Technical Appendix H3

Site Access Evaluation

URBAN CROSSROADS

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March 13, 2014

Ms. Tracy Zinn
T&B Planning
17542 East 17th Street, Suite 100
Tustin, CA 92780

SUBJECT: MODULAR LOGISTICS CENTER SITE ACCESS EVALUATION

Dear Ms. Tracy Zinn:

Urban Crossroads, Inc. is pleased to submit this Site Access Evaluation for the proposed Modular Logistics Center development ("Project"), which is located on the northeast corner of Perris Boulevard and Modular Way in the City of Moreno Valley. The Project consists of a 1,109,378 square foot high-cube warehouse/distribution center building. The preliminary site plan is illustrated on Exhibit 1.

The Project is proposing to accommodate truck access at the intersection of Perris Boulevard and San Michele Road/Driveway. The Modular Logistics Traffic Impact Analysis (revised February 27, 2014) (referred to as "2014 Traffic Study") assumed only passenger car access at this intersection. As such, this site access evaluation has been prepared to determine if the intersection of Perris Boulevard at San Michele Road/Driveway would operate at acceptable peak hour operations and provide sufficient storage to accommodate 95th percentile peak hour queues with the addition of truck traffic.

SUMMARY OF FINDINGS

The intersection of Perris Boulevard and San Michele Road/Driveway is anticipated to operate at acceptable levels of service (LOS) during the peak hours with the addition of Project truck traffic for Existing plus Project (E+P) and Opening Year Cumulative (2018) traffic conditions. This finding is consistent with the 2014 Traffic Study. The queuing analysis at the intersection of Perris Boulevard and San Michele Road/Driveway indicates that the driveway throat length is sufficient to accommodate the 95th percentile queues for both Existing plus Project and Opening Year Cumulative (2018) traffic conditions. As shown on Exhibit 1, the driveway throat length is approximately 108 feet. In addition, the drive aisles adjacent to the building also provide additional stacking for trucks. As shown on Exhibit 1, there is approximately 428 feet to the north of the driveway and 125 feet to the south of the driveway.

PROJECT TRIP DISTRIBUTION

Based on discussions with City staff, the truck distribution has been modified to accommodate 5 percent of trucks inbound from the north, 10 percent inbound and outbound from the west on San Michele and 15 percent inbound and outbound from the south on Perris Boulevard. The passenger car

distribution remains unchanged from that presented in the 2014 Traffic Study. The trip generation for the proposed Project is also consistent with that presented in the 2014 Traffic Study.

PEAK HOUR INTERSECTION OPERATIONS

The intersection analysis has been performed consistent with the methodology utilized in the 2014 Traffic Study. The E+P scenario includes the addition of Project traffic to Existing (2013) traffic volumes. The Opening Year Cumulative (2018) scenario includes Existing (2013) traffic volumes, an ambient growth factor of 10.4%, traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project traffic. The volumes utilized for the purposes of this analysis are consistent with the E+P and Opening Year Cumulative (2018) With Project traffic volumes from the 2014 Traffic Study in conjunction with the addition of Project truck traffic.

LOS calculations were conducted for the intersection of Perris Boulevard and San Michele Road/Driveway to evaluate the peak hour operations under E+P and Opening Year Cumulative (2018) With Project conditions with the addition of Project truck traffic. The intersection analysis results are summarized in Table 1 for E+P traffic conditions and Table 2 for Opening Year Cumulative (2018) traffic conditions which indicates that the intersection of Perris Boulevard and San Michele Road/Driveway is anticipated to operate at acceptable LOS during both peak hours for E+P and Opening Year Cumulative (2018) With Project traffic conditions. As shown on Table 1 and Table 2, this finding is consistent with the 2014 Traffic Study.

TABLE 1: INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

#	Intersection	Traffic Control[2]	2014 Traffic Study				With Truck Traffic			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Perris Bl. / St. Michele Rd.-Driveway	TS	30.2	28.1	C	C	30.2	28.1	C	C

[1] Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal

TABLE 2: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2018) WITH PROJECT CONDITIONS

#	Intersection	Traffic Control[2]	2014 Traffic Study				With Truck Traffic			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Perris Bl. / San Michele Rd.-Driveway	TS	39.7	37.5	D	D	39.8	37.6	D	D

[1] Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal

The intersection operations analysis worksheets for E+P conditions, with Project truck traffic, are included in Attachment "A" of this letter. The intersection operations analysis worksheets for Opening Year Cumulative (2018) With Project conditions, with Project truck traffic, are included in Attachment "B" of this letter.

QUEUING ANALYSIS

The queuing analysis has also been performed consistent with the methodology utilized in the 2014 Traffic Study. Based on the 95th percentile queuing analysis results, the westbound left requires a maximum stacking of 62 fee during the PM peak hour for E+P traffic conditions and 59 feet during the PM peak hour for Opening Year Cumulative (2018) traffic conditions. As shown on Exhibit 1, the driveway throat length is anticipated to provide sufficient storage to accommodate the 95th percentile queues. 95th percentile queuing analysis results for the intersection of Perris Boulevard and San Michele Road/Driveway are shown on Table 3 and Table 4 for E+P and Opening Year Cumulative (2018) traffic conditions, respectively.

TABLE 3: EXISTING PLUS PROJECT CONDITIONS AM/PM PEAK HOUR STACKING SUMMARY

Intersection	Movement	Stacking Distance (Feet)	95th Percentile Stacking Distance Required (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM
Perris Bl. / San Michele Rd./Dwy.						
	WBL	108	40	62	Yes	Yes
	WBT	108	28	49	Yes	Yes
	WBR	108	15	20	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

TABLE 4: OPENING YEAR CUMULATIVE (2018) WITH PROJECT CONDITIONS AM/PM PEAK HOUR STACKING SUMMARY

Intersection	Movement	Stacking Distance (Feet)	95th Percentile Stacking Distance Required (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM
Perris Bl. / San Michele Rd./Dwy.						
	WBL	108	32	59	Yes	Yes
	WBT	108	22	51	Yes	Yes
	WBR	108	15	18	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

The driveway queuing analysis worksheets for E+P conditions, with Project truck traffic, are included in Attachment "C" of this letter. The driveway queuing analysis worksheets for Opening Year Cumulative (2018) With Project conditions, with Project truck traffic, are included in Attachment "D" of this letter.

If you have any questions, please contact me directly at (949) 660-1994 x204.

Respectfully submitted,

URBAN CROSSROADS, INC.

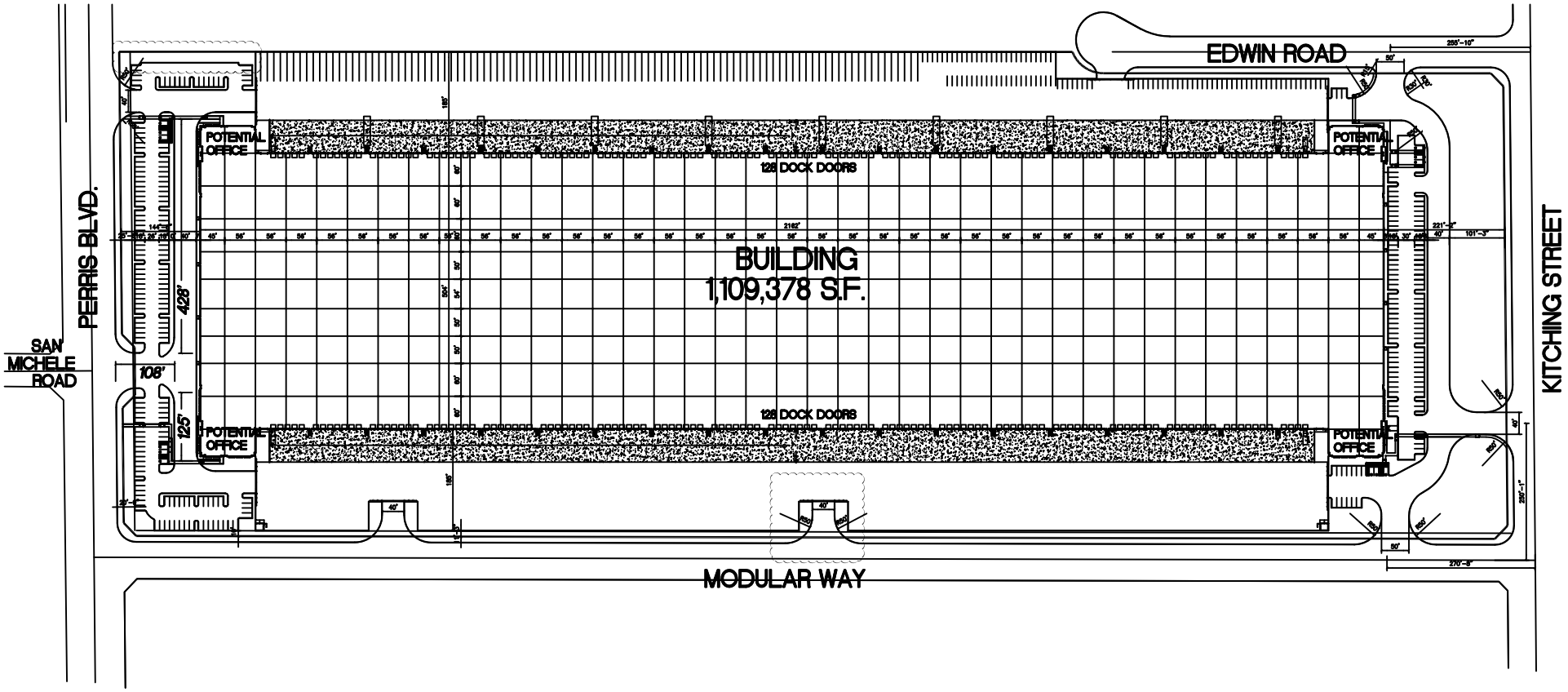
Aric Evatt, PTP
Principal

Charlene So, PE
Senior Transportation Engineer

Attachments

EXHIBIT 1

PRELIMINARY SITE PLAN



Modular Logistics Center

City of Moreno Valley, CA (JN - 08741:dab-1.1_50'truck thru-site.dwg)

URBAN CROSSROADS

Attachment "A"

Existing Plus Project Conditions, With Project Truck Traffic

HCM Analysis Worksheets

Modular Logistics Center Traffic Impact Analysis (JN:08741)
Existing (2013) Plus Project Conditions
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Perris Boulevard / San Michele Road-Driveway

Cycle (sec): 100 Critical Vol./Cap.(X): 0.343
Loss Time (sec): 16 Average Delay (sec/veh): 30.2
Optimal Cycle: OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	34	34	10	34	34	10	32	32	10	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	13	900	0	3	725	69	101	3	9	3	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	900	0	3	725	69	101	3	9	3	0	2
Added Vol:	0	14	0	27	3	0	0	10	0	6	4	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	914	0	30	728	69	101	13	9	9	4	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	15	1054	0	35	840	80	116	15	10	10	5	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	1054	0	35	840	80	116	15	10	10	5	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	1054	0	35	840	80	116	15	10	10	5	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.90	0.90	0.95	0.94	0.94	0.95	1.00	0.85
Lanes:	1.00	3.00	0.00	1.00	2.74	0.26	1.00	0.59	0.41	1.00	1.00	1.00
Final Sat.:	1805	5187	0	1805	4676	443	1805	1054	730	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.00	0.02	0.18	0.18	0.06	0.01	0.01	0.01	0.00	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.10	0.33	0.00	0.10	0.33	0.33	0.10	0.31	0.31	0.10	0.31	0.31
Volume/Cap:	0.08	0.61	0.00	0.20	0.54	0.54	0.66	0.05	0.05	0.06	0.01	0.01
Delay/Veh:	42.0	29.1	0.0	42.8	28.0	28.0	53.1	24.4	24.4	41.9	24.1	24.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.0	29.1	0.0	42.8	28.0	28.0	53.1	24.4	24.4	41.9	24.1	24.1
LOS by Move:	D	C	A	D	C	C	D	C	C	D	C	C
HCM2kAvgQ:	0	10	0	1	9	9	5	1	1	0	0	0

Note: Queue reported is the number of cars per lane.

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Modular Logistics Center Traffic Impact Analysis (JN:08741)
Existing (2013) Plus Project Conditions
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Perris Boulevard / San Michele Road-Driveway

Cycle (sec): 105 Critical Vol./Cap.(X): 0.263
Loss Time (sec): 16 Average Delay (sec/veh): 28.1
Optimal Cycle: OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	34	34	10	34	34	10	32	32	10	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	10	702	0	0	757	32	78	0	27	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	702	0	0	757	32	78	0	27	0	0	0
Added Vol:	0	18	0	14	1	0	0	5	0	17	10	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	720	0	14	758	32	78	5	27	17	10	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	11	773	0	15	814	34	84	5	29	18	11	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	773	0	15	814	34	84	5	29	18	11	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	773	0	15	814	34	84	5	29	18	11	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.90	0.90	0.95	0.87	0.87	0.95	1.00	0.85
Lanes:	1.00	3.00	0.00	1.00	2.88	0.12	1.00	0.16	0.84	1.00	1.00	1.00
Final Sat.:	1805	5187	0	1805	4947	209	1805	259	1400	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.15	0.00	0.01	0.16	0.16	0.05	0.02	0.02	0.01	0.01	0.00
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.34	0.00	0.10	0.35	0.35	0.10	0.31	0.31	0.10	0.30	0.30
Volume/Cap:	0.06	0.43	0.00	0.08	0.47	0.47	0.47	0.07	0.07	0.11	0.02	0.01
Delay/Veh:	43.4	26.8	0.0	43.0	26.8	26.8	46.7	25.8	25.8	43.6	25.5	25.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.4	26.8	0.0	43.0	26.8	26.8	46.7	25.8	25.8	43.6	25.5	25.4
LOS by Move:	D	C	A	D	C	C	D	C	C	D	C	C
HCM2kAvgQ:	0	7	0	0	8	8	3	1	1	1	0	0

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to URBAN CROSSROADS, IRVINE

Attachment "B"

Opening Year Cumulative (2018) With Project Conditions, With Project Truck Traffic

HCM Analysis Worksheets

Modular Logistics Center Traffic Impact Analysis (JN:08741)
Opening Year (2018) With Project Conditions - WITH HEACOCK EXTENSION
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Perris Boulevard / San Michele Road-Driveway

Cycle (sec): 115 | Critical Vol./Cap.(X): 0.527
Loss Time (sec): 16 | Average Delay (sec/veh): 39.8
Optimal Cycle: OPTIMIZED | Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	34	34	10	34	34	10	32	32	10	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	1 0		1 0 2	1 0		1 0 0	1 0		1 0 1	0 1	
Volume Module:												
Base Vol:	121	1159	1	0	1035	142	209	0	112	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	121	1159	1	0	1035	142	209	0	112	0	0	0
Added Vol:	0	14	0	27	3	0	0	10	0	6	4	1
PasserByVol:	0	0	9	3	-3	0	0	6	0	3	2	0
Initial Fut:	121	1173	10	30	1035	142	209	16	112	9	6	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	132	1275	11	33	1125	154	227	17	122	10	7	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	1275	11	33	1125	154	227	17	122	10	7	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	1275	11	33	1125	154	227	17	122	10	7	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.89	0.89	0.95	0.87	0.87	0.95	1.00	0.85
Lanes:	1.00	2.97	0.03	1.00	2.64	0.36	1.00	0.12	0.88	1.00	1.00	1.00
Final Sat.:	1805	5138	44	1805	4479	615	1805	206	1445	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.25	0.25	0.02	0.25	0.25	0.13	0.08	0.08	0.01	0.00	0.00
Crit Moves:	****				****		****				****	
Green/Cycle:	0.09	0.32	0.32	0.10	0.33	0.33	0.16	0.34	0.34	0.11	0.28	0.28
Volume/Cap:	0.77	0.77	0.77	0.19	0.77	0.77	0.77	0.25	0.25	0.05	0.01	0.00
Delay/Veh:	70.2	37.1	37.1	48.5	37.3	37.3	58.0	27.9	27.9	46.4	30.1	30.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.2	37.1	37.1	48.5	37.3	37.3	58.0	27.9	27.9	46.4	30.1	30.0
LOS by Move:	E	D	D	D	D	D	E	C	C	D	C	C
HCM2kAvgQ:	5	15	15	1	16	16	10	4	4	0	0	0

Note: Queue reported is the number of cars per lane.

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Modular Logistics Center Traffic Impact Analysis (JN:08741)
Opening Year (2018) With Project Conditions - WITH HEACOCK EXTENSION
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Perris Boulevard / San Michele Road-Driveway

Cycle (sec): 110 | Critical Vol./Cap.(X): 0.502
Loss Time (sec): 16 | Average Delay (sec/veh): 37.6
Optimal Cycle: OPTIMIZED | Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	34	34	10	34	34	10	32	32	10	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	123	890	1	14	898	147	211	0	141	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	123	890	1	14	898	147	211	0	141	0	0	0
Added Vol:	0	18	0	14	1	0	0	5	0	17	10	3
PasserByVol:	0	0	4	1	-1	0	0	3	0	9	6	0
Initial Fut:	123	908	5	29	898	147	211	8	141	26	16	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	132	975	5	31	965	158	227	9	151	28	17	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	975	5	31	965	158	227	9	151	28	17	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	975	5	31	965	158	227	9	151	28	17	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.89	0.89	0.95	0.86	0.86	0.95	1.00	0.85
Lanes:	1.00	2.98	0.02	1.00	2.58	0.42	1.00	0.05	0.95	1.00	1.00	1.00
Final Sat.:	1805	5153	28	1805	4364	714	1805	88	1543	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.19	0.19	0.02	0.22	0.22	0.13	0.10	0.10	0.02	0.01	0.00
Crit Moves:	****				****		****				****	
Green/Cycle:	0.09	0.31	0.31	0.09	0.31	0.31	0.16	0.34	0.34	0.11	0.29	0.29
Volume/Cap:	0.78	0.61	0.61	0.19	0.72	0.72	0.78	0.29	0.29	0.14	0.03	0.01
Delay/Veh:	69.2	32.9	32.9	46.7	35.3	35.3	57.1	26.5	26.5	44.8	27.9	27.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.2	32.9	32.9	46.7	35.3	35.3	57.1	26.5	26.5	44.8	27.9	27.7
LOS by Move:	E	C	C	D	D	D	E	C	C	D	C	C
HCM2kAvgQ:	5	10	10	1	13	13	9	4	4	1	0	0

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to URBAN CROSSROADS, IRVINE

Attachment "C"

Existing Plus Project Conditions, With Project Truck Traffic

Queuing Analysis Worksheets

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	TR	L	T	T
Maximum Queue (ft)	156	78	48	43	31	48	237	213	119	79	197	176
Average Queue (ft)	73	22	13	7	2	14	104	68	19	29	81	45
95th Queue (ft)	126	57	40	28	15	42	199	159	67	69	167	120
Link Distance (ft)		832		105			787	787	787		810	810
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	140		50		50	215				200		
Storage Blk Time (%)	1		2	1	0		0				0	
Queuing Penalty (veh)	0		0	0	0		0				0	

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	SB
Directions Served	TR
Maximum Queue (ft)	93
Average Queue (ft)	16
95th Queue (ft)	51
Link Distance (ft)	810
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	TR	L	T	T
Maximum Queue (ft)	127	98	69	70	31	52	197	176	56	60	208	168
Average Queue (ft)	57	25	27	15	4	12	87	43	8	15	79	44
95th Queue (ft)	105	63	62	49	20	40	176	118	33	42	175	123
Link Distance (ft)		832		105			787	787	787		810	810
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (ft)	140		50		50	215				200		
Storage Blk Time (%)	0	0	9	3	0		0				0	
Queuing Penalty (veh)	0	0	2	1	0		0				0	

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	SB
Directions Served	TR
Maximum Queue (ft)	66
Average Queue (ft)	10
95th Queue (ft)	36
Link Distance (ft)	810
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Attachment "D"

Opening Year Cumulative (2018) With Project Conditions, With Project Truck Traffic

Queuing Analysis Worksheets

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	TR	L	T	T
Maximum Queue (ft)	189	431	39	40	25	234	355	352	193	93	260	226
Average Queue (ft)	144	116	9	4	2	136	151	110	49	24	134	90
95th Queue (ft)	213	329	32	22	15	250	310	251	137	66	224	193
Link Distance (ft)		832		105			787	787	787		810	810
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	140		50		50	215				200		
Storage Blk Time (%)	25	1	1	0	0	11	1				2	
Queuing Penalty (veh)	32	2	0	0	0	43	2				1	

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	SB
Directions Served	TR
Maximum Queue (ft)	182
Average Queue (ft)	53
95th Queue (ft)	131
Link Distance (ft)	810
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	TR	L	T	T
Maximum Queue (ft)	189	400	59	69	31	222	308	279	130	64	241	211
Average Queue (ft)	148	140	28	17	3	127	116	83	24	12	134	93
95th Queue (ft)	217	351	59	51	18	234	254	210	78	40	216	190
Link Distance (ft)		832		105			787	787	787		810	810
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (ft)	140		50		50	215				200		
Storage Blk Time (%)	31	0	7	3	0	7	0				1	
Queuing Penalty (veh)	46	1	1	1	0	22	1				0	

Intersection: 1: Perris Boulevard & San Michele Rd./Driveway

Movement	SB
Directions Served	TR
Maximum Queue (ft)	160
Average Queue (ft)	44
95th Queue (ft)	117
Link Distance (ft)	810
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	