

3.13 TRAFFIC

This chapter provides a discussion of the potential effects of transportation and circulation resulting from the action. This discussion is based on the results of the traffic analysis prepared by Iteris, Inc. This document is included in Appendix E.

3.13.1 AFFECTED ENVIRONMENT

The following two intersections, illustrated in Figure 3.13-1, were analyzed as part of the traffic analysis:

- Durfee Avenue at State Route 60 (SR 60) Eastbound Ramps: This is a T-intersection with no northbound approach. This intersection is controlled by a two-phase traffic signal. A set of freeway on- and off-ramps are located in the north leg of this intersection. The southbound approach consists of 2 left-turn lanes and one right-turn lane. The eastbound approach consists of one shared left-through lane and 2 through lanes. The westbound approach consists of 2 through lanes and one right-turn lane.
- Durfee Avenue at Peck Road: This intersection is controlled by a 3-phase traffic signal with split phasing in the eastbound and westbound directions. The northbound approach consists of one left-turn lane, one through lane, and one shared through-right lane. The southbound approach consists of one left-turn lane, 2 through lanes, and one right-turn lane. The eastbound approach consists of one left-turn lane, one all-movement lane, and one right-turn lane. The westbound approach contains one all-movement lane.

These two intersections represent locations that County of Los Angeles Department of Public Works (LACDPW) Traffic and Lighting Division identified as potentially impacted by traffic generated by the action. The study intersections were chosen based on their close proximity to SR 60 and Interstate 605 (I-605) because the Whittier Narrows Natural Area (Natural Area) is a regional facility and visitors are expected to use these intersections to access the site.

EXISTING TRANSPORTATION SYSTEM

Regional Roadways

Pomona Freeway (SR 60) is a major east-west regional freeway located north of the sublease boundary. It extends eastward from downtown Los Angeles across the Inland Empire into San Bernardino County. Within the study area, this facility consists of 4 general travel lanes and one high-occupancy vehicle (HOV) lane in each direction. Full interchanges are located in the project vicinity at Santa Anita Avenue and Peck Road.



Figure 3.13-1
Location of Study Intersections
and Existing Lane Configuration

San Gabriel River Freeway (I-605) is a major north-south regional freeway that extends southward from the Foothill Freeway (I-210) in the Inland Empire to the San Diego Freeway (I-405) in the South Bay. This facility is located east of the sublease boundary and consists of 4 general travel lanes and one HOV lane in each direction as it passes through the study area. Half interchanges are located at Peck Road and Pellissier Place. A full interchange with SR 60 is located east of the project site.

Surface Arterial and Local Streets

Durfee Avenue is an east-west major arterial that extends from Rosemead Boulevard (State Route 19) eastward to Peck Road. This facility is located immediately adjacent to the north edge of the sublease boundary and provides access to the existing Whittier Narrows Nature Center (WNNC). The existing lane configuration consists of 2 travel lanes in each direction with a 2-way left-turn lane in the immediate vicinity of the site. Curbside parking is allowed along both sides of the street. There is a sidewalk located only on the north side of Durfee Avenue in the vicinity of the project site.

Peck Road is a north-south major arterial that provides access to Interstate 10 (I-10, San Bernardino Freeway), SR 60, and I-605. This facility is located approximately one-third of a mile east of the sublease boundary. The existing lane configuration of this facility consists of 2 travel lanes in each direction with a painted center median. Curbside parking is not allowed along either side of the street in the vicinity of the sublease boundary.

Santa Anita Avenue is a north-south major arterial that provides access to both SR 60 and I-10 before continuing northward into the Inland Empire. This roadway is located approximately 0.5 miles west of the sublease boundary. The existing lane configuration for this facility consists of 2 travel lanes in each direction with an alternating 2-way left-turn lane and a striped median.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

Level of Service Methodology

Traffic operating conditions in the vicinity of the site were analyzed using the “Intersection Capacity Utilization” methodology for signalized intersections.

The efficiency of traffic operations at given intersections is measured in terms of level of service (LOS). The LOS concept is a measure of average operating conditions at the designated intersection during a peak hour. It is based on a volume-to-capacity (V/C) ratio for signalized locations and delay (in seconds) for stop-controlled intersections. Levels range from A to F, with A representing excellent (free-flow) conditions and F representing extreme congestion. The Intersection Capacity Utilization methodology compares the amount of traffic a through or turn lane is able to process (the capacity) to the level of traffic during the peak hours (volume). The critical V/C ratios are combined to determine the Intersection Capacity Utilization value (V/C ratio) for the entire intersection. Table 3.13-1 describes the LOS concept and the operating conditions expected under each LOS.

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TABLE 3.13-1 INTERSECTION LEVEL OF SERVICE DEFINITIONS

LOS	Interpretation	V/C Ratio
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0.000 - 0.600
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	0.601 - 0.699
C	Good operation. Occasionally backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.700 - 0.799
D	Fair operation. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	0.800 - 0.899
E	Poor operation. Some long standing vehicular queues develop on critical approaches.	0.900 – 0.999
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	Over 1.000

Source: Transportation Research Board 2000.

Existing Levels of Service

The weekday morning and weekday evening peak hour LOS analyses were conducted for the study intersections based on the measured traffic volumes and the methodologies. All intersection analyses were performed using the TRAFFIX (Traffic Impact Analysis) software program. The existing conditions LOS analysis results are summarized in Table 3.13-2. The results shown in Table 3.13-2 indicate that all of the study intersections are currently operating at LOS E or better during both of the analyzed peak hours. Specifically, Durfee Avenue at SR 60 eastbound ramps is currently operating at LOS A during the morning and evening peak hours. Durfee Avenue at Peck Road is currently operating at LOS E during the morning peak hour and LOS D during the evening peak hour. The LOS worksheets are provided in Appendix E.



Source: Meyer, Mohaddes Associates, April 2007.

Figure 3.13-2
Existing Traffic Volumes

Study Intersection XXX/XXX AM/PM Peak Hour Volume
 ■ Project Location



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TABLE 3.13-2 LEVEL OF SERVICE SUMMARY – EXISTING CONDITIONS

#	Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour	
		V/C	LOS	V/C	LOS
1	Durfee Avenue at SR-60 Eastbound Ramps	0.532	A	0.493	A
2	Durfee Avenue at Peck Road	0.953	E	0.804	D

Source: Iteris, Inc. 2008..

3.13.2 REGULATORY FRAMEWORK

The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority. The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways and all freeways comprise the CMP system. A total of 164 intersections are identified for monitoring on the system in Los Angeles County.

3.13.3 Criteria for Significance of Effects

The proposed action would have an adverse effect on transportation and traffic if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the v/c ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a LOS standards established by the county congestion management agency for designated roads or highways;

Future traffic volume is a measure of traffic generated by the action in addition to traffic from both area projects and ambient traffic growth. An action may result in a substantial increase in traffic in relation to the existing traffic load and capacity of the street system if the estimated project traffic, in combination with future traffic counts would increase the V/C ratio on the intersection operating condition as illustrated in Table 3.13-3.

TABLE 3.13-3 LEVEL OF SERVICE THRESHOLD CRITERIA

Intersections		
Pre-Project		Project V/C Increase
LOS	V/C	
C	0.710 - 0.800	0.040 or more
D	0.810 - 0.900	0.020 or more
E/F	0.910 or more	0.010 or more

Source: LACDPW 2006.

3.13.4 PROJECT EFFECTS ON TRAFFIC

3.13.4.1 NO ACTION ALTERNATIVE

The No Action Alternative would not directly, indirectly, or cumulatively affect traffic. No changes would occur at the site as part of the No Action Alternative. The number of visitors and staff to the sublease boundary would be similar to Future Without Project Conditions shown in Table 3.13-6 below. No adverse traffic impact would occur at any of the study intersections. These intersections would continue to operate at their existing levels of service assuming a one percent ambient growth rate.

3.13.4.2 18,230 SF ALTERNATIVE (PROPOSED ACTION)

The 18,230 sf Alternative represents the largest proposed building size and construction impact area. As such, this alternative represents the worst-case traffic scenario of the build alternatives.

FUTURE TRAFFIC PROJECTIONS

The cumulative base scenario (“Future Without Project”) reflects growth in traffic over existing conditions from two sources. The first source is the ambient growth in traffic. Ambient growth reflects increases in traffic due to regional growth and development between baseline (year 2006) and future (year 2012). The second source is growth due to traffic generated by specific projects located within, or in the vicinity of, the study area. The methods and assumptions used to develop cumulative base traffic projections are described in more detail below.

Ambient Traffic Growth. Ambient traffic growth is the traffic growth that will occur in the study area due to general employment growth, housing growth, and growth in regional through trips in southern California. Even if there was no change in housing or employment in the County, there will be some background (ambient) traffic growth in the region. Per the CMP, a one percent per year growth rate was assumed as a conservative estimate of traffic increase in the study area.

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Related Project Traffic Generation and Assignment. Cumulative project traffic growth is growth due to specific, known development projects in the study area and is included in the analysis of the future base conditions. Approximately 10 related projects have been identified. These include components of the San Gabriel River Corridor Master Plan within a one-mile radius of the sublease boundary, as well as the current effort to update the Whittier Narrows Master Plan. However, these projects are conceptual only and no facilities have been identified at this time that would be constructed or would generate new vehicle trips in the project vicinity. For the purposes of the traffic analysis, 2 known development projects are considered. Table 3.13-4 summarizes the size and type of land uses and trip generation for the related projects. These include an approximately 352,000-square-foot warehouse expansion located approximately 2.2 miles southeast of the sublease boundary and a new bus garage that was recently constructed on the campus of South El Monte High School.

TABLE 3.13-4 TRIP GENERATION ESTIMATES FOR RELATED PROJECT

Project#	Description	Size		Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
1	Warehouse/Distribution	352	ksf	130	29	159	41	124	165
2	ELUHSD Bus Garage	15	Ksf	--	--	--	30	0	30
Total				130	29	159	71	124	195

Note: ksf = 1,000 square feet.

Source: Institute of Transportation Engineers 2007.

Traffic generated by the related projects was estimated based on the types of uses proposed and standard trip generation data from the Institute of Transportation Engineers' *Trip Generation (7th Edition)* (2003). As shown, the cumulative projects are forecast to generate a total of approximately 159 trips during the weekday morning and approximately 195 trips during the weekday evening peak. These trips were assigned to the traffic model as part of the development of the future base projections.

18,230 SF ALTERNATIVE TRAFFIC VOLUMES

18,230 sf Alternative Traffic Generation. Table 3.13-5 summarizes the anticipated weekday morning and evening peak hour trip estimates for the 18,230 sf Alternative. As shown in Table 3.13-5, this alternative is expected to generate approximately 109 weekday morning peak hour trips and 39 weekday evening peak hour trips. This represents an increase of 81 weekday morning peak hour trips and 29 weekday evening peak hour trips compared to the existing WNNC trip generation.

TABLE 3.13-5 TRIP GENERATION ESTIMATES FOR 18,230 SF ALTERNATIVE

Land Use	Size (ksf)	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Existing Uses	4.71	16	12	28	6	4	10
Total		16	12	28	6	4	10
Proposed Action	18.23	62	47	109	23	16	39
Total		62	47	109	23	16	39

Note: ksf = 1,000 square feet
Source: Iteris, Inc. 2008..

18,230 sf Alternative Intersection Impacts. The trip distribution assumptions are used to determine the origin and destination of the new vehicle trips associated with the 18,230 sf Alternative. Trips generated by the 18,230 sf Alternative were assigned to the surrounding roadway network based on the distribution patterns to estimate the alternative-only peak hour traffic volumes.

The 18,230 sf Alternative peak hour traffic volumes were added to the ambient growth and related project traffic volumes (“Future Without Project”) to create the “Future With Project” traffic conditions. The intersection V/C ratios and corresponding LOS for “Future With Project” were calculated and the results summarized in Tables 3.13-6 and 3.13-7. The resultant change in V/C ratio comparing the “Future With Project” to the “Future Without Project” is also presented in the tables.

TABLE 3.13-6 FUTURE INTERSECTION LEVEL OF SERVICE - WEEKDAY AM PEAK HOUR

#	Intersection	Future Without Project		Future With Project		Change in V/C Ratio	Significant Effect?
		V/C	LOS	V/C	LOS		
1	Durfee Avenue at SR 60 Eastbound Ramps	0.542	A	0.553	A	0.011	N
2	Durfee Avenue at Peck Road	0.972	E	0.980	E	0.008	N

Source: Iteris, Inc. 2008.

TABLE 3.13-7 FUTURE INTERSECTION LEVEL OF SERVICE - WEEKDAY PM PEAK HOUR

#	Intersection	Future Without Project		Future With Project		Change in V/C Ratio	Significant Effect?
		V/C	LOS	V/C	LOS		
1	Durfee Avenue at SR 60 Eastbound Ramps	0.503	A	0.509	A	0.006	N
2	Durfee Avenue at Peck Road	0.821	D	0.827	D	0.006	N

Source: Iteris, Inc. 2008.

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As shown in Tables 3.13-6 and 3.13-7, the comparison between the “Future Without Project” forecasts and the “Future With Project” forecasts indicate that the addition of trips from the 18,230 sf Alternative would not directly, indirectly, or cumulatively exceed County thresholds at either of the study intersections. Therefore, impacts during normal operation of the 18,230 sf Alternative would be less than significant.

Special Event Analysis

The 18,230 sf Alternative is estimated to host approximately 4 evening events per month with up to 150 attendees per event, as described in Table 2-4 on page 2-16. These events would generally operate between the hours of 6:00 p.m. and 9:30 p.m. on a weekday. An additional evening peak hour analysis was conducted to assess the potential traffic impacts associated with these events. For the purposes of a conservative analysis, it was assumed that all 150 attendees would travel to the site in separate vehicles. Thus, the trip generation associated with the special events is 150 inbound trips in the evening peak hour. These trips were added to the “Future Without Project” evening peak hour traffic volumes to create the “Future With Project” traffic conditions. The same trip distribution pattern was assumed as the normal weekday activities at the project site. The 150 new trips associated with the special event traffic were added to “Future Without Project” volumes, as shown in Table 3.13-8.

TABLE 3.13-8 FUTURE INTERSECTION LEVEL OF SERVICE WITH SPECIAL EVENT - WEEKDAY PM PEAK HOUR

#	Intersection	Future without Project		Future with Project		Change in V/C Ratio	Significant Effect?
		V/C	LOS	V/C	LOS		
1	Durfee Avenue at SR 60 Eastbound Ramps	0.503	A	0.513	A	0.010	N
2	Durfee Avenue at Peck Road	0.821	D	0.830	D	0.009	N

Source: Iteris, Inc. 2008.

As shown in Table 3.13-8, the comparison between the “Future Without Project” forecasts and the “Future With Project” forecasts indicate the addition of special event traffic from the 18,230 sf Alternative would not directly, indirectly, or cumulatively exceed County thresholds at either of the study intersections. Therefore, impacts during normal operation of the 18,230 sf Alternative would be less than significant.

3.13.4.3 14,000 SF ALTERNATIVE

The 14,000 sf Alternative involves construction of a smaller interpretive center and parking lot. The trip generation would be reduced under this alternative because trip generation is based on the square footage of the proposed uses and the project attendance levels that would be accommodated by a smaller facility

compared to the 18,230 sf Alternative. As described above, future traffic with a larger facility would not exceed County traffic thresholds. Thus, implementation of the 14,000 sf Alternative with a reduced building size and parking lot would not directly, indirectly, or cumulatively exceed County traffic thresholds, even during special events. Therefore, impacts during regular operations and special event operations under the 14,000 sf Alternative are considered less than significant.

3.13.4.4 10,000 SF ALTERNATIVE

The 10,000 sf Alternative involves construction of a smaller interpretive center and parking lot that is almost half of that proposed as part of the 18,230 sf Alternative. The trip generation would be reduced nearly in half under this alternative because trip generation is based on the square footage of the proposed uses and the project attendance levels that would be accommodated by a smaller facility compared to the 18,230 sf Alternative. As described above, future traffic with a larger facility would not directly, indirectly, or cumulatively exceed County traffic thresholds. Thus, implementation of the 10,000 sf Alternative with a reduced building size and parking lot would not exceed County traffic thresholds, even during special events. Therefore, impacts during regular operations and special event operations under the 10,000 sf Alternative are considered less than significant.

3.13.4.5 2,800 SF ALTERNATIVE

The 2,800 sf Alternative would increase the size of the existing interpretive center by approximately 1,000 sf and would use the existing parking lot and driveway. Because the proposed building would only be slightly larger than the existing interpretive center and would be substantially less than that of the 18,230 sf Alternative, a substantial increase in visitors to the site would not be anticipated. Future traffic volumes would be similar to existing traffic volumes under this alternative and would not directly, indirectly, or cumulatively cause a substantial adverse effect at the study intersections. Therefore, impacts during regular operations and special event operations under the 2,800 sf Alternative are considered less than significant.

3.13.5 MITIGATION MEASURES

No mitigation measures are required.

3.13.6 SIGNIFICANCE SUMMARY

3.13.6.1 NO ACTION ALTERNATIVE

Because no action would be taken on the project site, the No Action Alternative would have no direct, indirect, or cumulative effects on traffic.

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3.13.6.2 18,230 SF ALTERNATIVE (PROPOSED ACTION)

See Section 3.13.6.4 below.

3.13.6.3 14,000 SF ALTERNATIVE

See Section 3.13.6.4 below.

3.13.6.4 10,000 SF ALTERNATIVE

The additional traffic generated by operation and special event activity under the 18,230 sf Alternative, 14,000 sf Alternative, and 10,000 sf Alternative would have no direct, indirect, or cumulative effects on traffic.

3.13.6.5 2,800 SF ALTERNATIVE

Traffic volumes would not be anticipated to substantially increase under this alternative compared to existing conditions. Thus, the 2,800 sf Alternative would have no direct, indirect, or cumulative effects on traffic.