Air Quality Analysis for the Flamingo Bay Apartments Project (PEN22-0029) Moreno Valley, California

Prepared for
Empire Construction Management
2280 Wardlow Circle, Suite 250
Corona, CA 92878

Prepared by
RECON Environmental, Inc.
3111 Camino del Rio North, Suite 600
San Diego, CA 92108
P 619.308.9333

RECON Number 10112
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Jessica Fleming, Senior Environmental Specialist
Noise, Air Quality, and Greenhouse Gas

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ATTACHMENT

1: CalEEMod Output
2: Construction HRA/AERSCREEN Output

Acronyms and Abbreviations

°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
2016 AQMP	South Coast Air Quality Management District's 2016 Air Quality Management Plan
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Moreno Valley
CO	carbon monoxide
CO_2	carbon dioxide
COMU	Corridor Mixed Use
DPM	diesel particulate matter
HQ	hazard quotient
LST	Localized Significance Threshold
mg/kg/d	milligrams per kilogram body weight per day
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
Pb	lead
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
project	Flamingo Bay Apartments Project
ROG	reactive organic gases
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO_2	sulfur dioxide
SoCAB	South Coast Air Basin
SO_X	oxides of sulfur
SRA	Source Receptor Areas
TAC	toxic air contaminant
U.S. EPA	U.S. Environmental Protection Agency
USC	United States Code
VOC	volatile organic compounds

Executive Summary

The Flamingo Bay Apartments Project (project) is located in the central portion of the city of Moreno Valley, California, approximately 4.2 miles east of Interstate 215. The 3.86-acre project site is located on Assessor's Parcel Numbers 484-030-026 and 484-030-013 bounded by Alessandro Boulevard to the north and Copper Cove Lane to the south. The project site is currently undeveloped. The project would develop a 96-unit apartment complex that would consist of four separate buildings, providing a total of 48 one-bedroom apartments and 48 two-bedroom apartments. The project would also provide a 2,588-square-foot clubhouse with an outdoor pool. Access to the project site would be provided via a new driveway connection to Alessandro Boulevard in the northeastern corner of the project site. A new gated emergency access driveway connection to Copper Cove Lane would be provided in the southeastern corner of the project site. The project would also make the following off-site improvements:

- Widen Alessandro Boulevard at the project frontage to the ultimate width on the southern half (67 feet from centerline to right-of-way) and provide two eastbound lanes.
- Widen Copper Cove at the project frontage to the ultimate width on the northern half (30 feet from centerline to right-of-way) and provide one westbound lane.

These off-site improvements would total 0.21 acre, which would increase the total project area to 4.07 acres.

This analysis evaluates the significance of potential air quality impacts that may be generated by the project in accordance with the California Environmental Quality Act, and guidance from the South Coast Air Quality Management District (SCAQMD). The project was evaluated to determine if it would (1) be inconsistent with the applicable air quality plan, (2) result in cumulative impacts to air quality, (3) impact sensitive receptors, or (4) expose a substantial number of people to objectionable odors.

The SCAQMD prepared the 2016 Air Quality Management Plan (2016 AQMP), which represents its contribution to the State Implementation Plan, to outline the district's strategy for achieving attainment of federal and state Ambient Air Quality Standards (AAQS). The 2016 AQMP provides an overview of air quality and sources of air pollution, and identifies the pollution-control measures needed to meet clean air standards. As discussed in this analysis, emissions associated with the project are accounted for in the 2016 AQMP. Therefore, the project would not result in an exceedance of the growth forecasting used to develop the 2016 AQMP. Additionally, the project would not result in an air quality violation. Therefore, the project would not conflict with or obstruct the implementation of the 2016 AQMP or applicable portions of the State Implementation Plan, and impacts would be less than significant.

As calculated in this analysis, project construction and operation would not exceed the SCAQMD's thresholds of significance. Therefore, the project would not result in regional emissions that would exceed the National AAQS or California AAQS or contribute to existing violations, and impacts would be less than significant.

On-site emissions during construction and operation would be less than the SCAQMD localized significance thresholds. Project construction would not result in the exposure of sensitive receptors to significant levels of diesel particulate matter that could result in excess cancer risks. The project would not introduce site sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day, and would not result in the creation of a carbon monoxide (CO) hot spot. Therefore, construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

During construction, potential odor sources would be associated with construction equipment; however, exposure to odors associated with project construction would be short term and temporary in nature. Operation of the project would not include any uses that would generate substantial odors. Therefore, the project would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

1.0 Introduction

This report evaluates the significance of potential air quality impacts that may be generated by the proposed Flamingo Bay Apartments Project (project). This report characterizes existing conditions at the project site and in the region, identifies applicable rules and regulations, and assesses impacts to air quality from construction and operation of the project. The significance of potential air quality impacts is assessed based on the air quality thresholds defined by the regional air quality management district, the South Coast Air Quality Management District (SCAQMD).

Air pollution affects all southern Californians. Effects can include increased respiratory infections, increased discomfort, missed days from work and school, and increased mortality. Polluted air also damages agriculture and our natural environment.

The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and therefore are expected to have similar ambient air quality. The project site is located within the South Coast Air Basin (SoCAB). The portion of the SoCAB covering the project site is currently classified as a federal non-attainment area for ozone (O_3) and particulate matter less than 2.5 microns ($PM_{2.5}$), and a state non-attainment area for ozone, particulate matter less than 10 microns (PM_{10}) and $PM_{2.5}$.

Air quality impacts can result from the construction and operation of the project. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development, or local hot spot effects stemming from sensitive receivers being placed close to highly congested roadways. In the case of this project, operational impacts would be primarily due to emissions to the SoCAB from mobile sources associated with vehicular travel along the roadways surrounding the project site.

The analysis of impacts is based on federal and state Ambient Air Quality Standards (AAQS) and is assessed in accordance with the guidelines, policies, and standards established by the SCAQMD.

Project compatibility with the adopted air quality plan for the area is also assessed. Measures are recommended, as required, to reduce potentially significant impacts.

2.0 Project Description

The project is located in the central portion of the city of Moreno Valley, California, approximately 4.2 miles east of Interstate 215. The 3.86-acre project site is located on Assessor's Parcel Numbers 484-030-026 and 484-030-013 bounded by Alessandro Boulevard to the north and Copper Cover Lane to the south. The project site is currently undeveloped. Figure 1 shows the regional location of the project site. Figure 2 shows an aerial photograph of the project site and vicinity.

The project would develop a 96-unit apartment complex that would consist of four separate buildings, providing a total of 48 one-bedroom apartments and 48 two-bedroom apartments. The total floor area of all the units within the four apartment buildings would equal 98,290 square feet. The project would also provide a 2,588-square-foot clubhouse with an outdoor pool. The project would provide a total of 171 parking spaces consisting of 149 assigned parking spaces and 22 unassigned parking spaces, including 6 Americans with Disabilities Act-compliant parking spaces and 18 electric vehicle parking spaces wired for future installation of charging equipment. Access to the project site would be provided via a new driveway connection to Alessandro Boulevard in the northeastern corner of the project site. A new gated emergency access driveway connection to Copper Cove Lane would be provided in the southeastern corner of the project site. The project would also make the following off-site improvements:

- Widen Alessandro Boulevard at the project frontage to the ultimate width on the southern half (67 feet from centerline to right-of-way) and provide two eastbound lanes.

- Widen Copper Cove at the project frontage to the ultimate width on the northern half (30 feet from centerline to right-of-way) and provide one westbound lane.

These off-site improvements would total 0.21 acre, which would increase the total project area to 4.07 acres. Figure 3 shows the proposed site plan.

3.0 Regulatory Framework

3.1 Federal Regulations

AAQS represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 USC 7409], the U.S. Environmental Protection Agency (U.S. EPA) developed primary and secondary National Ambient Air Quality Standards (NAAQS).

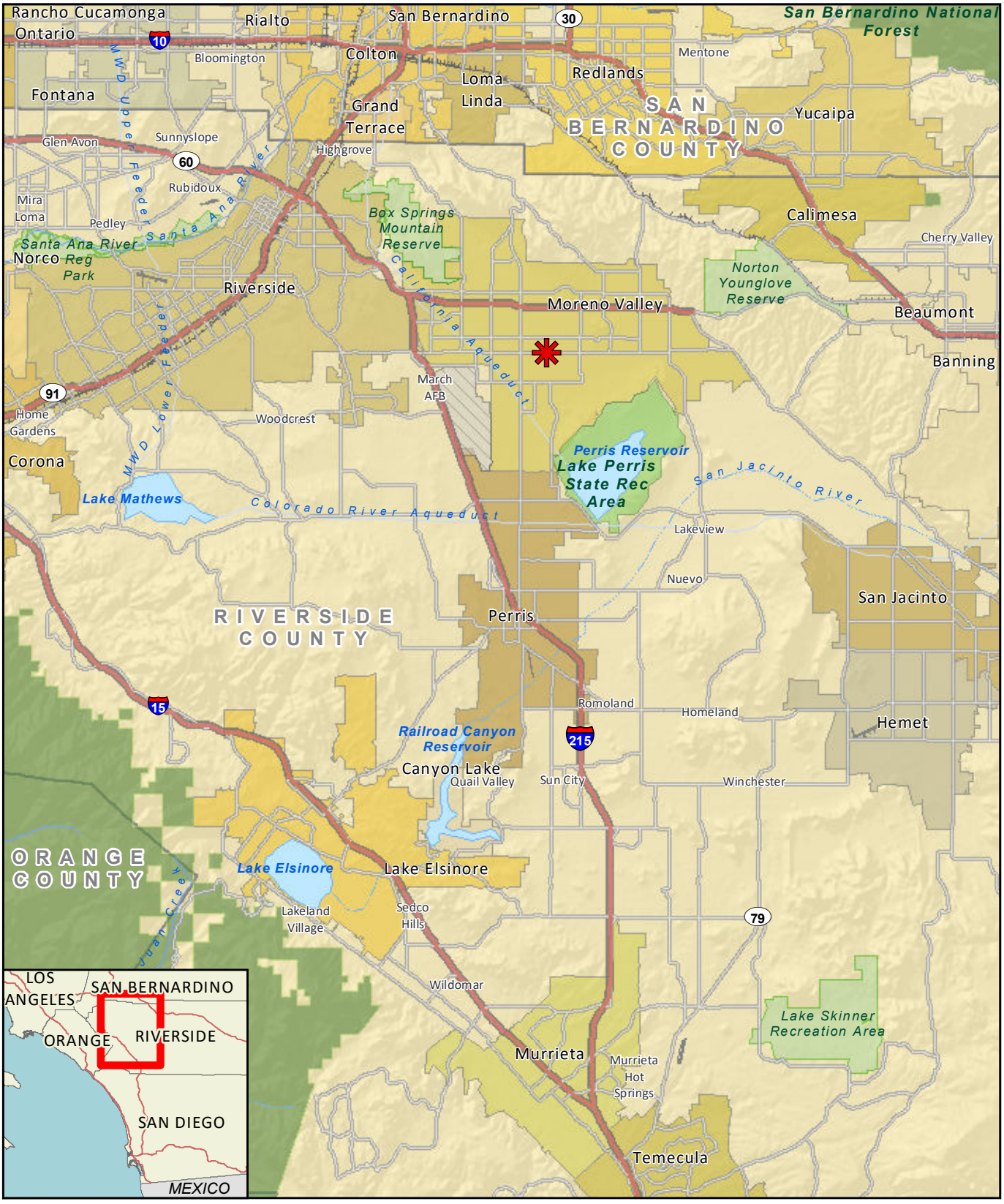

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FIGURE 1
Regional Location

Image Source: NearMap (flown September 2022)

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FIGURE 2
Project Location on Aerial Photograph

Map Source: PROACTIVE Engineering Consultants

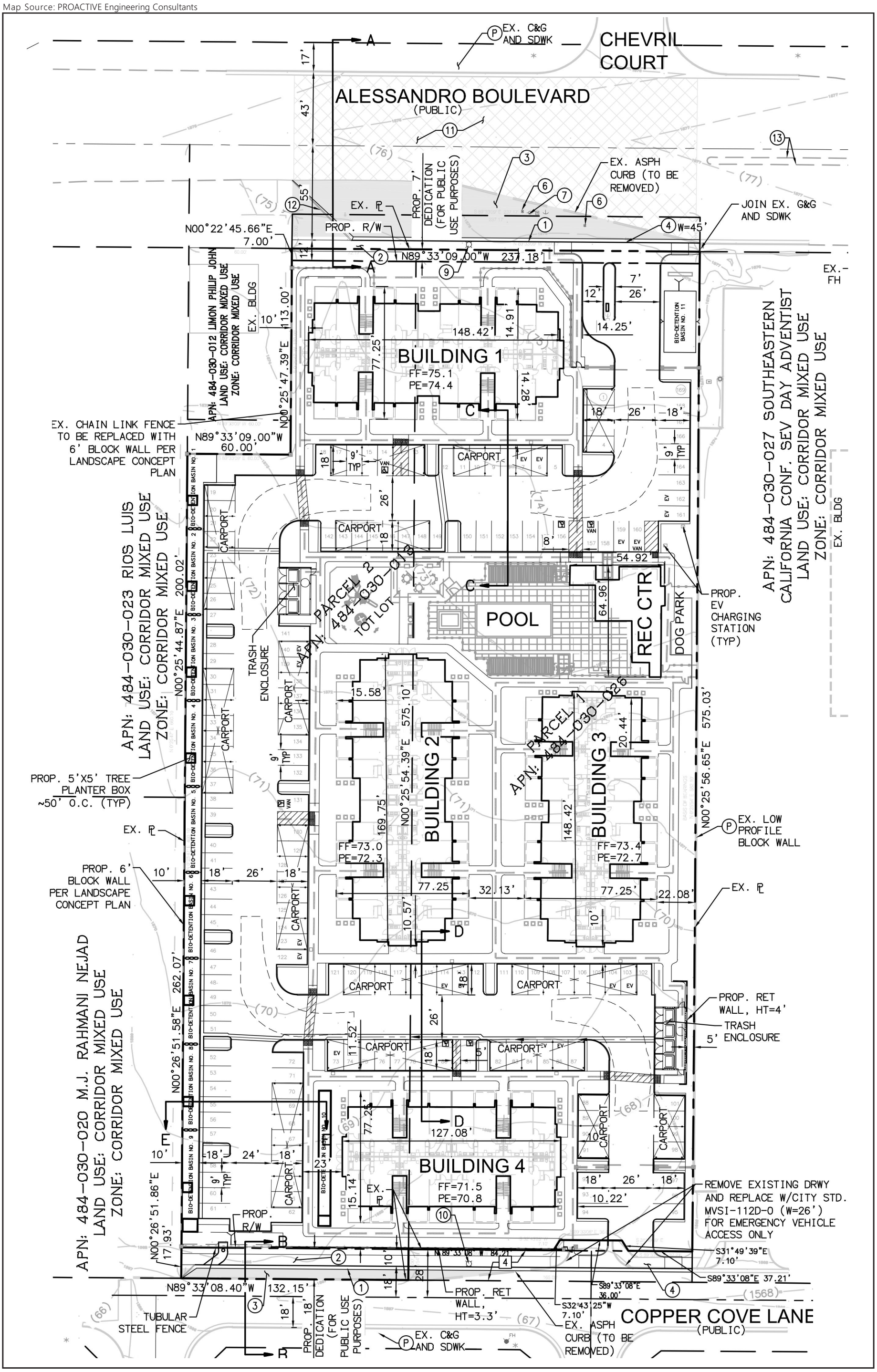

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FIGURE 3
Site Plan

Six criteria pollutants of primary concern have been designated: ozone, carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and respirable particulate matter (PM_{10} and $PM_{2.5}$). The primary NAAQS ". . . in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health . . . " and the secondary standards ". . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (California Air Resources Board [CARB] 2016).

An air basin is designated as either attainment or non-attainment for a particular pollutant. Once a non-attainment area has achieved the AAQS for a particular pollutant, it is redesignated as an attainment area for that pollutant. To be redesignated, the area must meet air quality standards for three consecutive years. After redesignation to attainment, the area is known as a maintenance area and must develop a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. The SoCAB is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality standards except for the 8-hour ozone and $PM_{2.5}$ standards.

3.2 State Regulations

3.2.1 Criteria Pollutants

The CARB has developed the California Ambient Air Quality Standards (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride (see Table 1).

Similar to the federal CAA, the state classifies as either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The portion of the SoCAB covering the project site is a non-attainment area for the state 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards.

3.2.2 Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel-exhaust particulate matter emissions have been established as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m^3)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chroma-tography			

See footnotes on next page.

Table 1
Ambient Air Quality Standards

ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; – = not applicable.

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

[8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standards of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of ppb. California standards are in units of ppm. To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[12] The Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[14] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB 2016.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the SDAPCD's Regulation XII. Of particular concern statewide are diesel-exhaust particulate matter emissions. Diesel-exhaust particulate matter was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of diesel particulate matter (DPM) as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB 2000). To monitor the effectiveness of the efforts to reduce DPM, CARB has supported field campaigns that measure real-world emissions from heavy-duty vehicles, and results indicate that regulations aimed at reducing emissions of DPM have been successful.

CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). It notes that the handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day should be avoided when possible.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of diesel particulate and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public's exposure to DPM will continue to decline.

3.2.3 State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

3.2.4 The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

3.3 Local Regulations

3.3.1 South Coast Air Quality Management District

The SCAQMD is the air pollution control agency in the SoCAB. The role of the local SCAQMD is to protect the people and the environment of the SoCAB from the effects of air pollution. As the SCAQMD is designated as a nonattainment area for state air quality standards for 8-hour ozone, PM_{10}, and $PM_{2.5}$, SCAQMD periodically prepares air quality management plans outlining measures to reduce these pollutants. The most recent AQMP is the 2016 Air Quality Management Plan (2016 AQMP).

Emissions that would result from mobile, area, and stationary sources during construction and operation of the project are subject to the rules and regulations of SCAQMD. The SCAQMD rules applicable to the project may include the following:

- **Rule 401, Visible Emissions.** This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402, Nuisance.** This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.
- **Rule 403, Fugitive Dust.** This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.

- **Rule 431.2, Sulfur Content of Liquid Fuels.** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of oxides of sulfur (SO_X) and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile sources.
- **Rule 1110.2, Emissions from Gaseous- and Liquid-Fueled Engines.** This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce oxides of nitrogen (NO_X), volatile organic compounds (VOC), and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.
- **Rule 1113, Architectural Coatings.** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

3.3.2 Southern California Association of Governments

In September 2020, SCAG adopted Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. The Connect SoCal plan identifies that land use strategies that focus on new housing and job growth in areas with a variety of destinations and mobility options would support and complement the proposed transportation network. The overarching strategy in Connect SoCal is to provide for a plan that allows the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). The Connect SoCal plan contains transportation projects to help more efficiently distribute population, housing, and employment growth as well as projected development that promotes active transport and reduces GHG emissions.

3.3.3 City of Moreno Valley

The City's 2040 General Plan includes various goals and policies designed to help improve air quality in the City (City of Moreno Valley 2021a). The 2040 General Plan includes key goals to increase the use of public transit, improve traffic congestion, and enhance the range of transportation options in the City and reduce vehicle miles traveled, thereby reducing mobile emissions and improving air quality. Additionally, concurrent with the adoption of the 2040 General Plan, the City adopted a Climate Action Plan (City of Moreno Valley 2021b). The Climate Action Plan includes a number GHG reduction goals that would also reduce emission of criteria pollutants.

4.0 Environmental Setting

4.1 Site Conditions

The project site is currently undeveloped and is surrounded by single-family residential uses to the north, south, and west, a church to the east, and a mobile home park beyond the single-family residential uses to the west. Additionally, multi-family residential uses are planned for the parcel east of the church. Undeveloped land is located to the northeast and northwest. The nearest sensitive receptors are the residential uses located approximately 40 feet south of the southern project boundary and the church located approximately 70 feet east of the eastern project boundary.

4.2 Regional Setting and Climate

The project is located approximately 42 miles northeast of the Pacific Ocean, within Riverside County, between the Santa Ana Mountains and the San Jacinto Mountains. Air quality in the county is influenced by both topographical and meteorological conditions.

The project area, like other inland valley areas in southern California, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The March Field climate monitoring station (ID 045326) is located three miles southwest of the project site and the Perris climate monitoring station (ID 046816) is located approximately nine miles south of the project site. Based on measurements taken at these climate monitoring stations, the average annual precipitation is 8 to 10 inches, falling primarily from November to April (Western Regional Climate Center 2020). Overall annual temperatures in the project area average about 62 degrees Fahrenheit (°F), winter low temperatures average about 36°F, and summer high temperatures average about 93°F.

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

The prevailing westerly wind pattern is sometimes interrupted by regional "Santa Ana" conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada–Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

4.3 Existing Air Quality

As discussed in Section 1.0 above, the State of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. The project is located in the SoCAB, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality

standards except 8-hour ozone and $PM_{2.5}$ standards. The SoCAB is designated as in nonattainment for state air quality standards for 8-hour ozone, PM_{10}, and $PM_{2.5}$.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by CARB or federal standards set by the U.S. EPA. SCAQMD has divided its jurisdictional territory of the SoCAB into 38 Source Receptor Areas (SRAs), most of which have monitoring stations that collect air quality data. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. These geographical areas include urbanized regions, interior valleys, coastal areas, and mountains. The project site is located within Moreno Valley SRA 24. The SCAQMD maintains 41 active air quality monitoring sites located throughout the SoCAB. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The nearest monitoring stations include the Perris monitoring station, located approximately nine miles south of the project site at 237½ North D Street, and the Riverside – Rubidoux monitoring station, located approximately 13 miles northwest of the project site at 5888 Mission Boulevard. The Perris monitoring station measures ozone and PM_{10}, and the Rubidoux monitoring station measures ozone, NO_2, PM_{10}, and $PM_{2.5}$. Table 2 provides a summary of measurements collected at the Perris and Rubidoux monitoring stations for the years 2019 through 2021.

Table 2
Summary of Air Quality Measurements Recorded at the Perris and Riverside – Rubidoux Air Quality Monitoring Stations

Pollutant/Standard	2019	2020	2021
Perris Monitoring Station			
Ozone			
Federal Max 8-hr (ppm)	0.095	0.106	0.094
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	64	74	55
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	38	48	38
State Max 8-hr (ppm)	0.096	0.106	0.094
Days State 8-hour Standard Exceeded (0.07 ppm)	66	77	60
Max. 1-hour (ppm)	0.118	0.125	0.117
Days State 1-hour Standard Exceeded (0.09 ppm)	28	34	25
PM_{10}*			
Federal Max. Daily ($\mu g/m^3$)	97.0	92.3	77.5
Measured Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0.0	--	--
Federal Annual Average ($\mu g/m^3$)	25.8	33.4	30.4
State Max. Daily ($\mu g/m^3$)	92.1	87.6	73.5
Measured Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	4	6	4
Calculated Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	24.5	--	--
State Annual Average ($\mu g/m^3$)	24.4	--	--
Riverside – Rubidoux Monitoring Station			
Ozone			
Federal Max 8-hr (ppm)	0.096	0.115	0.097
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	59	82	55
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	37	60	32
State Max 8-hr (ppm)	0.096	0.0115	0.098
Days State 8-hour Standard Exceeded (0.07 ppm)	63	86	57
Max. 1-hour (ppm)	0.123	0.143	0.117
Days State 1-hour Standard Exceeded (0.09 ppm)	24	46	20

Table 2 Summary of Air Quality Measurements Recorded at the Perris and Riverside – Rubidoux Air Quality Monitoring Stations			
Pollutant/Standard	2019	2020	2021
Nitrogen Dioxide			
Max 1-hour (ppm)	0.0560	0.0664	0.0520
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0
Annual Average (ppm)	0.014	0.014	0.014
PM_{10}*			
Federal Max. Daily ($\mu g/m^3$)	132.5	142.1	76.5
Measured Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0.0	--	0.0
Federal Annual Average ($\mu g/m^3$)	35.4	49.2	33.4
State Max. Daily ($\mu g/m^3$)	182.4	137.7	114.3
Measured Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	110	115	75
Calculated Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	116.4	--	43.7
State Annual Average ($\mu g/m^3$)	40.9	--	33.2
$PM_{2.5}$*			
Federal Max. Daily ($\mu g/m^3$)	55.7	59.9	82.1
Measured Days Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)	5	12	11
Calculated Days Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)	5.0	12.0	11.0
Federal Annual Average ($\mu g/m^3$)	11.3	13.3	12.7
State Max. Daily ($\mu g/m^3$)	57.6	61.9	82.1
State Annual Average ($\mu g/m^3$)	11.2	14.1	13.2

SOURCE: CARB 2022.
ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; -- = Not available.
* Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

5.0 Significance Criteria

The significance thresholds used in this analysis were based on Appendix G of the CEQA Guidelines as well as guidance from the SCAQMD for assessing air quality impacts. The following thresholds were used to determine significance of air quality impacts associated with the project. Adverse air quality impacts would occur if implementation of the project would:

- Obstruct or conflict with the implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standards (including the release of emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentration including air toxics.
- Create objectionable odors affecting a substantial number of people.

5.1 Regional Significance Thresholds

The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. These significance thresholds are updated as needed to appropriately represent the most current technical information and attainment status in the SoCAB. The City uses the current SCAQMD thresholds to determine whether a project would have a significant impact. SCAQMD's significance thresholds for impacts to regional air quality are shown in Table 3.

Table 3
SCAQMD Air Quality Significance Thresholds – Mass Daily Thresholds

Pollutant	Emissions (pounds)	
	Construction	Operational
Oxides of Nitrogen (NO_X)	100	55
Volatile Organic Compounds (VOC)	75	55
Coarse Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_X)	150	150
Carbon Monoxide (CO)	550	550
Lead (Pb)	3	3
SOURCE: SCAQMD CEQA Air Quality Handbook (SCAQMD 1993); SCAQMD Air Quality Significance Thresholds (SCAQMD 2015)		

5.2 Localized Significance Thresholds

The SCAQMD's Final Localized Significance Threshold (LST) Methodology was developed as a tool to assist lead agencies to analyze localized air quality impacts to sensitive receptors in the vicinity of the project (SCAQMD 2008). The LST Methodology outlines how to analyze localized impacts from common pollutants of concern including NO_2, CO, PM_{10}, and $PM_{2.5}$. Localized air quality impacts would occur if pollutant concentrations at sensitive receptors exceeded applicable NAAQS or CAAQS.

LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO_2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$, both of which are non-attainment pollutants.

6.0 Air Quality Calculations

Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional or local. In the case of this project, operational impacts are primarily due to emissions from project-related mobile sources associated with vehicular travel along the roadways. Operational emissions also consist of area sources that are direct sources of emissions located at the project site.

Construction and operation air emissions were calculated using California Emissions Estimator Model (CalEEMod) 2020.4.0 (California Air Pollution Control Officers Association 2021). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basics sources: construction sources and operational sources (i.e., area and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files presented in Attachment 1 indicate the specific outputs for each model run. Emissions of NO_X, CO, SO_X, PM_{10}, $PM_{2.5}$, and reactive organic gases (ROG) are calculated. Emission factors are not available for lead and consequently lead emissions are not calculated. The SoCAB is currently in attainment of the federal and state lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

6.1 Construction Regional Emissions

Construction-related activities are temporary, short-term sources of emissions. Sources of construction-related emissions include the following:

- Fugitive dust from grading activities;
- Construction equipment exhaust; and
- Construction-related trips by workers, delivery trucks, and material-hauling trucks.

Construction-related emissions include emissions from dust raised during grading, exhaust from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established by the SCAQMD including Rule 403, Fugitive Dust. Rule 403 requires the use of best available control measures for fugitive dust. This analysis assumes that standard dust and emission control during grading operations would be implemented to reduce potential nuisance impacts and to ensure compliance with SCAQMD Rule 403, which is estimated to result in a 61 percent reduction in fugitive dust from watering three times per day. The project would also be required to comply with SCAQMD Rule 1113, which places VOC content limits

on architectural coatings. Criteria pollutant emissions were calculated using the default VOC content values of 50 and 100 grams per liter which was provided by the SCAQMD.

Heavy-duty construction equipment is usually diesel-powered. Standard construction equipment includes dozers, rollers, scrapers, dewatering pumps, backhoes, loaders, paving equipment, delivery/haul trucks, jacking equipment, welding machines, pile drivers, and so on. Specific construction phasing and equipment parameters are not available at this time. However, CalEEMod can estimate the required construction equipment when project-specific information is unavailable. The estimates are based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District, of typical construction projects that provide a basis for scaling equipment needs and schedule with a project's size. Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. The construction schedule is based on the default construction phases, which include site preparation, grading, building construction, paving, and architectural coatings.

Table 4 summarizes the anticipated construction phases, duration, and equipment for total project construction. Table 5 shows the total projected construction maximum daily emission levels for each criteria pollutant and compares emissions to the SCAQMD regional significance thresholds. The CalEEMod output files for construction emissions are presented in Attachment 1.

Table 4
Construction Phases and Equipment

Equipment	Quantity	Daily Operation Time (Hours)
Site Preparation (5 days)		
Rubber Tired Dozers	3	8
Tractors/Loaders/Backhoes	4	8
Grading (8 days)		
Excavators	1	8
Graders	1	8
Rubber Tired Dozers	1	8
Tractors/Loaders/Backhoes	3	8
Building Construction (230 days)		
Cranes	1	7
Forklifts	3	8
Generator Sets	1	8
Tractors/Loaders/Backhoes	3	7
Welders	1	8
Paving (18 days)		
Cement and Mortar Mixers	2	6
Pavers	1	8
Paving Equipment	2	6
Rollers	2	6
Tractors/Loaders/Backhoes	1	8
Architectural Coatings (18 days)		
Air Compressor	1	6
NOTE: Each phase would also include vehicles associated with work commutes, dump trucks for hauling, and trucks for deliveries.		

Table 5 Maximum Daily Construction Emissions						
Construction	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Preparation	3	28	19	<1	9	5
Grading	2	18	15	<1	4	2
Building Construction	2	15	19	<1	2	1
Paving	1	9	13	<1	1	<1
Architectural Coatings	36	1	2	<1	<1	<1
Maximum Daily Emissions[1]	**36**	**28**	**19**	**<1**	**9**	**5**
SCAQMD Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceeds Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
[1]Emissions were rounded to the nearest whole number. Emissions reported as <1 indicate that emissions were calculated to be less than 0.5 pound per day.						

As shown in Table 5, maximum daily construction emissions for each separate phase of construction of the project would be less than the daily SCAQMD regional thresholds for all criteria pollutants.

6.2 Operational Regional Emissions

Mobile source emissions would originate from traffic generated by the project. Area source emissions would result from the use of natural gas, consumer products, as well as applying architectural coatings and landscaping activities.

6.2.1 Mobile Sources

Mobile source operational emissions are based on the trip rate, trip length, and vehicle mix. Based on the ITE Trip Generation Manual, 11th Edition, the project would generate 6.74 weekday trips per unit for a total of 647 daily weekday trips (K2 Traffic Engineering, Inc. 2022). Weekend trip generation rates were calculated by proportionately adjusting the default CalEEMod trip rates. CalEEMod default trip lengths were modeled utilizing default vehicle emission factors based on CARB's 2017 EMissions FACtor model.

6.2.2 Area Sources

Area sources are defined as direct sources of operational emissions located at the project site. Area source emissions associated with the project include consumer products, architectural coatings, and landscaping equipment. Hearths (fireplaces) and woodstoves are also a source of area emissions; however, the project would not include hearths or woodstoves. Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but not including other paint products, furniture coatings, or architectural coatings. Emissions due to consumer products are calculated using total building area and product emission factors.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emissions are based on the building surface area, architectural

coating emission factors, and a reapplication rate of 10 percent of area per year. Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

6.2.3 Energy Sources

Energy source emissions associated with the project include natural gas used in space and water heating. Emissions are generated from the combustion of natural gas used in space and water heating. Emissions are based on the Residential Appliance Saturation Survey which is a comprehensive energy use assessment that includes the end use for various climate zones in California.

6.2.4 Total Operational Emissions

Table 7 provides a summary of the operational emissions generated by the project. CalEEMod output files are presented in Attachment 1. As shown in Table 6, project-generated emissions are projected to be less than the SCAQMD's significance thresholds for all criteria pollutants.

Table 6
Summary of Project Operational Emissions
(pounds per day)

Source	Emissions					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	2	<1	8	<1	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Mobile Sources	2	3	18	<1	5	1
Total	**4**	**3**	**26**	**<1**	**5**	**1**
SCAQMD Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
NOTE: Totals may vary due to independent rounding.						

6.3 Localized Significance Thresholds

6.3.1 Construction Localized Significance Thresholds Calculations

The project site is located within Moreno Valley Source Receptor Area 24. LSTs apply to on-site air emissions of CO, NO_2, PM_{10}, and $PM_{2.5}$. Based on the SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (Fact Sheet), the appropriate methodology for determining localized impacts that could occur as a result of project-related construction, should follow these steps:

- Use CalEEMod to determine the maximum daily on-site emissions that will occur during construction activity.

- The SCAQMD's Fact Sheet is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.

- If the total calculated acreage is less than or equal to five acres, then the SCAQMD's screening look-up tables may be utilized to determine the potential for significant impacts. The look-up tables establish a maximum daily emissions threshold in pounds per day to be directly compared to CalEEMod emission results.

- If the total acreage disturbed is greater than five acres per day, then the SCAQMD recommends dispersion modeling to be conducted to determine the actual pollutant concentrations for applicable LSTs.

Additionally, the LST Methodology (SCAQMD 2008) states that only on-site emissions should be compared to LSTs. Therefore, off-site emissions associated with worker travel, materials deliveries, and other mobiles sources are not evaluated against LSTs.

The maximum on-site daily construction emissions for CO, NO_X, PM_{10}, and $PM_{2.5}$ are compared to the applicable screening thresholds based on construction site acreage and the distance to the closest sensitive receptor. The nearest sensitive receptors are the residential uses located approximately 40 feet south of the southern project boundary and the church located approximately 70 feet east of the eastern project boundary. To determine the maximum daily disturbed acreage for use in the SCAQMD's LST look-up tables, the maximum acres per day were developed from the CalEEMod Users Guide. Based on the CalEEMod Users Guide, the project is anticipated to disturb approximately 3.5 acres per day during the site preparation phase and 3.0 acres per day during the grading phase (Table 7). The SCAQMD's LST look-up tables provide LSTs for one, two, and five acre sites. Using the guidance provided in the LST Methodology, LSTs for 3.0 and 3.5 acres were developed using ratios of the known acreages and corresponding LSTs using the methodology provided in Appendix K of the SCAQMD's *Sample Construction Scenarios for Projects Less than Five Acres in Size* (SCAQMD 2005). The closest receptor distance in LST look-up tables is 25 meters. Receptors are located closer than 25 meters from the project site. SCAQMD's guidance indicates that projects with sensitive receptors located closer than 25 meters should use the LSTs for receptors located at 25 meters.

Table 7
Maximum Disturbed Acres

Phase	Equipment	Pieces	Acres/Piece	Total Daily Acres
Site Preparation	Rubber Tired Dozers	3	0.5	1.5
	Tractors/Loaders/Backhoes	4	0.5	2.0
	Total Acres			3.5
Grading	Excavators	1	0.5	0.5
	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Tractors/Loaders/Backhoes	3	0.5	1.5
	Total Acres			3.0

SOURCE: California Air Pollution Control Officers Association 2021

The maximum daily localized emissions from project construction and LSTs are presented in Table 8. As shown in Table 8, the maximum localized construction emissions would not exceed any of the SCAQMD recommended localized screening thresholds.

Table 8
Localized Construction Emissions

	NO_X	CO	PM_{10}	$PM_{2.5}$
Site Preparation (3.5 acres per day)				
Maximum On-Site Daily Emission	27.5	18.2	8.9	5.1
LST Threshold	*216.8*	*1,221.4*	*9.8*	*6.1*
Exceeds Threshold?	*No*	*No*	*No*	*No*
Grading (3.0 acres per day)				
Maximum On-Site Daily Emission	17.9	14.8	3.5	2.0
LST Threshold	*198.3*	*1,101.0*	*8.7*	*5.4*
Exceeds Threshold?	*No*	*No*	*No*	*No*

6.3.2 Operational Localized Significance Thresholds Calculations

Project operations impacts were also assessed used SCAQMD LSTs. Table 9 presents the maximum on-site emissions and applicable LSTs. As a conservative assessment, on-site emissions were evaluated against the most restrictive LSTs for a 1-acre project site with a sensitive receptor located 25 meters from the project boundary. As shown in Table 9, the maximum localized operational emissions would not exceed any of the SCAQMD recommended localized screening thresholds.

Table 9
Localized Operations Emissions

Operations	Pollutant (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area Sources	0.09	7.92	0.04	0.04
Energy Sources	0.35	0.15	0.03	0.03
Maximum On-Site Emissions	0.44	8.07	0.07	0.07
Operations LST Threshold[1]	*118*	*602*	*1*	*1*
Exceeds Threshold?	*No*	*No*	*No*	*No*

[1] Emissions are assessed against the threshold for 1-acre project sites with sensitive receptors within 25 meters of the project site boundary.

6.4 Impact Analysis

1. Would the project obstruct or conflict with the implementation of the applicable air quality plan?

As described in Section 3.0 above, the SoCAB is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality standards except for the 8-hour ozone and $PM_{2.5}$ standards. The SoCAB is also designated as in nonattainment for state air quality standards for 8-hour ozone and $PM_{2.5}$, and additionally is in nonattainment of state PM_{10} standards. The regional air quality plan, the 2016 AQMP, outlines measures to reduce emissions of ozone and $PM_{2.5}$. Whereas reducing PM concentrations is achieved

by reducing emissions of $PM_{2.5}$ to the atmosphere, reducing ozone concentrations is achieved by reducing the precursors of photochemical formation of ozone, VOC, and NO_X.

The growth forecasting for the 2016 AQMP is based in part on the land uses established by local general plans. Thus, if a project is consistent with land use as designated in the local general plan, it can normally be considered consistent with the 2016 AQMP. Projects that propose a different land use than is identified in the local general plan may also be considered consistent with the 2016 AQMP if the proposed land use is less intensive than buildout under the current designation. For projects that propose a land use that is more intensive than the current designation, analysis that is more detailed is required to assess conformance with the 2016 AQMP.

The project site is designated as Corridor Mixed Use (COMU) in the City's 2040 General Plan. This designation provides for a mix of housing with supporting retail and services that would cater to the daily needs of local residents. A mix of uses is not required on every site but is desired on sites at intersections to foster nodes of commercial mixed-use development along the corridor. The project would be consistent with the COMU land use designation.

However, the City's 2040 General Plan was adopted in 2021, prior to development the 2016 AQMP. Therefore, growth forecasting in the 2016 AQMP utilized the previous land use designation identified in the 2006 General Plan, which designated the project site as Residential/Office, which allowed for the establishment of areas for office-based working establishments or residential developments of up to 15 dwelling units per acre. Overall development intensity shall not exceed a floor area ratio of 1.0. Under the Residential/Office designation, a commercial office land use of up to 164,220 square feet on the 3.86-acre property would be allowed. Using a trip generation rate of 9.74 trips per 1,000 square feet for a general office building land use (California Air Pollution Control Officers Association 2022), it was calculated that a commercial office project would generate 1,600 daily trips, which exceeds the 647 daily trips that would be generated by the project. Consequently, the project would generate fewer vehicle trips compared to a commercial office project developed under the 2006 General Plan designation, and thereby generate fewer emissions compared to what was assumed in the 2016 AQMP. Therefore, the project would not exceed the growth forecasting used to develop the 2016 AQMP, and impacts would be less than significant.

Another factor used to determine if a project would conflict with implementation of the 2016 AQMP is determining if the project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards (NAAQS and CAAQS) or interim emissions reductions specified in the 2016 AQMP. NAAQS and CAAQS violations could occur if project emissions would exceed regional significance thresholds or LSTs. As shown in Tables 5 and 6 above, construction and operational emissions would not exceed the regional significance thresholds. Additionally, as shown in Tables 8 and 9 above, construction and operational emissions would not exceed the LSTs. Therefore, the project would not conflict with or obstruct the implementation of the 2016 AQMP or applicable portions of the SIP, and impacts would be less than significant.

2. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

As discussed in Section 3.0 above, the SoCAB is classified as in attainment for all criterion pollutants except for ozone, PM_{10}, and $PM_{2.5}$. The SoCAB is designated as a nonattainment area for federal AAQS for the 8-hour ozone and $PM_{2.5}$ standards, and is in nonattainment area under state PM_{10} standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_X and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone.

Based on SCAQMD cumulative significance methodologies, the emissions-based thresholds shown in Table 3 are used to determine if a project's contribution to regional cumulative emissions is cumulatively considerable. These thresholds were used to assess the significance of the project-specific and cumulative air quality impacts. Air quality impacts are basin-wide, and air quality is affected by all pollutant sources in the SoCAB. As the individual project thresholds are designed to help achieve attainment with cumulative basin-wide standards, they are also appropriate for assessing the project's contribution to cumulative impacts.

As shown in Tables 5 and 6 above, emissions of ozone precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$ from construction and operation would be below the SCAQMD's thresholds of significance. These thresholds are designed to provide limits below which project emissions from an individual project would not significantly affect regional air quality or the timely attainment of the NAAQS and CAAQS. Therefore, the project would not result in a cumulatively considerable net increase in emissions of ozone, PM_{10}, or $PM_{2.5}$, and impacts would be less than significant.

3. *Would the project expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates?*

A sensitive receptor is a person in the population who is more susceptible to health effects due to exposure to an air contaminant than is the population at large. Examples of sensitive receptor locations in the community include residences, schools, playgrounds, childcare centers, churches, athletic facilities, retirement homes, and long-term health care facilities. The nearest sensitive receptors are the residential uses located approximately 40 feet south of the southern project boundary and the church located approximately 70 feet east of the eastern project boundary.

Diesel Particulate Matter – Construction

Construction of the project would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. Other construction-related sources of DPM include material delivery trucks and construction worker vehicles; however, these sources are minimal relative to construction equipment. Not all construction worker vehicles would be diesel-fueled and most DPM emissions associated with material delivery trucks and construction worker vehicles would occur off-site.

For purposes of analyzing construction-related toxic air contaminant emissions and their impact on sensitive receptors, the maximum annual PM_{10} emissions from equipment exhaust were used to develop an average daily emission rate. The exhaust emissions were calculated by CalEEMod, and the maximum annual DPM concentration was calculated using AERSCREEN. AERSCREEN calculates

a worst-case maximum 1-hour concentration at a specific distance and specific angle from the source. The maximum 1-hour concentration is then converted to an annual concentration using a 0.08 conversion factor (U.S. Environmental Protection Agency [U.S. EPA] 1992).

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups: third trimester of pregnancy, 0<2, 2<9, 2<16, 16<30 and 16–70 years. The equation for dose through inhalation (Dose-air) is as follows:

Dose-air = (C_{air} x DBR × A × EF × 10^{-6});
Where:

Dose-air	=	Chronic daily intake, mg/kg/d
C_{air}	=	Ground-level concentration of toxic air contaminants to which the receptor is exposed, micrograms/cubic meter
DBR	=	Daily breathing rate, normalized to body weight (liters per kilogram body weight per day (Office of Environmental Health Hazard Assessment [OEHHA] 2015)
A	=	Inhalation absorption factor (OEHHA recommended factor of 1)
EF	=	Exposure frequency, days/year (OEHHA recommended factor of 0.96 for resident and 0.68 for workers)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. The excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. The worst-case cancer risk is calculated as follows:

Excess Cancer Risk = Dose-air × CPF × ASF × ED/AT × FAH;
Where:

Dose-air	=	Chronic daily intake, mg/kg body weight per day
CPF	=	Cancer potency factor (mg/kg/d)
ASF	=	Age sensitivity factor
ED	=	Exposure duration (years)
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time at home

Non-cancer risks are defined as chronic or acute. With respect to DPM only chronic risks are calculated and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels. Where the total equals or exceeds one, a health hazard is presumed to exist.

In this analysis, non-carcinogenic impacts are evaluated for chronic exposure inhalation exposure. Estimates of health impacts from non-carcinogenic concentrations are expressed as a hazard

quotient (HQ) for individual substances, such as diesel particulate. An HQ of one or less indicates that adverse health effects are not expected to result from exposure to emissions of that substance. Reference Exposure Levels are defined as the concentration at which no adverse health effects are anticipated. Generally, the inhalation pathway is the largest contributor to the total dose. The HQ is calculated with the flowing equation:

HQ = Ground-Level Concentration ($\mu g/m^3$)/Reference Exposure Level ($\mu g/m^3$)

It should also be noted that all construction equipment is subject to the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation. This regulation, which applies to all off-road diesel vehicles 25 horsepower or greater, limits unnecessary idling to five minutes, requires all construction fleets to be labeled and reported to CARB, bans Tier 0 equipment and phases out Tier 1 and 2 equipment (thereby replacing fleets with cleaner equipment), and requires that fleets comply with Best Available Control Technology requirements.

Based on the CalEEMod calculations for project construction, the project would result in on-site maximum annual emissions of 0.0916 ton of PM_{10} exhaust. This maximum annual emissions rate was modeled over the entire 13-month construction period, and therefore is a conservative assessment. Based on AERSCREEN modeling results, the maximum 1-hour ground-level DPM concentration from construction activities would be 0.0894 micrograms per cubic meter ($\mu g/m^3$). This was converted to an annual average concentration of 0.00715 $\mu g/m^3$ using a conversion factor of 0.08 (U.S. EPA 1992). The resulting annual concentration was used in the equations discussed above. Using this methodology, it was calculated that the excess cancer risk would be 1.38 in a million. AERSCREEN and cancer risk calculations are provided in Attachment 2. DPM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer. Additionally, the HQ would be 0.0014, which is less than one. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with diesel particulate matter during construction that could result in excess cancer risks, and impacts would be less than significant.

Diesel Particulate Matter – Freeway

As discussed in Section 3.2.2 above, the CARB handbook indicates that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day should be avoided when possible. The project site is located adjacent to Alessandro Boulevard and Lasselle Street. However, based on the future traffic projections provided in the City's 2040 General Plan Final Environmental Impact Report (EIR), traffic volumes on these roadways would be well less than 100,000 vehicles per day (City of Moreno Valley 2021c). Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with diesel particulate matter during operation, and impacts would be less than significant.

Carbon Monoxide Hot Spots

A CO hot spot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near congested intersections where idling and queuing occurs. Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Therefore, more

recent screening procedures based on more current methodologies have been developed. The Sacramento Metropolitan Air Quality Management District developed a screening threshold in 2011, which states that any project involving an intersection experiencing 31,600 vehicles per hour or more will require detailed analysis. In addition, the Bay Area Air Quality Management District developed a screening threshold in 2010 which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis. This analysis conservatively assesses potential CO hot spots using the Sacramento Metropolitan Air Quality Management District screening threshold of 31,600 vehicles per hour.

As discussed in Section 6.2.1 above, the project would generate 647 daily trips. Future year 2040 traffic volumes were obtained from the noise analysis prepared as part of the Final EIR prepared for the City's 2040 General Plan (City of Moreno Valley 2021c). Based on this analysis, Alessandro Boulevard would carry 22,460 to 26,745 ADT and Lasselle Street would carry 10,843 to 15,233 ADT in the vicinity of the project site. Peak hour volumes are typically 10 percent of the ADT. Based on this, the hourly turning volumes at nearby intersections are projected to be well less than 31,600 vehicles per hour. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with a CO hot spot, and impacts would be less than significant.

Would the project result in other emissions, such as those leading to odors adversely affecting a substantial number of people?

The potential for an odor impact is dependent on a number of variables, including the nature of the odor source, distance between the receptor and odor source, and local meteorological conditions. During construction, construction equipment may generate some nuisance odors. Sensitive receptors near the project site include residential uses and a church; however, exposure to odors associated with project construction would be short term and temporary in nature. Further, per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons. Therefore, project construction would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

The following list provides some common types of facilities that are known producers of objectionable odors (Bay Area Air Quality Management District 2017). This list of facilities is not meant to be all-inclusive.

- Wastewater Treatment Plant
- Wastewater Pumping Facilities
- Sanitary Landfill
- Transfer Station
- Composting Facility
- Petroleum Refinery
- Asphalt Batch Plant
- Chemical Manufacturing
- Fiberglass Manufacturing
- Painting/Coating Operations
- Rendering Plant

- Coffee Roaster
- Food Processing Facility
- Confined Animal Facility/Feed Lot/Dairy
- Green Waste and Recycling Operations
- Metal Smelting Plants

The project does not include any of these uses that are typically associated with odor complaints. The project does not propose any uses or activities that would result in potentially significant operational-source odor impacts. Additionally, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances. Therefore, project operation would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

7.0 Conclusions

The project's potential to result in impacts to air quality was assessed in accordance with the guidelines, policies, and standards established by the City and the SCAQMD. The SCAQMD prepared the 2016 AQMP, which represents its contribution to the SIP, to outline the district's strategy for achieving attainment of federal and state AAQS. The 2016 AQMP provides an overview of air quality and sources of air pollution, and identifies the pollution-control measures needed to meet clean air standards. As discussed in this analysis, the project would generate fewer vehicle trips compared to a commercial office project developed under the 2006 General Plan designation, and thereby generate fewer emissions compared to what was assumed in the 2016 AQMP. The project would, therefore, not result in an exceedance of the growth forecasting used to develop the 2016 AQMP. Additionally, the project would not result in an air quality violation. Therefore, the project would not conflict with or obstruct the implementation of the 2016 AQMP or applicable portions of the SIP, and impacts would be less than significant.

As shown in Tables 5 and 6 above, project construction and operation would not exceed the SCAQMD's thresholds of significance. Therefore, the project would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations, and impacts would be less than significant.

On-site emissions during construction and operation would be less than the SCAQMD LSTs. Project construction would not result in the exposure of sensitive receptors to significant levels of DPM that could result in excess cancer risks. The project would not introduce site sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day, and would not result in the creation of a CO hot spot. Therefore, construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

During construction, potential odor sources would be associated with construction equipment; however, exposure to odors associated with project construction would be short term and temporary in nature. Operation of the project would not include any uses that would generate substantial odors. Therefore, the project would not generate odors adversely affecting a substantial number of people, and impacts would be less than significant.

8.0 References Cited

Bay Area Air Quality Management District
2017 California Environmental Quality Act Air Quality Guidelines. May.

California Air Pollution Control Officers Association (CAPCOA)
2021 California Emissions Estimator model (CalEEMod). User's Guide Version 2020.4.0. May 2021.

2022 California Emissions Estimator Model (CalEEMod). User's Guide Version 2022.1. April.

California Air Resources Board (CARB)
2000 Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. California Air Resources Board. Stationary Source Division, Mobile Source Control Division. October.

2005 Air Quality and Land Use Handbook: A Community Health Perspective. California Air Resources Board. April.

2016 Ambient Air Quality Standards. California Air Resources Board. October 1.

2022 California Air Quality Data Statistics. California Air Resources Board Internet Site. http://www.arb.ca.gov/adam/welcome.html. Accessed September 20, 2022.

K2 Traffic Engineering, Inc.
2022 Flamingo Bay Project Scoping Form. Prepared on September 22, 2022.

Moreno Valley, City of
2021a General Plan 2040. Adopted June 15, 2021.

2021b Climate Action Plan. Adopted June 15, 2021.

2021c Final Environmental Impact Report for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan. SCH #2020039022. May 20, 2021.

Office of Environmental Health Hazard Assessment (OEHHA)
2015 Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual), February.

South Coast Air Quality Management District (SCAQMD)
1993 SCAQMD CEQA Air Handbook. November.

2005 Sample Construction Scenarios for Projects Less Than Five Acres in Size. February 2005.

2008 Final Localized Significance Threshold Methodology. July.

2015 SCAQMD Air Quality Significance Thresholds. Updated March 2015.

Southern California Association of Governments (SCAG)
2020 Connect SoCal – The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.

Western Regional Climate Center
2020 Western U.S. Climate Historical Summaries. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5326 and https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6816.

U.S. Environmental Protection Agency (U.S. EPA)
1992 Screening Procedures for Estimating the Air Quality Impact of Stationary Sources.

ATTACHMENTS

ATTACHMENT 1

CalEEMod Output

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10112 Flamingo Bay

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.39	Acre	1.39	60,548.40	0
Apartments Mid Rise	96.00	Dwelling Unit	2.71	100,880.00	275

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	453.21	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Moreno Valley Electric Utility intensity factors obtained from CalEEMod Version 2022

Land Use - 96 units
98,290 sf + 2,588 sf clubhouse
4.1 acres

Construction Phase -

Vehicle Trips - 6.74 weekday trips/unit

Woodstoves - No woodstoves or fireplaces

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	81.60	0.00
tblFireplaces	NumberNoFireplace	9.60	94.00
tblFireplaces	NumberWood	4.80	0.00
tblLandUse	LandUseSquareFeet	96,000.00	100,880.00
tblLandUse	LotAcreage	2.53	2.71
tblProjectCharacteristics	CH4IntensityFactor	0	0.033
tblProjectCharacteristics	CO2IntensityFactor	0	453.21
tblProjectCharacteristics	N2OIntensityFactor	0	0.004
tblVehicleTrips	ST_TR	4.91	6.08
tblVehicleTrips	SU_TR	4.09	5.07
tblVehicleTrips	WD_TR	5.44	6.74
tblWoodstoves	NumberCatalytic	4.80	0.00
tblWoodstoves	NumberNoncatalytic	4.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7211	27.5663	19.3521	0.0397	19.8582	1.2670	21.1252	10.1558	1.1656	11.3214	0.0000	3,851.4160	3,851.4160	1.1967	0.0778	3,882.6207
2024	36.2455	8.3148	12.7791	0.0207	0.2236	0.3997	0.6232	0.0593	0.3694	0.4287	0.0000	1,983.5962	1,983.5962	0.5715	4.4600e-003	1,999.2126
Maximum	**36.2455**	**27.5663**	**19.3521**	**0.0397**	**19.8582**	**1.2670**	**21.1252**	**10.1558**	**1.1656**	**11.3214**	**0.0000**	**3,851.4160**	**3,851.4160**	**1.1967**	**0.0778**	**3,882.6207**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7211	27.5663	19.3521	0.0397	7.8674	1.2670	9.1344	3.9933	1.1656	5.1589	0.0000	3,851.4160	3,851.4160	1.1967	0.0778	3,882.6207
2024	36.2455	8.3148	12.7791	0.0207	0.2236	0.3997	0.6232	0.0593	0.3694	0.4287	0.0000	1,983.5962	1,983.5962	0.5715	4.4600e-003	1,999.2126
Maximum	**36.2455**	**27.5663**	**19.3521**	**0.0397**	**7.8674**	**1.2670**	**9.1344**	**3.9933**	**1.1656**	**5.1589**	**0.0000**	**3,851.4160**	**3,851.4160**	**1.1967**	**0.0778**	**3,882.6207**

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	59.71	0.00	55.13	60.33	0.00	52.45	0.00	0.00	0.00	0.00	0.00	0.00

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034
Energy	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Mobile	1.7181	2.7929	17.5071	0.0426	4.6716	0.0350	4.7067	1.2463	0.0328	1.2792		4,407.2901	4,407.2901	0.2279	0.2180	4,477.9600
Total	**4.1934**	**3.2328**	**25.5724**	**0.0452**	**4.6716**	**0.1071**	**4.7787**	**1.2463**	**0.1049**	**1.3512**	**0.0000**	**4,866.5758**	**4,866.5758**	**0.2501**	**0.2262**	**4,940.2324**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034
Energy	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Mobile	1.7181	2.7929	17.5071	0.0426	4.6716	0.0350	4.7067	1.2463	0.0328	1.2792		4,407.2901	4,407.2901	0.2279	0.2180	4,477.9600
Total	**4.1934**	**3.2328**	**25.5724**	**0.0452**	**4.6716**	**0.1071**	**4.7787**	**1.2463**	**0.1049**	**1.3512**	**0.0000**	**4,866.5758**	**4,866.5758**	**0.2501**	**0.2262**	**4,940.2324**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/7/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 1.39

Residential Indoor: 204,282; Residential Outdoor: 68,094; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,633 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	95.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0422	0.5362	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		164.1079	164.1079	4.1200e-003	4.3200e-003	165.4988
Total	**0.0616**	**0.0422**	**0.5362**	**1.6000e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**164.1079**	**164.1079**	**4.1200e-003**	**4.3200e-003**	**165.4988**

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.6662**	**1.2660**	**8.9323**	**3.9400**	**1.1647**	**5.1047**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0422	0.5362	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		164.1079	164.1079	4.1200e-003	4.3200e-003	165.4988
Total	**0.0616**	**0.0422**	**0.5362**	**1.6000e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**164.1079**	**164.1079**	**4.1200e-003**	**4.3200e-003**	**165.4988**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0826**	**0.7749**	**7.8575**	**3.4247**	**0.7129**	**4.1377**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0514**	**0.0351**	**0.4468**	**1.3400e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**136.7566**	**136.7566**	**3.4300e-003**	**3.6000e-003**	**137.9157**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.7622**	**0.7749**	**3.5371**	**1.3357**	**0.7129**	**2.0486**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0514**	**0.0351**	**0.4468**	**1.3400e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**136.7566**	**136.7566**	**3.4300e-003**	**3.6000e-003**	**137.9157**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0209	0.6930	0.2781	3.5000e-003	0.1281	5.7100e-003	0.1338	0.0369	5.4600e-003	0.0424		371.4616	371.4616	3.7000e-003	0.0549	387.9255
Worker	0.3253	0.2225	2.8300	8.4600e-003	1.0619	4.9800e-003	1.0669	0.2816	4.5900e-003	0.2862		866.1248	866.1248	0.0218	0.0228	873.4659
Total	**0.3462**	**0.9155**	**3.1081**	**0.0120**	**1.1900**	**0.0107**	**1.2007**	**0.3185**	**0.0101**	**0.3286**		**1,237.5864**	**1,237.5864**	**0.0255**	**0.0778**	**1,261.3914**

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0209	0.6930	0.2781	3.5000e-003	0.1281	5.7100e-003	0.1338	0.0369	5.4600e-003	0.0424		371.4616	371.4616	3.7000e-003	0.0549	387.9255
Worker	0.3253	0.2225	2.8300	8.4600e-003	1.0619	4.9800e-003	1.0669	0.2816	4.5900e-003	0.2862		866.1248	866.1248	0.0218	0.0228	873.4659
Total	**0.3462**	**0.9155**	**3.1081**	**0.0120**	**1.1900**	**0.0107**	**1.2007**	**0.3185**	**0.0101**	**0.3286**		**1,237.5864**	**1,237.5864**	**0.0255**	**0.0778**	**1,261.3914**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1204**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0685	0.0469	0.5958	1.7800e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		182.3421	182.3421	4.5800e-003	4.8000e-003	183.8876
Total	**0.0685**	**0.0469**	**0.5958**	**1.7800e-003**	**0.2236**	**1.0500e-003**	**0.2246**	**0.0593**	**9.7000e-004**	**0.0603**		**182.3421**	**182.3421**	**4.5800e-003**	**4.8000e-003**	**183.8876**

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1204**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0685	0.0469	0.5958	1.7800e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		182.3421	182.3421	4.5800e-003	4.8000e-003	183.8876
Total	**0.0685**	**0.0469**	**0.5958**	**1.7800e-003**	**0.2236**	**1.0500e-003**	**0.2246**	**0.0593**	**9.7000e-004**	**0.0603**		**182.3421**	**182.3421**	**4.5800e-003**	**4.8000e-003**	**183.8876**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0837**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0641	0.0417	0.5581	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		177.9757	177.9757	4.1600e-003	4.4600e-003	179.4087
Total	**0.0641**	**0.0417**	**0.5581**	**1.7300e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**177.9757**	**177.9757**	**4.1600e-003**	**4.4600e-003**	**179.4087**

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0837**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0641	0.0417	0.5581	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		177.9757	177.9757	4.1600e-003	4.4600e-003	179.4087
Total	**0.0641**	**0.0417**	**0.5581**	**1.7300e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**177.9757**	**177.9757**	**4.1600e-003**	**4.4600e-003**	**179.4087**

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.0039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**36.1847**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0608	0.0397	0.5302	1.6400e-003	0.2124	9.5000e-004	0.2133	0.0563	8.8000e-004	0.0572		169.0769	169.0769	3.9500e-003	4.2400e-003	170.4383
Total	**0.0608**	**0.0397**	**0.5302**	**1.6400e-003**	**0.2124**	**9.5000e-004**	**0.2133**	**0.0563**	**8.8000e-004**	**0.0572**		**169.0769**	**169.0769**	**3.9500e-003**	**4.2400e-003**	**170.4383**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.0039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**36.1847**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0608	0.0397	0.5302	1.6400e-003	0.2124	9.5000e-004	0.2133	0.0563	8.8000e-004	0.0572		169.0769	169.0769	3.9500e-003	4.2400e-003	170.4383
Total	**0.0608**	**0.0397**	**0.5302**	**1.6400e-003**	**0.2124**	**9.5000e-004**	**0.2133**	**0.0563**	**8.8000e-004**	**0.0572**		**169.0769**	**169.0769**	**3.9500e-003**	**4.2400e-003**	**170.4383**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7181	2.7929	17.5071	0.0426	4.6716	0.0350	4.7067	1.2463	0.0328	1.2792		4,407.2901	4,407.2901	0.2279	0.2180	4,477.9600
Unmitigated	1.7181	2.7929	17.5071	0.0426	4.6716	0.0350	4.7067	1.2463	0.0328	1.2792		4,407.2901	4,407.2901	0.2279	0.2180	4,477.9600

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	647.04	583.68	486.72	2,101,841	2,101,841
Parking Lot	0.00	0.00	0.00		
Total	647.04	583.68	486.72	2,101,841	2,101,841

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
NaturalGas Unmitigated	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3782.71	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0408**	**0.3486**	**0.1483**	**2.2300e-003**		**0.0282**	**0.0282**		**0.0282**	**0.0282**		**445.0244**	**445.0244**	**8.5300e-003**	**8.1600e-003**	**447.6690**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.78271	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0408**	**0.3486**	**0.1483**	**2.2300e-003**		**0.0282**	**0.0282**		**0.0282**	**0.0282**		**445.0244**	**445.0244**	**8.5300e-003**	**8.1600e-003**	**447.6690**

6.0 Area Detail

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034
Unmitigated	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034

10112 Flamingo Bay - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2381	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439		14.2613	14.2613	0.0137		14.6034
Total	**2.4345**	**0.0912**	**7.9169**	**4.2000e-004**		**0.0439**	**0.0439**		**0.0439**	**0.0439**	**0.0000**	**14.2613**	**14.2613**	**0.0137**	**0.0000**	**14.6034**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2381	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439		14.2613	14.2613	0.0137		14.6034
Total	**2.4345**	**0.0912**	**7.9169**	**4.2000e-004**		**0.0439**	**0.0439**		**0.0439**	**0.0439**	**0.0000**	**14.2613**	**14.2613**	**0.0137**	**0.0000**	**14.6034**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

10112 Flamingo Bay - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10112 Flamingo Bay

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.39	Acre	1.39	60,548.40	0
Apartments Mid Rise	96.00	Dwelling Unit	2.71	100,880.00	275

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	453.21	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Moreno Valley Electric Utility intensity factors obtained from CalEEMod Version 2022

Land Use - 96 units
98,290 sf + 2,588 sf clubhouse
4.1 acres

Construction Phase -

Vehicle Trips - 6.74 weekday trips/unit

Woodstoves - No woodstoves or fireplaces

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	81.60	0.00
tblFireplaces	NumberNoFireplace	9.60	94.00
tblFireplaces	NumberWood	4.80	0.00
tblLandUse	LandUseSquareFeet	96,000.00	100,880.00
tblLandUse	LotAcreage	2.53	2.71
tblProjectCharacteristics	CH4IntensityFactor	0	0.033
tblProjectCharacteristics	CO2IntensityFactor	0	453.21
tblProjectCharacteristics	N2OIntensityFactor	0	0.004
tblVehicleTrips	ST_TR	4.91	6.08
tblVehicleTrips	SU_TR	4.09	5.07
tblVehicleTrips	WD_TR	5.44	6.74
tblWoodstoves	NumberCatalytic	4.80	0.00
tblWoodstoves	NumberNoncatalytic	4.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

10112 Flamingo Bay - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7252	27.5648	19.9982	0.0398	19.8582	1.2670	21.1252	10.1558	1.1656	11.3214	0.0000	3,881.6448	3,881.6448	1.1967	0.0771	3,920.4395
2024	36.2494	8.3133	12.9080	0.0208	0.2236	0.3997	0.6232	0.0593	0.3694	0.4287	0.0000	2,002.0056	2,002.0056	0.5715	4.3600e-003	2,017.5920
Maximum	**36.2494**	**27.5648**	**19.9982**	**0.0398**	**19.8582**	**1.2670**	**21.1252**	**10.1558**	**1.1656**	**11.3214**	**0.0000**	**3,881.6448**	**3,881.6448**	**1.1967**	**0.0771**	**3,920.4395**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.7252	27.5648	19.9982	0.0398	7.8674	1.2670	9.1344	3.9933	1.1656	5.1589	0.0000	3,881.6448	3,881.6448	1.1967	0.0771	3,920.4395
2024	36.2494	8.3133	12.9080	0.0208	0.2236	0.3997	0.6232	0.0593	0.3694	0.4287	0.0000	2,002.0056	2,002.0056	0.5715	4.3600e-003	2,017.5920
Maximum	**36.2494**	**27.5648**	**19.9982**	**0.0398**	**7.8674**	**1.2670**	**9.1344**	**3.9933**	**1.1656**	**5.1589**	**0.0000**	**3,881.6448**	**3,881.6448**	**1.1967**	**0.0771**	**3,920.4395**

10112 Flamingo Bay - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	59.71	0.00	55.13	60.33	0.00	52.45	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034
Energy	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Mobile	2.0152	2.6334	19.8210	0.0459	4.6716	0.0350	4.7066	1.2463	0.0328	1.2791		4,746.7717	4,746.7717	0.2229	0.2136	4,815.9883
Total	**4.4905**	**3.0732**	**27.8863**	**0.0485**	**4.6716**	**0.1071**	**4.7787**	**1.2463**	**0.1049**	**1.3512**	**0.0000**	**5,206.0575**	**5,206.0575**	**0.2452**	**0.2217**	**5,278.2607**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034
Energy	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Mobile	2.0152	2.6334	19.8210	0.0459	4.6716	0.0350	4.7066	1.2463	0.0328	1.2791		4,746.7717	4,746.7717	0.2229	0.2136	4,815.9883
Total	**4.4905**	**3.0732**	**27.8863**	**0.0485**	**4.6716**	**0.1071**	**4.7787**	**1.2463**	**0.1049**	**1.3512**	**0.0000**	**5,206.0575**	**5,206.0575**	**0.2452**	**0.2217**	**5,278.2607**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/7/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 1.39

Residential Indoor: 204,282; Residential Outdoor: 68,094; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,633 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	95.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0658	0.0406	0.6603	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		181.1165	181.1165	4.1400e-003	4.2200e-003	182.4783
Total	**0.0658**	**0.0406**	**0.6603**	**1.7700e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**181.1165**	**181.1165**	**4.1400e-003**	**4.2200e-003**	**182.4783**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.6662**	**1.2660**	**8.9323**	**3.9400**	**1.1647**	**5.1047**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0658	0.0406	0.6603	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		181.1165	181.1165	4.1400e-003	4.2200e-003	182.4783
Total	**0.0658**	**0.0406**	**0.6603**	**1.7700e-003**	**0.2012**	**9.4000e-004**	**0.2021**	**0.0534**	**8.7000e-004**	**0.0542**		**181.1165**	**181.1165**	**4.1400e-003**	**4.2200e-003**	**182.4783**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0826**	**0.7749**	**7.8575**	**3.4247**	**0.7129**	**4.1377**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0548**	**0.0339**	**0.5503**	**1.4700e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**150.9305**	**150.9305**	**3.4500e-003**	**3.5200e-003**	**152.0653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**2.7622**	**0.7749**	**3.5371**	**1.3357**	**0.7129**	**2.0486**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0548	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0548**	**0.0339**	**0.5503**	**1.4700e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**150.9305**	**150.9305**	**3.4500e-003**	**3.5200e-003**	**152.0653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0225	0.6534	0.2691	3.4900e-003	0.1281	5.6900e-003	0.1338	0.0369	5.4400e-003	0.0423		370.5420	370.5420	3.7800e-003	0.0548	386.9535
Worker	0.3471	0.2145	3.4852	9.3400e-003	1.0619	4.9800e-003	1.0669	0.2816	4.5900e-003	0.2862		955.8929	955.8929	0.0218	0.0223	963.0800
Total	**0.3696**	**0.8679**	**3.7542**	**0.0128**	**1.1900**	**0.0107**	**1.2007**	**0.3185**	**0.0100**	**0.3285**		**1,326.4349**	**1,326.4349**	**0.0256**	**0.0771**	**1,350.0335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0225	0.6534	0.2691	3.4900e-003	0.1281	5.6900e-003	0.1338	0.0369	5.4400e-003	0.0423		370.5420	370.5420	3.7800e-003	0.0548	386.9535
Worker	0.3471	0.2145	3.4852	9.3400e-003	1.0619	4.9800e-003	1.0669	0.2816	4.5900e-003	0.2862		955.8929	955.8929	0.0218	0.0223	963.0800
Total	**0.3696**	**0.8679**	**3.7542**	**0.0128**	**1.1900**	**0.0107**	**1.2007**	**0.3185**	**0.0100**	**0.3285**		**1,326.4349**	**1,326.4349**	**0.0256**	**0.0771**	**1,350.0335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1204**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0731	0.0452	0.7337	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		201.2406	201.2406	4.5900e-003	4.6900e-003	202.7537
Total	**0.0731**	**0.0452**	**0.7337**	**1.9700e-003**	**0.2236**	**1.0500e-003**	**0.2246**	**0.0593**	**9.7000e-004**	**0.0603**		**201.2406**	**201.2406**	**4.5900e-003**	**4.6900e-003**	**202.7537**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1204**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0731	0.0452	0.7337	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		201.2406	201.2406	4.5900e-003	4.6900e-003	202.7537
Total	**0.0731**	**0.0452**	**0.7337**	**1.9700e-003**	**0.2236**	**1.0500e-003**	**0.2246**	**0.0593**	**9.7000e-004**	**0.0603**		**201.2406**	**201.2406**	**4.5900e-003**	**4.6900e-003**	**202.7537**

10112 Flamingo Bay - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0837**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**		**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0681	0.0402	0.6870	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		196.3851	196.3851	4.1600e-003	4.3600e-003	197.7882
Total	**0.0681**	**0.0402**	**0.6870**	**1.9000e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**196.3851**	**196.3851**	**4.1600e-003**	**4.3600e-003**	**197.7882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.2023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0837**	**8.2730**	**12.2210**	**0.0189**		**0.3987**	**0.3987**		**0.3685**	**0.3685**	**0.0000**	**1,805.6205**	**1,805.6205**	**0.5673**		**1,819.8039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0681	0.0402	0.6870	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		196.3851	196.3851	4.1600e-003	4.3600e-003	197.7882
Total	**0.0681**	**0.0402**	**0.6870**	**1.9000e-003**	**0.2236**	**1.0000e-003**	**0.2246**	**0.0593**	**9.2000e-004**	**0.0602**		**196.3851**	**196.3851**	**4.1600e-003**	**4.3600e-003**	**197.7882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.0039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**36.1847**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0647	0.0382	0.6527	1.8100e-003	0.2124	9.5000e-004	0.2133	0.0563	8.8000e-004	0.0572		186.5658	186.5658	3.9500e-003	4.1400e-003	187.8988
Total	**0.0647**	**0.0382**	**0.6527**	**1.8100e-003**	**0.2124**	**9.5000e-004**	**0.2133**	**0.0563**	**8.8000e-004**	**0.0572**		**186.5658**	**186.5658**	**3.9500e-003**	**4.1400e-003**	**187.8988**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.0039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**36.1847**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0647	0.0382	0.6527	1.8100e-003	0.2124	9.5000e-004	0.2133	0.0563	8.8000e-004	0.0572		186.5658	186.5658	3.9500e-003	4.1400e-003	187.8988
Total	**0.0647**	**0.0382**	**0.6527**	**1.8100e-003**	**0.2124**	**9.5000e-004**	**0.2133**	**0.0563**	**8.8000e-004**	**0.0572**		**186.5658**	**186.5658**	**3.9500e-003**	**4.1400e-003**	**187.8988**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0152	2.6334	19.8210	0.0459	4.6716	0.0350	4.7066	1.2463	0.0328	1.2791		4,746.7717	4,746.7717	0.2229	0.2136	4,815.9883
Unmitigated	2.0152	2.6334	19.8210	0.0459	4.6716	0.0350	4.7066	1.2463	0.0328	1.2791		4,746.7717	4,746.7717	0.2229	0.2136	4,815.9883

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	647.04	583.68	486.72	2,101,841	2,101,841
Parking Lot	0.00	0.00	0.00		
Total	647.04	583.68	486.72	2,101,841	2,101,841

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
NaturalGas Unmitigated	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3782.71	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0408**	**0.3486**	**0.1483**	**2.2300e-003**		**0.0282**	**0.0282**		**0.0282**	**0.0282**		**445.0244**	**445.0244**	**8.5300e-003**	**8.1600e-003**	**447.6690**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.78271	0.0408	0.3486	0.1483	2.2300e-003		0.0282	0.0282		0.0282	0.0282		445.0244	445.0244	8.5300e-003	8.1600e-003	447.6690
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0408**	**0.3486**	**0.1483**	**2.2300e-003**		**0.0282**	**0.0282**		**0.0282**	**0.0282**		**445.0244**	**445.0244**	**8.5300e-003**	**8.1600e-003**	**447.6690**

6.0 Area Detail

10112 Flamingo Bay - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034
Unmitigated	2.4345	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439	0.0000	14.2613	14.2613	0.0137	0.0000	14.6034

10112 Flamingo Bay - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2381	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439		14.2613	14.2613	0.0137		14.6034
Total	**2.4345**	**0.0912**	**7.9169**	**4.2000e-004**		**0.0439**	**0.0439**		**0.0439**	**0.0439**	**0.0000**	**14.2613**	**14.2613**	**0.0137**	**0.0000**	**14.6034**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1776					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2381	0.0912	7.9169	4.2000e-004		0.0439	0.0439		0.0439	0.0439		14.2613	14.2613	0.0137		14.6034
Total	**2.4345**	**0.0912**	**7.9169**	**4.2000e-004**		**0.0439**	**0.0439**		**0.0439**	**0.0439**	**0.0000**	**14.2613**	**14.2613**	**0.0137**	**0.0000**	**14.6034**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT 2

Construction HRA/AERSCREEN Output

10112 Flamingo Bay
Construction DPM HRA

Construction Health Risk Calculations

Annual PM Exhaust Generation

Annual Tons/Year	Pounds/year	lbs/day	lbs/hr	g/day	sec/day	g/sec
0.0916	183.2	5.02E-01	2.09E-02	228	86,400	2.64E-03

Max 1-hour concentration	8.94E-02	µg/m^3
Annualized average concentration (0.08)	7.15E-03	µg/m^3

Onsite Maximum Exposure	3rd Trimester	0<2	2<9	2<16	16<30	16-70
Cair	7.15E-03	7.15E-03	7.15E-03	7.15E-03	7.15E-03	7.15E-03
DBR	361	1090	861	745	335	290
A	1	1	1	1	1	1
EF	0.96	0.96	0.96	0.96	0.96	0.96
Dose-air	2.48E-06	7.48E-06	5.91E-06	5.12E-06	2.30E-06	1.99E-06
CPF	1.10	1.10	1.10	1.10	1.10	1.10
ASF	10	10	3	3	1	1
ED (years of construction = 1.083)	0.25	1.083	1.083	1.083	1.083	1.083
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk in 1 mill	**0.08**	**1.08**	**0.22**	**0.19**	**0.03**	**0.02**
	5.00	5.00	5.00	5.00	5.00	5.00
Chronic Exposure	**0.0014**	**0.0014**	**0.0014**	**0.0014**	**0.0014**	**0.0014**
0-9	1.38	2.42				
0-30	1.38	3.50				
0-70	1.38	3.50				

AERSCREEN 11126 / AERMOD 1206 05/18/22
13:23:42

TITLE: FB_Construction

********** VOLUME PARAMETERS **********

SOURCE EMISSION RATE: 0.264E-02 g/s 0.210E-01 lb/hr
VOLUME HEIGHT: 5.00 meters 16.40 feet
INITIAL LATERAL DIMENSION: 95.00 meters 311.68 feet
INITIAL VERTICAL DIMENSION: 180.00 meters 590.55 feet
RURAL OR URBAN: URBAN
POPULATION: 20000

FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** PROBE ANALYSIS **********
25 meter receptor spacing: 205. meters - 5000. meters

Zo SECTOR	ROUGHNESS LENGTH	1-HR CONC (ug/m3)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.8940E-01	205.2	WIN

* = worst case flow sector

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	16	16	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-0.41	0.043	-9.000	0.020	-999.	21.	19.3	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR	MO	DY	JDY	HR
10	01	16	16	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-0.41	0.043	-9.000	0.020	-999.	21.	19.3	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

********** AERSCREEN AUTOMATED DISTANCES **********
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
205.25	0.8940E-01	2625.00	0.2385E-01
225.00	0.8541E-01	2650.00	0.2370E-01
250.00	0.8113E-01	2675.00	0.2354E-01
275.00	0.7749E-01	2700.00	0.2339E-01
300.00	0.7434E-01	2725.00	0.2324E-01
325.00	0.7158E-01	2750.00	0.2310E-01
350.00	0.6911E-01	2775.00	0.2295E-01
375.00	0.6690E-01	2800.00	0.2281E-01
400.00	0.6492E-01	2825.00	0.2267E-01
425.00	0.6358E-01	2850.00	0.2253E-01
450.00	0.6230E-01	2875.00	0.2240E-01
475.00	0.6108E-01	2900.00	0.2226E-01
500.00	0.5990E-01	2925.00	0.2213E-01
525.00	0.5877E-01	2950.00	0.2200E-01
550.00	0.5768E-01	2975.00	0.2187E-01
575.00	0.5664E-01	3000.00	0.2174E-01
600.00	0.5563E-01	3025.00	0.2161E-01
625.00	0.5465E-01	3050.00	0.2149E-01
650.00	0.5371E-01	3075.00	0.2137E-01
675.00	0.5281E-01	3100.00	0.2124E-01
700.00	0.5193E-01	3125.00	0.2112E-01
725.00	0.5109E-01	3150.00	0.2101E-01
750.00	0.5027E-01	3175.00	0.2089E-01
775.00	0.4948E-01	3200.00	0.2077E-01
800.00	0.4872E-01	3225.00	0.2066E-01
825.00	0.4798E-01	3250.00	0.2055E-01
850.00	0.4727E-01	3275.00	0.2043E-01
875.00	0.4657E-01	3300.00	0.2032E-01
900.00	0.4590E-01	3325.00	0.2022E-01
925.00	0.4525E-01	3350.00	0.2011E-01
950.00	0.4462E-01	3375.00	0.2000E-01
975.00	0.4401E-01	3400.00	0.1990E-01
1000.00	0.4341E-01	3425.00	0.1979E-01
1025.00	0.4283E-01	3450.00	0.1969E-01
1050.00	0.4227E-01	3475.00	0.1959E-01
1075.00	0.4173E-01	3500.00	0.1949E-01
1100.00	0.4120E-01	3525.00	0.1939E-01
1125.00	0.4068E-01	3550.00	0.1929E-01
1150.00	0.4018E-01	3575.00	0.1919E-01
1175.00	0.3969E-01	3600.00	0.1910E-01
1200.00	0.3921E-01	3625.00	0.1900E-01
1225.00	0.3875E-01	3650.00	0.1891E-01
1250.00	0.3830E-01	3675.00	0.1882E-01
1275.00	0.3786E-01	3700.00	0.1872E-01
1300.00	0.3743E-01	3725.00	0.1863E-01
1325.00	0.3701E-01	3750.00	0.1854E-01
1350.00	0.3660E-01	3775.00	0.1845E-01
1375.00	0.3620E-01	3800.00	0.1836E-01
1400.00	0.3581E-01	3825.00	0.1828E-01

1425.00	0.3543E-01	3850.00	0.1819E-01
1450.00	0.3506E-01	3875.00	0.1811E-01
1475.00	0.3470E-01	3900.00	0.1802E-01
1500.00	0.3434E-01	3925.00	0.1794E-01
1525.00	0.3400E-01	3950.00	0.1785E-01
1550.00	0.3366E-01	3975.00	0.1777E-01
1575.00	0.3333E-01	4000.00	0.1769E-01
1600.00	0.3300E-01	4025.00	0.1761E-01
1625.00	0.3269E-01	4050.00	0.1753E-01
1650.00	0.3237E-01	4075.00	0.1745E-01
1675.00	0.3207E-01	4100.00	0.1737E-01
1700.00	0.3177E-01	4125.00	0.1730E-01
1725.00	0.3148E-01	4150.00	0.1722E-01
1750.00	0.3119E-01	4175.00	0.1714E-01
1775.00	0.3091E-01	4200.00	0.1707E-01
1800.00	0.3064E-01	4225.00	0.1699E-01
1825.00	0.3037E-01	4250.00	0.1692E-01
1850.00	0.3011E-01	4275.00	0.1685E-01
1875.00	0.2985E-01	4300.00	0.1678E-01
1900.00	0.2959E-01	4325.00	0.1670E-01
1925.00	0.2934E-01	4350.00	0.1663E-01
1950.00	0.2910E-01	4375.00	0.1656E-01
1975.00	0.2886E-01	4400.00	0.1649E-01
2000.00	0.2862E-01	4425.00	0.1642E-01
2025.00	0.2839E-01	4450.00	0.1635E-01
2050.00	0.2816E-01	4475.00	0.1629E-01
2075.00	0.2794E-01	4500.00	0.1622E-01
2100.00	0.2772E-01	4525.00	0.1615E-01
2125.00	0.2750E-01	4550.00	0.1609E-01
2150.00	0.2729E-01	4575.00	0.1602E-01
2175.00	0.2708E-01	4600.00	0.1596E-01
2200.00	0.2688E-01	4625.00	0.1589E-01
2225.00	0.2668E-01	4650.00	0.1583E-01
2250.00	0.2648E-01	4675.00	0.1576E-01
2275.00	0.2628E-01	4700.00	0.1570E-01
2300.00	0.2609E-01	4725.00	0.1564E-01
2325.00	0.2590E-01	4750.00	0.1558E-01
2350.00	0.2572E-01	4775.00	0.1552E-01
2375.00	0.2553E-01	4800.00	0.1546E-01
2400.00	0.2535E-01	4825.00	0.1540E-01
2425.00	0.2518E-01	4850.00	0.1534E-01
2450.00	0.2500E-01	4875.00	0.1528E-01
2475.00	0.2483E-01	4900.00	0.1522E-01
2500.00	0.2466E-01	4925.00	0.1516E-01
2525.00	0.2449E-01	4950.00	0.1510E-01
2550.00	0.2433E-01	4975.00	0.1505E-01
2575.00	0.2417E-01	5000.00	0.1499E-01
2600.00	0.2401E-01		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	8.94E-02	8.94E-02	8.05E-02	5.36E-02	8.94E-03

DISTANCE FROM SOURCE 205.25 meters

IMPACT AT THE AMBIENT BOUNDARY	0.8940E-01	0.8940E-01	0.8046E-01	0.5364E-01	0.8940E-02

DISTANCE FROM SOURCE 205.25 meters