area was calculated by first measuring the area of the aortic cross section and then subtracting the OEL area.

*Wall Thickness* The aortic wall thickness (WT) was calculated as the mean of four measurements per cross section; each measurement, made at 90° intervals, was the distance from outer adventitial border to the luminal border.

*Media Thickness* The media thickness (MT) was measured and calculated as the WT was, but the distance measured was from the OEL to the luminal border.

*Adventitia Thickness* The adventitia thickness was the difference between the WT and the MT.

## STATISTICAL ANALYSES

### Data Quality Control

To test for outliers (i.e., values out of the likely range of the response variables), we calculated the median of the observations at each exposure level (stratified by sex and exposure duration) and the differences (i.e., residuals) of the observations and the medians at each exposure level. We calculated the standard deviation (SD) of all the residuals. Based on the Bonferroni method for multiple tests (Faraway 2005), the observations with the residuals outside the range of 4 SDs were identified (i.e., flagged) for examination of their plausibility and methodologic validity. Among these flagged values, we removed only those values that were both improbable (based on our experience) and that exceeded 4 × SD. The resulting data set excluding outlier values was used for subsequent statistical analyses. The mean and standard error (SE) for each group based on these data sets are reported in the Results section.

Note that all measurements (both bioanalytic and morphologic) were made and recorded in a blinded manner (i.e., the observer was unaware of the exposure treatment of the sample), which should have prevented observer-dependent bias in the cardiovascular histopathology analyses. Similarly, statistical analyses were performed only after all data were collected for 12- and 24-month exposures. Potential general limitations include the sample size ($n$ = 10/group for bioanalytic and $n$ = 7/group for morphologic endpoints), that the samples were not formalin-fixed under physiologic pressure conditions, and that the rats were unfasted at euthanization.

### Statistical Analysis Methods

For each marker, we first carried out three-way analysis of variance (ANOVA), with exposure level, sex, and exposure duration as factors, and included all two-way and three-way interactions. The normality of the residuals was assessed using the Shapiro-Wilk test. If the normality assumption was violated, the Box-Cox transformation was applied to meet the normality assumption. Otherwise, a rank-based transformation was applied (Venables and Ripley 2002). The three-way ANOVA was applied to the transformed data, and the mean squares for each factor and their interactions and the $P$ values for these significance tests are reported in the Results section.

Additionally, for each marker with significant exposure-level effect or significant two-way or three-way interaction with the exposure level, we applied the Dunnett multiple comparisons test to determine whether the measurements for each exposure level were significantly different from those for the control for each combination of exposure duration and sex. The significant results for exposure-level effects are reported in the Results section. A $P$ value less than 0.05 was considered statistically significant, and all analyses were carried out using the statistics software R (*www.r-project.org*).

# RESULTS

## EFFECTS OF DE EXPOSURE LEVEL

### Plasma Markers

Summary data for plasma markers in rats exposed for 12 and 24 months are shown in Tables 1 and 2, and summary data for short-term exposures (1 and 3 months) are compiled in Additional Materials 1, available on the HEI Web site (in

**Table 1.** Plasma Levels (Mean ± SE) of Markers Measured in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 12 or 24 Months[a]

| | CHOL ($N$ = 157) (mg/dL) | HDL ($N$ = 158) (mg/dL) | LDL ($N$ = 158) (mg/dL) | HDL/LDL ($N$ = 157) | TRIG ($N$ = 156) (mg/dL) | ALB ($N$ = 158) (g/dL) | TP ($N$ = 158) (g/dL) | NAP[b] ($N$ = 157) (g/dL) |
|---|---|---|---|---|---|---|---|---|
| **12-Month Exposure: Male Rats** | | | | | | | | |
| Air | 115.69 ± 10.86 | 64.03 ± 6.23 | 20.15 ± 1.88 | 3.30 ± 0.35 | 107.46 ± 27.83 | 4.05 ± 0.16 (9) | 6.45 ± 0.38 | 2.14 ± 0.17 (9) |
| Low | 95.56 ± 6.55 | 51.64 ± 2.99 | 18.30 ± 2.33 | 3.14 ± 0.31 | 96.68 ± 14.43 | 4.07 ± 0.15 | 6.31 ± 0.34 | 2.24 ± 0.19 |
| Mid | 95.60 ± 4.16 (9) | 52.76 ± 2.41 (9) | 18.18 ± 2.11 (9) | 3.20 ± 0.38 (9) | 102.95 ± 12.74 (9) | 4.05 ± 0.10 (9) | 6.21 ± 0.19 (9) | 2.16 ± 0.11 (9) |
| High | 97.14 ± 5.53 | 52.29 ± 2.62 | 20.99 ± 2.17 | 2.70 ± 0.26 | 63.39 ± 5.29 | 4.00 ± 0.12 | 5.90 ± 0.19 | 1.90 ± 0.09 |
| **12-Month Exposure: Female Rats** | | | | | | | | |
| Air | 88.51 ± 9.35 | 55.45 ± 5.27 | 13.94 ± 1.96 | 4.25 ± 0.33 | 53.63 ± 14.36 | 4.36 ± 0.22 | 6.33 ± 0.35 | 1.98 ± 0.14 |
| Low | 93.97 ± 7.31 | 57.63 ± 4.43 | 15.71 ± 1.55 | 3.81 ± 0.26 | 79.32 ± 18.87 | 4.16 ± 0.14 | 6.15 ± 0.28 | 1.99 ± 0.16 |
| Mid | 93.83 ± 7.06 | 57.62 ± 4.02 | 16.59 ± 2.41 | 3.92 ± 0.43 | 43.15 ± 7.61 (9) | 4.16 ± 0.12 | 5.94 ± 0.24 | 1.79 ± 0.12 |
| High | 96.50 ± 10.47 | 56.98 ± 5.71 | 16.53 ± 2.45 | 3.75 ± 0.30 | 90.00 ± 24.37 | 4.20 ± 0.13 | 6.04 ± 0.23 | 1.84 ± 0.13 |
| **24-Month Exposure: Male Rats** | | | | | | | | |
| Air | 139.81 ± 15.16 | 73.85 ± 8.15 | 31.61 ± 2.98 | 2.40 ± 0.27 | 90.33 ± 21.72 | 3.82 ± 0.17 | 6.42 ± 0.29 | 2.60 ± 0.15 |
| Low | 145.98 ± 18.43 | 77.44 ± 8.55 | 32.79 ± 4.76 (9) | 2.66 ± 0.42 (9) | 67.55 ± 16.11 (9) | 3.97 ± 0.07 | 6.61 ± 0.10 (9) | 2.67 ± 0.13 (9) |
| Mid | 147.61 ± 11.11 | 78.69 ± 6.57 | 31.26 ± 2.82 | 2.56 ± 0.14 | 117.34 ± 20.89 | 4.02 ± 0.06 | 6.76 ± 0.17 | 2.75 ± 0.14 |
| High | 152.62 ± 16.84 | 80.19 ± 7.48 | 31.32 ± 3.92 | 2.71 ± 0.26 | 91.82 ± 16.91 | 4.07 ± 0.09 | 6.67 ± 0.19 | 2.60 ± 0.13 |
| **24-Month Exposure: Female Rats** | | | | | | | | |
| Air | 138.42 ± 11.43 (9) | 80.50 ± 5.77 (9) | 24.18 ± 3.28 | 3.94 ± 0.44 (9) | 143.84 ± 33.29 | 4.25 ± 0.08 | 6.92 ± 0.24 | 2.67 ± 0.20 |
| Low | 135.88 ± 12.31 | 76.84 ± 7.31 | 24.61 ± 3.21 | 3.37 ± 0.37 | 113.64 ± 18.49 | 4.32 ± 0.09 | 6.97 ± 0.17 | 2.65 ± 0.11 |
| Mid | 146.88 ± 9.77 | 85.52 ± 5.75 | 27.72 ± 3.04 | 3.29 ± 0.26 | 65.64 ± 12.94 (9) | 4.36 ± 0.10 | 7.11 ± 0.23 | 2.75 ± 0.18 |
| High | 99.29 ± 3.62 (9) | 64.80 ± 7.39 | 20.11 ± 3.31 | 3.53 ± 0.33 | 92.45 ± 21.80 | 4.23 ± 0.12 | 6.94 ± 0.18 | 2.71 ± 0.12 |

*(Table continues next page)*

[a] The sample size was 10 per group unless otherwise indicated by the number in the parentheses ($n$) after the value. $N$ = total number of samples.

[b] Non-albumin protein.

**Table 1 (*Continued*).** Plasma Levels (Mean ± SE) of Markers Measured in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 12 or 24 Months[a]

| | ALT ($N$ = 158) (U/L) | AST ($N$ = 157) (U/L) | CK ($N$ = 156) (U/L) | CREA ($N$ = 158) (mg/dL) | LDH ($N$ = 156) (U/L) | Non-HDL ($N$ = 157) (mg/dL) | HDL+LDL ($N$ = 157) (mg/dL) |
|---|---|---|---|---|---|---|---|
| **12-Month Exposure: Male Rats** | | | | | | | |
| Air | 46.56 ± 3.91 | 76.84 ± 6.13 | 255.40 ± 47.16 | 0.59 ± 0.03 | 271.14 ± 28.20 | 51.66 ± 5.12 | 84.18 ± 7.27 |
| Low | 46.43 ± 2.08 | 70.78 ± 6.18 | 193.00 ± 33.91 | 0.60 ± 0.04 | 279.77 ± 70.96 | 43.91 ± 4.00 | 69.94 ± 4.69 |
| Mid | 42.07 ± 2.55 (9) | 74.31 ± 7.41 (9) | 180.11 ± 22.01 (9) | 0.61 ± 0.03 (9) | 195.59 ± 10.73 (9) | 42.84 ± 2.72 (9) | 70.94 ± 3.46 (9) |
| High | 54.49 ± 6.64 | 71.51 ± 7.91 | 181.28 ± 28.87 | 0.58 ± 0.03 | 207.92 ± 17.29 | 44.85 ± 3.47 | 73.28 ± 4.12 |
| **12-Month Exposure: Female Rats** | | | | | | | |
| Air | 79.64 ± 8.06 (9) | 132.98 ± 17.89 | 217.52 ± 32.21 | 0.57 ± 0.04 (9) | 276.51 ± 25.30 | 33.07 ± 4.28 | 69.38 ± 6.94 |
| Low | 83.12 ± 10.14 | 122.26 ± 18.89 | 187.15 ± 30.39 | 0.55 ± 0.03 | 282.86 ± 30.34 | 36.34 ± 3.09 | 73.34 ± 5.54 |
| Mid | 54.52 ± 5.73 | 104.68 ± 15.02 | 143.92 ± 18.59 | 0.54 ± 0.01 | 256.70 ± 17.78 | 36.22 ± 3.43 | 74.21 ± 5.88 |
| High | 67.43 ± 6.83 | 97.68 ± 12.62 | 134.61 ± 10.98 | 0.50 ± 0.02 | 247.09 ± 24.56 | 39.52 ± 5.17 | 73.51 ± 7.57 |
| **24-Month Exposure: Male Rats** | | | | | | | |
| Air | 47.57 ± 4.54 | 86.40 ± 17.03 (9) | 282.28 ± 47.25 | 0.56 ± 0.02 | 337.03 ± 61.98 | 65.95 ± 7.28 | 105.47 ± 9.92 |
| Low | 49.42 ± 2.95 | 78.22 ± 9.87 | 177.92 ± 50.99 (9) | 0.58 ± 0.02 | 240.53 ± 79.10 (9) | 68.54 ± 10.34 | 110.77 ± 13.75 (9) |
| Mid | 67.30 ± 6.97 | 118.29 ± 15.87 | 346.92 ± 80.16 | 0.57 ± 0.03 | 480.48 ± 103.34 | 68.92 ± 4.87 | 109.95 ± 8.78 |
| High | 58.50 ± 8.16 | 104.71 ± 12.71 | 385.42 ± 78.47 | 0.59 ± 0.03 | 477.69 ± 151.36 | 72.43 ± 9.97 | 111.51 ± 10.44 |
| **24-Month Exposure: Female Rats** | | | | | | | |
| Air | 67.04 ± 7.26 | 110.57 ± 14.02 (9) | 225.37 ± 64.33 (9) | 0.52 ± 0.02 | 313.40 ± 91.83 (9) | 57.91 ± 6.34 (9) | 102.68 ± 7.84 (9) |
| Low | 69.51 ± 7.20 | 122.52 ± 25.00 (9) | 201.81 ± 44.94 (9) | 0.57 ± 0.04 | 336.63 ± 83.49 (9) | 59.03 ± 5.23 | 101.45 ± 9.71 |
| Mid | 81.67 ± 10.50 | 139.96 ± 19.75 | 250.04 ± 90.47 | 0.48 ± 0.03 | 389.17 ± 145.07 | 61.36 ± 4.63 | 113.24 ± 8.09 |
| High | 66.75 ± 9.18 | 139.39 ± 19.72 | 362.68 ± 90.76 | 0.52 ± 0.02 | 533.02 ± 169.30 | 41.71 ± 2.20 (9) | 84.91 ± 10.43 |

[a] The sample size was 10 per group unless otherwise indicated by the number in the parentheses ($n$) after the value. $N$ = total number of samples.

**Table 2.** Plasma Levels (Mean ± SE) of Cytokines and Chemokines and APR Reactants Measured in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 12 or 24 Months[a]

| | GM-CSF ($N$ = 156) (pg/mL) | MCP-1 ($N$ = 154) (pg/mL) | IL-1β ($N$ = 150) (pg/mL) | IL-6 ($N$ = 152) (pg/mL) | IL-10 ($N$ = 153) (pg/mL) | IFN-γ ($N$ = 153) (pg/mL) | KC ($N$ = 155) (pg/mL) |
|---|---|---|---|---|---|---|---|
| **12-Month Exposure: Male Rats** | | | | | | | |
| Air | 61.03 ± 6.08 | 259.14 ± 108.31 | 267.85 ± 129.77 | 466.29 ± 128.44 | 168.27 ± 85.06 | 21.15 ± 10.63 | 4.31 ± 0.78 |
| Low | 80.08 ± 6.26 | 148.30 ± 15.12 | 186.47 ± 63.73 | 374.50 ± 69.52 | 120.59 ± 43.94 | 24.86 ± 13.54 | 3.92 ± 0.54 |
| Mid | 82.06 ± 6.84 | 122.60 ± 27.19 | 224.18 ± 97.85 | 857.64 ± 339.89 | 126.12 ± 43.59 | 10.16 ± 1.19 | 3.54 ± 0.39 |
| High | 72.92 ± 4.62 | 163.69 ± 52.85 | 272.27 ± 151.92 | 1118.78 ± 270.44 | 259.67 ± 153.92 | 45.70 ± 14.60 | 9.78 ± 4.48 |
| **12-Month Exposure: Female Rats** | | | | | | | |
| Air | 61.27 ± 7.17 | 98.93 ± 20.35 | 76.41 ± 29.40 | 772.36 ± 182.63 | 31.73 ± 9.68 | 37.04 ± 15.13 | 6.66 ± 2.49 |
| Low | 60.32 ± 3.48 | 101.68 ± 14.48 | 112.42 ± 28.62 | 620.12 ± 135.57 | 192.41 ± 108.61 | 73.14 ± 41.78 | 6.08 ± 2.13 |
| Mid | 50.09 ± 6.33 | 93.57 ± 12.78 | 121.84 ± 40.61 | 434.18 ± 79.18 | 52.38 ± 10.26 | 20.25 ± 10.47 | 5.80 ± 2.04 |
| High | 59.56 ± 4.65 | 82.85 ± 10.91 | 176.74 ± 95.61 (9) | 390.86 ± 62.77 | 32.54 ± 7.79 (9) | 22.89 ± 13.51 | 8.88 ± 2.65 |
| **24-Month Exposure: Male Rats** | | | | | | | |
| Air | 162.50 ± 60.67 | 298.42 ± 90.38 | 490.41 ± 210.18 (9) | 355.18 ± 80.46 (9) | 223.57 ± 105.96 | 53.94 ± 23.94 (9) | 8.64 ± 3.12 |
| Low | 223.83 ± 79.20 (9) | 167.43 ± 33.26 (9) | 217.97 ± 119.05 (9) | 1148.03 ± 565.18 (9) | 223.02 ± 115.97 | 60.74 ± 41.85 (9) | 5.55 ± 1.92 |
| Mid | 266.75 ± 80.27 | 242.70 ± 48.48 | 389.50 ± 285.13 (9) | 583.69 ± 172.42 | 161.09 ± 80.63 (9) | 59.98 ± 24.19 | 5.06 ± 1.87 (9) |
| High | 184.07 ± 79.04 (9) | 185.94 ± 49.56 (9) | 244.81 ± 129.50 (9) | 287.97 ± 155.16 (8) | 53.16 ± 23.15 (9) | 88.96 ± 65.92 (8) | 9.41 ± 3.46 (9) |
| **24-Month Exposure: Female Rats** | | | | | | | |
| Air | 162.60 ± 75.41 | 192.22 ± 49.37 (9) | 71.64 ± 42.34 | 77.97 ± 23.36 | 100.77 ± 89.72 | 18.11 ± 2.98 | 7.63 ± 2.39 |
| Low | 112.20 ± 39.98 (8) | 242.94 ± 68.71 (8) | 77.29 ± 39.56 (6) | 552.26 ± 247.07 (8) | 200.55 ± 162.32 (7) | 175.50 ± 100.27 (8) | 8.02 ± 1.57 (8) |
| Mid | 109.72 ± 73.87 | 207.52 ± 38.94 | 173.21 ± 85.51 (9) | 470.01 ± 121.09 | 88.95 ± 59.27 (9) | 33.20 ± 9.59 | 8.84 ± 2.13 (9) |
| High | 108.91 ± 26.38 | 117.27 ± 31.76 (9) | 73.83 ± 17.48 | 974.26 ± 389.26 (8) | 35.73 ± 13.03 | 248.82 ± 133.93 (9) | 10.65 ± 1.60 |

*(Table continues next page)*

[a] The sample size was 10 per group unless otherwise indicated by the number in the parentheses (n) after the value. $N$ = total number of samples.

s

**Table 2. (*Continued*)** Plasma Levels (Mean ± SE) of Cytokines and Chemokines and APR Reactants Measured in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 12 or 24 Months[a]

| | TNF-α ($N$ = 156) (pg/mL) | VEGF ($N$ = 153) (pg/mL) | sICAM-1 ($N$ = 155) (pg/mL) | Fibrinogen ($N$ = 157) (pg/mL) | Leptin ($N$ = 157) (pg/mL) | CRP ($N$ = 157) (pg/mL) |
|---|---|---|---|---|---|---|
| **12-Month Exposure: Male Rats** | | | | | | |
| Air | 6.09 ± 1.92 | 15.55 ± 1.45 | 4745.23 ± 2042.97 | 1654.34 ± 99.83 | 119.02 ± 12.23 | 418.64 ± 24.52 |
| Low | 4.06 ± 0.10 | 22.67 ± 2.72 | 4227.32 ± 854.60 | 1680.01 ± 224.61 | 124.06 ± 8.96 | 408.21 ± 37.16 |
| Mid | 4.00 ± 0.12 | 50.40 ± 22.69 | 5451.53 ± 2203.12 | 1862.99 ± 198.19 | 121.98 ± 7.14 | 395.57 ± 25.70 |
| High | 3.84 ± 0.07 | 51.06 ± 17.20 | 5063.65 ± 937.57 | 1622.40 ± 149.39 | 104.04 ± 9.96 | 376.43 ± 22.34 |
| **12-Month Exposure: Female Rats** | | | | | | |
| Air | 4.06 ± 0.22 | 59.27 ± 33.37 | 3427.54 ± 664.73 | 1985.65 ± 120.27 | 50.66 ± 10.69 | 347.73 ± 30.39 |
| Low | 4.51 ± 0.55 | 25.23 ± 3.52 | 2596.09 ± 606.66 | 2120.87 ± 222.41 | 63.09 ± 13.03 | 376.28 ± 34.45 |
| Mid | 4.90 ± 0.88 | 37.75 ± 10.94 (9) | 1067.43 ± 489.23 | 1804.56 ± 184.25 | 58.02 ± 5.90 | 291.78 ± 11.69 |
| High | 3.81 ± 0.08 | 22.89 ± 2.93 (9) | 1534.37 ± 383.95 | 1734.07 ± 124.72 | 64.99 ± 8.47 | 295.17 ± 26.92 |
| **24-Month Exposure: Male Rats** | | | | | | |
| Air | 6.31 ± 1.32 | 43.36 ± 16.36 | 11,885.15 ± 2503.63 | 2667.06 ± 378.77 | 75.67 ± 8.31 | 388.93 ± 31.36 |
| Low | 13.80 ± 7.59 | 51.88 ± 23.13 | 9868.69 ± 2918.25 | 2946.71 ± 318.21 | 100.78 ± 8.04 | 447.62 ± 25.20 |
| Mid | 7.79 ± 1.53 | 23.04 ± 3.89 | 15,833.35 ± 3666.47 | 2561.22 ± 263.54 | 107.78 ± 11.12 | 446.93 ± 25.17 |
| High | 6.79 ± 2.18 (9) | 31.40 ± 5.49 (9) | 12,460.72 ± 3772.46 (7) | 2582.76 ± 274.27 (9) | 94.21 ± 17.26 (9) | 428.30 ± 25.09 (9) |
| **24-Month Exposure: Female Rats** | | | | | | |
| Air | 5.41 ± 0.88 (9) | 64.80 ± 30.89 | 3505.02 ± 973.69 | 2333.92 ± 282.72 | 61.21 ± 10.53 | 446.83 ± 40.77 |
| Low | 8.80 ± 2.89 (8) | 66.16 ± 15.24 (8) | 8719.85 ± 1624.18 (8) | 2419.96 ± 237.81 (8) | 100.16 ± 15.02 (8) | 500.49 ± 49.75 (8) |
| Mid | 7.25 ± 1.59 | 27.81 ± 5.02 (9) | 6247.14 ± 1642.65 | 2892.09 ± 287.12 | 73.91 ± 11.75 | 428.49 ± 32.16 |
| High | 5.95 ± 0.89 | 48.29 ± 20.04 (9) | 11,245.42 ± 2447.96 | 3141.97 ± 294.84 | 65.20 ± 9.55 | 426.17 ± 41.43 |

[a] The sample size was 10 per group unless otherwise indicated by the number in the parentheses ($n$) after the value. $N$ = total number of samples.

all cases, $P \leq 0.05$ was considered statistically significant). We used three-way ANOVA testing on data for all groups (1, 3, 12, and 24 months), and the results of statistical testing are summarized in Tables 3 and 4. Significant interactions involving DE exposure level were observed for CHOL, non-HDL, TRIG, ALT, CK, IL-6, leptin, and sICAM-1 (Tables 3 and 4). These significant effects of DE exposure on plasma markers were then further analyzed with Dunnett tests to compare individual DE levels and the air control (Table 5). The Dunnett tests revealed the following: (1) mean plasma CHOL was decreased in female rats exposed to both mid-level DE for 3 months and high-level DE for 24 months compared with matched air controls (Figure 2A); (2) no significant differences were detected in HDL between female rats exposed to DE at all levels and the controls, as shown in Figure 2C; (3) mean plasma non-HDL cholesterol (i.e., total cholesterol minus HDL cholesterol) was significantly lower in female rats exposed to high-level DE for 24 months than in the air controls (Figure 2E); (4) mean plasma TRIG was significantly decreased in female rats exposed to mid-level DE for 24 months compared with the air controls (Figure 3A); (5) mean plasma ALT in female rats exposed to mid-level DE for 12 months was significantly lower than in the air control group (see Table 1);

**Table 3.** Mean Squares and *P* Values Resulting from the Final Three-Way ANOVA Model for Each Plasma Marker Measured in Male and Female Rats Exposed to Air or DE for 1, 3, 12, and 24 Months[a,b]

| | CHOL Box–Cox Transformation | | HDL Box–Cox Transformation | | LDL Box–Cox Transformation | | HDL/LDL Box–Cox Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 0.003 | 0.640 | 0.002 | 0.867 | 0.016 | 0.755 | 0.014 | 0.922 |
| Sex | 0.042 | **0.003** | 0.001 | 0.726 | 0.759 | **< 0.001** | 2.837 | **< 0.001** |
| Duration | 0.363 | **< 0.001** | 0.278 | **< 0.001** | 2.306 | **< 0.001** | 1.571 | **< 0.001** |
| Exposure level:Sex | 0.005 | 0.330 | 0.008 | 0.280 | 0.043 | 0.354 | 0.03 | 0.793 |
| Exposure level:Duration | 0.007 | 0.173 | 0.011 | 0.105 | 0.024 | 0.784 | 0.073 | 0.587 |
| Sex:Duration | 0.002 | 0.698 | 0.002 | 0.782 | 0.087 | 0.089 | 0.354 | **0.008** |
| Exposure level:Sex:Duration | 0.011 | **0.018** | 0.012 | 0.069 | 0.041 | 0.414 | 0.032 | 0.952 |
| Residuals | 0.005 | NA | 0.006 | NA | 0.04 | NA | 0.088 | NA |

| | TRIG Box–Cox Transformation | | ALB Rank Transformation | | TP Rank Transformation | | NAP[c] Rank Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 0.665 | 0.878 | 1338.9 | 0.852 | 3542.511 | 0.640 | 3610.438 | 0.583 |
| Sex | 92.141 | **< 0.001** | 792,130.3 | **< 0.001** | 278,560.4 | **< 0.001** | 2078.091 | 0.541 |
| Duration | 6.557 | 0.084 | 65,863.27 | **< 0.001** | 108,767.2 | **< 0.001** | 315,865.9 | **< 0.001** |
| Exposure level:Sex | 1.340 | 0.712 | 5648.845 | 0.346 | 9429.392 | 0.215 | 9579.557 | 0.162 |
| Exposure level:Duration | 1.584 | 0.845 | 2513.594 | 0.879 | 5007.276 | 0.621 | 1973.17 | 0.955 |
| Sex:Duration | 17.721 | **0.001** | 54,534.5 | **< 0.001** | 54,760.28 | **< 0.001** | 13,572.49 | 0.064 |
| Exposure level:Sex:Duration | 8.011 | **0.004** | 2742.741 | 0.846 | 2848.359 | 0.905 | 2642.416 | 0.890 |
| Residuals | 2.931 | NA | 5097.1 | NA | 6296.559 | NA | 5554.037 | NA |

*(Table continues next page)*

[a] NA indicates not available.

[b] *P* values ≤ 0.05 are in **bold**, showing statistical significance.

[c] Non-albumin protein.

(6) compared with matched air controls, mean plasma CK levels were decreased in female rats exposed to high-level DE for 12 months (see Table 1); (7) compared with matched air controls, mean plasma IL-6 levels were significantly higher in female rats exposed 24 months to both mid- and high-level DE and in male rats exposed for 12 months to high-level DE (see Table 2); (8) mean plasma sICAM-1 levels were significantly lower in female rats exposed to mid-level DE exposure for 12 months than in the air control group, and yet, compared with air controls, sICAM-1 levels were elevated in female rats exposed for 24 months to low- and high-level DE (Table 2, Figure 4A); and (9) the mean plasma leptin levels were significantly decreased in males exposed for 3 months to mid-level DE compared with the matched air control group (Figure 5B, Table 5, Additional Materials 1).

### Cardiovascular Histopathology

***Cardiac Fibrosis*** To estimate cardiac fibrosis, longitudinal sections of hearts from rats exposed for 12 and 24 months to air or DE were stained with Sirius Red and Fast Green FCF to label collagen fibers. Photomicrographs of the midleft ventricular wall were examined by a blinded

**Table 3 (*Continued*).** Mean Squares and *P* Values Resulting from the Final Three-Way ANOVA Model for Each Plasma Marker Measured in Male and Female Rats Exposed to Air or DE for 1, 3, 12, and 24 Months[a,b]

| | ALT Box–Cox Transformation | | AST Box–Cox Transformation | | CK Rank Transformation | | CREA Rank Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 0.014 | 0.387 | 0.005 | 0.786 | 11,483.4 | 0.192 | 2210.572 | 0.675 |
| Sex | 0.468 | **< 0.001** | 0.43 | **< 0.001** | 41,332.25 | **0.017** | 88,447.14 | **< 0.001** |
| Duration | 0.513 | **< 0.001** | 0.216 | **< 0.001** | 97,168.35 | **< 0.001** | 406,139.2 | **< 0.001** |
| Exposure level:Sex | 0.030 | 0.094 | 0.021 | 0.206 | 8507.144 | 0.318 | 928.523 | 0.886 |
| Exposure level:Duration | 0.032 | **0.015** | 0.02 | 0.166 | 14,767.96 | **0.034** | 3632.713 | 0.581 |
| Sex:Duration | 0.067 | **0.003** | 0.038 | **0.043** | 1577.413 | 0.883 | 16,502.48 | **0.011** |
| Exposure level:Sex:Duration | 0.006 | 0.933 | 0.003 | 0.992 | 5535.5 | 0.647 | 2039.106 | 0.894 |
| Residuals | 0.014 | NA | 0.014 | NA | 7215.636 | NA | 4331.631 | NA |

| | LDH Rank Transformation | | Non-HDL Box–Cox Transformation | | HDL+LDL Box–Cox Transformation | |
|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 1151.987 | 0.935 | 0.006 | 0.602 | 0.002 | 0.783 |
| Sex | 54,402.97 | **0.010** | 0.436 | **< 0.001** | 0.011 | 0.166 |
| Duration | 23,025.84 | **0.038** | 1.142 | **< 0.001** | 0.329 | **< 0.001** |
| Exposure level:Sex | 5614.88 | 0.557 | 0.004 | 0.750 | 0.008 | 0.245 |
| Exposure level:Duration | 11,310.02 | 0.189 | 0.009 | 0.518 | 0.007 | 0.241 |
| Sex:Duration | 4563.07 | 0.640 | 0.010 | 0.412 | 0.003 | 0.610 |
| Exposure level:Sex:Duration | 5964.959 | 0.675 | 0.020 | **0.043** | 0.010 | 0.061 |
| Residuals | 8097.812 | NA | 0.010 | NA | 0.006 | NA |

[a] NA indicates not available.

[b] *P* values ≤ 0.05 are in **bold**, showing statistical significance.

observer for the percentage of red-stained collagen, as described in Materials and Methods. As rats age, their levels of cardiac fibrosis increase (Annoni et al. 1998; Cornwell et al. 1991), and so, as expected, the percentage of red-stained collagen was significantly increased with age in both male and female rats (Table 6; Figure B.1.B–D in Additional Materials 2). However, DE exposure had no significant effect on the progression of cardiac fibrosis (Figure B.1.B–D in Additional Materials 2). As basal collagen deposition is intrinsically greater in perivascular than in avascular regions of heart, vascular fibrosis and avascular fibrosis were quantified separately. Yet, no significant differences in vascular and avascular fibrosis staining were observed between the groups exposed to air and those exposed to DE at either time point (Table 6; Figure B.1 in Additional Materials 2). Thus, DE exposure of up to 24 months had no effect on progressive age-related cardiac fibrosis in rats.

***Aorta Morphometry*** We measured a number of thoracic aorta parameters to assess whether any changes in wall architecture indicative of vascular wall remodeling were induced by DE exposure independent of aging yet resulting from potentially deleterious forces such as hypertension. The vascular fibrosis area was usually less than 10% of the

**Table 4.** Mean Squares and *P* Values Resulting from the Final Three-Way ANOVA Model for Plasma Values (Transformed) of Cytokines and Chemokines and APR Reactants Measured in Male and Female Rats Exposed to Air or DE for 1, 3, 12 and 24 Months[a,b]

| | GM-CSF Rank Transformation | | MCP-1 Rank Transformation | | IL-1β Box–Cox Transformation | | IL-6 Rank Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 12,397.67 | 0.184 | 8816.597 | 0.191 | 0.382 | 0.844 | 10,901.68 | 0.234 |
| Sex | 120,567.4 | **< 0.001** | 255,232.6 | **< 0.001** | 17.045 | **0.001** | 16,419.73 | 0.143 |
| Duration | 34,466.77 | **0.004** | 200,525.7 | **< 0.001** | 44.349 | **< 0.001** | 40,699.71 | **0.001** |
| Exposure level:Sex | 5504.867 | 0.540 | 4493.028 | 0.488 | 0.258 | 0.906 | 2398.443 | 0.814 |
| Exposure level:Duration | 4869.557 | 0.764 | 5304.186 | 0.475 | 0.265 | 0.995 | 9032.481 | 0.303 |
| Sex:Duration | 3723.967 | 0.691 | 12,679.25 | 0.078 | 2.651 | 0.130 | 1569.042 | 0.892 |
| Exposure level:Sex:Duration | 14,439.79 | 0.053 | 1798.484 | 0.966 | 0.868 | 0.778 | 14,938.22 | **0.044** |
| Residuals | 7629.052 | NA | 5534.389 | NA | 1.394 | NA | 7611.519 | NA |

| | IL-10 Box–Cox Transformation | | IFN-γ Rank Transformation | | KC Rank Transformation | | TNF-α Rank Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 10.179 | 0.104 | 5279.846 | 0.428 | 2349.881 | 0.323 | 2208.239 | 0.771 |
| Sex | 62.239 | **< 0.001** | 11,977.53 | 0.148 | 17,977.05 | **0.003** | 3324.654 | 0.453 |
| Duration | 29.246 | **0.001** | 268,500.5 | **< 0.001** | 649,097.8 | **< 0.001** | 272,968.0 | **< 0.001** |
| Exposure level:Sex | 2.497 | 0.676 | 3732.765 | 0.580 | 179.365 | 0.966 | 2261.232 | 0.764 |
| Exposure level:Duration | 3.665 | 0.666 | 2976.704 | 0.857 | 683.852 | 0.961 | 4943.059 | 0.579 |
| Sex:Duration | 2.582 | 0.665 | 3108.007 | 0.651 | 2138.189 | 0.366 | 977.785 | 0.919 |
| Exposure level:Sex:Duration | 3.566 | 0.684 | 7921.849 | 0.191 | 437.758 | 0.992 | 3831.618 | 0.752 |
| Residuals | 4.907 | NA | 5690.673 | NA | 2013.775 | NA | 5879.505 | NA |

*(Table continues next page)*

[a] NA indicates not available.

[b] *P* values ≤ 0.05 are in **bold**, showing statistical significance.

total ventricle area, but its fibrosis values (as percentages) were greater than 10 times the fibrosis values of avascular areas (e.g., > 30% vascular and < 3% avascular; see Table 6). As with cardiac fibrosis, we expected (and observed) obvious changes in aortic wall dimensions as rats grew and aged over the 24 months of air or DE exposure (Table 6 and Table 7; Figure B.2 in Additional Materials 2). However, we observed no statistically significant differences in measured aortic wall parameters between the air and DE exposure groups at any time point (Table 6). This suggests that DE exposure at these levels and under these specific conditions had little influence on aortic wall changes related to growth and aging in male or female rats. Because of the obvious difference in absolute size between female and male rats, numerous sex-dependent differences in aortic parameters were observed (Tables 6 and 7).

## EFFECTS OF SEX AND DURATION ON PLASMA MARKERS AND CARDIOVASCULAR AGING IN RATS

In addition to DE-level effects, we identified numerous statistically significant changes in plasma levels of markers, cardiac fibrosis, and aorta dimensions that were dependent on sex or exposure duration or on an interaction between sex and duration (see Tables 3, 4, and 7, rows labeled "Sex," "Duration," and "Sex:Duration").

**Table 4 (*Continued*).** Mean Squares and *P* Values Resulting from the Final Three-Way ANOVA Model for Plasma Values (Transformed) of Cytokines and Chemokines and APR Reactants Measured in Male and Female Rats Exposed to Air or DE for 1, 3, 12 and 24 Months[a,b]

| | VEGF Rank Transformation | | sICAM-1 Rank Transformation | | Fibrinogen Rank Transformation | | Leptin Rank Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 2392.633 | 0.614 | 8396.223 | 0.119 | 3065.25 | 0.176 | 9133.602 | **0.001** |
| Sex | 2734.728 | 0.407 | 539,007.1 | **< 0.001** | 860.61 | 0.495 | 277,886.7 | **< 0.001** |
| Duration | 416,364.2 | **< 0.001** | 200,530.8 | **< 0.001** | 693,545.7 | **< 0.001** | 603,828.8 | **< 0.001** |
| Exposure level:Sex | 382.445 | 0.962 | 3126.409 | 0.533 | 1505.76 | 0.486 | 256.6 | 0.922 |
| Exposure level:Duration | 5907.561 | 0.152 | 7286.745 | 0.087 | 939.25 | 0.868 | 2041.189 | 0.245 |
| Sex:Duration | 2092.115 | 0.664 | 9671.053 | 0.081 | 1127.68 | 0.608 | 9583.414 | **0.001** |
| Exposure level:Sex:Duration | 6363.497 | 0.114 | 11,891.69 | **0.004** | 2397.953 | 0.237 | 1481.424 | 0.498 |
| Residuals | 3969.838 | NA | 4265.663 | NA | 1845.361 | NA | 1589.838 | NA |

| | CRP Box–Cox Transformation | |
|---|---|---|
| Sources of Variation | Mean Square | *P* Value |
| Exposure level | 0.003 | 0.403 |
| Sex | 0.002 | 0.393 |
| Duration | 0.331 | **< 0.001** |
| Exposure level:Sex | 0.002 | 0.427 |
| Exposure level:Duration | 0.003 | 0.241 |
| Sex:Duration | 0.033 | **< 0.001** |
| Exposure level:Sex:Duration | 0.001 | 0.883 |
| Residuals | 0.003 | NA |

[a] NA indicates not available.

[b] *P* values ≤ 0.05 are in **bold**, showing statistical significance.

**Table 5.** Comparisons of *P* Values for DE Exposure Groups and Controls for the Plasma Markers, Cytokine and Chemokine Markers, and Cardiac Fibrosis and Aorta Morphometry Parameters Whose Final ANOVA Models Included Statistically Significant Exposure Effect or Statistically Significant Interaction of Exposure with Sex or Duration[a]

| | CHOL | TRIG | ALT | CK | Non-HDL | IL-6 | sICAM-1 | Leptin | Adventitia Area | Mean Media Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| **1-Month Exposure: Male Rat** | | | | | | | | | | |
| Low vs. Control | 0.734 | 0.160 | 0.962 | 0.982 | 0.684 | 0.973 | 0.731 | 0.087 | 0.419 | 0.993 |
| Mid vs. Control | 0.069 | 0.530 | 0.260 | 0.992 | 0.161 | 0.571 | 0.674 | 0.964 | 0.166 | 0.638 |
| High vs. Control | 0.076 | 0.842 | 0.994 | 0.982 | 0.384 | 0.94 | 0.994 | 0.594 | 0.112 | 0.999 |
| **1-Month Exposure: Female Rat** | | | | | | | | | | |
| Low vs. Control | 0.352 | 0.997 | 0.132 | 0.921 | 0.874 | 0.416 | 0.927 | 0.220 | 0.788 | 0.897 |
| Mid vs. Control | 0.435 | 0.724 | 0.292 | 0.061 | 0.872 | 0.652 | 0.494 | 0.905 | 0.824 | 0.964 |
| High vs. Control | 0.691 | 0.994 | 0.339 | 0.792 | 0.497 | 0.108 | 0.310 | 0.608 | 0.895 | 0.440 |
| **3-Month Exposure: Male Rat** | | | | | | | | | | |
| Low vs. Control | 0.356 | 0.996 | 0.805 | 0.990 | 0.763 | 0.691 | 0.908 | 0.856 | 0.992 | 0.588 |
| Mid vs. Control | 0.998 | 0.076 | 1 | 0.744 | 1 | 0.998 | 0.641 | **0.007** | 1 | 0.853 |
| High vs. Control | 1 | 0.706 | 0.995 | 0.746 | 0.818 | 0.996 | 0.965 | 0.856 | 0.661 | 0.443 |
| **3-Month Exposure: Female Rat** | | | | | | | | | | |
| Low vs. Control | 0.252 | 0.999 | 0.991 | 0.810 | 0.548 | 0.937 | 0.991 | 0.999 | 0.595 | 0.145 |
| Mid vs. Control | **0.015** | 0.745 | 0.369 | 0.988 | 0.089 | 0.994 | 0.329 | 0.903 | 0.390 | 0.459 |
| High vs. Control | 0.908 | 0.981 | 0.387 | 0.999 | 0.962 | 0.998 | 0.722 | 0.589 | 0.177 | 0.433 |
| **12-Month Exposure: Male Rat** | | | | | | | | | | |
| Low vs. Control | 0.240 | 0.996 | 0.989 | 0.440 | 0.423 | 0.933 | 0.724 | 0.865 | 0.899 | 0.993 |
| Mid vs. Control | 0.345 | 0.972 | 0.849 | 0.440 | 0.464 | 0.806 | 0.916 | 0.955 | 0.999 | 0.999 |
| High vs. Control | 0.358 | 0.236 | 0.560 | 0.414 | 0.617 | **0.035** | 0.409 | 0.660 | 0.312 | 0.792 |
| **12-Month Exposure: Female Rat** | | | | | | | | | | |
| Low vs. Control | 0.819 | 0.470 | 1 | 0.510 | 0.628 | 0.974 | 0.761 | 0.661 | 1 | 0.618 |
| Mid vs. Control | 0.794 | 0.999 | **0.031** | 0.076 | 0.649 | 0.257 | **0.032** | 0.961 | 0.181 | 0.446 |
| High vs. Control | 0.793 | 0.234 | 0.574 | **0.027** | 0.433 | 0.150 | 0.069 | 0.602 | 0.279 | 0.560 |
| **24-Month Exposure: Male Rat** | | | | | | | | | | |
| Low vs. Control | 0.989 | 0.638 | 0.940 | 0.115 | 1 | 0.400 | 0.994 | 0.241 | 0.091 | 0.141 |
| Mid vs. Control | 0.844 | 0.445 | 0.085 | 1 | 0.890 | 0.821 | 0.834 | 0.126 | 0.984 | 0.684 |
| High vs. Control | 0.845 | 0.955 | 0.712 | 0.781 | 0.915 | 0.667 | 0.988 | 0.588 | 1 | 0.141 |
| **24-Month Exposure: Female Rat** | | | | | | | | | | |
| Low vs. Control | 0.982 | 0.847 | 0.990 | 0.999 | 0.980 | 0.151 | **0.021** | 0.078 | 0.459 | 0.447 |
| Mid vs. Control | 0.862 | **0.032** | 0.678 | 0.998 | 0.828 | **0.037** | 0.346 | 0.694 | 0.996 | 0.149 |
| High vs. Control | **0.009** | 0.239 | 0.993 | 0.624 | **0.034** | **0.027** | **0.005** | 0.991 | 0.530 | 0.996 |

[a] *P* values ≤ 0.05 are in **bold**, showing statistical significance.

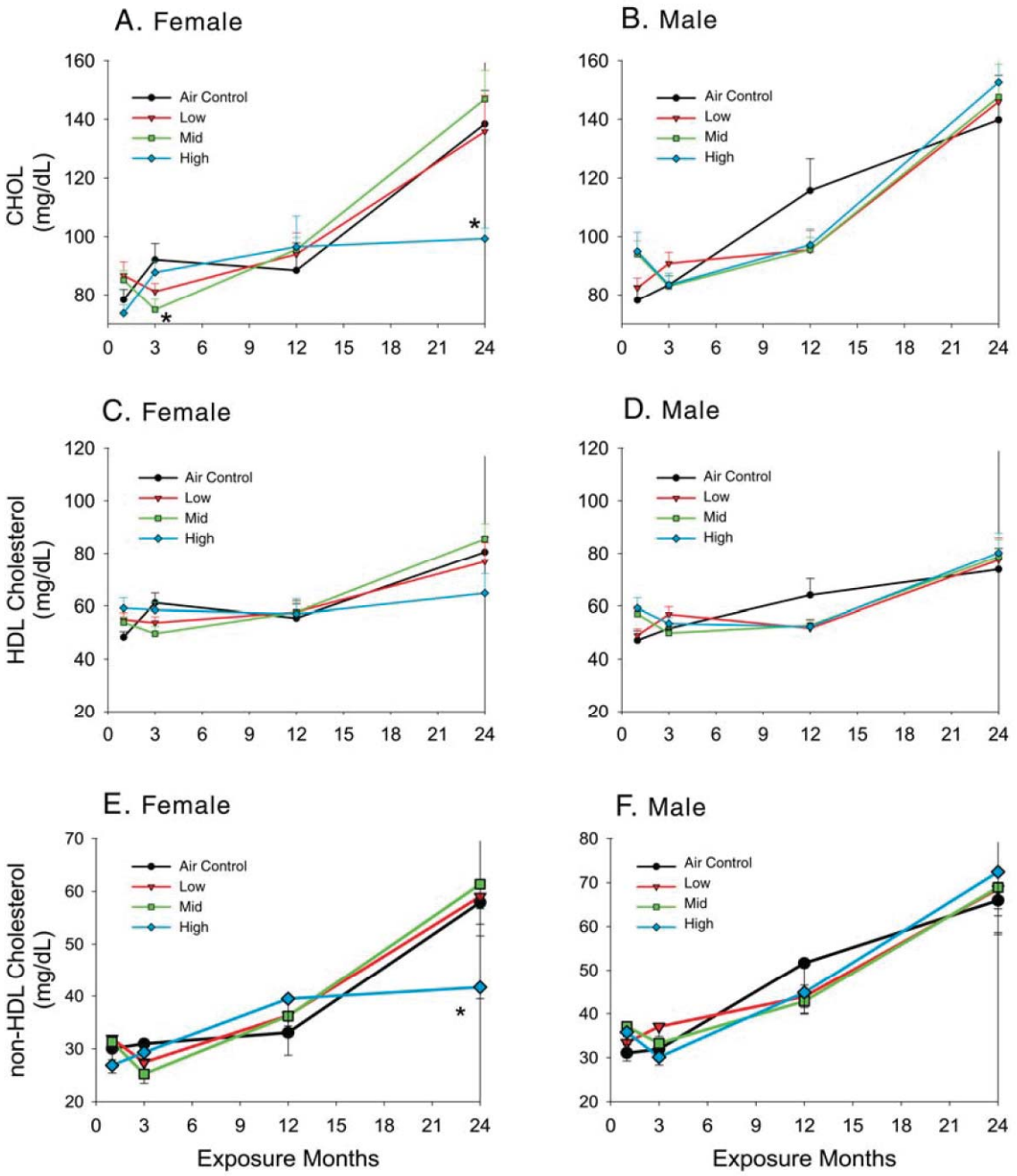


**Figure 2. Plasma CHOL, HDL cholesterol, and non-HDL cholesterol levels in female (A, C, E) and male (B, D, F) rats over the 24 months of exposure to filtered air or DE at the low, mid, or high level.** Values are the mean ± SE. $N$ = 9 to 10 rats/group (see Table 1 and Additional Materials 1). *indicates a significant difference between the air control and DE group.

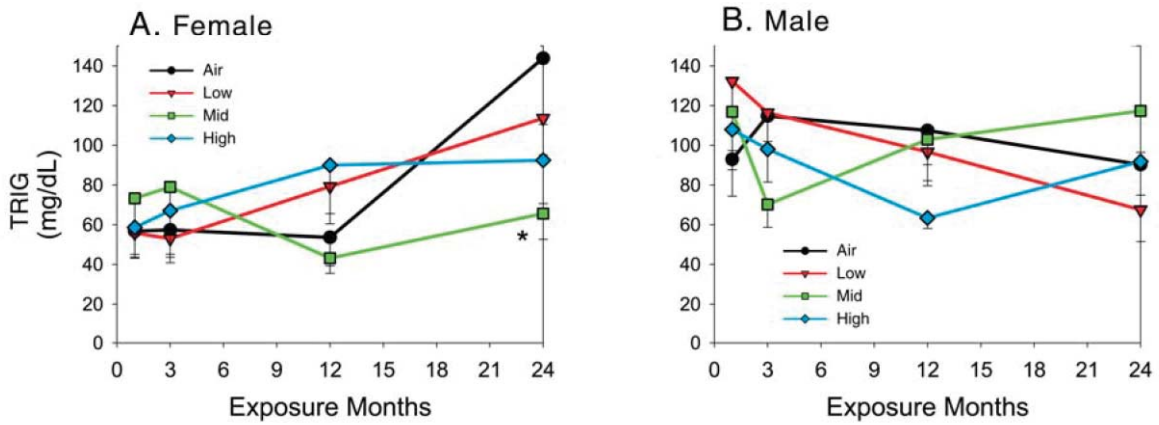


**Figure 3. Plasma TRIG levels in female (A) and male (B) rats over the 24 months of exposure to filtered air or DE at the low, mid, or high level.** Values are the mean ± SE. $N$ = 9 to 10 rats/group (see Table 1 and Additional Materials 1). *indicates a significant difference between the air control and DE group.

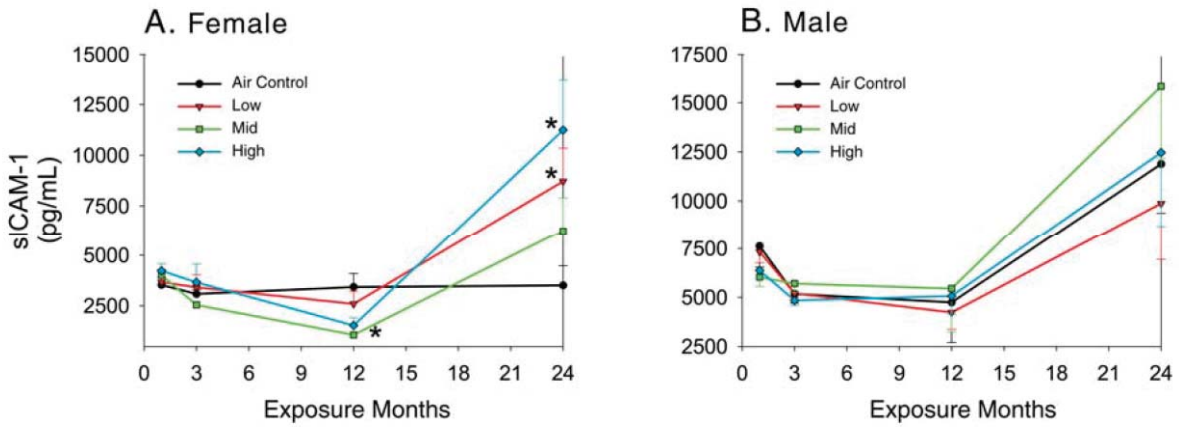


**Figure 4. Plasma sICAM-1 levels in female (A) and male (B) rats over the 24 months of exposure to filtered air or to DE at the low, mid, or high level.** Values are the mean ± SE. $N$ = 6 to 10 rats/group (see Table 2 and Additional Materials 1). *indicates a significant difference between the air control and DE group.

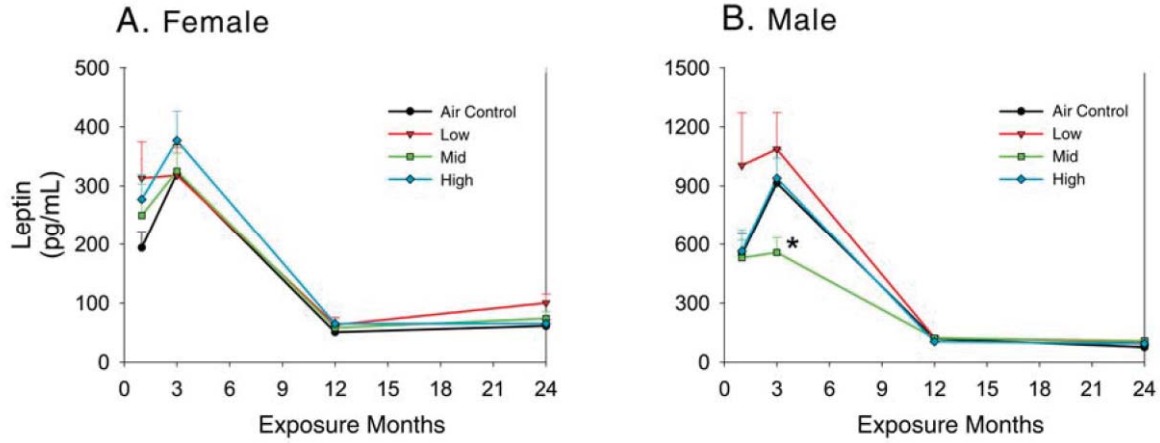


**Figure 5. Plasma leptin levels in female (A) and male (B) rats over the 24 months of exposure to filtered air or to DE at the low, mid, or high level.** Values are the mean ± SE. $N$ = 6 to 10 rats/group (see Table 2 and Additional Materials 1). *indicates a significant difference between the air control and DE group.

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**Table 6**. Cardiac Fibrosis and Aorta Morphometry Data (Mean ± SE) in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 1, 3, 12, or 24 Months[a]

| | % Total Left Ventricle Fibrosis | % Vascular Fibrosis | % Avascular Fibrosis | Luminal Area ($\mu m^2 \times 10^6$) |
|---|---|---|---|---|
| **1-Month Exposure: Male Rats** | | | | |
| Air | nd | nd | nd | 1.28 ± 0.18 (6) |
| Low | | | | 1.28 ± 0.18 (5) |
| Mid | | | | 1.22 ± 0.13 (5) |
| High | | | | 1.08 ± 0.12 |
| **1-Month Exposure: Female Rats** | | | | |
| Air | nd | nd | nd | 0.87 ± 0.08 |
| Low | | | | 0.86 ± 0.07 (6) |
| Mid | | | | 1.06 ± 0.10 |
| High | | | | 0.96 ± 0.12 |
| **3-Month Exposure: Male Rats** | | | | |
| Air | nd | nd | nd | 1.67 ± 0.12 (6) |
| Low | | | | 1.50 ± 0.23 |
| Mid | | | | 1.77 ± 0.15 |
| High | | | | 1.41 ± 0.17 |
| **3-Month Exposure: Female Rats** | | | | |
| Air | nd | nd | nd | 1.06 ± 0.12 (6) |
| Low | | | | 1.03 ± 0.12 |
| Mid | | | | 1.00 ± 0.12 (5) |
| High | | | | 1.03 ± 0.09 |
| **12-Month Exposure: Male Rats** | | | | |
| Air | 1.98 ± 0.32 | 23.47 ± 4.81 | 1.98 ± 0.31 | 1.97 ± 0.16 (5) |
| Low | 2.12 ± 0.36 | 34.57 ± 5.46 | 1.78 ± 0.32 | 1.90 ± 0.12 |
| Mid | 2.20 ± 0.23 (6) | 40.96 ± 3.89 (6) | 1.78 ± 0.21 (6) | 2.03 ± 0.15 (5) |
| High | 1.61 ± 0.41 (5) | 38.93 ± 7.41 (4) | 1.33 ± 0.38 (5) | 1.71 ± 0.14 (5) |
| **12-Month Exposure: Female Rats** | | | | |
| Air | 1.28 ± 0.20 (6) | 33.22 ± 6.96 (5) | 1.13 ± 0.15 (6) | 1.33 ± 0.152 (3) |
| Low | 1.64 ± 0.23 | 29.33 ± 1.14 (6) | 1.48 ± 0.21 | 0.81 ± 0.15 |
| Mid | 1.88 ± 0.24 | 31.54 ± 6.80 (6) | 1.71 ± 0.21 | 1.35 ± 0.16 (6) |
| High | 1.75 ± 0.17 | 32.64 ± 5.43 (6) | 1.58 ± 0.19 | 1.21 ± 0.15 |
| **24-Month Exposure: Male Rats** | | | | |
| Air | 3.10 ± 0.12 (5) | 32.60 ± 4.01 (4) | 2.29 ± 0.31 (4) | 2.72 ± 0.28 (5) |
| Low | 2.93 ± 0.51 | 27.82 ± 2.94 | 2.57 ± 0.50 | 2.22 ± 0.13 |
| Mid | 3.40 ± 0.39 (5) | 29.78 ± 2.90 (5) | 2.95 ± 0.36 (5) | 2.01 ± 0.11 (6) |
| High | 3.37 ± 0.31 | 35.58 ± 5.03 | 3.02 ± 0.27 | 2.15 ± 0.17 |
| **24-Month Exposure: Female Rats** | | | | |
| Air | 2.25 ± 0.21 (6) | 32.02 ± 5.12 (5) | 2.21 ± 0.34 (6) | 1.59 ± 0.10 (6) |
| Low | 2.80 ± 0.38 | 32.36 ± 2.75 (6) | 2.36 ± 0.32 | 1.84 ± 0.22 |
| Mid | 2.48 ± 0.27 (6) | 34.30 ± 4.52 (6) | 1.98 ± 0.35 (6) | 1.68 ± 0.10 (6) |
| High | 2.46 ± 0.33 | 27.54 ± 3.39 (6) | 2.11 ± 0.23 | 1.57 ± 0.12 (5) |

*(Table continues next page)*

[a] The sample size was 7 per group unless otherwise indicated by the number in the parentheses (*n*) after the value. "nd" means not determined.

**Table 6 (*Continued*).** Cardiac Fibrosis and Aorta Morphometry Data (Mean ± SE) in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 1, 3, 12, or 24 Months[a]

| | Wall (Area = $\mu m^2 \times 10^6$) | WA/LA | Adventitia (Area = $\mu m^2 \times 10^6$) | Media (Area = $\mu m^2 \times 10^6$) |
|---|---|---|---|---|
| **1-Month Exposure: Male Rats** | | | | |
| Air | 0.74 ± 0.05 (6) | 0.65 ± 0.10 (6) | 0.18 ± 0.01 (6) | 0.56 ± 0.04 (6) |
| Low | 0.76 ± 0.034 (5) | 0.66 ± 0.09 (5) | 0.21 ± 0.01 (5) | 0.55 ± 0.03 (5) |
| Mid | 0.82 ± 0.06 (6) | 0.75 ± 0.07 (5) | 0.22 ± 0.01 (6) | 0.59 ± 0.04 (6) |
| High | 0.78 ± 0.06 | 0.80 ± 0.11 | 0.25 ± 0.03 | 0.53 ± 0.05 |
| **1-Month Exposure: Female Rats** | | | | |
| Air | 0.61 ± 0.03 | 0.94 ± 0.30 | 0.18 ± 0.02 | 0.44 ± 0.02 |
| Low | 0.65 ± 0.03 (6) | 0.85 ± 0.09 (6) | 0.19 ± 0.01 (6) | 0.46 ± 0.03 (6) |
| Mid | 0.62 ± 0.03 | 0.67 ± 0.13 | 0.16 ± 0.01 | 0.45 ± 0.02 |
| High | 0.69 ± 0.04 | 0.85 ± 0.16 | 0.19 ± 0.01 | 0.50 ± 0.03 |
| **3-Month Exposure: Male Rats** | | | | |
| Air | 0.99 ± 0.04 (6) | 0.61 ± 0.06 (6) | 0.23 ± 0.02 (6) | 0.75 ± 0.03 (6) |
| Low | 0.78 ± 0.14 | 0.73 ± 0.21 | 0.33 ± 0.09 | 0.69 ± 0.04 |
| Mid | 0.96 ± 0.05 | 0.57 ± 0.07 | 0.24 ± 0.02 | 0.73 ± 0.03 |
| High | 0.85 ± 0.02 | 0.94 ± 0.36 | 0.20 ± 0.01 | 0.65 ± 0.02 |
| **3-Month Exposure: Female Rats** | | | | |
| Air | 0.66 ± 0.04 (6) | 0.66 ± 0.06 (6) | 0.15 ± 0.01 (6) | 0.51 ± 0.03 (6) |
| Low | 0.76 ± 0.05 | 0.83 ± 0.12 | 0.18 ± 0.01 | 0.58 ± 0.04 |
| Mid | 0.74 ± 0.02 (5) | 0.77 ± 0.09 (5) | 0.18 ± 0.01 (5) | 0.55 ± 0.02 (5) |
| High | 0.78 ± 0.09 | 0.80 ± 0.13 | 0.19 ± 0.02 | 0.58 ± 0.08 |
| **12-Month Exposure: Male Rats** | | | | |
| Air | 1.06 ± 0.04 (5) | 0.55 ± 0.03 (5) | 0.27 ± 0.02 (5) | 0.80 ± 0.04 (5) |
| Low | 1.13 ± 0.10 | 0.59 ± 0.03 | 0.29 ± 0.02 | 0.84 ± 0.08 |
| Mid | 1.12 ± 0.10 (6) | 0.56 ± 0.05 (5) | 0.27 ± 0.02 (6) | 0.84 ± 0.09 (6) |
| High | 0.96 ± 0.03 (5) | 0.58 ± 0.04 (5) | 0.23 ± 0.02 (5) | 0.72 ± 0.02 (5) |
| **12-Month Exposure: Female Rats** | | | | |
| Air | 0.75 ± 0.05 (3) | 0.57 ± 0.04 (3) | 0.16 ± 0.02 (3) | 0.58 ± 0.04 (3) |
| Low | 0.75 ± 0.04 | 1.19 ± 0.25 | 0.16 ± 0.01 | 0.58 ± 0.04 |
| Mid | 0.83 ± 0.06 (6) | 0.68 ± 0.08 (6) | 0.21 ± 0.02 (6) | 0.62 ± 0.04 (6) |
| High | 0.80 ± 0.04 | 0.72 ± 0.09 | 0.20 ± 0.02 | 0.60 ± 0.02 |
| **24-Month Exposure: Male Rats** | | | | |
| Air | 1.50 ± 0.22 (5) | 0.54 ± 0.03 (5) | 0.29 ± 0.05 (5) | 1.21 ± 0.18 (5) |
| Low | 1.19 ± 0.04 | 0.55 ± 0.03 | 0.21 ± 0.01 | 0.98 ± 0.04 |
| Mid | 1.36 ± 0.04 (6) | 0.69 ± 0.04 (6) | 0.25 ± 0.02 (6) | 1.11 ± 0.04 (6) |
| High | 1.22 ± 0.08 | 0.57 ± 0.02 | 0.26 ± 0.02 | 0.96 ± 0.08 |
| **24-Month Exposure: Female Rats** | | | | |
| Air | 0.90 ± 0.05 (6) | 0.57 ± 0.03 (6) | 0.16 ± 0.02 (6) | 0.74 ± 0.04 (6) |
| Low | 1.09 ± 0.11 | 0.61 ± 0.03 | 0.20 ± 0.02 | 0.89 ± 0.09 |
| Mid | 1.06 ± 0.08 (6) | 0.63 ± 0.01 (6) | 0.17 ± 0.01 (6) | 0.89 ± 0.07 (6) |
| High | 0.98 ± 0.11 (5) | 0.62 ± 0.05 (5) | 0.20 ± 0.02 (5) | 0.78 ± 0.09 (5) |

*(Table continues next page)*

[a] The sample size was 7 per group unless otherwise indicated by the number in the parentheses (*n*) after the value. "nd" means not determined.

**Table 6 (*Continued*).** Cardiac Fibrosis and Aorta Morphometry Data (Mean ± SE) in Male and Female Rats Exposed to Air or Low-, Mid-, or High-Level DE for 1, 3, 12, or 24 Months[a]

| | Mean Media Thickness (μm) | Mean Wall Thickness (μm) | Mean Adventitia Thickness (μm) | Media Thickness/Adventitia Thickness |
|---|---|---|---|---|
| **1-Month Exposure: Male Rats** | | | | |
| Air | 108.42 ± 5.20 (6) | 144.60 ± 7.11 (6) | 36.18 ± 2.68 (6) | 3.09 ± 0.14 (6) |
| Low | 106.29 ± 4.07 (5) | 145.03 ± 4.15 (5) | 38.74 ± 2.48 (5) | 2.83 ± 0.26 (5) |
| Mid | 116.73 ± 7.42 (6) | 159.47 ± 8.06 (6) | 42.75 ± 1.84 (6) | 2.79 ± 0.17 (6) |
| High | 109.27 ± 5.08 | 153.63 ± 5.99 | 44.35 ± 3.84 | 2.68 ± 0.24 |
| **1-Month Exposure: Female Rats** | | | | |
| Air | 98.69 ± 3.03 | 136.50 ± 4.47 | 37.82 ± 2.38 | 2.68 ± 0.16 |
| Low | 101.80 ± 3.63 (6) | 139.58 ± 4.10 (6) | 37.79 ± 4.16 (6) | 2.93 ± 0.34 (6) |
| Mid | 100.34 ± 2.07 | 135.46 ± 2.66 | 35.13 ± 1.38 | 2.95 ± 0.11 |
| High | 106.88 ± 5.94 | 145.11 ± 6.64 | 38.23 ± 1.87 | 2.83 ± 0.19 |
| **3-Month Exposure: Male Rats** | | | | |
| Air | 129.15 ± 4.69 (6) | 172.98 ± 7.58 (6) | 43.82 ± 3.88 (6) | 3.07 ± 0.21 (6) |
| Low | 122.93 ± 6.96 | 160.18 ± 7.44 | 37.25 ± 4.74 | 3.70 ± 0.55 |
| Mid | 124.30 ± 4.08 | 160.96 ± 5.63 | 36.66 ± 3.83 | 3.82 ± 0.48 |
| High | 119.60 ± 3.23 | 152.47 ± 2.50 | 32.86 ± 2.07 | 3.88 ± 0.29 |
| **3-Month Exposure: Female Rats** | | | | |
| Air | 104.47 ± 3.48 (6) | 136.43 ± 3.63 (6) | 31.96 ± 2.15 (6) | 3.42 ± 0.27 (6) |
| Low | 117.25 ± 4.93 | 146.90 ± 6.96 | 29.65 ± 2.67 | 4.20 ± 0.30 |
| Mid | 112.33 ± 2.83 (5) | 144.44 ± 3.75 (5) | 32.11 ± 1.25 (5) | 3.54 ± 0.09 (5) |
| High | 113.22 ± 5.72 | 147.36 ± 6.25 | 34.14 ± 2.46 | 3.48 ± 0.27 |
| **12-Month Exposure: Male Rats** | | | | |
| Air | 136.89 ± 4.86 (5) | 174.25 ± 2.65 (5) | 37.36 ± 4.09 (5) | 3.98 ± 0.63 (5) |
| Low | 141.31 ± 8.54 | 183.53 ± 11.12 | 42.22 ± 2.78 | 3.37 ± 0.11 |
| Mid | 142.19 ± 13.38 (6) | 185.45 ± 16.32 (6) | 43.25 ± 4.06 (6) | 3.38 ± 0.28 (6) |
| High | 128.65 ± 4.52 (5) | 165.86 ± 5.64 (5) | 37.20 ± 1.66 (5) | 3.48 ± 0.14 (5) |
| **12-Month Exposure: Female Rats** | | | | |
| Air | 115.05 ± 9.50 (3) | 148.08 ± 8.27 (3) | 33.03 ± 1.78 (3) | 3.56 ± 0.47 (3) |
| Low | 122.00 ± 4.47 | 152.67 ± 5.68 | 30.67 ± 3.11 | 4.28 ± 0.50 |
| Mid | 125.40 ± 6.52 (6) | 159.37 ± 10.86 (6) | 33.97 ± 4.92 (6) | 4.13 ± 0.64 (6) |
| High | 122.53 ± 3.58 | 156.04 ± 5.95 | 33.51 ± 3.06 | 3.92 ± 0.32 |
| **24-Month Exposure: Male Rats** | | | | |
| Air | 186.38 ± 14.35 (6) | 227.90 ± 16.23 (6) | 41.51 ± 2.26 (6) | 4.76 ± 0.30 (6) |
| Low | 154.89 ± 6.19 | 189.02 ± 5.58 | 34.13 ± 1.33 | 4.83 ± 0.37 |
| Mid | 168.46 ± 7.15 (6) | 207.11 ± 5.32 (6) | 38.65 ± 3.03 (6) | 4.59 ± 0.49 (6) |
| High | 156.62 ± 8.37 | 194.94 ± 8.07 | 38.32 ± 1.48 | 4.18 ± 0.34 |
| **24-Month Exposure: Female Rats** | | | | |
| Air | 138.48 ± 5.57 (6) | 171.11 ± 7.30 (6) | 32.63 ± 3.47 (6) | 4.50 ± 0.40 (6) |
| Low | 153.34 ± 7.54 | 187.27 ± 8.93 | 33.93 ± 2.67 | 4.73 ± 0.48 |
| Mid | 162.85 ± 9.12 (6) | 192.16 ± 9.26 (6) | 29.31 ± 0.58 (6) | 5.78 ± 0.44 (6) |
| High | 142.35 ± 10.48 (5) | 177.12 ± 10.27 (5) | 34.76 ± 2.17 (5) | 4.22 ± 0.47 (5) |

[a] The sample size was 7 per group unless otherwise indicated by the number in the parentheses (*n*) after the value. "nd" means not determined.

**Table 7.** Mean Squares and *P* Values Resulting from the Final Three-Way ANOVA Model for Cardiac Fibrosis and Aorta Morphometry Measured in Male and Female Rats Exposed to Air or DE for 1, 3, 12 and 24 Months[a,b]

| | % Total Left Ventricle Fibrosis[c] Original Scale | | % Vascular Fibrosis[c] Original Scale | | % Avascular Fibrosis[c] Box–Cox Transformation | | Luminal Area ($\mu m^2$) Original Scale | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 0.495 | 0.507 | 104.04 | 0.502 | 0.068 | 0.778 | 2.49E+11 | 0.140 |
| Sex | 6.819 | **0.001** | 32.041 | 0.623 | 1.036 | **0.021** | 1.49E+13 | **< 0.001** |
| Duration | 26.392 | **< 0.001** | 42.898 | 0.569 | 5.547 | **< 0.001** | 7.01E+12 | **< 0.001** |
| Exposure level:Sex | 0.260 | 0.745 | 161.219 | 0.305 | 0.087 | 0.707 | 2.25E+11 | 0.176 |
| Exposure level:Duration | 0.109 | 0.915 | 77.024 | 0.626 | 0.099 | 0.661 | 1.25E+11 | 0.505 |
| Sex:Duration | 0.731 | 0.285 | 72.311 | 0.460 | 0.097 | 0.471 | 4.87E+11 | **0.015** |
| Exposure level:Sex:Duration | 0.599 | 0.421 | 166.4 | 0.292 | 0.472 | 0.062 | 1.79E+11 | 0.225 |
| Residuals | 0.632 | NA | 131.342 | NA | 0.186 | NA | 1.35E+11 | NA |

| | Wall Area ($\mu m^2$) Rank Transformation | | WA/LA Rank Transformation | | Adventitia Area Rank Transformation | | Media Area Rank Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 1925.505 | 0.190 | 3084.953 | 0.381 | 2995.096 | 0.227 | 1972.347 | 0.145 |
| Sex | 146,583.6 | **< 0.001** | 33,968.73 | **0.001** | 203,775.8 | **< 0.001** | 116,398.5 | **< 0.001** |
| Duration | 88,755.74 | **< 0.001** | 6816.043 | 0.082 | 7386.377 | **0.015** | 107,097.5 | **< 0.001** |
| Exposure level:Sex | 2780.038 | 0.077 | 2813.701 | 0.423 | 2420.68 | 0.318 | 2632.106 | 0.067 |
| Exposure level:Duration | 395.571 | 0.964 | 2575.346 | 0.562 | 1454.101 | 0.699 | 408.509 | 0.944 |
| Sex:Duration | 2843.048 | 0.072 | 3947.823 | 0.270 | 3791.569 | 0.140 | 2740.68 | 0.059 |
| Exposure level:Sex:Duration | 974.616 | 0.605 | 3246.687 | 0.377 | 4472.984 | **0.025** | 450.569 | 0.925 |
| Residuals | 1198.923 | NA | 2994.454 | NA | 2047.884 | NA | 1080.672 | NA |

| | Mean Media Thickness Box–Cox Transformation | | Mean Wall Thickness (µm) Box–Cox Transformation | | Mean Adventitia Thickness (µm) Original Scale | | Media Thickness/ Adventitia Thickness Box–Cox Transformation | |
|---|---|---|---|---|---|---|---|---|
| Sources of Variation | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value | Mean Square | *P* Value |
| Exposure level | 2.64E-06 | 0.171 | 5.10E-07 | 0.473 | 26.746 | 0.688 | 0.057 | 0.208 |
| Sex | 6.24E-05 | **< 0.001** | 3.34E-05 | **< 0.001** | 1395.706 | **< 0.001** | 0.045 | 0.272 |
| Duration | 1.49E-04 | **< 0.001** | 3.70E-05 | **< 0.001** | 182.678 | **0.020** | 1.501 | **< 0.001** |
| Exposure level:Sex | 4.71E-06 | **0.031** | 1.46E-06 | 0.069 | 43.312 | 0.497 | 0.046 | 0.298 |
| Exposure level:Duration | 7.11E-07 | 0.902 | 3.23E-07 | 0.849 | 46.618 | 0.563 | 0.026 | 0.706 |
| Sex:Duration | 3.97E-07 | 0.858 | 3.85E-07 | 0.594 | 37.011 | 0.564 | 0.016 | 0.730 |
| Exposure level:Sex:Duration | 9.72E-07 | 0.776 | 6.33E-07 | 0.408 | 72.646 | 0.221 | 0.032 | 0.577 |
| Residuals | 1.56E-06 | NA | 6.07E-07 | NA | 54.274 | NA | 0.037 | NA |

[a] NA indicates not available.

[b] *P* values ≤ 0.05 are in **bold**, showing statistical significance.

[c] Includes data from 12 and 24 months only, and thus, the degree of freedom for duration is 1 instead of 3.

## DISCUSSION

The etiology or pathogenesis of cardiovascular diseases such as atherosclerosis and heart failure is complex and multigenic. Induction and acceleration of these disease states by environmental exposures (both acute and chronic) have been established in both epidemiologic and animal exposure studies. Moreover, air pollution has been indicated as an important contributor to all-cause and CVD-related mortality and morbidity. To better understand how air pollution, and specifically DE emissions, affect increased CVD risk under chronic exposure conditions, female and male rats were exposed to DE for up to 2 years. A variety of endpoints were measured after 1 and 2 years of DE exposure to assess potential evidence of chronic cardiovascular injury.

As outlined above, three distinctive yet overlapping mechanisms are likely causal in cardiovascular morbidity and mortality associated with air pollutant exposure. These paths include (1) thrombogenicity, (2) vascular inflammation, and (3) APR (acute systemic inflammation). Thus, we measured plasma markers representative of inflammation (vascular and systemic), thrombosis, and APR along with a panel of general toxicity markers to assess potential ongoing injury as a result of the activation of a coordinated stress–response pathway (e.g., increased CRP in the APR) or of specific organ injury (e.g., ALT or CK leakage into the blood from injured hepatocytes or striated muscle, respectively). Even though we evaluated more than 20 plasma markers, we observed few exposure-dependent changes, and in both sexes no plasma marker was altered by DE at all exposure durations. This was consistent with findings reported previously for rats and mice exposed for 1 and 3 months to DE (Conklin and Kong 2012).

Importantly, we complemented plasma measures by assessing morphologic changes in cardiac and aorta structures (i.e., measuring cardiac fibrosis and the architecture of the thoracic aorta wall) to detect whether DE exposure stimulated a remodeling of the heart and aorta that is reflective of chronic cardiovascular injury. Similar to the results obtained with plasma markers, DE exposures did not alter the expected growth- and age-dependent changes in cardiac fibrosis and aortic wall morphometry in rats over the 2 years of exposure. However, the animal used in this study, the Wistar Han rat, does not develop atherosclerotic lesions, hypertension, or heart failure, as do susceptible rat models, such as the hypertensive rat (e.g., SHR) or one prone to heart failure. Nonetheless, changes in heart and aorta architecture may reflect ongoing inflammation or could arise as secondary changes resulting from DE-induced effects on hemodynamics, such as hypertension. For example, acute (4-hour) DE exposure (500 µg/m$^3$ $PM_{2.5}$) stimulated cardiac bradyarrhythmias and contractile changes in aged, heart-failure-prone rats (16 months old); this emphasizes both the utility of studying susceptible rats to detect DE effects (Carll et al. 2013) and the importance of monitoring endpoints appropriate to the time course under study. Although the data in this study collectively indicate that DE exposures (at levels studied) of up to 2 years (i.e., 16 hr/d × 7 d/wk × 52 wk/yr) had limited effect on the rat cardiovascular system, it is possible (albeit unlikely) that a more subtle form of injury occurred, yet went undetected.

### PLASMA MARKERS: SHORT-TERM VERSUS CHRONIC EXPOSURES

As summarized in the Results section, only a handful of plasma markers were altered in the current study by 1- to 24-month DE exposures, and no consistent or obvious changes or patterns emerged. In previous studies, plasma lipids (e.g., CHOL) also have been extensively examined in female and male rats exposed to DE subchronically (Conklin and Kong 2012; Reed et al. 2004, 2005, 2006a; Seagrave et al. 2005). Although we have reported significant changes at 1 month in plasma levels of total and HDL cholesterol in male rats exposed to mid- and high-level DE (Conklin and Kong 2012), these changes were not significant in the context of plasma cholesterol changes over 24 months of DE exposure. After statistical analysis of the collective lipids data, we found only three lipids were statistically significantly changed (CHOL, non-HDL, and TRIG) in female rats over 24 months (see Table 5). For example, we observed significant decreases in both total and non-HDL cholesterol levels in female rats exposed to high-level DE for 24 months (see Table 5 and Figure 2). Similarly, previous reports have shown that chronic DE exposure — albeit at $PM_{2.5}$ levels over 50 times higher than in our current ACES investigation — decreased plasma cholesterol level in rats (Reed et al. 2004, 2005, 2006a), and we reported that mid-level DE exposure for 3 months decreased cholesterol levels in female rats (see Additional Materials 1 for this report [available on the HEI Web site]) (Conklin and Kong 2012; McDonald et al. 2012). In the current study, TRIG levels were slightly decreased in female rats at the mid-level DE exposure at 24 months, but overall, plasma TRIG levels were highly variable with no consistent pattern with respect to DE exposure over the course of the 24 months (Table 1). Because rats were not fasted prior to euthanization and blood collection, variable lipid levels, especially in TRIG, were expected, and thus, an unfasted condition confounded lipid measurements.

This issue was addressed in more detail in our initial ACES subchronic report (Conklin and Kong 2012); however, some of the variation in levels of lipids and other plasma markers also could be a consequence of age or other factors associated with chronic exposure (e.g., noise and single housing) (Peng et al. 1989; Perez et al. 1997; Perkins and Lipman 1996). Whether circulating cholesterol level is a sensitive marker of DE exposure in rats is still unclear. Thus, although we found evidence that DE exposure decreases total and non-HDL cholesterol levels in female rats, the biologic significance of these changes is unknown.

Whereas rapidly elevated levels of blood lipids are hallmarks of a coordinated APR, elevated blood levels of chemokines and certain cytokines are evidence of inflammation. We measured a variety of cytokines and chemokines in the 2-year exposure study, and only three of these were significantly altered by DE exposure compared with matched air controls (Tables 2 and 4). Significant changes in plasma IL-6 (three changes), sICAM-1 (three changes), and leptin (one change) were modest and variable with respect to direction of change and DE exposure. Of the seven changes, six occurred at either 12 or 24 months of DE exposure; three of seven changes were at the highest DE exposure level; and four of seven changes were in female rats. In all cases, no single marker was altered by DE exposure in a consistent pattern. For example, plasma sICAM-1 levels in female rats fluctuated widely after 12 months (significantly decreased) and 24 months (significantly increased) of exposure (see Table 2 and Figure 4A). Similarly, plasma leptin levels at 12 and 24 months were substantially reduced from baseline levels in young rats (Figure 5). These data establish that aging in rats in this study was the single most important determinant of baseline levels of several of our critical plasma markers.

Although these data are insufficient to indicate an age- and sex-dependent sensitivity of the endothelium to DE exposure, an activated endothelium increases the expression of adhesion molecules, including ICAM-1, and subsequent shedding of the extracellular receptor portion of those molecules leads to increased circulating levels of sICAM-1 (Nakashima et al. 1998). It is known that some toxins, such as acrolein, can increase or decrease plasma sICAM-1 levels depending on treatment conditions and rodent species (Conklin et al. 2011a, 2011b); so, in practice, a single agent can stimulate opposing effects. It should be noted, however, that the single greatest factor contributing to a significant DE effect in female rats at 12 and 24 months is the consistent baseline level of sICAM-1 in the air control group. This contrasts with baseline sICAM-1 levels in male rats that differed widely at 12 and 24 months (compare Figures 4A and 4B, and see Table 2). Thus, we speculate that DE exposure in females may slightly accelerate what is an apparent, inevitable, aging-related activation of the endothelium that has already occurred by 2 years of age in the air control male group. Interestingly, plasma IL-6 levels significantly increased in female rats exposed to DE for 24 months (mid- and high-level exposure), and perhaps, these changes in IL-6 levels are linked with changes in sICAM-1. Because vascular inflammation and endothelium injury can increase expression of both IL-6 and sICAM-1 in endothelial cells (Chen et al. 2006; Dayal et al. 2002), the relationship between these two markers may provide a stronger signal of pollutant-induced endothelium injury than either marker alone. Unfortunately, measurement of plasma markers as was done in this study did not provide definitive evidence of the specific cell, tissue, or organ source of the marker, so this hypothesis will require further study.

As in our initial study (Conklin and Kong 2012), we measured numerous plasma markers of inflammation and general toxicity, and assays were performed at the University of Louisville or by a commercial vendor using well-established assays, calibration standards, and positive "technical" controls for quality control and assurance. Although many analytes are stable while frozen at −80°C, analyte values can vary over time because of decay and alterations in assay protocol, sensitivity, or accuracy. To reduce variation, all rat samples (i.e., the 12- and 24-month exposures) were processed at the same time, and thus, freezing and thawing was minimized. For lipid and protein analyses performed at the University of Louisville, samples were thawed only at the time of the analysis, and at that time a separate aliquot was refrozen and then sent on dry ice to the commercial vendor for cytokine and chemokine array analysis. Excellent concordance was observed between the analytical values for plasma lipids and proteins measured in the current study and values obtained previously using the same control samples (Conklin and Kong 2012; see also Additional Materials 3 of this report). Although the data presented here and those provided by McDonald and colleagues (McDonald et al. 2012 and Part 1 of this volume) on rat sera chemistry provided external assay validation for some analytes, uncertainty remained about the quality and robustness of assays for other analytes, especially some of those measured via commercial vendor (e.g., rat SAA) (Marhaug and Dowton 1994). Because of this specific uncertainty, rat SAA was not measured in the current study. Yet fibrinogen, a marker of thrombosis and APR, and CRP, also an APR reactant, were measured, and these analytes, which varied relatively little, provided some of the most consistent data sets measured

(see Table 2). Notably, these markers (i.e., pro-APR, prothrombotic, proinflammatory) were not altered by DE exposures. We conclude that the assay conditions and protocols used were appropriate for the endpoints measured in this study.

### AGE-RELATED CHANGES IN CARDIOVASCULAR ORGANS

Because of the importance of structural organ remodeling in chronic CVDs such as atherosclerosis and heart failure, we added endpoints to assess changes in the aging thoracic aorta and heart. As expected, obvious age-dependent changes in aorta morphometry (e.g., in the LA and in WT) and cardiac fibrosis were observed in both female and male rats. Despite documenting what appears to be a robust dynamic range of change in the measured parameters over time (e.g., 1% change in cardiac fibrosis over 12 months), we did not observe any statistically significant changes related to DE exposure. Wold and colleagues (2012) reported that exposing mice to CAPs for 9 months led to increased cardiac dysfunction and increased fibrosis. CAPs exposure levels used in the study by Wold and colleagues were approximately 85 µg/m$^3$ (i.e., about 5–6 times greater than the highest DE $PM_{2.5}$ level used in our current study). However, their exposures were only for 5 to 6 hours per day and only 5 days per week, and the estimated continuous $PM_{2.5}$ exposure integrated over the 24-hour day was in the range of 10 to 20 µg/m$^3$, which is similar to the highest DE exposure level in ACES (McDonald et al. 2012). Moreover, a 50-day exposure of apolipoprotein E-null mice to DE emissions led to particle-dependent alterations in atherosclerosis composition (Campen et al. 2010) indicating the potential for DE to induce aortic remodeling. Although no statistically significant changes were observed in rat aorta in the present study, nearly all the mean values for the DE-exposed groups for the aorta LA, aorta WA, and in MT were greater than (females) or less than (males) the mean values of matched air control groups (see Figure B.2 in Additional Materials 2, available on the HEI Web site). It is possible then that in this study the rudimentary morphometry methods employed and the limited sample size ($N \leq 7$ group) compromised the statistical robustness of group comparisons of these endpoints.

## CONCLUSIONS

Although air pollution increases CVD risk in humans, the specific components and mechanisms responsible for this increased risk are not completely known. Likewise, many exposure studies in animals have shown that DE alters CVD risk factors or directly modifies the cardiovascular disease process and outcome. Because of the long-term (2-year) exposure period, we hypothesized that DE exposure could lead to alterations in plasma markers of CVD risk, general toxicity, or cardiovascular organ remodeling. However, evidence of any DE-induced effects was limited. For example, only in female rats exposed to DE for 2 years did we find elevated plasma levels of sICAM-1 and IL-6 along with decreased plasma total and non-HDL cholesterol. Collectively, this constellation of changes may reflect an enhanced sensitivity of the aging female cardiovascular system to chronic DE exposure (Chen et al. 2005). This conclusion likely is best interpreted within the context of the exposure conditions and methodologic shortcomings of this study: (1) rats were singly housed for the whole exposure duration, (2) tissue was collected from unfasted rats, and (3) aged female rats lose reproductive and cardioprotective status. Although we did not measure reproductive status in our current study, the literature describes amply how CVD risk increases in postmenopausal women as a result of loss of the protective action of estrogen (Maxwell 1998; Reckelhoff 2001; Schwartz et al. 1995). A previous study, done with young and aged female and male rats, provides supportive data about endothelium function and general sensitivity to a common component of DE, phenanthraquinone (Prisby et al. 2008). The data indicated that 2-year-old female rats were less protected than younger counterparts. If the DE emissions used in this study accelerated postestrous (postmenopausal) onset, then increased CVD injury (reflected by elevated plasma risk factors) is a plausible outcome as predicted by previous rat studies assessing susceptibility in aging or ovariectomized females to CVD outcomes (Castillo et al. 2005; Lee et al. 2008; Mercier et al. 2002; Mori et al. 2011). It is important to note that it is difficult to compare the data of the current study, which tested the emissions of new and emerging technologies (e.g., 2007-compliant engines, low-sulfur fuel), with those of previously published studies of DE exposures that were performed under very different conditions (e.g., different engine loads, exposure durations, fuels, and $PM_{2.5}$ levels) (Campen et al. 2003; Cherng et al. 2009; Maresh et al. 2011). Nonetheless, the results from the present study suggest that exposure of rats to DE emissions from 2007-compliant diesel engines for up to 2 years under the conditions of the study has limited effect on the aging cardiovascular system. A few major limitations related to this conclusion are worth mentioning: (1) we made a large number of statistical comparisons, which increases the likelihood of a Type I error; (2) we did not measure cardiovascular function; had we done so, we might have found direct evidence of potential DE-induced cardiovascular injury (e.g., measuring blood pressure could have revealed hypertension

and measuring vascular function could have revealed endothelium dysfunction) (Campen 2009); and (3) we did not use a susceptible-animal model that may have better reflected enhanced sensitivity (e.g., to heart failure) of more susceptible humans. Future studies could address these limitations.

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## ADDITIONAL MATERIALS AVAILABLE ON THE WEB

Additional Materials contain supplemental material not included in the printed report. They are available on the HEI Web site at *http://pubs.healtheffects.org*.

Additional Materials 1. Summary Data Tables of Plasma Markers Measured in Rats Exposed to Filtered Air or Diesel Exhaust Emissions at 1 or 3 Months of Exposure

Additional Materials 2. Aorta Morphometry in Rats Over 24 Months of Exposure to Filtered Air or Diesel Exhaust Emissions

Additional Materials 3. Plasma Levels of Markers Measured in Rats Exposed to Acrolein as Positive Technical Controls

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**Daniel J. Conklin, Ph.D.,** received his doctorate from the University of Notre Dame in 1995 and was a National Institute of Environmental Health Sciences toxicology postdoctoral fellow at the University of Texas Medical Branch at Galveston from 1996 to 1998. He has published over 55 peer-reviewed manuscripts, book chapters, and editorials on cardiovascular physiology and toxicology. He is a full member of the Society of Toxicology (SOT) and past president of the Cardiovascular Toxicology Specialty Section of SOT. He is chairman of an American Heart Association grant review committee on vascular and endothelium biology and is an associate editor of the journals *Cardiovascular Toxicology* and *Toxicology and Applied Pharmacology*. His laboratory, funded by the National Institutes of Health, investigates the cardiovascular toxicity and pathophysiology of environmental/endogenous aldehydes, such as acrolein, and the cardioprotective functions of glutathione *S*-transferase P. He is currently an associate professor of medicine in the Division of Cardiovascular Medicine of the University of Louisville in Louisville, Kentucky, where he directs the Inhalation Facility and the Animal Core of the Diabetes and Obesity Center. The Center is directed by A. Bhatnagar, Ph.D. and funded by the National Institute of General Medical Sciences.

**Maiying Kong, Ph.D.,** received her doctorate in mathematical statistics from Indiana University–Bloomington in 2004 and was a postdoctoral fellow in biostatistics at the University of Texas M.D. Anderson Cancer Center from 2004 to 2006. She has published over 32 peer-reviewed articles on statistical methods in the areas of dose–response relationships and longitudinal studies as well as their application to biomedical research. She is a member of the American Statistical Association (ASA) and a member of the Eastern North American Region/International Biometric Society (ENAR). She serves as the biostatistics core director for the NIH-funded Consortium for Preclinical Assessment of Cardioprotective Therapies (CAESAR) study, and as the key biostatistician for several other NIH-funded projects. She is currently an associate professor in the Department of Bioinformatics and Biostatistics, School of Public Health, at the University of Louisville.

## OTHER PUBLICATION RESULTING FROM THIS RESEARCH

Conklin DJ, Kong M. 2012. Part 4. Effects of subchronic diesel engine emissions exposure on plasma markers in rodents: report on 1- and 3-month exposures in the ACES bioassay. In: Advanced Collaborative Emissions Study (ACES) Subchronic Exposure Results: Biologic Responses in Rats and Mice and Assessment of Genotoxicity. Research Report 166. Boston, MA: Health Effects Institute.

## ABBREVIATIONS AND OTHER TERMS

| | |
|---|---|
| ALB | albumin |
| ALT | alanine aminotransferase |
| ANOVA | analysis of variance |
| APR | acute phase response |
| AST | aspartate aminotransferase |
| CAPs | concentrated ambient particles |
| CHOL | total cholesterol |
| CK | creatine kinase |
| CREA | creatinine |
| CRP | C-reactive protein |
| CVD | cardiovascular disease |
| DE | diesel exhaust |
| ELISA | enzyme-linked immunosorbent assay |
| HDL | high-density lipoprotein |
| GM-CSF | granulocyte-macrophage colony-stimulating factor |
| ICAM-1 | intercellular adhesion molecule 1 |
| IFN-γ | interferon-γ |
| IL-1β | interleukin-1β |
| IL-6 | interleukin-6 |
| IL-10 | interleukin-10 |
| KC | keratinocyte-derived chemoattractant |
| LA | luminal area |
| LDH | lactate dehydrogenase |
| LDL | low-density lipoprotein |
| LRRI | Lovelace Respiratory Research Institute |
| MCP-1 | monocyte chemotactic protein 1 |
| MT | media thickness |
| NAP | non-albumin protein |
| $NO_2$ | nitrogen dioxide |
| non-HDL | non-high-density lipoprotein (cholesterol) |
| OEL | outer elastic lamina |
| $PM_{2.5}$ | particulate matter ≤ 2.5 μm in aerodynamic diameter |
| SAA | serum amyloid A |
| SE | standard error |
| sICAM-1 | soluble intercellular adhesion molecule 1 |
| TNF-α | tumor necrosis factor-α |
| TP | total protein |
| TRIG | triglycerides |
| VEGF | vascular endothelial growth factor |
| WA | wall area |
| WT | wall thickness |

# COMMENTARY

## HEI ACES Review Panel

Research Report 184, *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust,* J.D. McDonald et al., J.C. Bemis et al., L.M. Hallberg et al., and D.J. Conklin and M. Kong

## INTRODUCTION

This Commentary summarizes HEI's independent evaluation of the four studies conducted as Phase 3B of the multipart Advanced Collaborative Emissions Study (ACES*) program. HEI's evaluation was conducted by a specially convened ACES Review Panel.

These studies investigated the health effects of exposures of rats over their lifetime (up to 30 months) and of mice for 3 months to diesel exhaust emissions from a heavy-duty diesel engine system compliant with U.S. 2007 regulations. These emissions are referred to as *new-technology diesel exhaust* (NTDE) to distinguish them from the emissions of older, pre-2007 engine systems that did not use these technologies, referred to as *traditional-technology diesel exhaust* (TDE).

The core study was led by Dr. Jacob McDonald, of Lovelace Respiratory Research Institute (LRRI) in Albuquerque, New Mexico, where the exposures were carried out. Other ancillary studies were led by Dr. Jeffrey Bemis, of Litron Laboratories, Rochester, New York; Dr. Lance Hallberg, of the University of Texas Medical Branch, Galveston, Texas; and Dr. Daniel Conklin, of the University of Louisville, Louisville, Kentucky. These ancillary studies evaluated endpoints not examined in the core study. Included in this volume is the report from McDonald and colleagues, with results from the final exposure time point — 28 months (males) and 30 months (females) — as well as interim results from 1, 3, 12 and 24 months, and the reports from Bemis, Hallberg, and Conklin and their colleagues, with data from 1-, 3-, 12- and 24-month exposure times. A previous HEI Research Report (ACES 2012) presented results from the subchronic exposure time points of 1 and 3 months (with some 12-month results from McDonald and colleagues' study).

This Commentary, prepared by the Panel, is intended to aid the sponsors of HEI and the public by highlighting both the strengths and limitations of these studies and by placing them in a scientific and regulatory perspective.

### BACKGROUND TO THE ACES PROGRAM

In light of concerns identified over many decades about the potential health effects of diesel emissions, the U.S. EPA and the California Air Resources Board adopted stringent new regulations for heavy-duty highway diesel engines, which were required to meet a new standard for PM by 2007. A tighter standard for nitrogen oxides ($NO_x$, primarily nitric oxide [NO] and nitrogen dioxide [$NO_2$]) came into effect in 2010. The regulatory agencies also mandated that sulfur in fuel be reduced substantially.

Engines needed to meet a new standard for PM (light-duty engines by 2006 and heavy-duty engines by 2007) and for $NO_x$ (by 2010). Engine manufacturers and other industries developed advanced engine technologies and exhaust aftertreatment systems (in particular, diesel particle filters to reduce PM emissions and selective catalytic reduction devices for reducing $NO_x$ emissions). The regulatory agencies also mandated that sulfur in fuel be reduced substantially; such ultra-low-sulfur fuel (< 15 ppm) was essential for proper functioning of the aftertreatment systems. Introduction of these changes was expected to result in substantially

Dr. McDonald's 4-year study, "Development of a Diesel Exhaust Exposure Facility and Conduct of a Chronic Inhalation Bioassay in Rats and Mice," began in February 2010. Total expenditures were $8,423,802. The draft Investigators' Report from Dr. McDonald and colleagues was received for review in January 2014. A revised report, received in June 2014, was accepted for publication in July 2014.

Dr. Bemis's 2.5-year study, "Genotoxicity of Inhaled Diesel Exhaust: Examination of Rodent Blood for Micronucleus Formation," began in February 2010. Total expenditures were $28,340. The draft Investigators' Report from Dr. Bemis and colleagues was received for review in March 2013. A revised report, received in July 2013, was accepted for publication in August 2013.

Dr. Hallberg's 2.5-year study, "Assessment of the Genotoxicity of Diesel Exhaust/Diesel Exhaust Particulates from Improved Diesel Engines," began in May 2010. Total expenditures were $63,380. The draft Investigators' Report from Dr. Hallberg and colleagues was received for review in March 2013. A revised report, received in December 2013, was accepted for publication in April 2014.

Drs. Conklin and Kong's 2.5-year study, "Effects of Diesel Emissions on Vascular Inflammation and Thrombosis," began in February 2010. Total expenditures were $91,920. The draft Investigators' Report from Conklin and Kong was received for review in March 2013. A revised report, received in September 2013, was accepted for publication in October 2013.

During the review process, the HEI ACES Review Panel and the investigators had the opportunity to exchange comments and to clarify issues in both the Investigators' Reports and the Review Panel's Commentary.

This document has not been reviewed by public or private party institutions, including those that support the Health Effects Institute; therefore, it may not reflect the views of these parties, and no endorsements by them should be inferred.

* A list of abbreviations and other terms appears at the end of the Investigators' Reports.

reduced emissions of PM and $NO_x$, as well as other exhaust constituents such as air toxics. The U.S. EPA and CARB projected that the reduction in pollutant emissions that would result from the introduction of new technologies and fuels — estimated at about a 90% reduction compared with emissions from pre-2007 engine systems — would have substantial public health benefits. HEI's industry sponsors and government officials at the U.S. EPA, CARB, and the U.S. Department of Energy (U.S. DOE) expressed strong interest in research into the emissions and health effects of the new diesel technology, with the expectation that reduced emissions would also reduce adverse health effects. After planning workshops with multiple stakeholders in 2003 and 2004, HEI — working in collaboration with the Coordinating Research Council (CRC), a nonprofit organization with expertise in emissions characterization — launched ACES.

The overall goals of ACES were to characterize the exhaust emissions of these new advanced heavy-duty diesel (Class 8) engines with aftertreatment systems using ultra-low-sulfur fuels and to assess the possible adverse health effects of exposure to these emissions.

## SELECTION OF ACES PHASE 3B CORE AND ANCILLARY STUDY INVESTIGATORS

As described in the Preface to this report, ACES was designed in three phases. Phases 1 and 2 focused on emissions characterization from 2007- and 2010-compliant engines, respectively; Phase 3 focused on an evaluation of the health effects of emissions from a 2007-compliant engine. In view of its expertise in emissions characterization and its existing expert committee and oversight structure for planning and monitoring such activities, CRC took a leading role in the Phase 1 and 2 studies, whereas HEI took the leading role in the Phase 3 studies. The overall effort was led by HEI and guided by an ACES Steering Committee consisting of representatives of CRC, the U.S. DOE, engine manufacturers, the U.S. EPA, the petroleum industry, CARB, manufacturers of emission control devices, the National Resources Defense Council, and others. At the inception of ACES, the first step taken jointly by the CRC and HEI committees was the development of a detailed project plan that formed the basis for the subsequent requests for applications issued by CRC and HEI.

The design and implementation of Phase 3 and reporting of results were the responsibility of HEI and were overseen by the ACES Oversight Committee (a subset of the HEI Research Committee augmented by other independent experts from several disciplines), with advice from a Health Advisory Committee of ACES stakeholder experts.

In 2006 HEI issued Request for Proposals (RFP) 06-1, *Exposure Facility and Conduct of a Chronic Inhalation Bioassay,* to solicit proposals for Phase 3 of the ACES study, a chronic inhalation study assessing cancer and non-cancer effects in rats and mice exposed to emissions from a 2007-compliant engine system, or NTDE. The study was to be conducted in two subphases: *Phase 3A,* the establishment of an exposure facility, as well as the characterization and optimization of engine exposure conditions before the start of the inhalation study (for a description of this substudy and the results, see Mauderly and McDonald 2012), and *Phase 3B*, the evaluation of health outcomes in animals exposed to NTDE for up to 24 months or longer, depending on the number of animals surviving.

In response, Dr. Joe L. Mauderly and a team at LRRI submitted a proposal, "Development of a Diesel Exhaust Exposure Facility and Conduct of a Chronic Inhalation Bioassay in Rats and Mice." After extensive discussions among HEI staff, the ACES Oversight Committee, and additional experts, Dr. Mauderly's proposal was selected, and the study was approved by the HEI Board of Directors in February 2007. When Dr. Mauderly retired in 2010, HEI agreed that Dr. Jacob D. McDonald, who had been responsible for the exposure generation and characterization in the study, would become the principal investigator.

Phase 3B, the chronic inhalation study, was designed to be similar to the standard National Toxicology Program (NTP) bioassays for assessment of the carcinogenicity of chemical compounds (NTP 2011), albeit with a longer daily exposure period than most NTP studies. To maximize the information that would be provided by the Phase 3B exposures, HEI issued Request for Applications (RFA) 06-2, "Additional Health Effects Measurements During the Chronic Bioassay and Short-Term Study." This RFA solicited applications from respondents to RFP 06-1, as well as other scientists interested in measuring additional endpoints — such as genotoxicity and vascular markers of inflammation and damage — that were not included in the core chronic inhalation bioassay funded under RFP 06-1. As described in the Preface, HEI selected five investigator teams to conduct these Phase 3B ancillary studies. Three teams completed their studies.

## REVIEW OF THE ACES PHASE 3B REPORTS

ACES Phase 3B was designed to examine the effects of chronic exposure to NTDE in rats for up to 24 months or longer and in mice for up to 3 months. The ACES protocol stipulated that the investigators would evaluate blood and tissue samples collected at intermediate exposure time points, as well as at the end of the study. Thus, each investigator team prepared an Investigators' Report with results from subchronic exposures of rats and mice (1- and 3-month

time points) and submitted it to HEI. Then, at the end of the study, the investigator teams submitted reports with data from the chronic exposures of rats.

To review the reports from the ACES Phase 3B core and ancillary studies, HEI set up a special ACES Review Panel (see the list of Panel members at the beginning of this volume). The Panel comprised experts in the fields of cardiovascular effects, pathology, genotoxicity, and biostatistics and was supplemented by members of HEI's Review Committee, a body of experts that reviews completed HEI studies and reports. The ACES Review Panel reviewed the investigators' reports and made suggestions to the investigators to modify their reports by revising them, predominantly to enhance clarity, to explain further some of the statistical analyses, and to consider alternative interpretations of the data. The investigators submitted revised reports that the Panel subsequently reviewed and approved for publication by HEI. The Panel summarized its review of the reports of the subchronic exposures in the Commentary accompanying the reports published in HEI Research Report 166 (ACES 2012). The current Commentary summarizes the Panel's review of the reports submitted at the end of the study and containing data from all exposure time points.

HEI set up an Exposure Characterization Review Panel (see the list of members at the front of this volume) to review the exposure characterization report submitted by McDonald and colleagues (Appendix I of Part 1; available on the Web at *http://pubs.healtheffects.org*). This panel reviewed a draft report and recommended revisions, which the investigators addressed in a revised report submitted shortly before the issue of this volume. The panel was not able to review the revised version in time for publication.

## COMMENTARY ON THE CORE STUDY OF BIOLOGIC EFFECTS BY MCDONALD AND COLLEAGUES: ASSESSMENT OF CARCINOGENICITY AND BIOLOGIC RESPONSES IN RATS AFTER LIFETIME INHALATION OF NEW-TECHNOLOGY DIESEL EXHAUST IN THE ACES BIOASSAY

### SCIENTIFIC BACKGROUND

#### Long-Term Inhalation Exposure to "Traditional Diesel" in Rats

Before the current study of NTDE emissions from a 2007-compliant engine, several studies had investigated the effects of long-term inhalation exposure in multiple animal species to TDE (reviewed in Hesterberg et al. 2005; International Agency for Research on Cancer [IARC] 2012) — emissions derived from pre-2007 diesel engines (i.e., before the new technologies were introduced and the new standards enforced). Many chronic inhalation studies in rats (lasting 24 months or longer) had found elevated incidence of lung tumors in animals exposed to high TDE concentrations (> 2 mg/m$^3$ PM) as compared with incidence in rats in a control group (Brightwell et al. 1986; Heinrich et al. 1986, 1995; Ishinishi et al. 1986; Iwai et al. 1986; Mauderly et al. 1987b, 1994; Nikula et al. 1995). In contrast to the effects in rats, few studies conducted in mice (or hamsters) found excess tumors resulting from long-term inhalation of TDE as compared with incidence in control animals. For example, the studies of Heinrich and colleagues (1995) and Mauderly and colleagues (1996) found no tumors in mice exposed to TDE concentrations that induced tumors in rats.

The importance of the particulate fraction of TDE in causing tumors in rats in these early studies was supported by studies in which TDE particles had been removed from the exhaust by filters; in the absence of TDE particles, the gaseous components alone produced no change in the number of lung tumors in exposed rats as compared with controls (Brightwell et al. 1986; Heinrich et al. 1986; Iwai et al. 1986, 1997). Findings from the study by Heinrich and colleagues (1986) are particularly relevant because they were conducted in female Wistar Han rats (after 24 months of exposure), the same strain as was used in the current study. As in the current study, PM emissions in the filtered TDE were very low, as was the ratio of PM to $NO_2$. The $NO_2$ level (1.1 ppm) in the 1986 study by Heinrich and colleagues was comparable to the lowest level of NTDE exposure in the current study, but the $NO_2$:$NO_x$ ratio in the Heinrich study was somewhat lower than the ratio found in NTDE at the highest level of exposure in the current study. In a later long-term study (1995) of exposure to TDE from which particles had been removed, Heinrich and colleagues reported levels of PM and $NO_2$ and ratios of $NO_2$:$NO_x$ and of PM:$NO_2$ that were similar to their 1986 findings (see Results section of the current study).

#### *Pathways of Induction of Tumors in Rats Exposed to DE*

Several early studies identified organic components of DE as carcinogenic when applied to the skin or implanted in the lungs of rodents (Grimmer et al. 1987; Nesnow et al. 1982) and as mutagenic in the in vitro Ames test (Huisingh et al. 1978). Of the organic components, polycyclic aromatic hydrocarbons (PAHs) and nitro-PAHs were shown to be a large fraction of the mass of an organic extract of TDE (Gallagher et al. 1994), and some organic components — especially nitropyrenes — had been shown to be carcinogenic in

laboratory animals and mutagenic in vitro (reviewed in IARC 1989). Thus, a major hypothesis that emerged from these studies to explain the carcinogenicity of TDE was that organic components of DE damaged deoxyribonucleic acid (DNA) — for example, by inducing the formation of adducts —leading to an increase in the number of mutations (see Beland 1995).

However, long-term inhalation studies in rats that compared the effects of exposure to high concentrations of TDE (2.5 mg/m$^3$ PM or higher) with the effects of exposure to similar or higher concentrations of other insoluble particles that had been previously considered to lack toxic properties found that all these particles induced lung tumors in rats. In particular, carbon black (Nikula et al. 1995) — chemically similar to the core of a diesel particle, but without adsorbed components —and titanium dioxide (Heinrich et al. 1995) induced lung tumors in rats but *not* in mice (Heinrich et al. 1995; Nikula et al. 1995; Mauderly et al. 1996).

These findings suggested that the development of lung tumors in rats after exposure to high concentrations of TDE and other insoluble particles was specific to rats and did not depend on the presence of organic, mutagenic components. Rather, the development of lung tumors in rats exposed to high concentrations of insoluble particles was attributed to a rat-specific "particle overload" mechanism, originally proposed by Vostal (1986), in which airway macrophages were unable to effectively clear high concentrations of insoluble diesel particles (Mauderly and McCunney 1996; Nikula et al. 1995). Particle overload was hypothesized to result in the generation of reactive oxygen species (ROS) and oxidative damage (e.g., to DNA) that would lead to airway inflammation and ultimately to tumor development (as reviewed in Hesterberg et al. 2005).

Studies have evaluated whether long-term exposure of rodents to TDE enhances damage to DNA, such as by DNA adduct formation or oxidative damage. Bond and colleagues (1990), in a 3-month exposure of rats, and Randerath and colleagues (1995), who examined samples from the 23-month exposure of F344 rats in the study by Nikula and colleagues (1995), did not find an increase in DNA adducts. In contrast, Iwai and colleagues (2000) found increases in levels of DNA adducts and 8-hydroxy-deoxyguanosine (8-OHdG) in the lung tissue of F344 female rats over the course of a 12-month exposure to 3.5 mg/m$^3$ TDE. The investigators associated the development of tumors in these rats at the end of the study (30 months) to the earlier effects of oxidative damage from TDE. Reed and colleagues (2004) at LRRI exposed male and female A/J mice and male and female F344 rats to different concentrations of TDE (up to 1 mg/m$^3$) for 7 days per week for 6 months. Multiple endpoints were examined, but genotoxic effects were studied only in mice. Exposure to TDE did not affect the number of micronucleated reticulocytes (MN-RETs) or the incidence of lung tumors (adenomas) 6 months after the end of the exposure.

In 2002 the U.S. EPA discussed the possible mode of action of DE in its *Health Assessment Document for Diesel Engine Exhaust* (2002) and again considered the hypothesis that tumor induction in rats exposed to high TDE concentrations was related to the overloading of normal lung clearance mechanisms, the accumulation of particles, lung inflammation, and cell damage. The EPA also postulated that other mechanisms may predominate at lower DE concentrations; for example, production of ROS generated from organic compounds may cause DNA damage at concentrations below those required to produce particle overload. Moreover, organic compounds, especially PAHs, can bind to and damage DNA and may be involved in the induction of tumors.

Based in part on these toxicology results, IARC (1989) classified diesel exhaust as a Group 2A "probable human carcinogen." In 2012, while the current study was underway, IARC convened a panel to evaluate the full body of scientific literature on the effects of DE. Included in the review were two recently published epidemiologic studies of historical exposures to diesel exhaust in occupational settings, the Diesel Exhaust in Miners Study (Attfield et al. 2012) and the Truckers Study (Garshick et al. 2012). Both studies had been specifically designed to address shortcomings identified in earlier epidemiologic studies of diesel exhaust and lung cancer. As a consequence of this review, IARC reclassified diesel exhaust as a Group 1 carcinogen ("carcinogenic to humans") (IARC 2012). McDonald and colleagues' report (ACES 2012) of subchronic ACES findings of the effects of NTDE in mice and rats, accompanied by the HEI ACES Review Panel's Commentary, was evaluated and included in the IARC report. However, although IARC recognized that NTDE differed from TDE, this first report of the effects of NTDE was not discussed at length in the IARC review.

### Long-Term Exposure to $NO_2$

In previous TDE animal exposure studies, dilution levels were based on PM concentrations. However, the HEI ACES Oversight Committee, which designed the current study, recognized that this approach would not be viable in ACES because of the low particle concentrations in the exhaust of the 2007-compliant diesel engines and control systems (Khalek et al. 2009, 2011). They decided to use $NO_2$ as the target component in NTDE for determining the dilution ratios for animal exposures. Their reasons for choosing $NO_2$ were that it is a major gaseous component of both TDE and NTDE and that it is known to have respiratory effects in

rodents (see below in this section). Thus, as explained in the Preface, the highest DE exposure level in the current study was set with a concentration of $NO_2$ that was expected to have some biologic effects.

As a result, prior studies that have evaluated health effects associated with exposure to $NO_2$ alone are relevant to interpreting and understanding the results of the current study. Two long-term $NO_2$ exposure studies funded by HEI are of particular relevance (Mauderly et al. 1987a, 1989). In the first, Mauderly and colleagues (1987a) exposed two sets of male F344 rats to 9.5 ppm $NO_2$ (7 hr/day, 5 day/wk = 332.5 ppm • hr/wk) for 6 months — either from conception to 6 months of age or from 6 to 12 months of age. The investigators found no histologic effects in the lung and no changes in pulmonary function in either set of rats exposed for 6 months. Both sets of animals had decreased body weight compared with controls. In the exposed adult rats, some small increases were detected in biochemical markers in bronchoalveolar lavage fluid (BALF): lactate dehydrogenase and glutathione peroxidase levels were increased, as were levels of acid and alkaline phosphatases. These changes suggested that, at the exposure levels used, $NO_2$ induced mild cytotoxicity and oxidative stress. There was no increase in inflammatory cells in BALF.

In their second study, Mauderly and colleagues (1989) used $NO_2$ exposure conditions identical to those used in their 1987 study for a 24-month $NO_2$-exposure study in rats. Animals were examined at intermediate exposure time points (12 and 18 months). After 12 months of exposure to $NO_2$, the rats had mild airway epithelial hyperplasia with thickening of the walls of terminal bronchioles and inflammation in proximal alveoli and small changes in some markers of respiratory function and in biochemical markers in BALF. After 24 months, histologic changes persisted, and lung volume and lung weight were increased, as were indicators of cell damage and oxidant protective mechanisms (specifically, increased levels of glutathione [GSH]) in BALF.

As noted in the Preface, the $NO_2$ exposure conditions used in these two earlier studies by Mauderly and colleagues were the basis for the decision in the current study to limit the concentration of $NO_2$ in the group exposed to the highest level of NTDE to 4.2 ppm, using a 16-hour exposure cycle for 5 day/wk (for a total of 336 ppm • hour/week). Thus, based on the findings of these earlier studies by Mauderly and colleagues, the concentration of $NO_2$ in the current study was expected to cause some biologic changes but was generally considered safe for long-term exposures. This issue is discussed further in the next subsection "Technical Approach" in this Commentary.

Kubota et al. (1987) conducted a morphometric study of Wistar Han rats — the strain used in the current study — exposed continuously to 0.04, 0.4, and 4.0 ppm $NO_2$ for up to 27 months. They found no effects of 0.04 ppm throughout the study, but rats exposed to 0.4 ppm $NO_2$ showed small alterations to the epithelium after 27 months. Exposure to 4 ppm $NO_2$ resulted in proliferation of the bronchial epithelium at 9 months, which progressed further at 18 months; fibrosis was noted at 27 months. Exposure to 4 ppm $NO_2$ also showed an increase of the arithmetic mean of the thickness of the alveolar wall at 9 months, which was significant after 18 months. The arithmetic mean of the thickness was slightly decreased at 27 months compared with 18 months, which the investigators interpreted as a "recovery of alveolar epithelium and decreased amount of septal edema, which in turn led to fibrosis."

Previous reports have also evaluated the effects of longer-term $NO_2$ exposure on some of the same biochemical endpoints examined in the current core and ancillary ACES reports. For example, male Wistar Han rats exposed to 4.0 ppm $NO_2$ for 9 months or longer had increases in a marker of oxidative stress — lipid peroxidation, as measured by an increase in thiobarbituric acid reactive substances (TBARS) (Sagai et al. 1984). In the same study, long-term exposure (18 months) to 0.4 or 4.0 ppm $NO_2$ also decreased the activity of enzymes that regulate levels of the antioxidant GSH.

The U.S. EPA's 2008 $NO_2$ assessment concluded that it has not been established how long-term exposure to $NO_2$ affects the airways, but long-term exposure to $NO_2$ has not been linked to carcinogenicity in animal studies (U.S. EPA 2008). That assessment also concluded that acute exposure studies have shed light on potential mechanisms of $NO_2$ effects in the airways: $NO_2$ is an oxidant and, after inhalation, is believed to interact rapidly with components of the epithelial fluid, such as surfactants and antioxidants, that line the airways. Controlled exposure of healthy adult humans to $\leq$ 2 ppm $NO_2$ resulted in acute inflammatory effects in the airways, such as increased numbers of polymorphonuclear (PMN) leukocytes in BALF, within hours after exposure (e.g., Frampton et al. 2002; Solomon et al. 2000). In animal studies, $NO_2$ has also been shown to induce changes in the membrane of cells lining the airways — in particular, to induce lipid peroxidation, which can result in altered phospholipid composition of the membrane and may adversely affect membrane fluidity.

## TECHNICAL APPROACH

As discussed in the Preface, before the Phase 3B studies began, the ACES Oversight Committee and the ACES

investigators at LRRI decided on several key design features, as follows:

- Of the four heavy heavy-duty diesel engines (i.e., gross vehicle weight higher than 33,000 lb, hereinafter referred to as a "heavy-duty" engine) with control systems designed to meet the 2007 standards tested in ACES Phase 1, one would be selected for health effects testing. As described below, a second, backup engine was also used for different periods in the study.
- Wistar Han rats and C57BL/6 mice would be evaluated.
- The duration of exposure would be 24 months for rats, with evaluations at intermediate time points; the duration might be extended up to 30 months, depending on survival. For mice, the exposure duration would be 3 months.
- Three concentrations of NTDE, based on $NO_2$ concentrations, and a control atmosphere (filtered air) would be evaluated.

### Objectives and Hypothesis

The goal of the ACES Phase 3B exposure studies was to evaluate the effects of lifetime inhalation exposure (up to 30 months) of NTDE in rats and in mice (exposed for up to 3 months).

The investigators tested the primary (null) hypothesis for ACES stated in RFA 06-1:

> Emissions from combined new heavy-duty diesel engine, aftertreatment, lubrication and fuel technologies designed to meet the 2007 $NO_x$ and PM emission standards will have very low pollutant levels and will not cause an increase in tumor formation or substantial toxic health effects in rats and mice at the highest concentration of exhaust that can be used (based on temperature and $NO_2$ or CO levels) compared to animals exposed to "clean air," although some biologic effects may occur.

As indicated above, this Commentary and accompanying reports focus on the results of chronic exposure (up to 30 months) of rats to NTDE; results from 3-month exposures of mice can be found in their entirety in HEI Research Report 166 (ACES 2012) and are discussed in the Commentary accompanying that report.

### Study Design

***Engine Selection*** ACES Phase 1 involved the extensive characterization at the Southwest Research Institute (SwRI) of gaseous and particulate emissions from the four heavy-duty diesel engines (model year 2007) made available by different engine manufacturers (Khalek et al 2009). The engine selection process for Phase 3B was guided by a group comprising a subset of members of the CRC ACES Panel (described in the Preface) and the HEI ACES Oversight Committee. In brief, after a review of the emissions indicated similar generation of gaseous and particulate-phase compounds from all four engines, engine B was randomly selected for the health study. After the selection had been made, the manufacturer of engine B (Detroit Diesel, a subsidiary of Daimler Corp.) provided a backup engine (referred to as B′). Engine B′ had the same technical specifications and was equipped with the same emission controls as engine B, but was of model year 2008. Engine B′ underwent testing at SwRI for regulated emission characterization and was then shipped to the LRRI investigators for further testing, in parallel with engine B, as part of ACES Phase 3A. The results of these tests were published in HEI Communication 17 by Mauderly and McDonald (2012).

***Generation and Characterization of NTDE*** Comprehensive information about the setup of the emissions dilution system and exposure chambers, as well as optimization of exposure conditions, has been published in HEI Communication 17 (Mauderly and McDonald 2012). The key features are described here. Detailed descriptions are also provided in Appendix I (available on the Web at *http://pubs.healtheffects.org*) of the report by McDonald and colleagues, and a summary of the composition of NTDE in the study is provided in Table 3 of that report (Part 1 of the current volume).

*Generation* During the study McDonald and colleagues generated exhaust from two similar 2007-compliant heavy-duty diesel engines, termed B and B′, as described above. A decision was made to start the animal exposures using engine B′ because it was a slightly newer model that was thought to better represent the engines in the marketplace at that time (Donald Keski-Hynnila, Detroit Diesel, personal communication, 8 September 2009). During the study, engine B′ was used from February 2010 to September 2011. Because of engine maintenance requirements, this engine was replaced with engine B, which continued in operation until May 2012. Engine B′ was reinstalled in June 2012 and operated until the end of the study (December 2012).

Both engines were fueled with ultra-low-sulfur diesel fuel meeting current on-road specifications and were operated with a dynamometer. The engines and associated systems were maintained as recommended by the engine manufacturer. The crankcase lubricating oil, changed every 250 hours, was a proprietary blend provided by Lubrizol,

and was also used in Phase 1 of the ACES program. The engines were run on a unique and strenuous 16-hour cycle specifically designed for the ACES program (described in the Preface) to represent more closely the real-world operations of modern engines than the operating cycles used in older long-term studies of TDE.

Engine exhaust and gases from the crankcase that had passed through the aftertreatment system entered a primary dilution tunnel where they were mixed and diluted with filtered air. The dilution ratio was 5:1. The diluted exhaust then passed into transit lines connected to each exposure chamber, where it was further diluted before entering each animal inhalation chamber. Three dilution ratios were determined based on the $NO_2$ concentrations. Additional dilution air was added in the chambers as needed to maintain the average $NO_2$ concentration (integrated over 16 hours) and keep it close to concentration targets, namely, 4.2 ppm (high), 0.8 ppm (mid), and 0.1 ppm (low) $NO_2$. The overall total dilution ratios at these concentrations were approximately 25:1, 115:1, and 840:1, respectively. The residence time of NTDE in the dilution tunnel and transit lines was less than 5 seconds. After the exhaust reached the exposure chamber, the residence time was approximately 4 minutes. The control exposure consisted of filtered air.

Daily average temperatures in the chambers were maintained within a target range of 18 to 26°C. The investigators noted that the actual temperatures in the chamber fluctuated, typically increasing during engine operation, with the highest temperatures generally found at the highest NTDE exposure level (1.5–2°C higher than lower exposure levels and control).

*Exposure Characterization* A detailed description of exposure characterization of the animal chambers is found in Appendix I of Part 1 of this volume (McDonald et al.), available on the Web at *http://pubs.healtheffects.org*. Note that Appendix I contains data from both the 30-month rat exposure study and the 3-month mouse exposure study, which was completed before the lifetime rat exposures started.

In brief, concentrations of NO, $NO_2$, and $NO_x$ were measured continuously for each exposure level throughout each exposure day. $NO_x$ were also measured from the primary dilution tunnel for the purpose of calculating the dilution ratio between the primary tunnel and the chambers. Concentrations of carbon monoxide (CO), carbon dioxide ($CO_2$), particle mass (using a Dekati Mass Monitor) and particle size distribution (using aerodynamic and fast mobility particle sizers), and black carbon (using a photoacoustic spectrometer) were also measured continuously in the high-exposure chamber on a daily basis. During periodic intensive characterizations (at 2.5, 11.5, and 23.5 months during the rat exposures), these measurements were made at the other exposure levels, but not in the high-level exposure chamber.

A more detailed measurement of particle size was conducted once per week at each exposure level using the fast mobility particle sizer, which measures particles between 5 and 500 nm in diameter. Integrated PM mass concentration was measured once per week at each exposure level by gravimetric analysis of Teflon-membrane filters placed at both the inlet of the chamber and inside the exposure chamber. Taking measurements at both locations allowed the investigators to determine how much of the PM in the exposure chamber was contributed by the animals themselves (e.g., from their dander or food supply).

***Animal Exposure Groups and Biologic Sample Collection*** A total of 140 male and 140 female 6-week-old Wistar Han rats per exposure group were entered in the study (see Table 1 of the report by McDonald and colleagues, Part 1 of this volume) and exposed at LRRI to filtered air as a control or one of the three targeted NTDE dilutions — 4.2 (high), 0.8 (mid), or 0.1 (low) ppm $NO_2$. Exposures were conducted 16 hours per day (plus the few minutes taken to reach 90% of the target concentration) from approximately 1600 to 0800 hours for 5 days per week (Sunday through Thursday).

Groups of 10 male and 10 female rats (per exposure group) were euthanized after 1, 3, 12, and 24 months of exposure. LRRI investigators harvested blood and tissues at these time points and analyzed them as described below. The LRRI investigators also sent aliquots of blood and tissue samples from these animals at these time points to the ACES Phase 3B ancillary studies investigators. At 3, 12, and 24 months, the LRRI investigators also measured the rats' pulmonary function before euthanizing them.

The remaining rats at each time point were assigned to the chronic inhalation groups for assessment of cancer and pre-cancerous endpoints at the end of the exposure period. Thus, 100 animals per sex and per exposure level were assigned to the terminal sacrifice for these evaluations. In effect, as explained in Table 1 of McDonald et al., the total pool of animals evaluated for the chronic study was slightly more than 140, because the investigators had purchased a few extra animals in anticipation of losses during shipping from the breeder. All of these animals were examined histologically.

Most of the animals developed a pododermatitis (ulcerative foot lesions) by 12 months into the study. This condition was treated and changes were made to the cages so that the animals were not resting on the wire-mesh floors.

If the condition became severe, the animal was euthanized. This occurred in 183 out of over 1000 animals in the study, predominantly in the (heavier) male rats.

As specified in the original project plan, the duration of the exposure was scheduled for 24 months, unless survival in the control group decreased to less than 20%, in which case the exposures would be stopped and the terminal sacrifice conducted. Rats were to be evaluated after 23 months of exposure for survival rates and general health status, and a decision was to be made whether to sacrifice all surviving rats at 24 months or to keep them for an additional 6 months or until survival in the control group decreased to less than 20%. Based on these pre-established criteria, the final sacrifice of all surviving male rats was conducted after 28 months of exposure and after 30 months of exposure for surviving female rats.

***Biologic Assays*** Table 2 in the report by McDonald et al. shows all the biologic endpoints examined. The endpoints fell into the following broad categories:

- *Hematology* — counts of multiple cell types, plus coagulation endpoints;
- *Serum chemistry* — including triglyceride and protein components;
- *Lung lavage endpoints* — numbers of cells, level of total protein (µTP, as a marker of tissue injury), multiple cytokines, and markers of oxidative stress;
- *Pulmonary function* — measures of total lung capacity, peak expiratory flow (PEF), quasistatic lung compliance, CO diffusing capacity ($DL_{CO}$) and alveolar volume, forced expiratory flow (FEF), mean mid-expiratory flow (MMEF), and others (measurements performed immediately preceding necropsy at the 3-, 12-, and 24-month exposure time points); and
- *Other clinical observations* — mortality, tissue histopathology, and body and individual organ weights.

***Histopathology*** The evaluation of hematoxylin- and eosin-stained slides made from 4 µm paraffin tissue sections is described in detail in the Methods section of the report by McDonald and colleagues (Part 1 of this volume). The tissue evaluation process and the sequence of slide reading were consistent with the procedures used by contractors to the NTP (Morton et al. 2010).

Sections of target tissues (lung, nasal turbinates, larynx, trachea, kidney, liver, heart, brain, ovaries, and testes) were examined from all animals. Other tissues (such as pancreas, stomach, adrenal glands, and pituitary gland) were examined from all animals only in the control and high-level exposure groups. Non-target tissues were examined in animals from intermediate-level exposure groups only when the tissues exhibited gross abnormalities or when there was evidence of an exposure effect in that tissue in the high-level exposure group.

Slides from rats were read by the two study pathologists, who evaluated multiple indicators of inflammation, cytotoxicity, and parenchymal changes, and scored them on a scale in which *minimal* (1) was considered difficult to observe, *mild* (2) quite easy to find, *moderate* (3) quite extensive, and *marked* (4) involving most of an organ. They then calculated the average of the scores in each category for each animal and generated an average score ± standard error of the mean (SEM) for each exposure group. The diagnoses and evaluations of exposure effects, or lack thereof, were confirmed by two independent peer-review pathologists, Drs. Ernest McConnell (ToxPath, Inc., and a member of the ACES Oversight Committee) and Ronald Herbert (National Institute of Environmental Health Sciences), who were engaged by HEI to review pathology results at all interim time points.

*Pathology Working Group* In May 2013 HEI convened a group of five pathologists to meet in Chantilly, Virginia, to review the pathology findings from rats at the terminal sacrifice. The composition of this independent Pathology Working Group (PWG), the details of the slides reviewed and how they were selected, and the study findings and conclusions are described in the PWG report, found in this volume. One member of the PWG (Dr. Harkema) was also a member of the ACES Review Panel. The PWG did not review slides from the interim sacrifices (at 1, 3, 12, and 24 months) "with the exception of several proliferative lesions of the lung and nasal cavity identified by the study pathologist at the 12- and 24-month interim sacrifices."

In an additional report (the Pathology Working Group Comparison Statement, found in this volume), the PWG compared the lung histology findings in slides from the terminal sacrifice (at 28 and 30 months) in the current study with slides from previous long-term inhalation exposure rat studies — specifically, the NTP 30-month ozone study; a 24-month study conducted at LRRI with TDE (Mauderly et al. 1994), using 2.5–6.5 mg/m$^3$ PM; a 24-month study conducted at LRRI with $NO_2$ (Mauderly et al. 1989) with up to 9.5 ppm $NO_2$; and a 30-month TDE study conducted at the Fraunhofer Institute in Germany (Heinrich et al. 1986), with 4.2 mg/m$^3$ PM. These slides are shown in the PWG Comparison Statement, as well as in Figure 5 of the report by McDonald et al. (Part 1 of this volume).

*Statistical Approaches* The authors used the Poly-3 test for the statistical analysis of neoplastic and non-neoplastic lesions in all the tissues examined (Bailer and Portier 1988). The Poly-3 test adjusts the denominator of the observed overall tumor or lesion incidence to take into account the survival of each individual animal in that group. These "adjusted rates" for each lesion type and each exposure group are given in Tables H.1 and H.2 of Appendix H of the report by McDonald et al. in this volume (available on the Web at *http://pubs.healtheffects.org*). They were calculated as follows: An animal with a lesion or an animal surviving until the end of the study was given full weight (i.e., assigned a weight of $n = 1$). A lesion-free animal dying during the course of the study was assigned a weight corresponding to the fraction of the total duration of time it survived in the study raised to the third power. Thus, for example, an animal without a lesion dying halfway through the study was assigned a weight of $n = (½)^3$, or 0.125. These $n$'s were then summed, and this total replaced the denominator of the observed overall lesion rate. The statistical tests (both trend and pairwise comparisons) were then applied to these Poly-3–adjusted lesion rates.

This survival-adjusted test is also currently used by the NTP in its evaluation of rodent tumor data. For a more detailed description of the method and its application by the NTP, see recent NTP technical reports linked to the following Web site: *http://ntp.niehs.nih.gov/results/pubs/longterm/reports/longterm/index.html*. As described above, for non-target organs, animals in the low- and mid-level exposure groups were examined histopathologically for tumors only if a gross lesion was observed at necropsy in that organ that suggested the presence of a tumor. In such cases, consistent with the NTP's practice, the Poly-3 test was not applied because of the resulting "gross lesion sampling bias" when computing the overall tumor incidence.

For the continuous variables — including the endpoints in blood, BALF, and lung tissue — Analysis of Variance (ANOVA) procedures were used to assess the overall effects of exposure, sex, and/or duration, as well as the interactions between these factors. The significance of a linear trend in response was also assessed. For some variables, variance-stabilizing logarithmic transformation was applied before statistical analysis. Pairwise comparisons were made by the Dunnett test.

Endpoints that had 10 or fewer distinct values (e.g., cellular count data) were analyzed with an ANOVA and trend analysis approach for categorical data based on weighted least squares (Grizzle et al. 1969). Since there is no standard multiple comparison method for categorical data that is analogous to the Dunnett test, pairwise comparisons from the categorical ANOVA were adjusted using the Bonferroni correction.

## THE ACES REVIEW PANEL'S EVALUATION OF THE REPORT BY MCDONALD ET AL.

### GENERAL COMMENTS

The HEI ACES Review Panel, which conducted an independent, detailed review of the report submitted by the investigators, thought that the study addressed an important issue: the health effects of inhalation of DE generated by a heavy-duty engine compliant with 2007 regulations, which significantly reduced particulate emissions. The Panel's review highlighted several strengths of the study. It was carefully designed and executed and is the first, and so far the only, in vivo evaluation in rats of the health effects of a range of exposures of NTDE over a lifetime from the new generation of heavy-duty diesel engines. On a daily basis, these exposures were much longer (16 hours/day) than traditional NTP exposures (typically 6 hours/day) and were created from a unique and strenuous engine cycle that included regeneration of the particle filters in order to best represent actual driving conditions. The investigators provided a comprehensive analysis of the physical and chemical composition of the emissions and exposure atmospheres. Furthermore, over an exposure period lasting more than 30 months, McDonald and colleagues maintained the NTDE exposure levels (high, mid, and low) at close to the target levels.

The evaluation of tumor incidence was a critical outcome of this lifetime study. The independent histopathologic review conducted by the PWG of the findings reported by the investigators confirmed the histologic findings from the study. As described in detail below, the Panel agreed with the investigators that exposure of rats to NTDE for up to 30 months did not induce tumors or preneoplastic changes in the lung, and did not increase tumors that were considered to be related to NTDE in any other tissue.

The standardized toxicity endpoints measured in this study were also appropriate for evaluating the study hypothesis, namely, that the emissions would not cause an increase in tumor formation or substantial toxic health effects in rats, although some biologic effects, might occur. The Panel also agreed with the investigators that exposure to NTDE induced few biologic effects, and those that were detected were mild and occurred mostly in rats exposed to the highest NTDE level evaluated. The Panel considered that the statistical methods described in the report were appropriate for data analysis and were applied correctly by the authors. The Panel noted some minor limitations to the interpretation — particularly, the lack of internal controls for some of the biochemical assays.

## KEY RESULTS AND INTERPRETATION

### Exposure Characterization

The Panel considered the following to be the key findings regarding the characterization of the NTDE:

- Over the course of the study, average $NO_2$ exposure levels within 20% of the target were achieved: 4.4, 0.9, and 0.1 ppm for high-, mid-, and low-level NTDE exposures for the entire study (see Table 3 of McDonald et al.), and 4.2, 0.8, and 0.1 ppm for the 30-month rat exposure period (see Appendix I, Table 3B).
- The most abundant pollutants by mass were $CO_2$, CO, NO, and $NO_2$.
- NTDE particle concentrations were very low over the course of the exposures. At the chamber inlet, they ranged from 2.5 to approximately 8 µg/m$^3$ over the three exposure levels. Inside the chamber, engine-generated PM was ≤ 10.4 µg/m$^3$. Particle number concentrations ranged from 2 to 8 × 10$^5$ particle/cm$^3$ over the three exposure levels. Continuous measurements of particle number indicated that most of the particles were generated only during regeneration of the diesel filter, which occurred once or twice in a 16-hour exposure period (Khalek et al. 2009). These combustion-derived particles were in the ultrafine range — median particle size approximately 20 nm (based on number) and 40 nm (based on mass) — which is consistent with measurements made in the ACES Phase 3A study (Mauderly and McDonald 2012).

  Thus, the ratios of PM mass to $NO_2$ (and $NO_2$ to $NO_x$) in NTDE in this study were substantially different from those found in TDE (see Commentary Table 1): PM mass:$NO_2$ was much lower (approximately 30-fold) and $NO_2$:$NO_x$ was much higher (approximately 3-fold) than in the earlier studies (Mauderly et al. 1994; Heinrich et al. 1995). As the table also indicates, PM mass:$NO_2$ and $NO_2$:$NO_x$ ratios were comparable in the current study to those found in the study of Heinrich and colleagues (1995) in which particles were removed from TDE.

The PM mass:$NO_2$ ratio changed slightly over the course of the current study, which McDonald and colleagues attributed to a decrease in the efficiency of the diesel particle filter's conversion of NO to $NO_2$. However, the Panel considered that the report did not provide sufficient evidence to justify that conclusion and thought the change in ratio could also have resulted from differences in performance between the two engines used in the study. Concentrations of some NTDE components, including VOCs such as benzene, appeared to change over the course of the study (see

**Commentary Table 1.** Concentrations of PM, $NO_2$, and $NO_x$ in the Current Study (Mouse and Rat Exposures) and in Studies of Older Diesel Engines Used in Rat Exposure Studies[a]

| Study / Exposure Level (dilution) | PM Mass[b] (mg/m$^3$) | $NO_2$ (ppm) | $NO_x$ (ppm) | PM/$NO_2$ | $NO_2$/$NO_x$ (%) |
|---|---|---|---|---|---|
| **Current Study**[c] | | | | | |
| High exposure (25:1 dilution) | 0.0273 | 4.4 | 11.0 | 0.006 | 40 |
| **Mauderly et al. 1994**[d] | | | | | |
| High exposure (dilution ratio NA) | 6.33 | 3.8 | 23.5 | 1.7 | 16 |
| **Heinrich et al. 1995**[e] | | | | | |
| High exposure (9:1 dilution) | 6.98 | 3.8 | 33.1 | 1.8 | 11 |
| Filtered exhaust[f] (15:1 dilution) | 0.010 | 2.9 | 23.9 | 0.003 | 12 |

[a] All data collected in inhalation chambers with rats present.

[b] Measured gravimetrically inside the exposure chamber.

[c] 2007 14L heavy-duty diesel engine and ultra-low-sulfur fuel.

[d] 1988 6.2L light-duty diesel engine and high-sulfur fuel.

[e] 1.6L light-duty diesel engine and high-sulfur fuel (age of engine not given).

[f] Particles removed from emissions by filters.

NA = data not available.

data in Appendix I of Part 1 of this volume; available on the Web at *http://pubs.healtheffects.org*). However, the Panel noted that the concentrations measured were derived from engine B at the end of the study (2012), but were derived from engine B′ in the earlier characterizations (2010 and 2011).

- Concentrations of volatile and semivolatile organic compounds (VOCs and SVOCs) were very low. High-molecular-weight alkanes and polar compounds (derivatives of benzoic acid) were the major SVOC, with lower levels of PAHs.
- Sulfur dioxide ($SO_2$) levels were also very low.
- Approximately 50% of the mass of the particles measured in the chamber when the animals were present was carbon at the high exposure level; the proportion of organic carbon in the total carbon varied slightly at different DE exposure levels. Most of the remainder of the mass consisted of nitrate, ammonium, sulfate, and the elements zinc, manganese, copper, and iron.
- Animals in the exposure chambers generated larger particles (3.5–4 µm), which were major contributors to the total particle mass. Additionally, the animals contributed to the VOCs measured and to the composition of the PM through reaction of ammonia with inorganic ions/gases to form inorganic salts.

More detailed descriptions of the exposure atmosphere characterization are provided in Appendix I of the report by McDonald and colleagues. Commentary Table 1 shows a comparison of results from the current study with those of earlier studies.

### Biologic Effects

The investigators tested a wide variety of biologic endpoints; most of those tests, including tumor incidence, did not show any exposure-related effects. A few statistically significant changes were observed at one or more exposure time points and almost exclusively at the highest exposure level. Commentary Table 2 summarizes these effects and the negative findings in tumor cell incidence. The sections below summarize the Panel's conclusions about these findings.

### Histology

***Tumor Incidence*** Inhalation exposure of NTDE for up to 30 months (female) and 28 months (male) rats at the levels used resulted in no lung tumors and did not increase tumors that were considered to be related to NTDE in any other tissue. The Panel was in broad agreement with the investigators and the PWG about the major histologic findings and their interpretation: see the Pathology Working Group's Report in a separate section of this volume, which focused exclusively on the histopathologic findings in the core study, and the Pathology Working Group's Comparison Statement (also in this volume), which compared histopathologic findings in the current study with findings from other relevant long-term rat exposures — specifically to TDE, ozone, and $NO_2$.

NTDE-exposed female — but not male — rats showed a significantly greater number of thyroid gland tumors (follicular cell adenomas and combined follicular cell adenomas and carcinomas) than control animals (see Table H.1 in Appendix H of the report by McDonald and colleagues; available on the Web at *http://pubs.healtheffects.org*). Although the possibility that this finding represented an endocrine disrupter effect was considered, the Panel, in broad agreement with the investigators and the PWG, concluded for several reasons that these thyroid tumors did not represent a response to NTDE exposures. The main reason was because the female controls in this study had an unusually low incidence of thyroid follicular cell tumors (1%), that is, lower than the tumor incidence in control groups of 24-month bioassays in the same strain of rat (Giknis and Clifford 2003; RCC 2003). In addition, the PWG's detailed review of slides from all NTDE-exposed and control groups of female and male rats at the terminal sacrifice (28 and 30 months, respectively) found (a) no exposure-associated dose–response in the incidence of follicular cell tumors among females; (b) no corresponding evidence of an increase in thyroid follicular cell hyperplasia, the relevant pre-neoplastic change; and (c) no evidence of an increase in thyroid tumor incidence in male rats between controls and any group of NTDE-exposed rats.

***Non-Neoplastic Lesions in the Respiratory Tract*** Four types of exposure-associated non-neoplastic lesions, restricted to the lung, were detected in male and female rats at all time points beyond 1 month (see Table 6 and Figure 3 of the report by McDonald and colleagues). Lesions were detected only with exposure to high-level NTDE. Overall, these lesions progressed slightly from 3 to 12 months, without further progression between 12 months and up to the final sacrifice (28 or 30 months). These lesions are summarized in Commentary Table 2 and described below.

*Periacinar epithelial hyperplasia* (an increased number of airway epithelial cells) affected only a portion of the centriacinar regions, lining pre-terminal and terminal bronchioles, alveolar ducts and alveoli close to the terminal bronchioles, and alveolar ducts. The hyperplasia was minimal to mild. In some examples of "mild lesions" (see Figure 3 of McDonald et al. in this volume), epithelial cell proliferation was manifest as small papillary-like projections into the lumen of preterminal and terminal bronchioles, sometimes with a central stalk. The Panel agreed with the investigators and the PWG that this was not a

**Commentary Table 2.** Summary of (1) Histopathologic Findings (Showing Lack of NTDE-Associated Tumor Incidence) and (2) Statistically Significant Biologic Effects by Sex, Exposure Duration, and NTDE Level in McDonald et al.[a]

| Evaluation | Results |
|---|---|
| **Histology** | |
| Tumors | *Evaluated in all animals, at all exposure time points as well as in animals dying during the study.*<br>No tumors in lungs; no tumor increases considered to be related to NTDE in any other tissue. |
| Non-neoplastic lesions | *Evaluated in all animals, at all exposure time points as well as in animals dying during the study.*<br>**In lung,** periacinar epithelial hyperplasia; bronchiolization; accumulation of macrophages; periacinar interstitial fibrosis, mild, in both sexes *at high NTDE.* Slight progression from 3 to 12 months, but no further progression from 12 months on.<br>No lesions associated with NTDE exposure found in any other tissue. |
| **Pulmonary Function** | |
| | FEF (multiple markers): ↓ in females (at *3 and 24 months*) and males (at *24 months*), mostly at *high NTDE*; greater in females than in males. |
| | $DL_{CO}$: ↓ trend *across all exposure groups* in combined males and females at *3, 12, and 24 months.* |
| **Biochemical Markers** | |
| Lung tissue | HO-1: ↑ in both sexes, predominantly at *high NTDE* at *3, 12, and 24 months.* |
| | IL-6: ↑ trend *across all exposure groups* in females (at *24 months*) and combined males and females (at *12 and 24 months*). |
| | KC: ↑ trend *across all exposure groups* in females (at *24 months*) and combined males and females (at *12 months*). |
| BALF | µTP: ↑ *high NTDE* in combined sexes at *3, 12, and 24 months.* |
| | ALP: ↑ trend (males, females, and combined sexes) and ↑ at *high NTDE* (combined sexes) at *24 months.* |
| | Albumin: ↑ trend for females at *12 months.* |
| | Mean corpuscular hemoglobin: ↑ in males (*mid-level NTDE*), ↑ females (trend), and ↑ combined sexes (*mid- and high-level NTDE*; trend) at *24 months.* |
| | Total white blood cells and absolute macrophage count: ↑ trend in females at *24 months.* |
| | TEAC and GSSG: inconsistent responses (↑ at some time points; ↓ at others). |
| Blood | Albumin: ↑ trend in males at *24 months.* |
| | ALP: ↓ *high NTDE* (and trend) at *12 months* in both sexes. |

[a] ↑ = increase; ↓ = decrease; ALP = alkaline phosphatase; $DL_{co}$ = lung diffusing capacity of carbon monoxide; FEF = forced expiratory flow; GSSG = oxidized glutathione; HO-1 = heme oxygenase 1; IL-6 = interleukin 6; KC = keratinocyte-derived chemokine; µTP = micro–total protein; TEAC = Trolox equivalent antioxidant capacity.

pre-neoplastic lesion — that is, it would not lead to the development of tumors — but was a response to the inhalation of NTDE.

Although epithelial cell hyperplasia was detected histologically in the lung, the investigators did not find evidence of exposure-associated epithelial cell proliferation in an assay that used the expression of Ki67 (a nuclear protein) as a measure of dividing cells; that is, there were no differences in any group in the number of cells expressing Ki67. The Panel agreed with the investigators that this assay was unlikely to have detected changes in epithelial cell proliferation because the histologic findings indicated that the hyperplasia was restricted to only a very limited area of the lung, the central acinus, and effects in this area would probably have been diluted out in this assay, which sampled the whole lung. The Panel considered that although the interpretation of focal hyperplasia is likely correct, the authors might have been able to corroborate this conclusion by re-evaluating the labeling indices, specifically in the serial sections in those small focal locations in which epithelial hyperplasia was documented.

*Bronchiolization* (in which normally flat epithelial cells change to a cuboidal shape, similar to cells lining the terminal bronchioles) was found in some animals. The cells in question were generally ciliated and were found extending into alveolar ducts and centriacinar alveoli.

*An accumulation of macrophages* accompanied bronchiolization in some samples, as noted by both the PWG and the Panel. However, as the PWG also noted (see the Pathology Working Group Report earlier in this volume), "a remarkable finding was the general lack of inflammatory cells," which contrasted with findings from TDE-exposed rats.

*Periacinar interstitial fibrosis* (so named by the investigators because the area of fibrosis was restricted to the periacinar region, to distinguish it from the more general "interstitial fibrosis" used in the subchronic exposure findings [ACES 2012]) involved the wall at the terminal bronchiole and proximal alveolar ducts in the centriacinar areas underlying the epithelial changes (see Figure 4 of McDonald et al.). It was found at 3 months and after longer exposures; incidence was high at 12 months (80% in males and 100% in females) and continued to be high throughout the rest of the study. The severity of fibrosis was usually minimal at all the time points at which it was found, including terminal sacrifice.

*Nasal Cavity* Areas of the nasal cavity (nasal turbinates 1–3) showed some effects, usually minimal to mild, at multiple time points in many groups of male and female rats. The PWG reviewed the nasal lesions and concluded that there was no clear difference in either incidence or severity of lesions between control and animals exposed to high-level NTDE. In addition, the lesion distribution in the nasal cavity of NTDE-exposed rats did not fit a site-specific pattern characteristic of inhaled nasal toxicants (Harkema et al. 2006). Thus, the PWG concluded that these lesions were not exposure related.

**Pulmonary Function**

As indicated in Commentary Table 2, the investigators noted exposure-associated decreases in multiple related markers of FEF rates over the lung volume range — $FEF_{75}$ (i.e., FEF at 75% of the forced vital capacity [FVC]), $FEF_{50}$, $FEF_{25}$, and $FEF_{10}$, as well as PEFR and MMEF. Decreases were seen both in females (3 and 24 months) and in males (24 months) and were greater in females than in males. With the exception of a reduction in $FEF_{25}$/FVC in males at 24 months at the mid-level exposure, most effects were seen only at high NTDE. McDonald and colleagues concluded that these findings suggested that the exposures affected airways with smaller diameters more than those with larger diameters.

In some analyses, $DL_{CO}$, a measure of alveolar–capillary gas exchange, showed a small effect of exposure to NTDE — specifically, a small decreasing trend across all exposure groups in combined males and females at all the time points examined (3, 12, and 24 months). McDonald and colleagues concluded that "the small effect of exposure on $DL_{CO}$ at 24 months was in part a small reduction of lung size relative to control. Accordingly, the impact on the efficiency of gas transfer across the alveolar–capillary membrane, if any, must have been very slight." Alternatively, the Panel considered that, while the reductions in $DL_{CO}$ were relatively small, they were not completely accounted for by reductions in lung volume. The Panel considered that the small reductions in $DL_{CO}$ were consistent with the histopathologic findings of mild histologic changes in the gas-exchange regions of the lung, indicating that the histologic changes detected may have had functional effects.

**Biochemical Markers**

The great majority of the biologic tests performed by the investigators showed no effect. The Panel agreed with the investigators that the few changes observed (shown in Commentary Table 2) — including small increases in levels of HO-1, IL-6, KC, μTP, total white blood cells, and macrophages in the lung

— were consistent with mild pulmonary oxidative stress and inflammation and mild tissue injury.

## KEY CONSIDERATIONS IN THE INTERPRETATION OF RESULTS

Although the Panel generally agreed with McDonald and colleagues' interpretations of the data, it noted that some topics, described below, also needed to be considered.

### The Engine Systems

At different times in this study, two engine systems with similar, but not identical, emissions profiles were used (see Mauderly and McDonald 2012; also see Appendix I of McDonald et al., available on the Web at *http://pubs.healtheffects.org*). Although the investigators concluded that the change, mentioned earlier, in the ratio of $NO:NO_2$ over the course of the study was due to a decrease in efficiency of the diesel particle filter, the Panel did not think there was any evidence to conclude this. The Panel noted that engine B produced slightly more $NO_2$ than did engine B′, suggesting that the components of the emissions produced by the two engines may also have varied somewhat at different times during the study. In addition, over the course of the study, the investigators maintained the average $NO_2$ concentrations in the chamber within the range (± 20%) specified for the target $NO_2$ concentrations. However, the Panel noted that the $NO_2$ concentration varied widely within the 16-hour cycle (see Appendix I). Nonetheless, given the overall lack of toxicity of the emissions, the Panel did not consider that these variations in $NO_2$ concentration during the study had an overall impact on the results.

### Lack of a Positive Control Engine

The study design did not include a side-by-side comparison with an older pre-2007 model-year engine. In their design of the program, the ACES Oversight Committee had well understood the desirability of such a comparison, but it was clear that such a "positive control" could not be included as it would have substantially increased the complexity and cost of the study and would have posed enormous logistical challenges. The Review Panel concurred with the Oversight Committee that such a side-by-side comparison could have enhanced the study.

### Emissions Temperature

Because a heavy-duty engine can generate more power and heat than light- and medium-duty engines that have been used in previous studies, the potential to generate high temperature emissions in the exposure chambers was recognized during the design phase of the study. Throughout the study, the investigators successfully maintained the temperature in the exposure chambers within the specified range of 18 to 26°C. Because the dilution of the NTDE from the engine was kept relatively low in order to reach the desired exposure concentrations, however, the hot exhaust was not diluted with cool air to the same extent as in previous studies. Thus, animals in the high-level NTDE exposure group in the current study were more often exposed to higher temperatures than those in other groups. Whether and how these differences in temperature among the exposure groups might have affected the testing of the primary hypothesis of this study is not clear.

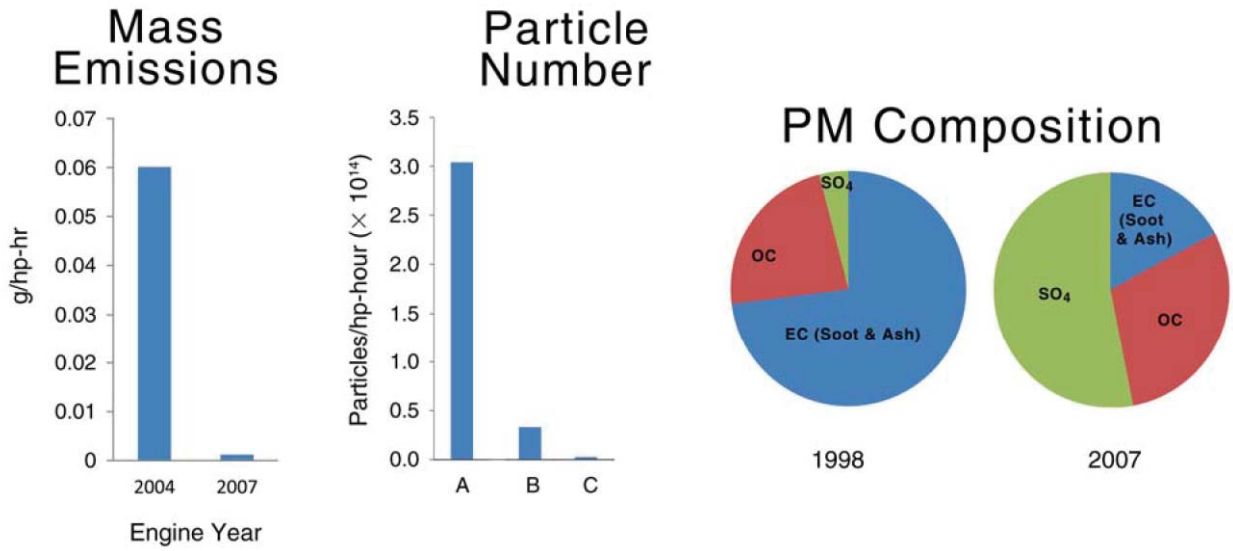
### Biochemical Assay Controls

Most of the biochemical assays employed in this study did not show an effect of exposure. As with any negative study, however, there is always the question of whether the results are truly negative or whether the lack of effects might be attributed to design and methodologic issues, including the sensitivity of the assays employed. The Panel considered that adding positive "technical" controls — for example, by using "spiked" samples, containing agents known to affect a particular endpoint — would have provided a standard by which to judge the potential exposure-related changes and might have alleviated concerns about the sensitivity of the particular assay to measure changes. In particular, the lack of assay sensitivity may have been an issue in the measurements of GSH levels, in view of the fact that GSH levels were much lower than those reported in other animal studies (e.g., Weldy et al. 2011; da Cunha et al. 2011).

### Toxicity of NTDE vs. TDE

The Commentary Figure shows how much lower the PM mass and particle numbers in emissions from 2007-compliant engines fitted with particle-reduction technologies are than in emissions from pre-2007 engines. As shown, the ACES Phase I study (Khalek et al. 2009) found that emissions from 2007-compliant engines were reduced more than 90% compared with those from a 2004 engine. Commentary Table 3 shows that emissions of hydrocarbons and other air toxics by 2007-compliant engines were also lower by more than 80% than those of older engines. Furthermore, the Commentary Figure indicates how the composition of particles in NTDE and TDE differs — with sulfate, rather than elemental carbon, being the major component of NTDE mass.

Regarding the question of whether the *toxicity per unit mass* of the PM emitted from the 2007-compliant engines was changed compared with older engines, the Panel pointed out that ACES was not designed to investigate this question. Consequently, the most straightforward inference would be that the steep drop in particle mass and




**Commentary Figure. Comparison of PM in traditional-technology diesel exhaust (pre-2007) and new-technology diesel exhaust (2007-compliant) by mass, particle number, and composition.** The particle number graph shows the results as measured using the Federal Test Procedure from **(A)** a 2004 engine with no diesel particulate filter (DPF); **(B)** a 2007-compliant engine with a DPF and with active regeneration; **(C)** a 2007-compliant engine with a DPF and without active regeneration. (EC = elemental carbon; OC = organic carbon; $SO_4$ = sulfate.) (Data from Clark et al. 2007; Khalek and Merritt 2009; personal communication, Imad Khalek, 22 March 2012.)

levels of organic components in NTDE significantly *decreased* the overall toxicity of NTDE compared with the toxicity of TDE.

**Commentary Table 3.** Reductions in Unregulated Components of Emissions from 2007-Compliant Diesel Engines[a,b]

| Compounds | % Reduction Relative to 2004-Technology Engine |
|---|---|
| Single-ring aromatics | 82 |
| PAHs | 79 |
| Nitro-PAHs | 81 |
| Alkanes | 85 |
| Polar | 81 |
| Hopanes/steranes | 99 |
| Carbonyls | 98 |
| Inorganic ions | 38 |
| Metals and elements | 98 |
| Organic carbon | 96 |
| Elemental carbon | 99 |
| Dioxins/furans[c] | 99 |

[a] Source: Coordinating Research Council (Khalek et al. 2009).

[b] 16-hour cycle.

[c] Relative to 1998-technology engine.

The beneficial effects of filtering out particles from TDE have also been reported in controlled short-term human exposures: In healthy male volunteers exposed via inhalation for 1 hour to TDE (derived from a 1991 Volvo engine), Lucking et al (2011) found impairment of cardiovascular endpoints, namely, reduced vasodilatation and increased ex vivo thrombus formation. Emissions from the same engine equipped with a diesel particulate filter showed reduced particle mass and number, and exposure of the volunteers for the same length of time was associated with increased vasodilatation and reduced thrombus formation (Lucking et al. 2011).

### Comparison of Histopathologic Effects of NTDE with Other Pollutants

The Panel agreed with the PWG's conclusion in the Comparison Statement Report that "the most dramatic differences were between the new 2007-technology diesel exhaust study, in which few, and mostly minimal, lesions were found, and the old-technology diesel exhaust studies in which the lungs were loaded with pigment, inflammatory changes, hyperplasia, and cancer." The contrast in findings between TDE and NTDE studies is illustrated in the slides shown in the PWG Comparison Statement (earlier in this volume) and in Figure 5 of McDonald and colleagues' report (Part 1 of the current volume). None of the histologic changes in the lung associated with chronic

exposure to high levels of TDE were found in the current study of exposure to NTDE, which was conducted at much lower PM levels.

The small histologic changes in the lung that were found in the current study, particularly the changes in the preterminal bronchiole, were similar to those found in male F344 rats exposed to 9.5 ppm $NO_2$ for 24 months in an earlier study by Mauderly and colleagues (1989) (see PWG Comparison Statement and Figure 5E of the study by McDonald and colleagues, both in this volume). In addition, as noted by the investigators and the PWG, the minimal to mild periacinar lesions in the lungs of rats exposed to high-level NTDE in the current study were similar to those previously reported by Kubota et al. (1987) in Wistar Han rats exposed continuously for 24 hours/day to 4 ppm $NO_2$ for 27 months. The Panel also agreed with the investigators that NTDE from engine systems compliant with regulations introduced in 2010, which mandate a decrease in emissions of $NO_2$, is likely to result in even fewer lesions in the respiratory tract.

Histopathologic changes in an earlier NTP study (1994) in the rat lung after long-term exposure to ozone (344/N rats exposed for 30 months to 1 ppm ozone), including changes in bronchiolar epithelial cells in the centriacinar area and an increase in alveolar macrophages, were also similar to those found in the current study (see the PWG Comparison Statement and Figure 5F of the study by McDonald and colleagues, both in this volume). Although ozone was not present in NTDE, these findings lend support to the notion that exposure to an oxidant gas results in the changes in the lung comparable to those seen in the current study.

Both the investigators and the Panel noted that although engine-generated PM mass was greatly reduced (to $\leq 11\ \mu g/m^3$ inside the chamber) in this study, substantial numbers of particles (between 2 and $8 \times 10^5/cm^3$) in the ultrafine range (20 to 40 nm in diameter) were detected. These levels are in the range of (or somewhat higher than) those found on or near major roads in urban areas and in environments in which diesel-powered traffic dominates (e.g., McCreanor et al. 2007; Morawska et al. 2008; Zhang et al. 2009). It is possible that components of NTDE other than $NO_2$ may have contributed to the effects reported, but the low levels of other components suggest that they would not be primarily responsible.

### Choice of Rat Strain

The ACES Oversight Committee, after extensive discussions, selected the Wistar Han rat for several reasons, including the strain's longevity, its previous use in chronic inhalation studies of DE (particularly in Europe; for example, in the studies of Heinrich and colleagues [1986, 1995]), the existence of a historical database of information on cancer incidence in this strain, the relatively low rate of spontaneous background tumors compared with some other species, and an acceptable maximum bodyweight that would be reached by males during the study (affecting housing in the inhalation chambers). (See also the Preface to this report and Additional Materials 1 of McDonald et al., available on the Web at *http://pubs.healtheffects.org*.)

One possible concern discussed during the study design phase was that a proportion of Wistar Han rats have a mutation in the aryl hydrocarbon receptor (AhR) gene that may alter their responses to dioxin and PAHs, which also bind to the AhR. Because PAHs are present in DE and some have known carcinogenic properties, there was a question as to whether the AhR mutation might make the Wistar Han strain more resistant than strains with a wild-type AhR gene to the potential toxic and carcinogenic effects of DE. However, the AhR mutation in the Wistar Han rat does not render it unresponsive to dioxin — the strain is highly resistant to dioxin's lethality, but not to other dioxin-mediated effects (Okey et al. 2005). Responses to PAHs in this strain are thus likely to be similar to the responses to dioxin. More important, there is no evidence that the AhR mutation affects the development of cancer in this strain; tumors develop in Wistar Han rats with long-term exposure (20 or more months) to high concentrations of TDE, as well as to other particles (Heinrich et al. 1986, 1995; Karagianes et al. 1981).

## SUMMARY

- This study is the first to address the issue of whether lifetime inhalation exposure of male and female rats to a range of concentrations of new-technology diesel exhaust (NTDE) emissions, compliant with 2007 regulations, has the same biologic effects as exposure to traditional-technology diesel exhaust (TDE).
- Lifetime exposure (28 months for males, 30 months for females) of rats to NTDE, which has greatly reduced particle emissions compared with TDE, did not induce tumors or pre-cancerous changes in the lung and did not increase tumors considered to be related to NTDE in any other tissue.
- Some mild histologic changes were observed in the lung, consistent with long-term exposure to $NO_2$, a major component of NTDE from 2007-compliant engines.
- Of more than 100 different biologic endpoints evaluated in lung and blood, only a few showed NTDE-associated changes, consistent with mild pulmonary inflammation and oxidative stress. There were also small decreases in some measures of respiratory function,
- The effects of chronic exposure to NTDE differed markedly from the effects of chronic exposure to TDE, which include tumor incidence and the presence of multiple pre-neoplastic lesions in the lungs.

A more detailed Summary and Conclusions section covering all the ACES 3B studies is included at the end of this Commentary.

## COMMENTARY ON ANCILLARY STUDIES: EFFECTS ON GENOTOXICITY (BEMIS ET AL. AND HALLBERG ET AL.) AND VASCULAR MARKERS (CONKLIN AND KONG)

### INTRODUCTION

As noted above, ACES Phase 3B, the chronic inhalation study funded under RFP 06-1, was designed to be similar to the standard NTP bioassay for assessment of carcinogenicity of chemical compounds (NTP 2011). However, there was interest in measuring additional health outcomes not covered in the NTP bioassay, such as genotoxicity and vascular markers of inflammation and damage. Consequently, as described in the Preface, HEI funded several additional studies to complement the core study of McDonald and colleagues.

The three completed ancillary studies are included in the current Research Report. The principal investigators, study proposal titles, and study goals were as follows:

- Dr. Jeffrey C. Bemis, Litron Laboratories, Rochester, New York: "Genotoxicity of inhaled diesel exhaust: examination of rodent blood for micronucleus formation" (to evaluate the frequency of reticulocytes containing micronuclei in the blood of NTDE-exposed animals);
- Dr. Lance M. Hallberg, University of Texas Medical Branch, Galveston, Texas: "Assessment of the genotoxicity of diesel exhaust/diesel exhaust particulates from improved diesel engines" (to evaluate DNA damage and oxidative stress in tissues and blood from NTDE-exposed animals); and
- Dr. Daniel J. Conklin, University of Louisville, Louisville, Kentucky: "Effects of diesel engine emissions on vascular inflammation and thrombosis" (to measure effects on multiple vascular markers).

### THE ACES GENOTOXIC STUDIES

The ACES genotoxic studies made use of samples from rats exposed by inhalation to NTDE in the core study at LRRI (McDonald et al. in this volume).

#### Scientific Background

As described in the Scientific Background section above on the report by McDonald and colleagues, a few studies (Bond et al. 1990; Iwai et al. 2000; Randerath et al. 1995) have evaluated whether long-term exposure of rodents to TDE affects genotoxic endpoints, specifically, causing damage to DNA, such as DNA adduct formation, and oxidative damage in different tissues. Bond and colleagues (1990) and Randerath and colleagues (1995) did not find any changes in adduct formation. Iwai and colleagues (2000) reported increased levels of DNA adducts and 8-OHdG in the lung tissue of F344 female rats exposed for 12 months to 3.5 mg/m$^3$ TDE. Iwai and colleagues reported an association between the development of tumors in these rats at the end of the study (30 months) to the earlier effects of oxidative damage effects from TDE. Reed and colleagues (2004) found that exposure of mice to TDE (up to 1 mg/m$^3$ for 7 days per week for 6 months) had no effect on another genotoxic endpoint, the number of micronucleated reticulocytes (MN-RETs), or the incidence of lung tumors (adenomas) 6 months after the end of the exposure.

The current study is the first to evaluate the potential effects of exposure of rats to NTDE on these well-accepted genotoxic endpoints.

#### Exposure to NTDE

The generation of NTDE and the exposure of rats to high, mid, and low levels of NTDE are described in the report by McDonald and colleagues and summarized in the preceding sections of this Commentary.

After euthanizing sets of rats at 1, 3, 12, and 24 months, LRRI investigators harvested blood and tissues and sent aliquots to Drs. Bemis, Hallberg, and Conklin. Rat blood and tissues were taken from the same animals assessed in the study by McDonald and colleagues. Note that samples for the ancillary studies were collected only at these four exposure time points; no samples were collected at the time of terminal sacrifice (28–30 months) in the core study.

### FEATURES UNIQUE TO THE STUDY BY BEMIS ET AL.

#### Aims

The goal of the study by Bemis and colleagues was to evaluate in the blood of NTDE-exposed animals the number of immature red blood cells (reticulocytes, or RETs) that contained micronuclei (MN), an indicator of genotoxic changes. Conditions that cause double strand breaks or disrupt the proper segregation of chromosomes during cell division result in an increase in MN frequency.

#### Samples

Peripheral blood (100 µL) from between 4 and 6 rats of each sex per exposure group euthanized after each exposure

time point was collected at LRRI in a special anticoagulant and then fixed according to established procedures. Samples were shipped frozen to Bemis and his team.

### Methods

***Pilot Study*** Before the main study started, Bemis and colleagues conducted a pilot study to determine whether MN could be detected in older rats after exposure to a known genotoxic agent, cyclophosphamide (see Additional Materials 2 of the report by Bemis et al., Part 2 of this volume; available on the Web at *http://pubs.healtheffects.org*). After first establishing a baseline level of MN-RETs for each animal by collecting blood from the tail, the investigators treated 3 males and 2 female rats aged between 10 and 21 months with cyclophosphamide (15 mg/kg body weight administered at 1 mL/kg) by gavage, and two rats of each sex with vehicle only. Animals were killed 48 hours later, and cardiac blood collected.

***MN Assay*** In the current study, the investigators used flow cytometry to differentially identify and count three types of red blood cells in each blood sample: RET with or without MN (RET and MN-RET), and mature normochromatic erythrocytes (NCEs). (The investigators did not collect MN-NCE data in this study because MN-NCEs in rat blood are not reliable indicators of chromosomal damage — the action of the rat spleen removes these cells from the circulation.) Figure 3 of the report by Bemis and colleagues (Part 2 of the current volume) shows that by using fluorescent antibody specific for CD71 (expressed on RET) and propidium iodide (with ribonuclease) as a fluorescent DNA probe, each type of red blood cell could be grouped into and assessed quantitatively in one of the quadrants of the flow-cytometric readout.

***Statistical Approaches*** The means and SEM were calculated for each group of rats, combining males and females (so that there were up to 10 animals per treatment condition). Once these initial calculations were made, the %MN-RET values were converted to a proportion, and an arcsin–square root transformation was performed to stabilize group variance and normalize the data. However, the arcsin transformation did not achieve a suitably normal distribution for the %RET data, so the values for %RET were transformed by taking the natural log — if necessary applying a consistent correction factor to shift the data into positivity — and then taking the natural log again. This double-logarithmic transformation afforded the best approximation of a normal distribution. All data were analyzed using a three-way ANOVA that included the factors of sex, exposure level, and exposure duration. Significance was set at $P \leq 0.05$.

### Key Results

- Exposure of rats for up to 24 months to NTDE did *not* increase the frequency of MN-RET in peripheral blood.
- In the pilot study, treatment with cyclophosphamide increased the frequency of MN detected in peripheral blood RETs from elderly rats — 1% to 4%, compared with < 0.2% in the blood of vehicle controls.

## THE ACES REVIEW PANEL'S EVALUATION OF THE STUDY BY BEMIS ET AL.: RESULTS AND INTERPRETATION

The panel considered that Bemis and colleagues had assessed a well-accepted endpoint — the presence of MN in circulating reticulocytes — to determine whether exposure to NTDE had genotoxic effects. The data were analyzed with appropriate statistical approaches, and the conclusions drawn were largely appropriate — in particular, that there were no exposure-related changes in the numbers of MN-RETs measured in the blood of rats exposed for up to 24 months to NTDE. Data from a pilot study indicated that an increase in MN-RETs could be detected after treating rats with cyclophosphamide, establishing that changes in the endpoint in ACES samples could have been detected by the assay used.

One limitation to the study was that the MN endpoint is only a short-term indicator of genotoxicity; that is, it assesses damage that has occurred only over approximately the last 3 days of exposure — the length of time taken for a red blood cell precursor in bone marrow to differentiate into an immature $CD71^+$ erythrocyte (RET), and then differentiate further into a mature $CD71^-$ erythrocyte (NCE). Thus, the number of MN-RETs does not measure cumulative exposure over the entire 24-month period, or a substantial fraction of it, unless the animals' damage responses, such as DNA repair capacity or detoxification systems, have been compromised by the exposure — for which there is no evidence in the current study. Thus, the value of using the MN assay as a marker of cumulative genotoxicity in this long-term exposure is not clear.

## FEATURES UNIQUE TO THE STUDY BY HALLBERG ET AL.

### Aims

The goal of the ancillary study by Hallberg and colleagues was to assess oxidative damage to DNA in the lung and blood — measured as DNA strand breaks and 8-OHdG

adducts, respectively — and damage to lipids in brain tissue (specifically, the hippocampus) — measured as TBARS.

### Samples

Investigators at LRRI took samples (50 µL of plasma, the right accessory lung lobe, and half the brain with the olfactory bulb) from male and female rats euthanized at each of the exposure time points and shipped them frozen to Hallberg and colleagues. The goal was to evaluate samples from 5 male and 5 female rats at each time point, but as the report (Part 3 of the current volume) indicates, some groups in the 12- and 24-month exposures had between 3 and 5 animals.

### Methods

***Comet Assay*** This assay detects damage to DNA by immobilizing cells on a slide coated with agarose gel and then lysing the cells, followed by electrophoresis. Under the influence of the electric current, intact double-stranded DNA remains in the nucleus, whereas damaged DNA moves out of the cell and can be detected as a tail. DNA damage is quantified by measuring the displacement between DNA in the nucleus ("comet head") and the resulting "comet tail." The measurements made were *%DNA in tail*; *tail length* (the distance of DNA migration in the tail); *tail moment* (the product of the tail length and the fraction of total DNA in the tail); and *olive moment* (the product of tail %DNA and tail moment length — the distance from the center of the head to the center of the tail).

The investigators used an alkali modification (treatment at pH > 13) of the comet assay on lung tissue samples. This alkali modification detects single and double DNA strand breaks, as well as additional DNA structures, such as abasic sites (which are missing a nucleotide) and sites at which excision repair is occurring.

***Positive Technical Controls*** The investigators showed that they could detect genetic damage in the comet assay through an earlier experiment in which exposure of control cells to the DNA-damaging agent bleomycin resulted in exposure-dependent increases in tail length and tail moment (see Appendix C to the report by Hallberg and colleagues, available on the Web at *http://pubs.healtheffects.org*).

***8-OHdG Adducts*** 8-OHdG is produced as a consequence of oxidative damage to DNA; specifically, it is secreted from cells during repair of damaged DNA. Hallberg and colleagues measured 8-OHdG in serum using an enzyme-linked immunosorbent assay (ELISA) with sensitivity in the range of 100 pg/mL to 2 ng/mL. Results were normalized across blood samples for protein content and expressed as pg/mL/mg protein.

***TBARS*** Lipid peroxidation is a manifestation of oxidative damage to cells resulting from oxidative stress. Lipid peroxides are unstable and decompose to form a mixture of more complex and reactive compounds, including hydroperoxides and aldehydes. One aldehyde that can be formed is malondialdehyde (MDA), which in vitro reacts with thiobarbituric acid to form a by-product, TBARS, which can be measured colorimetrically or fluorometrically. In the current study, the investigators measured TBARS in hippocampal samples as MDA normalized for protein content of the tissue (µM MDA/mg).

### *Statistical Approaches*

*Comet Data* Differences among exposure groups, differences between sexes, and the interaction between these two factors at specific time points were assessed using ANOVA procedures. Post-hoc comparisons, made only when the overall ANOVA was significant, used a Bonferroni correction, although the specific test used for the post-hoc comparisons was not identified. Tests were carried out at the $P < 0.05$ level.

*OHdG and TBARS Data* Differences among exposure groups, differences between sexes, and the interaction between these two factors at specific time points were assessed using ANOVA procedures, if the data were normally distributed. If the data did not meet normality or variance criteria, the Student–Newman–Keuls nonparametric method was used to examine the exposure effects, controlling for sex and stratifying by duration. The statistical method used for post-hoc comparisons was not identified, no mention was made of the Bonferroni correction, which was used in the comet data analysis, and no mention was made of the level of significance used for the statistical tests.

*Power Analysis* Before the start of the study, the investigators calculated the number of animals they would need to have in each group to detect statistically significant differences in olive tail moment data in the comet assay at different exposure levels. The power calculations were based on mouse data from a previous study (Hallberg et al. 2012) and assumed a specific set of underlying parameter values (namely, controls, 1.0; low level, 1.75; mid level, 2.5; high level, 3.25; effect size, 0.99; level of significance: $P < 0.05$; power > 0.92; and underlying SD, 0.85 [see Table A.1 in Appendix A of the Hallberg report in this volume; available on the Web at *http://pubs.healtheffects.org*]). The justification

for these parameter choices and the relevance of power calculations based on previous mouse data to the current rat study are unclear from the investigators' report.

Under these conditions, the authors estimated that four animals per group would be sufficient to detect differences between exposure levels (see Table A.1 in Appendix A), but they increased the number to five animals per group of each sex to look for sex differences. Later in the study, the investigators performed similar power calculations for other comet data — tail length, %DNA in tail, and tail moment — based on data from rats exposed for 12 months to various concentrations of NTDE. These results are also presented in Appendix A.

### Key Findings

Exposure of rats for up to 24 months to NTDE resulted in the following:

- No DNA damage in lung cells, as measured by %DNA in tail, tail length, tail moment, or olive moment in the alkali modification of the comet assay was observed. (A few small and scattered effects were noted after 1- and 3-month exposures, but no effects were seen at 12 and 24 months.)
- No oxidative damage (as measured by 8-OHdG levels in serum) or lipid peroxidation in the hippocampus (as measured by TBARS) was observed. (A few small and scattered effects were noted in 8-OHdG levels in some NTDE-exposed groups at 12 months, but these were not exposure-dependent and were not seen at other exposure times.)

## THE ACES REVIEW PANEL'S EVALUATION OF THE STUDY BY HALLBERG ET AL.: RESULTS AND INTERPRETATION

The panel considered that Hallberg and colleagues assessed well-accepted endpoints to determine whether exposure to NTDE had genotoxic effects. The panel agreed with the investigators' overall conclusions that there were no exposure-related changes in DNA damage in lung cells, as measured by the alkali modification of the comet assay, in serum (by 8-OHdG levels), or by lipid peroxidation in the hippocampus (TBARS, as measured by MDA equivalents).

Some limitations to the interpretation of the findings were identified. First, the TBARS assay is not a particularly sensitive or specific assay for oxidative stress, and the assay used by Hallberg and colleagues measured only MDA, just one lipid peroxidation product. Thus, the TBARS assay does not provide information on a larger spectrum of possible changes in lipid peroxidation.

In addition, although overall the statistical approaches using ANOVA for the comet, 8-OHdG, and TBARS data were appropriate, there were inconsistencies and lack of clarity in the description of the statistical approaches. For example, the Panel could not evaluate the statistical methods used for post-hoc pairwise comparisons in all the assays, because they were not identified in the report. Moreover, these methods were inconsistently applied across the assays — the Bonferroni correction was used only for the comet data, but not for the 8-OHdG and TBARS data, even though the same general ANOVA approach was used for all of these variables. Furthermore, the authors did not explain why it was necessary for the overall ANOVA to be significant before making post-hoc comparisons for the comet data, but not for the 8-OHdG or TBARS data.

In addition, certain details of the power calculations were unclear. In Appendix A of the report by Hallberg and colleagues in this volume (available on the Web at *http://pubs.healtheffects.org*), the authors present power calculations for detecting various "effect sizes." An effect size is normally defined to be a difference in mean response relative to controls, possibly standardized by dividing by the standard deviation (e.g., see *http://meera.snre.umich.edu/plan-an-evaluation/related-topics/power-analysis-statistical-significance-effect-size#effect*), but the investigators defined effect size in a nonstandard way, as the ratio of two standard deviations. The Panel was not clear why the investigators' power calculations apparently focused on detecting changes in standard deviations rather than on detecting changes in mean responses.

From the power calculations they conducted during the study on comet assay endpoints, Hallberg and colleagues concluded that many more animals would have been needed to detect a difference in response among exposure groups than were used in the study. However, the Panel concluded that these power calculations may be misleading by suggesting that the study was underpowered — a large required sample size does not necessarily indicate that the study is underpowered. Rather, it may indicate that the hypothetical effect is so weak that it would be nearly impossible to detect in a study of feasible sample size. If such a weak effect were detected, its biologic significance would be questionable. For this reason, the Panel concluded that the authors' power calculations did not diminish the interpretation that the comet assay findings were negative.

## GENOTOXICITY STUDIES: JOINT ASSESSMENT BY THE ACES REVIEW PANEL

### Items Common to the ACES Ancillary Genotoxicity Studies

The Bemis et al. and Hallberg et al. studies are the first to show that exposure of rats to NTDE for up to 24 months does not affect well-accepted endpoints of genotoxicity. In addition, the Panel made the following observations about both studies.

#### *Evaluation of Genotoxic Effects Outside the Airways*

The initial effects of inhaled DE are expected to be in the airways, but the studies by Bemis et al. and Hallberg et al. both evaluated genotoxic effects in cells outside the airways: Bemis and colleagues assessed the incidence of MN in red blood cells, and Hallberg and colleagues assessed changes in blood and brain cells. How relevant to the effects of DE exposure are changes in non-airway cells? Several studies have indicated that inhaled DE or other particles initially target the airways but that effects extend beyond the lungs and can be detected in blood and in other tissues and organs (Crüt et al. 2008; Lucking et al. 2011; Riedl et al. 2012 [see Commentary by HEI Review Panel in that Research Report]). In addition, DNA damage has been reported in the brains of humans and dogs in areas with high levels of air pollution (Calderón-Garcidueñas et al. 2003, 2004). How the effects of inhaled particles are mediated outside the lungs is not resolved and was not the object of these studies; effects may result from the direct transfer of smaller-sized particles out of the lung or via indirect mechanisms involving inflammatory or neurologic signaling in the lung, which releases mediators that act outside the lung (Brook et al. 2010).

The Panel recognized that investigators in the ACES genotoxic ancillary studies anticipated finding some systemic effects attributable to inhaled particles, and thus agreed that evaluating the potential genotoxic effects of NTDE in blood cells was justifiable. Bemis and colleagues studied MN in peripheral blood red blood cells because they are a readily accessible target, reporting on conditions leading to the development of MN in red blood cell precursors, which develop in the bone marrow and move into the circulation. Similarly, the Panel thought the assessment of Hallberg and colleagues of one of their genotoxic endpoints — 8-OHdG — in blood was reasonable. However, although the Panel understood that Hallberg and colleagues chose to study lipid peroxidation in the brain because exposure to particles might affect the function of this organ, they noted that evaluating lipid peroxidation in blood might also have been useful, providing an overlap with measurements of 8-OHdG.

***Lack of a Positive Control Engine*** The reasons for not including a "positive control," side-by-side comparison with an older pre-2007 model-year engine have been discussed earlier in this Commentary in the section on the report by McDonald and colleagues.

***Use of Short-Term Assays*** The Panel recognized that the endpoints assessed in the Bemis et al. and Hallberg et al. studies are accepted markers of genotoxic effects and thought to be on the critical paths to the development of tumors. Nonetheless, they considered that the utility of assays of short-term effects was uncertain in assessing the effects of long-term exposure to DE. Assays to assess the accumulation of mutations — for example, in the *hprt* gene in peripheral blood cells — might have provided valuable information on the longer-lasting effects of DE exposures.

### Summary and Conclusions

- The investigators assessed generally well accepted markers of genotoxicity — MN formation in RETs (in the report by Bemis et al.) and DNA damage and lipid peroxidation (in the report by Hallberg et al.) — and the studies were valuable extensions to the ACES core study.
- No genotoxic effects associated with exposure for up to 24 months to any level of NTDE could be detected.
- The investigators' choice of genotoxic endpoints that were relatively short term was noted by the Panel as being a limitation in study design that reduced the utility of the negative findings.

## FEATURES UNIQUE TO THE STUDY BY CONKLIN AND KONG

### Aims

The goal of the study by Conklin and Kong was to evaluate changes in systemic markers of inflammation and thrombosis, including both blood lipids and proteins, resulting from chronic exposure to NTDE for up to 24 months. The authors' aim was to determine whether long-term exposure to NTDE would lead to alterations in plasma markers associated with increased risk of cardiovascular disease, general toxicity, or cardiovascular organ remodeling. As a positive control for the assay of many of these markers, the investigators compared levels found in the current study with levels of the same markers in rats that they had previously exposed to acrolein. The investigators

also assessed the effects of NTDE on cardiac fibrosis and aortic remodeling.

The investigators presented the results of subchronic exposure (1 and 3 months) in a previous report (Conklin and Kong 2012), so the current report and this Commentary focus on the results from later exposure time points evaluated — 12 and 24 months.

## Scientific Background

***Cardiovascular Effects of Exposure to DE*** As discussed above in the Scientific Background section of the Commentary on the McDonald and colleagues report, several studies have shown that long-term inhalation exposure to TDE induced the development of lung cancer in rodents, particularly rats. In addition, short-term TDE inhalation studies in humans (e.g., Behndig et al. 2006, 2011; Mills et al. 2005; Stenfors et al. 2004) and in rats and mice (particularly in models of cardiovascular conditions) have shown effects on systemic inflammation, vascular dysfunction, and thrombosis pathways (e.g., Campen et al. 2003; Hansen et al. 2007; Mauderly et al. 1994; Reed et al. 2004, 2006). Furthermore, there is also extensive evidence based on epidemiologic studies that links exposure to ambient PM — of which diesel PM is a component — with cardiovascular mortality and morbidity (reviewed in Krewski et al. 2009). Thus, although the major focus of ACES Phase 3B was to evaluate effects of NTDE on carcinogenicity, the study also provided an excellent opportunity to examine possible changes in cardiovascular-associated markers and endpoints.

***Acrolein Effects on the Liver and APR*** Prior to the current study, Conklin and colleagues examined the short-term cardiovascular effects in rodents of exposure to the toxic aldehyde acrolein — a combustion product present in cigarette smoke and engine exhaust — with a particular focus on changes in plasma lipid and lipoprotein levels and effects in liver after exposure via the gastrointestinal tract (Conklin et al. 2010, 2011). The focus on liver was because it is the site of the production of many acute phase response (APR) reactants, including C-reactive protein, fibrinogen, and serum amyloid A. The APR is a key component of the inflammatory response to an external agent (such as particles or an infectious pathogen). Cytokines produced early in the airway response to such external agents include IL-1, IL-6, and IL-8, and tumor necrosis factor-α, which enter the circulation and within hours stimulate the liver to synthesize APR reactants. Levels of some APR reactants, such as albumin, are decreased. The APR is also characterized by alterations in lipid metabolism and in the lipoprotein profile. In addition to their role in the acute response to external agents, levels of APR reactants can also be increased in several chronic conditions, such as obesity, cardiovascular disease, and inflammatory arthritis.

Conklin and colleagues found that adult C57BL/6 and apolipoprotein E knockout mice fed 0.1 to 5 mg/kg acrolein by gavage had increased plasma cholesterol and triglyceride levels, with maximum levels 24 hours after exposure (Conklin et al. 2010). Acrolein-fed C57BL/6 mice also had modified plasma and hepatic proteins and increased plasma triglycerides within 15 minutes of exposure (Conklin et al. 2011). Sprague Dawley rats fed 2 mg/kg acrolein showed an increase in plasma cholesterol lasting up to 5 days and elevated levels of phospholipids and triglycerides (Conklin et al. 2010). As described below, the data obtained after acrolein exposure provided useful comparisons with the data obtained after NTDE exposure in the current study.

## Methods

### *Sample Collection*

*NTDE-Exposed Animals* Peripheral blood (500 µL) from 10 male and 10 female rats at each exposure level and killed after the 1-, 3-, 12-, and 24-month exposures was collected at LRRI. Hearts and aortas (7 animals/group) were also dissected out at these time points by LRRI investigators. Samples were shipped frozen to Dr. Conklin.

*Acrolein-Exposed Animals* Plasma samples from rats exposed via gavage to acrolein (or water as the control) — referred to as "internal validation" or "positive controls" — were analyzed at the same time as the samples from the current study. These positive control samples, stored frozen, were from Conklin and colleagues' previous studies (2010, 2011), in which many of the same endpoints were measured.

### *Endpoints Measured*

*Plasma* The investigators measured plasma levels of lipids (total cholesterol, HDL cholesterol, LDL cholesterol, and triglycerides) as well as total protein and albumin. Unless otherwise indicated in the report, all measurements were made using samples from 10 rats per sex per exposure group. A commercial vendor measured plasma levels of several cytokines, chemokines, and other soluble factors in plasma: granulocyte-macrophage colony-stimulating factor (GM-CSF), monocyte chemotactic protein 1 (MCP-1), interleukin (IL)-1β, IL-6, IL-10, interferon-γ, keratinocyte-derived chemoattractant (KC), tumor necrosis factor-α (TNF-α), vascular endothelial growth factor (VEGF),

soluble intercellular adhesion molecule 1 (sICAM-1), fibrinogen, leptin, and C-reactive protein.

*Histopathology* The investigators assessed cardiac fibrosis (after 12- and 24-month exposures) and aortic remodeling (after 1-, 3-, 12- and 24-month exposures) in male and female rats ($n$ = 7/group). The heart was isolated, cut longitudinally into dorsal and ventral halves, and formalin-fixed and paraffin-embedded for sectioning. Isolated proximal thoracic aorta was cut into as many as 3 sections and handled in the same manner as the heart for formalin fixation and paraffin embedding. Longitudinal sections of the heart (5 µm) and cross sections (5 µm) of the aorta were stained with Sirius Red and Fast Green to detect collagen fibers (red). Further details are contained in Additional Materials 2 (available on the Web at *http://pubs.healtheffects.org*) of the Conklin and Kong report (Part 4 of this volume).

The extent of cardiac fibrosis was evaluated by measuring the red-stained area as a percentage of the total area assessed. Each image was analyzed for total, vascular fibrosis (all easily identifiable blood vessels > 50 µm diameter) and avascular fibrosis (in the absence of obvious relatively large-diameter vasculature) as a percentage of the area covered. For the aorta, area (in $\mu m^2$) was measured for the lumen, wall, media, and adventitia; thickness (in µm) was measured for the wall, media, and adventitia.

***Statistical Analyses*** For each marker, the investigators first carried out a three-way ANOVA, with exposure level, sex, and exposure duration as factors and included all two-way and three-way interactions. The normality of the residuals was assessed using the Shapiro-Wilk test. If the normality assumption was violated, the Box-Cox transformation was first applied to meet the normality assumption. Otherwise, a rank-based transformation was applied (Venables and Ripley 2002). The three-way ANOVA was applied to the transformed data, and the mean squares for each factor and their interactions and the $P$ values for these significance tests were reported in Tables 4 and 5 of the Conklin et al. report (Part 4 of this volume).

Additionally, for each of the markers with significant exposure-level effect or significant two-way or three-way interaction with the exposure level, Conklin and Kong applied the Dunnett multiple comparison test to determine whether the measurements for each exposure level were significantly different from those for the control for each combination of exposure duration and sex. The significant results for exposure-level effects are reported in Table 7 of the Conklin et al. report. A $P$ value < 0.05 was considered statistically significant, and all analyses were carried out using the statistics software R (*www.r-project.org*).

## Key Results

***Plasma*** Exposure to NTDE at any concentration for up to 24 months had few effects on the more than 20 markers measured. Commentary Table 4 shows that some scattered changes were detected in one or more NTDE-exposed groups. However, most of these changes were found at only one exposure time point and in one sex, predominantly in females. Only two markers showed increases after 24 months of exposure — IL-6 and sICAM-1. However, changes in sICAM-1 levels were inconsistent over the course of the study, decreasing rather than increasing at 12 months with mid-level

**Commentary Table 4.** Plasma Markers with Significant Changes in Mean Levels in NTDE-Exposed Rats After 12 or 24 Months, Compared with Filtered-Air Controls[a]

| Endpoint | Male (NTDE level) | Female (NTDE level) |
|---|---|---|
| IL-6 | ↑ 12 mo (high) | ↑ 24 mo (mid and high) |
| sICAM-1 | | ↓ 12 mo (mid), ↑ 24 mo (low and high) |
| Total cholesterol | | ↓ 24 mo (high) |
| Non-HDL cholesterol | | ↓ 24 mo (high) |
| Triglycerides | | ↓ 24 mo (mid) |
| Alanine aminotransferase | | ↓ 12 mo (mid) |
| Creatine kinase | | ↓ 12 mo (high) |

[a] ↓ = decrease; ↑ = increase; HDL = high-density lipoprotein; IL-6 = interleukin 6; sICAM-1 = soluble intercellular adhesion molecule 1; NTDE = new-technology diesel exhaust (2007-compliant).

NTDE exposure. There were few changes in lipids (total cholesterol, non-HDL cholesterol, and triglycerides) over the course of the study — all were modest decreases compared with controls. Some markers, such as leptin, showed changes in levels after subchronic exposure (1 and 3 months [see Conklin and Kong 2012]) but not at 12 or 24 months.

Exposure of Sprague Dawley rats to acrolein via gavage resulted in increases in multiple plasma markers 24 hours after exposure, confirming that many of the plasma marker assays were sensitive enough to detect changes in the current study.

***Cardiac Fibrosis*** NTDE exposure had no effect in either male or female rats on the age-associated increase in cardiac fibrosis that was noted in control animals (between 12 and 24 months).

***Aortic Remodeling*** NTDE exposure had no effect on any parameter of aortic remodeling, though age-dependent increases in thoracic aorta parameters were noted, as well as differences between male and female rat aortic measurements (males larger than females) in control animals over the course of 24 months.

## THE ACES REVIEW PANEL'S EVALUATION OF THE STUDY BY CONKLIN AND KONG: RESULTS AND INTERPRETATION

### General Comments

In its independent review of the ancillary study by Conklin and Kong, the ACES Review Panel concluded that the major strengths of the study were that the investigators assessed a large number of plasma markers associated with inflammation and thrombosis with the goal of identifying a sensitive marker or set of markers in blood that might reflect cardiovascular effects of exposure to NTDE. They also measured multiple plasma markers of organ toxicity (such as of the liver and kidney). An additional strength of the study was that the investigators made side-by-side measurements of many of the same endpoints in the blood of rats that they had treated with acrolein in separate studies. These measurements served as a positive control to verify that the assays used in the current study were sensitive enough to detect changes in response to another pollutant. In its Commentary accompanying Conklin and Kong's subchronic NTDE exposure results (see ACES 2012), the Panel had suggested adding markers of *chronic* inflammation such as fibrosis to the longer-term exposure analyses. Thus, the Panel thought the inclusion of morphometric analyses of cardiac fibrosis and aortic remodeling in this final report was a useful addition to the study.

The Panel agreed with the investigators that NTDE exposure for up to 24 months had no effect on almost all the blood markers measured in rats. The lack of meaningful changes suggested that the 16-hours-per-day exposure to NTDE for this time period was associated with very few changes on inflammatory or thrombotic pathways; the few small changes that were detected were difficult to interpret, either because the changes were seen at only one time point or in one sex or because they were inconsistent in terms of the direction of the effect at the two exposure time points. The investigators acknowledged that because they had made a large number of statistical comparisons, it was possible that what was defined as a statistically significant difference between groups may have arisen by chance.

The Panel also agreed with the investigators that only two markers were increased by long-term exposure — IL-6 and sICAM-1 — and these were most likely indicators of endothelial cell activation, rather than of vascular injury or endothelial cell dysfunction. Because these two markers were increased in females, but not males, at the 24-month exposure time point, the Panel considered that it was reasonable for the investigators to speculate that the aged, female endothelium may be slightly more sensitive than that of males to NTDE exposure. However, as the investigators pointed out, the study did not attempt to identify the cellular source of these two markers, so it is not known whether IL-6 and sICAM-1 were produced by the endothelium. The Panel also noted that the increase in plasma IL-6 at 24 months found in the current study was consistent with the increase in lung tissue IL-6 found (in both sexes, although with a slightly greater effect in females), at the same time point in the McDonald and colleagues' study (discussed earlier in this Commentary).

The Panel agreed with Conklin and Kong that some markers — in particular, leptin and HDL levels — that were changed at 1 or 3 months by exposure to NTDE showed no effects of exposure at later time points (12 and 24 months).

***Cardiac Fibrosis and Aortic Remodeling*** The Panel also agreed with the investigators that exposure for up to 24 months to NTDE did not affect cardiac fibrosis or aortic remodeling. The morphologic data, although assessed on a relatively small number of animals, provide some reassuring evidence of an absence of structural changes associated with long-term NTDE exposure in healthy rats. The Panel also noted that the described morphometric methodology fell short of a robust, state-of-the-art, unbiased analysis, which follows the mathematical rules of unbiased stereology (Boyce et al. 2010; Mühlfeld et al. 2010). Additionally, the

Panel noted that accurate assessment of vascular remodeling is difficult in the absence of perfusion fixation.

***Interpretation of Changes in Lipid Levels*** The Panel agreed with the investigators that the biologic significance of the exposure-associated modest decreases in levels of cholesterol and other lipids (total cholesterol, non-HDL cholesterol, and triglycerides) at 24 months was uncertain because the animals had been fed ad libitum before sacrifice. Thus, as the investigators point out and the Panel agreed, levels of cholesterol at the time of death would most likely reflect catabolism of the food most recently eaten, rather than the effects of exposure.

***Rodents as Models of Cardiovascular Effects*** The Panel recognized that the investigators' goal was to identify possible cardiovascular markers of effects of exposure to NTDE, with changes in thrombotic and inflammatory pathways as the key focus. However, the Panel noted that the use of "normal" rodents to evaluate cardiovascular changes of relevance to humans is not an optimal choice because humans develop atherosclerosis as the result of inflammatory processes in which increases in cholesterol levels and LDL are involved in the initiation of the lesion (Libby and Aikawa 2002). In contrast, strains of rats such as the Wistar Han (and C57BL/6 mice used in the subchronic ACES exposure study) do not develop hyperlipidemia or atherosclerosis. In rats and mice, 70% to 80% of circulating cholesterol is in the form of HDL, compared with only approximately 20% in humans (Li et al. 2011). These differences among species in the distribution of plasma cholesterol between HDL and LDL likely result from differences in expression of cholesteryl ester transferase protein, which exchanges triglycerides from LDL for cholesteryl esters from HDL and vice versa. Humans express the protein, but rats and mice lack the gene and so do not (Barter et al. 2003). In addition, rats efficiently convert cholesterol into bile (Li et al. 2011).

Some special strains of rats (e.g., the spontaneously hypertensive) and mice (e.g., those with genes knocked out that are relevant to cholesterol metabolism or function, such as apolipoprotein E or the LDL receptor [Zaragoza et al. 2011]) do develop lipid-containing lesions or even frank atherosclerosis. Evaluating the effects of NTDE in one or more of these rodent strains was discussed during the development of the original ACES protocol. The Panel appreciated that the choice of a strain for a lifetime exposure study is complex and challenging and that the primary hypothesis of this study concerned carcinogenicity. However, because of the differences noted above in cholesterol metabolism in different species, the current study provided a weak model for testing cardiovascular effects.

**Summary and Conclusions**

- The Panel agreed with the investigators' conclusions that most of the endpoints measured in inflammatory and thrombotic pathways were not affected by exposure to the concentrations of NTDE tested in this study. The paucity of changes reported in the study in a large set of endpoints assessed suggests that exposure to the concentrations of NTDE used triggered few, if any, cardiovascular responses that were sustained or detectable over the 24-month exposure.
- Some scattered changes in plasma markers were detected in rats exposed to NTDE over 24 months. Of the NTDE-associated changes, only the changes in IL-6 and sICAM-1 at the longest exposure time point (24 months) were positive, and these were small and noted predominantly in females. The Panel agreed with the investigators that these observations were of uncertain pathophysiologic significance. The Panel also agreed it was reasonable for the investigators to speculate that these observations suggest the aging female rat may be more susceptible than the male rat to endothelial cell activation.
- No NTDE-exposure-associated effects on cardiac fibrosis or aortic remodelling were detected.

## OVERALL CONCLUSIONS FOR THE ACES PHASE 3B REPORTS

In its independent review of the core and ancillary ACES Phase 3B reports, the HEI ACES Review Panel concluded that McDonald and colleagues' study is the first to conduct a careful, comprehensive, and well-executed evaluation in rodents of lifetime inhalation exposure to a range of emissions from a heavy-duty 2007-compliant engine, referred to as NTDE. The investigators evaluated over 100 endpoints in the broad areas of histology, serum chemistry, systemic and lung inflammation, and respiratory function. Using appropriate statistical approaches to analyse the data, the investigators in this core study confirmed the a priori hypothesis, namely, that lifetime exposure to NTDE at the concentrations studied would *not* cause an increase in tumor formation or substantial toxic health effects in rats, although some biologic effects might occur.

The investigators continuously operated for over 30 months a facility in which NTDE from a heavy-duty diesel engine compliant with 2007 regulations was generated and transported to rat exposure chambers. Diesel emissions were derived over this time period from an engine operating on a strenuous 16-hour cycle, which was intended to reproduce typical urban and rural driving conditions and

thus be more reflective of modern engine performance and characteristics than exposure cycles used in long-term studies of emissions from older pre-2007-compliant engines (referred to as TDE). The investigators also attained NTDE exposure atmospheres within 20% of the designated target levels, which were 4.2, 0.8, and 0.1 ppm $NO_2$ over the exposure period. These exposure concentrations were based on levels of $NO_2$ rather than PM, which had been used in previous rat inhalation studies of TDE effects, because PM levels in NTDE were greatly reduced compared with TDE emissions. The $NO_2$ levels were chosen to provide a comparison with the same cumulative exposure to $NO_2$ (the product of concentration and exposure duration) used in prior HEI-funded rat inhalation studies by Mauderly and colleagues (1987a, 1989) in which minor biologic changes — but no cancer or pre-cancerous changes — were observed in the respiratory tract.

In their extensive analysis of the physical and chemical composition of the emissions, McDonald and colleagues found that the most abundant pollutants were $CO_2$, CO, NO, and $NO_2$. Concentrations of engine-generated PM were very low (< 11 µg/m$^3$) at all exposure levels (in the ultrafine range of 20–40 nm in diameter), as were concentrations of sulfur dioxide and semivolatile and volatile organic species. These findings confirm that concentrations of the components of NTDE differ strikingly from those of older engines, in which the concentrations of PM, as well as volatile and PM-associated organic species, are much higher.

The major biologic finding was that most endpoints evaluated showed no NTDE-associated changes after exposure of rats for up to 28 months (males) and 30 months (females). In particular, chronic exposure to NTDE resulted in no tumors or pre-neoplastic changes in the lung and no increases in tumors that were considered to be related to NTDE in any other tissue. Some mild histologic changes were found in the lung; however, these were not "preneoplastic lesions," which have been described in previous long-term exposure studies of rats to TDE. Rather, the histologic changes — periacinar epithelial hyperplasia, bronchiolization, accumulation of macrophages, and periacinar interstitial fibrosis — were confined to a small region, the centriacinus, which is involved in gas exchange.

HEI convened a panel of expert pathologists, the Pathology Working Group (PWG), to evaluate the histopathology data collected. The PWG findings confirmed the major histopathologic observations reported by the investigators. Also, the PWG, by evaluating the findings of this study side by side with findings from prior studies, provided a context with which to compare and contrast the current study findings with those from relevant long-term studies of exposure to TDE and oxidant gases. The overall conclusions were that chronic exposure to NTDE did not produce tumors in the lung in rats and resulted in effects that differed markedly from the chronic effects of exposure to TDE observed in multiple rat studies, where lung tumors, as well as inflammation and the deposition of soot in the lung, were observed. Rather, the effects of NTDE in the lung more closely resembled changes noted after long-term exposures to gaseous pollutants, in particular $NO_2$, and to TDE from which particles have been filtered out. It is possible that components of NTDE other than $NO_2$ may have contributed to the effects reported, but the low levels of other components suggest that they would not be primarily responsible.

The multiple toxicity endpoints evaluated — including lung and serum chemistry and respiratory function — were appropriate for evaluating a wide range of possible biologic effects. There were small decreases in some respiratory endpoints, particularly in measures of expiratory flow, predominantly at the highest exposure level and more in females than males. $DL_{CO}$ also showed a small effect of exposure to NTDE, and the Panel considered these findings consistent with the histopathologic findings of mild changes in the gas-exchange regions of the lung, indicating that the histologic changes might have resulted in functional effects. In addition, some small increases in a few markers of oxidative stress and inflammation — HO-1, IL-6, KC, µTP, total white blood cells, and macrophages — were detected in lung tissue, BALF, and blood. The Panel considered that a minor limitation to the study was that some biochemical assays lacked positive controls (to determine that each was sensitive enough to detect any changes).

The Panel considered that the ancillary studies by Bemis et al., Hallberg et al., and Conklin and Kong were valuable extensions to the ACES core study. These generally well implemented studies took advantage of samples collected by McDonald and colleagues at several exposure time points up to 24 months to assess multiple endpoints that are not normally part of chronic inhalation bioassays. The genotoxicity studies assessed well-accepted endpoints: MN formation in RETs in the report by Bemis and colleagues, and DNA damage and lipid peroxidation in the report by Hallberg and colleagues. Conklin and Kong used a wide-ranging set of plasma markers associated with systemic inflammation and thrombosis and assays of cardiac fibrosis or aortic remodeling to identify possible cardiovascular effects of NTDE. The Panel agreed with the conclusions of Bemis and colleagues and Hallberg and colleagues that no genotoxic effects could be detected that were associated with exposure for up to 24 months to NTDE. However, the Panel's assessment that the genotoxic endpoints used are relatively short term (lasting 1 month or less) somewhat reduced the utility of these negative findings. NTDE also had few effects at up to 24 months of

exposure on the inflammatory and thrombotic pathway endpoints measured in plasma in Conklin and Kong's study. It was not clear that these scattered changes, predominantly in female rats, were of any pathophysiologic significance, however. In addition, Conklin and Kong did not find any NTDE-associated effects on cardiac fibrosis or aortic remodeling.

Overall, these results indicate that rats exposed to one of three levels of NTDE from a 2007-compliant engine for up to 30 months, for 16 hours per day, 5 days a week, with use of a strenuous operating cycle that more accurately reflected the real-world operation of a modern engine than cycles used in previous studies, showed few NTDE-exposure-related biologic effects. In contrast to the findings in rats chronically exposed to TDE, there was no induction of tumors or pre-neoplastic changes in the lung and no increase in tumors that were considered to be related to NTDE in any other tissue. The effects that were observed with NTDE were limited to the respiratory tract and were mild and generally seen at only the highest exposure level. These histologic changes in lungs were consistent with previous findings in rats after long-term exposure to $NO_2$ — a major component of the exposure atmosphere, which is being substantially further reduced in 2010-compliant engines.

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