

**APPENDIX G**  
**Traffic Study**

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# LADWP Sylmar Ground Return System Replacement Project Traffic Study

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## 1. Introduction

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KOA Corporation was retained by POWER Engineers, Inc., to conduct a traffic study for the Sylmar Ground Return System Replacement Project (Project). The Project has been proposed by the City of Los Angeles Department of Water and Power (LADWP) for implementation within West Los Angeles and the City of Santa Monica.

### 1.1 Project Location

The Project would be located in the City of Los Angeles, within the communities of Brentwood and Pacific Palisades, and in the City of Santa Monica. A majority of the fronting land uses are residential, but some areas of commercial land uses are present as well.

Land uses along the proposed Project route include four schools/daycare facilities (Kenter Canyon Elementary School, Brentwood Science Magnet, Montana Preschool, and Canyon Charter Elementary School), and one designated park (Will Rogers State Beach). The Brentwood Country Club Golf Course is also adjacent to portions of the proposed Project alignment. While not designated as park, the median along San Vicente Boulevard within the Project limits is used for recreational purposes (walking and jogging).

### 1.2 Project Description

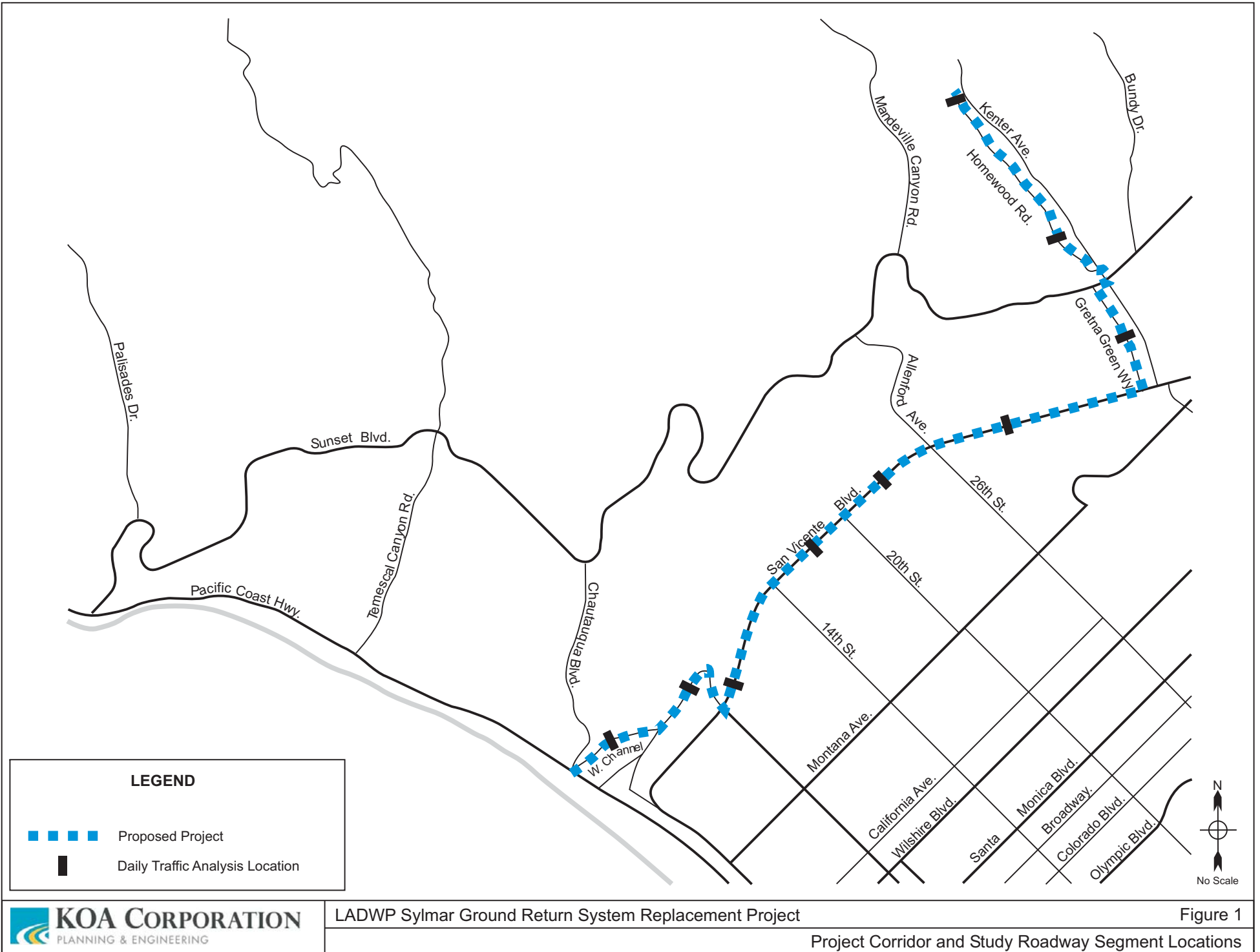
#### Proposed Route

The proposed alignment for the Project would begin at the Kenter Terminal Tower, at Elkins Road and Homewood Road (the eastern end of the study area), and proceed southward and westward via the following identified streets:

- Homewood Road between the existing Kenter Canyon Terminal Tower and North Kenter Avenue
- North Kenter Avenue between Homewood Road and Sunset Boulevard
- Sunset Boulevard between North Kenter Avenue and South Gretna Green Way
- South Gretna Green Way between Sunset Boulevard and San Vicente Boulevard
- San Vicente Boulevard between South Gretna Green Way and 7<sup>th</sup> Street
- 7<sup>th</sup> Street between San Vicente Boulevard and Entrada Drive
- Entrada Drive between 7<sup>th</sup> Street and West Channel Road
- West Channel Road between Entrada Drive and the proposed West Channel Vault (near 216 West Channel Road).

The length of the proposed cable route between the Kenter Terminal Tower and the West Channel Vault is approximately 4.8 miles.

The proposed Project route and the locations of the study roadway segments along that route are illustrated on Figure 1.



### Project Construction

Construction of the Project would occur over a period of about two years, with various construction activities occurring simultaneously. Intensive construction of the underground segment of the Project would occur over an approximate 18 month period and involve several construction activities as listed below. It should be noted that the underground cables and vaults would be constructed in segments, and construction of multiple segments would occur at the same time.

- Surveying of underground alignment, trench marking, and potholing;
- saw-cutting and pavement breaking;
- trenching to install conduit bank;
- excavation of maintenance vaults;
- install conduit bank;
- install maintenance vault;
- concrete and soil backfill;
- repaving;
- cable installation and splicing; and
- commissioning and testing.

Capacity would be constricted, in some form, along each Project roadway segment during construction. It is anticipated that general lane closures associated with the underground cable construction activities would involve the closure of one travel lane, based on the width of the Project work areas. It may be necessary to close up to two lanes for short periods (about two to three days) during the installation of the maintenance vaults.

It is anticipated that special construction methods, such as horizontal dry boring (jack and bore), would be needed at two locations near the intersection of West Channel Road and Mesa Road, and the intersection of West Channel Road and Rustic Road to avoid existing substructures at these intersections. This includes excavating a bore pit at the launching end and at the receiving end. During final design or during trenching excavations, additional locations that may require horizontal boring may be identified.

The proposed West Channel Vault would be located under the existing street, on the center median, near 216 West Channel Road. During construction, directional drilling for the installation of a portion of the proposed marine segment would occur at this location. Once directional drilling is completed, a permanent vault would be installed underground to provide access for maintenance and testing.

The need for manual traffic control, detours, and roadway/approach closures would be defined through work site and closure plans developed for each construction segment. These plans would be reviewed by the local jurisdiction (varying by segment, as identified above) prior to implementation along the Project corridor. Full roadway capacity would be restored when construction is completed.



### Staging Area

The Kenter Canyon Terminal Tower and Receiving Station K (1840 Centinela Avenue in Los Angeles) have been preliminarily identified as staging areas for the Project.

### Project Coordination and Logistics

Coordination with multiple agencies would be necessary during the development, review, and approval of construction work zone and lane closure/transition plans. The plans would include temporary parking prohibition signs; lane closures and transitions; warning and merge signs; and changeable message/arrow signs, as applicable to each work zone. Development of the proposed Project route would require coordination with the City of Los Angeles and the City of Santa Monica.

In order to minimize the duration of the construction schedule, variances to the Mayor's Directive #2 would be sought for segments of the Project within the City of Los Angeles. The directive states that road construction, outside of emergency repairs, cannot be conducted from 6:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 7:00 p.m. The rule does state, however, that exemptions would be carefully considered for public works projects, as long as the proper mitigation measures are in place. This report takes a conservative approach to traffic analysis and assumes that construction work would take place during peak times. The status of the Mayor's Directive #2 as it applies to this Project would be determined as construction plans are developed.

Construction activities in the City of Santa Monica are permitted during the weekday from 7:00 a.m. to 6:00 p.m. and Saturday from 9:00 a.m. to 5:00 p.m. The City does allow construction outside of these normal permitted hours with the filing of an afterhours construction permit application.

### Large Truck Deliveries

A marine electrode array would be located at the terminus of the Sylmar Ground Return System, about three miles from shore on the ocean floor at a depth of approximately 160 feet below the water surface. It would be composed of approximately 88 cylindrical boxes weighing about 100 tons each, arranged in an array.

The individual box components of the marine electrodes would be manufactured at an onshore facility in the City of Fontana. Each box would be transported as an oversized load during off-peak hours from the source of manufacture via truck to the Port of Los Angeles. From the Port, the pieces would be put on a ship for delivery to the marine electrode array site.

The truck movements associated with the delivery of these boxes would take place as the pieces are manufactured. Each delivery would necessitate an oversize truck movement. Oversize load permits would need to be obtained from the California Department of Transportation (Caltrans) (for movements on area freeways), and with the City of Los Angeles

(for movements on roadways to/from and within the Port area). Additional permits may be necessary at the point of origin of these movements within the City of Fontana.

### **1.3 Traffic Impact Analysis Methodology**

This traffic study analyzed potential traffic impacts at study roadway segments for the following scenarios:

- Existing Conditions
- Existing plus Project Construction
- Future without Project Construction
- Future with Project Construction

The analysis of the potential effects of construction-related closures on public roadways on the Project corridors is discussed further within this report. Discussion of access constraints and significant traffic impacts is provided for roadway segments along the proposed Project corridor route.

#### Existing Conditions

Fieldwork within the Project study area was undertaken to identify the condition of major roadways, to identify number of travel lanes, speed limits, parking restrictions, and other characteristics of each study roadway segment.

Average Daily Traffic (ADT) volumes were collected at multiple points for public roadways that are part of the proposed Project route. Traffic count locations were chosen based on the analyzed roadway corridors and their characteristics. Traffic counts utilized for base volumes at the study roadway segments on arterials and local roadways were conducted on Thursday, June 6, 2013, and Tuesday, June 18, 2013.

Existing volumes and level of service (LOS) values for the study roadway segments are discussed within Section 2 of this report.

#### Existing plus Project Construction

The existing plus Project scenario analyzes the roadway conditions in the year that the Notice of Preparation for the Project environmental documentation was published, per California Environmental Quality Act (CEQA) guidelines.

This scenario analyzed Project construction effects on roadway capacity, without future-period traffic growth. The existing roadway segment counts were conducted in the year 2013. The analyzed volumes were not reduced from the year-2013 counts, in order to provide a conservative analysis of year-2010 existing conditions. The existing plus Project scenario is discussed in Section 3 of this report.

### Future without Project Construction Conditions

The year 2017 was utilized for the future year baseline as this represents the latest year of Project construction, and therefore the analyzed volumes would have the highest amount of annual growth applied. In order to acknowledge regional traffic growth that would affect operations at the study roadway segments during this period, a traffic growth rate was applied along with applicable area/cumulative projects within the study area.

Existing traffic volumes were factored upward by a 0.28 percent annual growth rate in order to increase year-2013 volumes to future baseline year-2017 conditions. The growth rate was based on the 2010 Los Angeles County Congestion Management Program (CMP). These rates are determined by regional statistical areas (RSA), with the study area segments being located in RSA 16 (Santa Monica, Bel Air, Palisades, and Marina Del Rey).

Area projects in the City of Los Angeles (in the communities of Brentwood, Pacific Palisades, and West Los Angeles) and the City of Santa Monica were reviewed to determine relevant projects for analysis as part of the future without Project conditions.

The future without-Project scenario is discussed in Section 4 of this report.

### Future with Project Construction Conditions

The future with Project conditions scenario analyzes the future roadway conditions under year 2017 conditions and per the anticipated lane closures necessary during construction.

The future with Project construction scenario is discussed in Section 5 of this report.

### Impact Definition

LADWP construction assumptions indicate that the establishment of typical work areas would generally necessitate the closure of one travel lane, with potential restrictions on parking where necessary. However, vault installation would necessitate temporary closure of up to two travel lanes for two to three days at each vault location.

The generation of employee vehicle trips as part of daily commutes to and from the construction work areas and/or laydown and parking sites, and construction hauling/delivery trips were not defined for this analysis. These are expected to be minimal for the type of construction work required for the proposed Project.

The construction of the Project will constrict roadway capacity in affected segments; therefore, the discussion was concentrated on the capacity that can be provided during construction.

The impact analysis was based on roadway flow during construction and the application of volume-to-capacity calculations. Of particular concern were study locations that would worsen in operations to or within LOS values of E or F. These two values represent poor operating conditions, and significant impacts were defined by worsening of operations within or to these values. The Project would not have the typical incremental impact of a development project or other trip-generating activity where incremental impact thresholds could be applied, since there would be no increased traffic or continued lane closures after completion of construction.

Where feasible, Project construction activities should be limited to off-peak periods in order to reduce traffic impacts. In areas where the Project construction would occur within the City of Los Angeles, the City of Los Angeles Mayor's Directive #2 would apply. The primary portion of the directive is as follows:

"To improve traffic flow on city streets, we must avoid construction in the public right-of-way during rush hour. This includes both actual construction on city streets as well as the staging of equipment and materials, even if construction is not in the public right-of-way. Current City permits already prohibit construction on major roads during the morning and evening rush hours. This Executive Directive formalizes the prohibition on rush hour construction by any City department or agency on major roads from 6:00 a.m. to 9:00 a.m. and 3:30 p.m. to 7:00 p.m...."

If the variances are obtained from the City of Los Angeles, typical construction hours in Los Angeles would be Monday through Friday from 7:00 a.m. to 5:00 p.m., and Saturday from 8:00 a.m. to 6:00 p.m. The City of Santa Monica limits construction hours on weekdays to 7:00 a.m. to 6:00 p.m. and on Saturdays to 9:00 a.m. to 5:00 p.m.; these construction hours would be adhered to in the City of Santa Monica.

Final construction closure plans will need to be reviewed and approved by the City of Los Angeles and the City of Santa Monica, dependent on the location of each Project roadway segment. Encroachment permits will be required by all local jurisdictions that lie within the Project study area for the construction activities associated with the Project.

## 2. Existing Conditions

This section documents existing traffic conditions in the study area based on traffic counts and existing roadway configurations.

### 2.1 Roadway Network Characteristics

Fieldwork within the Project study area was undertaken to identify the condition of major roadways, to identify number of travel lanes, parking restrictions, speed limits, and other characteristics of the study roadway segments. Table 1 summarizes the roadway characteristics within the study area.

**Table 1 – Roadway Characteristics**

Location ID	Roadway	Location	# of Lanes	Median	Parking	Speed Limit (mph)
<b>PROPOSED ROUTE</b>						
<b>A</b>	Homewood Rd.	South of Elkins Rd.	2	Striped	Permitted	No Posting
<b>B</b>		South of Bonhill Rd.	2	Striped	Permitted	No Posting
<b>C</b>	Gretna Green Way	South of Shetland Ln.	2	Not Striped	Permitted	No Posting
<b>D</b>	San Vicente Blvd.	West of Bristol Ave.	4	Raised	Permitted	35
<b>E</b>		East of 21 <sup>st</sup> Pl.	4	Raised	Permitted	35
<b>F</b>		East of 17 <sup>th</sup> St.	4	Raised	Permitted	35
<b>G</b>		East of Lincoln Blvd.	3/4	Raised	Permitted	35
<b>H</b>	Entrada Dr.	West of Stassi Ln.	2	Striped	NB/SB: No Parking Any	25/30
<b>I</b>	West Channel Rd.	West of Short St.	3	TWLT	NB/SB: 1 hr, 8am-8pm	No Posting

Notes: mph – miles per hour; NB – Northbound; SB – Southbound; TWLT - Two-way left-turn lane

The photographs below provide views of the typical cross-sections, looking in both directions, for the study roadway segment locations along the proposed Project corridor.



**GRETNA GREEN WAY**



View toward south on Gretna Green Way,  
near Shetland Lane



View toward north on Gretna Green  
Way, near Shetland Lane

**SAN VICENTE BOULEVARD**



View towards east on San Vicente  
Boulevard, near Bristol Avenue



View towards west on San Vicente  
Boulevard, near Bristol Avenue

**SAN VICENTE BOULEVARD (continued)**



View towards east on San Vicente Boulevard, near 21<sup>st</sup> Place



View towards west on San Vicente Boulevard, near 21<sup>st</sup> Place



View towards east on San Vicente Boulevard, near 17<sup>th</sup> Street



View towards west on San Vicente Boulevard, near 17<sup>th</sup> Street



View towards east on San Vicente Boulevard, near Lincoln Boulevard



View towards west on San Vicente Boulevard, near Lincoln Boulevard



**ENTRADA DRIVE**



View towards east on Entrada Drive,  
near Stassi Lane



View towards west on Entrada Drive,  
near Stassi Lane

**WEST CHANNEL ROAD**



View towards east on West Channel Road,  
near Short Street



View towards west on West Channel Road,  
near Short Street

**2.2 Transit Services**

Transit services in the study area, provided by Metro and Santa Monica Big Blue Bus, are summarized in Table 2.

**Table 2 – Study Area Transit Services**

Agency	Line	From	To	Via	Peak Frequency
Metro	2	Pacific Palisades	Downtown Los Angeles	Sunset Blvd.	6 to 10 Minutes
Metro	302	Pacific Palisades	Downtown Los Angeles	Sunset Blvd.	8 to 25 Minutes
Metro Express	534	Malibu	Culver City	Pacific Coast Highway / I-10 Freeway	12 to 30 Minutes
Santa Monica Big Blue Bus	BBB4	Santa Monica	West Los Angeles	Sawtelle Blvd. / San Vicente Blvd. / 4 <sup>th</sup> Street	15 to 30 Minutes
Santa Monica Big Blue Bus	BBB9	Pacific Palisades	Santa Monica	Sunset Blvd. / Chautauqua Blvd. / 6 <sup>th</sup> Court	7 to 30 Minutes

Figure 2 illustrates the public transit network within the general study area extents.

**Figure 2 – Study Area Transit Network**



Source: Metro, 2013.

### 2.3 Bicycle Network

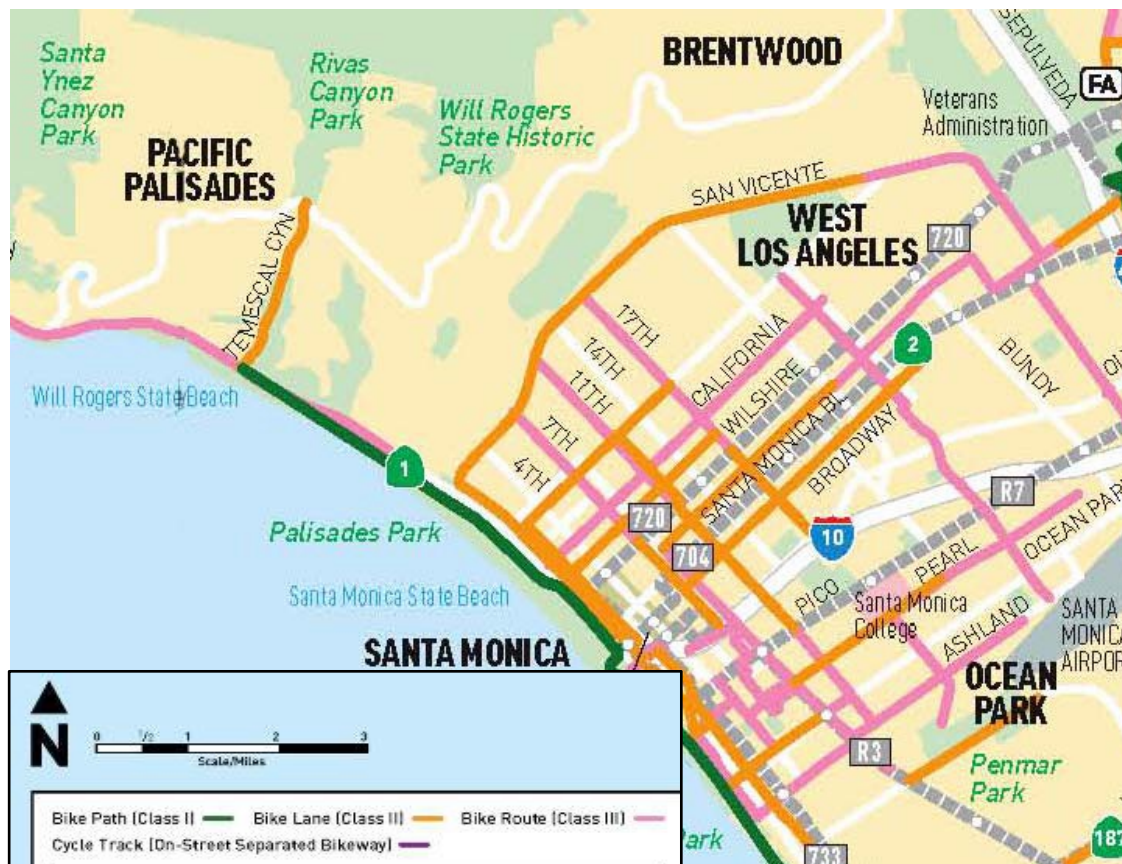
The bicycle network located within the study area includes bike facilities that fall within the three major categories as follows:

- Class I – is designated as a bicycle path that allows for two-way, off-street bicycle use.
- Class II – is designated as a bicycle lane where a portion of the roadway is striped, signed, and marked for the exclusive use of cyclists.
- Class III – is designated as a bicycle route where the roadway facilities are shared by motorists and cyclists.

San Vicente Boulevard provides striped bike lanes along the length of the roadway and transitions to a bike route near Montana Avenue.

Figure 3 illustrates the study area bicycle network.

**Figure 3 – Study Area Bicycle Network**



Source: Metro, 2012.

## 2.4 Study Roadway Segment Operations Analysis

Average Daily Traffic (ADT) volumes were collected at multiple points for public roadways that are part of the proposed Project route. Traffic count locations were chosen based on the analyzed roadway corridors and their characteristics. Traffic counts utilized for base volumes at the study roadway segments on arterials and local roadways were conducted on Thursday, June 6, 2013, and Tuesday, June 18, 2013. The traffic count summaries at the study roadway segments are provided in Appendix A to this document.

Table 3 provides the applied capacity limit, the existing number of travel lanes, daily traffic volumes, and associated LOS values for the nine analyzed roadway segments on the proposed Project route.

**Table 3 – Existing (2013) Conditions – Daily LOS**

Segment			Existing Conditions				
			Capacity	# of Lanes	Existing		
					Volume	V/C	LOS
A	Homewood Rd.	south of Elkins Rd.	5,000	2	764	0.153	A
B	Homewood Rd.	south of Bonhill Rd.	5,000	2	1,034	0.207	A
C	Gretna Green Way	south of Shetland Ln.	5,000	2	2,061	0.412	A
D	San Vicente Blvd.	west of Bristol Ave.	30,000	4	34,221	1.141	F
E	San Vicente Blvd.	east of 21 <sup>st</sup> Pl.	30,000	4	25,401	0.847	D
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	30,000	4	22,524	0.751	C
G	San Vicente Blvd.	east of Lincoln Blvd.	22,500	3	20,201	0.898	D
H	Entrada Drive	west of Stassi Ln.	15,000	2	14,334	0.956	E
I	West Channel Rd.	west of Short St.	22,500	3	17,450	0.776	C

The daily LOS for two analyzed roadway segments is currently at poor values of E (nearing capacity) or F (at/exceeding capacity) based on the existing volumes and number of travel lanes of the roadway. These two roadway segments are as follows:

- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operates at LOS F
- Segment H (Entrada Drive, west of Stassi Lane) – Operates at LOS E

Figure 4 provides the daily volumes for the analyzed roadway segments, under this scenario.

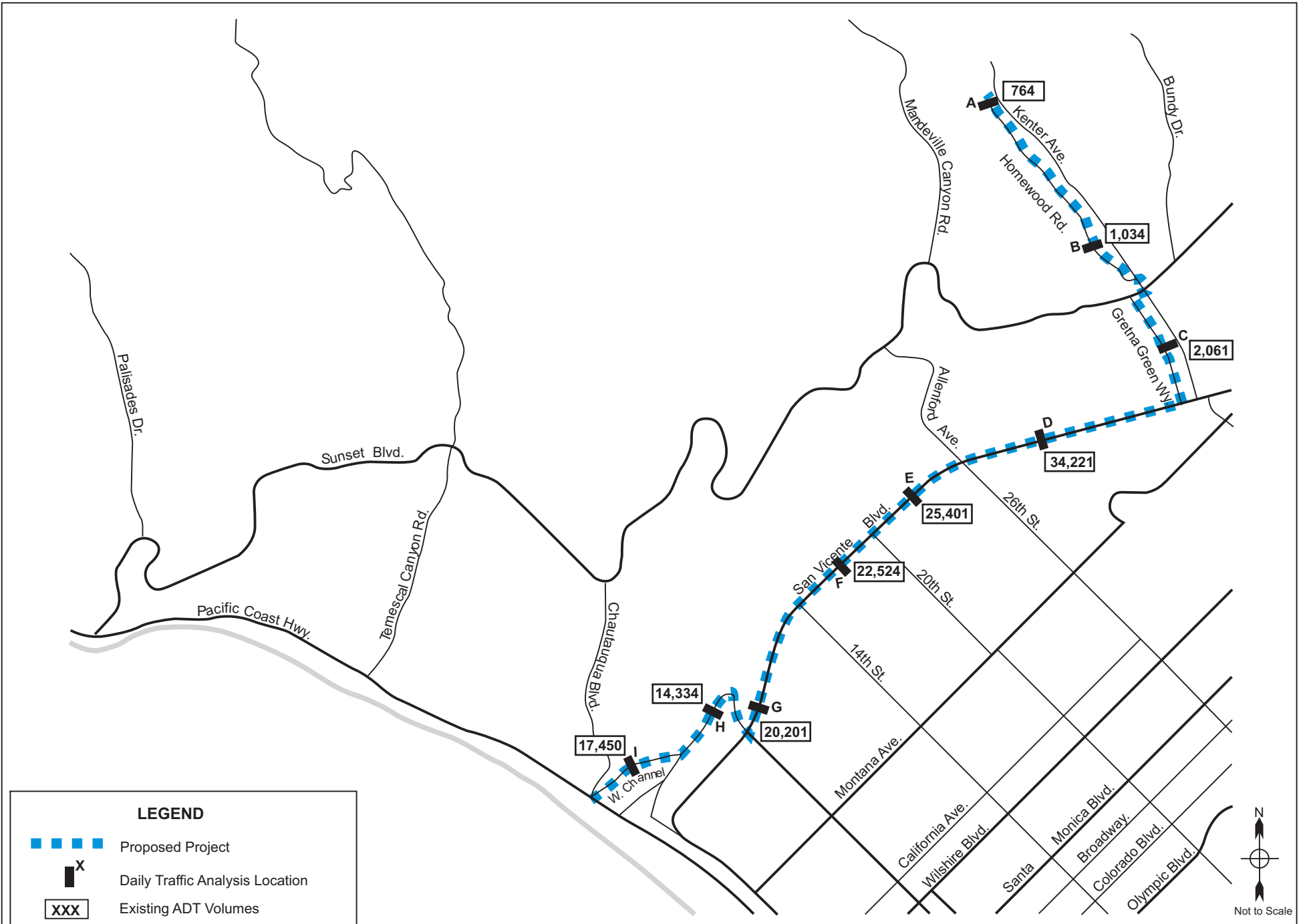
The existing roadway peak-hour LOS values are summarized in Table 4.

**Table 4 – Existing (2013) Conditions – Peak-Hour LOS**

Segment			# of Lanes	Capacity	AM Peak Hour			PM Peak Hour		
					Volumes	V/C	LOS	Volumes	V/C	LOS
A	Homewood Rd.	south of Elkins Rd.	2	900	262	0.291	A	24	0.027	A
B	Homewood Rd.	south of Bonhill Rd.	2	900	150	0.167	A	58	0.064	A
C	Gretna Green Way	south of Shetland Ln.	2	900	141	0.157	A	176	0.196	A
D	San Vicente Blvd.	west of Bristol Ave.	4	2,500	2,601	1.040	F	2,398	0.959	E
E	San Vicente Blvd.	east of 21 <sup>st</sup> Pl.	4	2,500	1,809	0.724	C	1,903	0.761	C
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	4	2,500	1,505	0.602	B	1,776	0.710	C
G	San Vicente Blvd.	east of Lincoln Blvd.	3	1,575	1,454	0.923	E	1,658	1.053	F
H	Entrada Drive	west of Stassi Ln.	2	1,050	1,108	1.055	F	953	0.908	E
I	West Channel Rd.	west of Short St.	3	1,575	1,239	0.787	C	1,333	0.846	D

During the a.m. and p.m. peak hour, three roadway segments would operate at poor levels of service of E or F. Operations at the following analyzed roadway segments would operate at LOS E or F:

- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operates at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operates at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour
- Segment H (Entrada Drive, west of Stassi Lane) – Operates at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour



### 3. Existing Plus Project Conditions

This section documents existing traffic conditions in the study area with Project construction. This analysis scenario was included in this report to provide a comparison of the existing baseline condition to the future baseline condition analyzed later within this report. Inclusion of this analysis complies with rulings on baseline analysis conditions in the *Sunnyvale West Neighborhood Assoc. v. City of Sunnyvale City Council* and *Neighbors for Smart Rail v. Exposition Metro Rail Construction Authority* court cases related to the application of CEQA.

Table 5 provides the lane configurations during Project construction (based on the assumed work area limits and the effects on the roadway cross-section), daily traffic volumes, and associated LOS values for the nine analyzed roadway segments on the proposed Project route.

**Table 5 – Existing Plus-Project Conditions – Daily LOS**

Segment			Exist With Project Conditions				
			Capacity	# of Lanes	Volume	V/C	LOS
A	Homewood Rd.	south of Elkins Rd.					
B	Homewood Rd.	south of Bonhill Rd.	1,250	1	1,034	0.827	D
C	Gretna Green Way	south of Shetland Ln.	1,250	1	2,061	1.649	F
D	San Vicente Blvd.	west of Bristol Ave.	22,500	3	34,221	1.521	F
E	San Vicente Blvd.	east of 21 <sup>st</sup> Pl.	22,500	3	25,401	1.129	F
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	22,500	3	22,524	1.001	F
G	San Vicente Blvd.	east of Lincoln Blvd.	15,000	2	20,201	1.347	F
H	Entrada Dr.	west of Stassi Ln.	3,750	1	14,334	3.822	F
I	West Channel Rd.	west of Short St.	15,000	2	17,450	1.163	F

The daily LOS for seven analyzed roadway segments would worsen to or within poor LOS values of E or F, for existing plus Project conditions:

- Segment C (Gretna Green Way, south of Shetland Lane) – Operations would worsen to LOS F
- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operations would worsen within LOS F
- Segment E (San Vicente Boulevard, east of 21<sup>st</sup> Place) – Operations would worsen to LOS F
- Segment E (San Vicente Boulevard, east of 17<sup>th</sup> Street) – Operations would worsen to LOS F
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operations would worsen to LOS F
- Segment H (Entrada Drive, west of Stassi Lane) – Operations would worsen to LOS F
- Segment I (West Channel Road, west of Short Street) – Operations would worsen to LOS F

The existing roadway peak-hour LOS values are summarized in Table 6.

**Table 6 – Existing Plus-Project Conditions – Peak-Hour LOS**

Segment			AM Peak Hour					PM Peak Hour				
			# of Lanes	Capacity	Volumes	V/C	LOS	# of Lanes	Capacity	Volumes	V/C	LOS
A	Homewood Road	south of Elkins Road	1	450	262	0.582	A	1	450	24	0.053	A
B	Homewood Road	south of Bonhill Road	1	450	150	0.333	A	1	450	58	0.129	A
C	Gretna Green Way	south of Shetland Lane	1	450	141	0.313	A	1	450	176	0.391	A
D	San Vicente Boulevard	west of Bristol Avenue	3	1,575	2,601	1.651	F	3	1,575	2,398	1.523	F
E	San Vicente Boulevard	east of 21 <sup>st</sup> Place	3	1,575	1,809	1.149	F	3	1,575	1,903	1.208	F
F	San Vicente Boulevard	east of 17 <sup>th</sup> Street	3	1,575	1,505	0.956	E	3	1,575	1,776	1.128	F
G	San Vicente Boulevard	east of Lincoln	2	1,050	1,454	1.385	F	2	1,050	1,658	1.579	F
H	Entrada Drive	west of Stassi Lane	1	525	1,108	2.110	F	1	525	953	1.815	F
I	West Channel Road	west of Short Street	2	1,050	1,239	1.180	F	2	1,050	1,333	1.270	F

The peak-hour LOS of service for six analyzed roadway segments would worsen to or within poor LOS values of E or F, for existing plus Project conditions:

- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operations would worsen within LOS F in the a.m. peak hour and would worsen to LOS F in the p.m. peak hour
- Segment E (San Vicente Boulevard, east of 21<sup>st</sup> Place) – Operations would worsen to LOS F in the a.m. and p.m. peak hours
- Segment F (San Vicente Boulevard, east of 17<sup>th</sup> Street) – Operations would worsen to LOS E in the a.m. peak hour and LOS F in the p.m. peak hour
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operations would worsen to LOS F in the a.m. peak hour and within LOS F in the p.m. peak hour
- Segment H (Entrada Drive, west of Stassi Lane) – Operations would worsen within LOS F in the a.m. peak hour and to LOS F in the p.m. peak hour
- Segment I (West Channel Road, west of Short Street) – Operations would worsen to LOS F in the a.m. and p.m. peak hours

Significant Project impacts are discussed within Section 6 of this report.



## 4. Future (2017) Without Project Conditions

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This section provides the analysis of without-Project construction conditions in the study area for the analyzed future year. Project construction is anticipated to begin in early 2016 and to be completed in approximately two years. The future analysis year was defined as the year 2017, as this would be the latest year of Project construction activities, and therefore the highest amount of annual ambient growth would apply to conditions during that year. This provides a conservative analysis.

The analysis of future baseline conditions included the addition of ambient growth, based on projections within the Metro 2010 CMP. This was also based on trips that are expected to be generated by proposed area/cumulative projects.

In order to forecast year-2017 baseline traffic volumes, year-2013 peak hour volumes were increased by a 0.28 percent annual growth rate based on the CMP definitions, in addition to the inclusion of cumulative/area project trips within the study area.

### 4.1 Cumulative/Area Projects

There were a total of 29 cumulative/area projects that were considered for the future baseline analysis. Table 7 summarizes the projects compiled from information maintained by the City of Los Angeles and the City of Santa Monica, and the trip generation of each.

Trips that would be generated by these projects were defined by environmental documentation maintained by the City of Los Angeles as part of the LADOT clearinghouse function, and by development project updates provided on the City of Santa Monica Planning Department website.

Where only project intensity information was provided by the local jurisdiction, trip generation was calculated through the application of rates defined by *Trip Generation (9<sup>th</sup> edition)*, published by the Institute of Transportation Engineers. Trip distribution to the study area was defined by the distance of each area project from the proposed Project corridor, as well as regional travel routes. Projects at a high distance from the Project corridor had minimal volumes applied to the analysis.

**Table 7 – Cumulative/Area Projects List**

ID	Project Type	Location	Land Use	Intensity	Units	Daily Total	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
<b>CITY OF LOS ANGELES</b>												
1	Retail Development	11711 Gorham Ave.	Retail	32.000	k.s.f.	1,366	31	19	12	119	57	62
2	Green Hollow Square	11973 San Vicente Blvd.	Retail	26.582	k.s.f.	1,361	104	43	61	189	104	85
			Other	16.556	k.s.f.							
			Office	(12.296)	k.s.f.							
			Office	(0.680)	k.s.f.							
			Retail	(7.830)	k.s.f.							
			Other	(3.500)	k.s.f.							
			Other	(0.500)	k.s.f.							
Single Family Residential	(2)	du										
<b>SUB-TOTAL</b>						<b>2,727</b>	<b>135</b>	<b>62</b>	<b>73</b>	<b>308</b>	<b>161</b>	<b>147</b>
<b>CITY OF SANTA MONICA</b>												
3	Mixed-Use	2041 Colorado Ave.	Townhouse/Condo	174	d.u.	1,807	95	24	71	159	93	66
			Retail	18.645	k.s.f.							
4	1802 Santa Monica Blvd.	1802 Santa Monica Blvd.	Townhouse/Condo	26	d.u.	767	52	30	22	64	31	33
			Auto Sales	13.590	k.s.f.							
			Restaurant	1.390	k.s.f.							
5	Toyota Auto Dealership	1530 Santa Monica	Auto Sales	43.500	k.s.f.	1,405	84	63	21	114	46	68
6	Mini Auto Dealership	1402 Santa Monica	Auto Sales	33.750	k.s.f.	1,090	65	49	16	88	35	53
7	Media Production	1551 14 <sup>th</sup> St.	Office	5.776	k.s.f.	64	9	8	1	9	2	7
8	Condominium	1211 12 <sup>th</sup> St.	Townhouse/Condo	15	d.u.	87	7	1	6	8	5	3
9	Acute Rehabilitation	1131 Arizona Ave.	Hospital	55	beds	712	73	53	20	78	26	52
10	16-Unit Condo	1652 12 <sup>th</sup> St.	Townhouse/Condo	16	d.u.	93	7	1	6	8	5	3
11	Mixed Use	1437 Lincoln Blvd	Townhouse/Condo	100	d.u.	702	47	9	38	62	40	22
			Retail	2.828	k.s.f.							
12	Mixed Use	1560 Lincoln Blvd	Townhouse/Condo	100	d.u.	1,165	57	15	42	103	59	44
			Retail	13.680	k.s.f.							
13	Mixed Use	1601 Lincoln Blvd.	Townhouse/Condo	100	d.u.	880	51	11	40	78	47	31
			Retail	7.000	k.s.f.							
14	Mixed use (Joann's Fabric site)	1637 Lincoln Blvd	Townhouse/Condo	75	d.u.	834	42	12	30	74	43	31
			Retail	9.330	k.s.f.							
15	Mixed Use	1650 Lincoln Blvd.	Apartment	90	d.u.	663	47	10	37	62	39	23
			Retail	1.500	k.s.f.							
16	Mixed Use	1660 Lincoln Blvd.	Apartment	82	d.u.	609	43	9	34	57	36	21
			Retail	1.500	k.s.f.							
17	Mixed Use	710 Wilshire Blvd.	Hotel	285	rooms	2,969	165	98	67	227	114	113
			Retail	15.000	k.s.f.							
18	Mixed Use	702 Arizona Ave.	Townhouse/Condo	49	d.u.	553	28	8	20	48	28	20
			Retail	6.276	k.s.f.							
19	1317 7th St.	1317 7 <sup>th</sup> St.	Townhouse/Condo	57	d.u.	456	28	6	22	41	25	16
			Retail	2.929	k.s.f.							
20	Affordable Housing	1543 7 <sup>th</sup> St.	Apartment	43	d.u.	286	22	4	18	27	18	9
21	Mixed Use	1325 6 <sup>th</sup> St.	Townhouse/Condo	100	d.u.	683	46	8	38	61	39	22
			Retail	2.400	k.s.f.							
22	Mixed Use	1415 5 <sup>th</sup> St.	Townhouse/Condo	100	d.u.	736	47	9	38	65	41	24
			Retail	3.623	k.s.f.							
23	Courtyard by Marriot Hotel	1554 5 <sup>th</sup> St.	Hotel	131	rooms	4,433	145	88	57	371	180	191
			Retail	78.750	k.s.f.							
24	Hampton Inn & Suites by Hilton	501 Colorado Ave.	Hotel	138	rooms	4,558	150	91	59	381	185	196
			Retail	80.350	k.s.f.							
25	AMC Movie Theater	1318-1320 Fourth St.	Retail	81.200	k.s.f.	3,696	97	58	39	319	155	164
			Restaurant	1.800	k.s.f.							
26	Mixed Use	401 Broadway	Townhouse/Condo	56	d.u.	503	29	6	23	44	26	18
			Retail	4.159	k.s.f.							

ID	Project Type	Location	Land Use	Intensity	Units	Daily Total	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
<b>CITY OF SANTA MONICA</b>												
27	1318 2 <sup>nd</sup> St.	1318 2nd St.	Townhouse/Condo	53	d.u.	594	29	8	21	53	31	22
			Retail	6.700	k.s.f.							
28	Miramar Hotel (revitalization)	1133 Ocean Ave/101 Wilshire Blvd	Townhouse/Condo	120	d.u.	2,683	197	89	108	220	133	87
			Restaurant	12.500	k.s.f.							
			Retail	9.300	k.s.f.							
29	Mixed Use	101 Santa Monica Blvd.	Hotel	125	rooms	2,602	112	63	49	213	106	107
			Apartment	5	d.u.							
			Townhouse/Condo	22	d.u.							
			Retail	33	k.s.f.							
			Office	0.460	k.s.f.							
<b>SUB-TOTAL</b>						<b>35,630</b>	<b>1,774</b>	<b>831</b>	<b>943</b>	<b>3,034</b>	<b>1,588</b>	<b>1,446</b>
<b>TOTAL</b>						<b>38,357</b>	<b>1,909</b>	<b>893</b>	<b>1,016</b>	<b>3,342</b>	<b>1,749</b>	<b>1,593</b>

Notes: d.u. = dwelling units, k.s.f. = 1,000 square feet of floor area

Trip Generation Rates Source: Institute of Transportation Engineers (ITE) "Trip Generation - 9<sup>th</sup> Edition".

Based on the application of ambient growth rates and trips generated by area projects, area project baseline conditions for the study roadway segments were computed. The roadway segment most directly affected by the trips generated by the area projects would be on the eastern portion of San Vicente Boulevard, just east of Gretna Green Way.

#### 4.2 Future Study Roadway Segment Operations Analysis

Table 8 provides the future (2017) without Project construction daily conditions analysis for the proposed Project route.

**Table 8 - Future (2017) Without Project Conditions – Daily LOS**

Segment			Future Base Conditions							
			Capacity	# of Lanes	Ambient Growth	Area Projects	Existing Volumes	Future		
							Volume	V/C	LOS	
A	Homewood Rd.	south of Elkins Rd.	5,000	2	1.12%	0	764	773	0.155	A
B	Homewood Rd.	south of Bonhill Rd.	5,000	2	1.12%	0	1,034	1,046	0.209	A
C	Gretna Green Way	south of Shetland Ln.	5,000	2	1.12%	0	2,061	2,084	0.417	A
D	San Vicente Blvd.	west of Bristol Ave.	30,000	4	1.12%	272	34,221	34,876	1.163	F
E	San Vicente Blvd.	east of 21 <sup>st</sup> Place	30,000	4	1.12%	0	25,401	25,685	0.856	D
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	30,000	4	1.12%	0	22,524	22,776	0.759	C
G	San Vicente Blvd.	east of Lincoln Blvd.	22,500	3	1.12%	0	20,201	20,427	0.908	E
H	Entrada Dr.	west of Stassi Ln.	15,000	2	1.12%	356	14,334	14,851	0.990	E
I	West Channel Rd.	west of Short St.	22,500	3	1.12%	356	17,450	18,001	0.800	D

The daily LOS for three analyzed roadway segments would worsen to or within poor LOS values of E or F, with ambient traffic growth through the year 2017 and the addition of trips generated by area projects:

- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operations would worsen within LOS F
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operations would worsen to LOS E
- Segment H (Entrada Drive, west of Stassi Lane) – Operations would worsen within LOS E

Figure 5 provides the daily volumes for the analyzed roadway segments, under this analysis scenario.

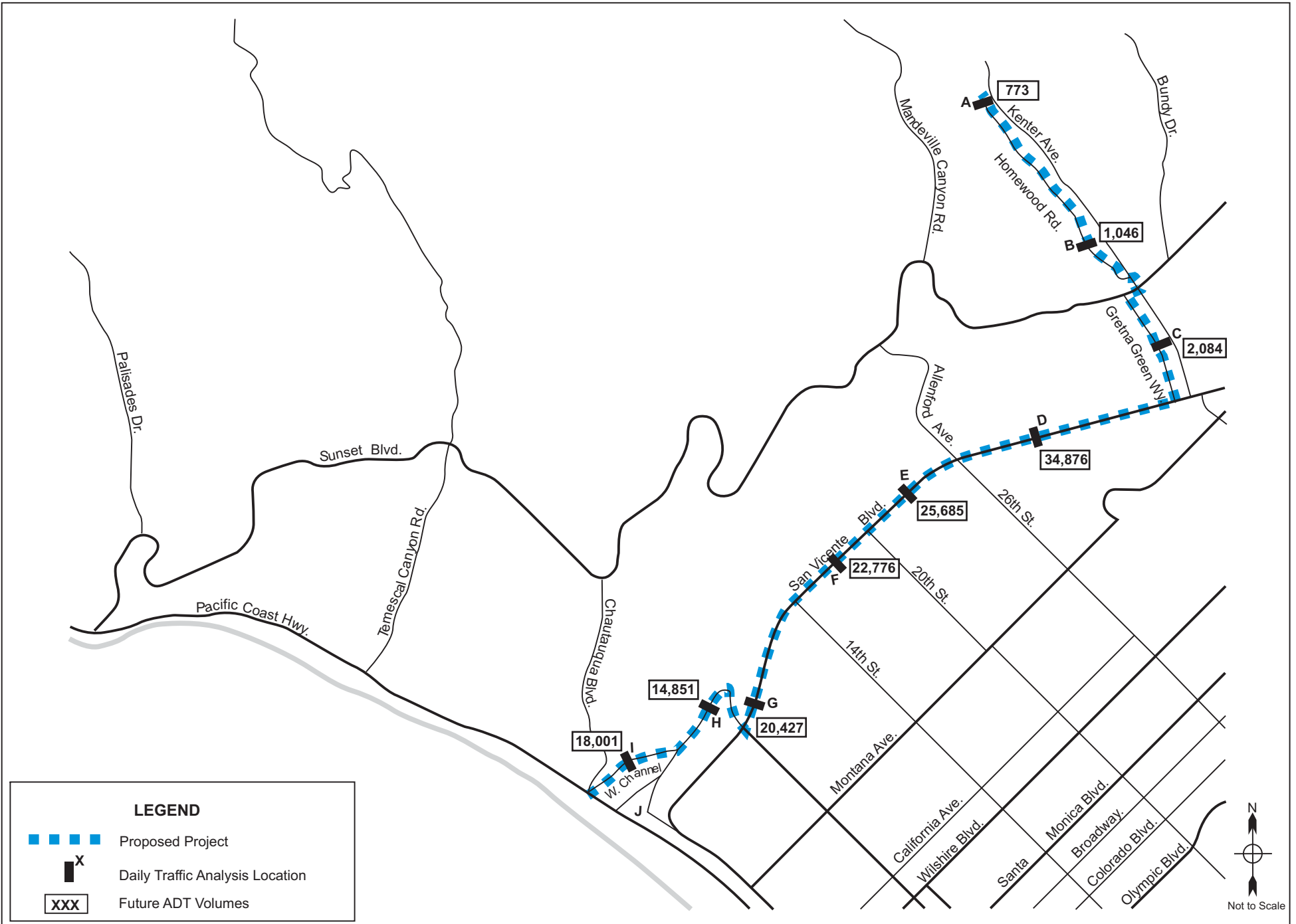
Table 9 provides the future (2017) without Project construction peak-hour conditions analysis for the proposed Project route.

**Table 9 – Future (2017) Without Project Conditions – Peak-Hour LOS**

Segment			# of Lanes	Capacity	AM Peak Hour			PM Peak Hour		
					Volumes	V/C	LOS	Volume	V/C	LOS
A	Homewood Rd.	south of Elkins Rd.	2	900	265	0.294	A	24	0.027	A
B	Homewood Rd.	south of Bonhill Rd.	2	900	152	0.169	A	59	0.065	A
C	Gretna Green Way	south of Shetland Lane	2	900	143	0.158	A	178	0.198	A
D	San Vicente Blvd.	west of Bristol Avenue	4	2,500	2,643	1.057	F	2,456	0.982	E
E	San Vicente Blvd.	east of 21 <sup>st</sup> Place	4	2,500	1,829	0.732	C	1,924	0.770	C
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	4	2,500	1,522	0.609	B	1,796	0.718	C
G	San Vicente Blvd.	east of Lincoln Blvd.	3	1,575	1,470	0.934	E	1,677	1.064	F
H	Entrada Drive	west of Stassi Lane	2	1,050	1,137	1.083	F	994	0.946	E
I	West Channel Rd.	west of Short St.	3	1,575	1,270	0.806	D	1,378	0.875	D

The peak-hour LOS for three analyzed roadway segments would worsen to or within poor LOS values of E or F, with ambient traffic growth through the year 2017 and the addition of trips generated by area projects:

- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operations would worsen within LOS F in the a.m. peak hour and would worsen within LOS E in the p.m. peak hour
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operations would worsen within LOS E in the a.m. peak hour and within LOS F in the p.m. peak hour
- Segment H (Entrada Drive, west of Stassi Lane) – Operations would worsen within LOS F in the a.m. peak hour and within LOS E in the p.m. peak hour



## 5. Future (2017) Project Construction Conditions

This section documents future traffic conditions in the study area with Project construction. This analysis scenario builds upon the previous report section by adding the expected configuration of travel lanes at the analyzed roadway segments during the Project construction period.

Table 10 provides the with-Project construction lane configurations (based on the assumed work area limits and the effects on the roadway cross-section), daily traffic volumes, and associated LOS values for the nine analyzed roadway segments on the proposed Project route.

**Table 10 – Future (2017) with Project Conditions – Daily LOS**

Segment			Future With Project Conditions				
			Capacity	# of Lanes	Future with Project		
					Volume	V/C	LOS
A	Homewood Rd.	south of Elkins Rd.	1,250	1	773	0.618	B
B	Homewood Rd.	south of Bonhill Rd.	1,250	1	1,046	0.836	D
C	Gretna Green Way	south of Shetland Ln.	1,250	1	2,084	1.667	F
D	San Vicente Blvd.	west of Bristol Ave.	22,500	3	34,876	1.550	F
E	San Vicente Blvd.	east of 21 <sup>st</sup> Pl.	22,500	3	25,685	1.142	F
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	22,500	3	22,776	1.012	F
G	San Vicente Blvd.	east of Lincoln Blvd.	15,000	2	20,427	1.362	F
H	Entrada Drive	west of Stassi Ln.	3,750	1	14,851	3.960	F
I	West Channel Rd.	west of Short St.	15,000	2	18,001	1.200	F

The daily LOS for seven analyzed roadway segments would worsen to or within poor LOS values of E or F, with proposed Project construction in the analyzed future period:

- Segment C (Gretna Green Way, south of Shetland Lane) – Operations would worsen to LOS F
- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operations would worsen within LOS F
- Segment E (San Vicente Boulevard, east of 21<sup>st</sup> Place) – Operations would worsen to LOS F
- Segment F (San Vicente Boulevard, east of 17<sup>th</sup> Street) – Operations would worsen to LOS F
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operations would worsen to LOS F
- Segment H (Entrada Drive, west of Stassi Lane) – Operations would worsen to LOS F
- Segment I (West Channel Road, west of Short Street) – Operations would worsen to LOS F

The future with Project construction peak-hour LOS values are summarized in Table 11.

**Table 11 – Future (2017) with Project Conditions – Peak-Hour LOS**

Segment			AM Peak Hour					PM Peak Hour				
			# of Lanes	Capacity	Volumes	V/C	LOS	# of Lanes	Capacity	Volumes	V/C	LOS
A	Homewood Rd	south of Elkins Rd	1	450	265	0.589	A	1	450	24	0.054	A
B	Homewood Rd	south of Bonhill Rd	1	450	152	0.337	A	1	450	59	0.130	A
C	Gretna Green Way	south of Shetland Ln.	1	450	143	0.317	A	1	450	178	0.395	A
D	San Vicente Blvd.	west of Bristol Ave.	3	1,575	2,643	1.678	F	3	1,575	2,456	1.559	F
E	San Vicente Blvd.	east of 21 <sup>st</sup> Pl.	3	1,575	1,829	1.161	F	3	1,575	1,924	1.222	F
F	San Vicente Blvd.	east of 17 <sup>th</sup> St.	3	1,575	1,522	0.966	E	3	1,575	1,796	1.140	F
G	San Vicente Blvd.	east of Lincoln Blvd.	2	1,050	1,470	1.400	F	2	1,050	1,677	1.597	F
H	Entrada Drive	west of Stassi Ln.	1	525	1,137	2.166	F	1	525	994	1.893	F
I	West Channel Rd	west of Short St.	2	1,050	1,270	1.209	F	2	1,050	1,378	1.312	F

The peak-hour LOS for six analyzed roadway segments would worsen to or within poor LOS values of E or F, with proposed Project construction in the analyzed future period:

- Segment D (San Vicente Boulevard, west of Bristol Avenue) – Operations would worsen within LOS F in the a.m. peak hour and would worsen to LOS F in the p.m. peak hour
- Segment E (San Vicente Boulevard, east of 21<sup>st</sup> Place) – Operations would worsen to LOS F in the a.m. and p.m. peak hours
- Segment F (San Vicente Boulevard, east of 17<sup>th</sup> Street) – Operations would worsen to LOS E in the a.m. peak hour and to LOS F in the p.m. peak hour
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard) – Operations would worsen to LOS F in the a.m. peak hour and worsen within LOS F in the p.m. peak hour
- Segment H (Entrada Drive, west of Stassi Lane) – Operations would worsen within LOS F in the a.m. peak hour and to LOS F in the p.m. peak hours
- Segment I (West Channel Road, west of Short Street) – Operations would worsen to LOS F in the a.m. and p.m. peak hours

Significant Project impacts are discussed within Section 6 of this report.

As previously discussed, capacity would be constricted, in some form, along each Project roadway segment during construction. It is anticipated that construction would generally involve the closure of one travel lane, based on the width of the Project work areas. It may be necessary to close up to two lanes during the installation of the maintenance vaults. The closures related to the vault installation would be short term in nature, only occurring for five days of the

construction process at a given location.

The need for manual traffic control, detours, and roadway/approach closures would be defined through traffic plans developed for each construction segment. These plans would be reviewed by the local jurisdictions prior to implementation along the Project corridor.

Impacts to transit service would not be likely along Project segments during construction. Temporary stop relocations/closures could be necessary based on the roadway width needed for Project construction on San Vicente Boulevard, where a large center median restricts the ability to restripe lanes during the construction period. Turning movements would not likely be restricted or closed, avoiding re-routing from neighborhoods currently served by transit.

### **5.1 Significant Impact Definitions and Determinations**

Per CEQA Appendix G, Environmental Checklist Form, under Section XVI. Transportation/Traffic, the following questions are to be answered to determine if a project would create a significant impact. The questions are followed by a discussion of quantified or generally-determined impact significance for the Project construction period.

*a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

*b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

The discussion below references both questions a) and b) from above.

Traffic impacts are identified if a proposed development will result in a significant change in traffic conditions of the roadway segment. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if a facility is already operating below the acceptable LOS and project traffic will cause a further decline below a threshold.

Incremental impact thresholds are typically applied for projects where new trips are generated – either from construction, a development project, or a similar proposed activity/use. Where a roadway segment was forecasted to operate at LOS E (nearing capacity) or LOS F (at or over capacity), and Project construction activities would cause or worsen this condition, it was considered significant since it implies that major congestion could be created by Project construction if not mitigated.



The significant traffic impact thresholds of the City of Los Angeles and the City of Santa Monica are provided in Appendix B to this traffic report. These guidelines are developed for the purpose of determining how trips generated by proposed development projects would incrementally impact roadway facilities.

The temporary reductions in travel lanes that would be caused by construction of the proposed Project would cause large changes in volume-to-capacity ratios and LOS value changes that are not applicable to these development-based guidelines. In addition, the number of construction trips generated by employees and truck delivery/hauling trips would be negligible for purposes of impact analysis. Therefore, the LOS value changes defined above were applied to the significant impact analysis.

The following seven roadway segments would worsen in operations during the Project construction period to or within LOS E or F in either the weekday daily period, the weekday a.m. peak period, or the p.m. peak period. This worsening of operations was considered to denote significant traffic impacts:

- Segment C (Gretna Green Way, south of Shetland Lane)
- Segment D (San Vicente Boulevard, west of Bristol Avenue)
- Segment E (San Vicente Boulevard, east of 21<sup>st</sup> Place)
- Segment F (San Vicente Boulevard, east of 17<sup>th</sup> Street)
- Segment G (San Vicente Boulevard, east of Lincoln Boulevard)
- Segment H (Entrada Drive, west of Stassi Lane)
- Segment I (West Channel Road, west of Short Street)

*c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

The Project would not impact air traffic patterns since the Project consists of construction activities associated with underground cables and vaults.

*d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

The construction of the Project was designed to not increase hazards and create incompatible uses. The construction traffic control plans would be designed with standard safety measures and would provide for safe passage or detouring, as necessary, of vehicles, transit services, bicyclists, and pedestrians. Intersection control measures would be established through these plans to adequately control traffic, and construction zone maximum traffic speeds would be established. Hazards would not be increased with establishment of these plans.

*e) Result in inadequate emergency access?*

Underground construction activities could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. The loss of a lane and the resulting increase in congestion could lengthen the response time required for emergency vehicles passing through the construction zone. Moreover, there is a possibility that emergency services may be needed at a location where access is temporarily blocked by the construction zone. The construction work zones, however, would be established within finite areas, and the balance of the corridor would remain open and unrestricted by construction. LADWP will notify public safety departments of the City of Los Angeles and the City of Santa Monica before construction begins within the Project corridor, so that alternate access routes could be used as needed.

*f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

Potential impacts to transit, bicycle, and pedestrian facilities are discussed below.

Potential Transit Line Impacts

The design of traffic plans would be performed in consultation with local transit agencies to minimize impacts to passenger loading areas and to minimize travel times on scheduled transit routes. All affected transit agencies (such as Metro, LADOT, and the City of Santa Monica) shall be contacted to provide for any required modifications or temporary relocation of bus stops.

One area public bus transit line would be affected by construction within the proposed Project corridor. The Santa Monica Big Blue Bus Line 4 operates as a local bus route that provides services within the Community of Pacific Palisades. Within the study area, this line travels from the Westside Pavilion to the Santa Monica Civic Center via San Vicente Boulevard, Carlyle Avenue, and 4<sup>th</sup> Street. Service on San Vicente Boulevard within the Project route analyzed within this report section is limited to eastbound service to the east of 26<sup>th</sup> Street. This service operates at an approximate frequency of 30 minutes during weekday peak periods. Provision of temporary stops and access for riders, where necessary based on construction closures, shall be included in traffic control plans.

Bus stops for Line 4 may need to be temporarily moved forward or back during the course of construction. With constricted roadway width during construction, bus stops may need to be accommodated within travel lanes. Stop closure signs would be provided by the transit operator, with proper noticing by LADWP before construction work areas are established.

With this pre-planning to facilitate use of transit and accommodating passage of transit vehicles through the work zones, the impact to transit will be less than significant.

#### Potential Bicycle Facility Impacts

Striped bicycle lanes present within the San Vicente Boulevard corridor will need to be considered during the construction planning process. If the lanes cannot be provided during the construction period, advance-warning detour signs for bicyclists would be provided to route bicyclists onto parallel local roadways. As construction activities are completed within each segment and work area barriers are removed, the routes would be restored and detours would be removed.

With pre-planning to facilitate use of bicycle facilities and provided proper detours where necessary, the impact to bicycle travel will be less than significant.

#### Potential Pedestrian Network Impacts

Sidewalks will not likely be affected by the construction work areas and should remain open in most areas during the Project construction activities. Where sidewalks must be closed due to the establishment of construction work areas or logistical needs such as laydown area access or truck movement routes, pedestrian detour signs would be provided at the next safe crossing points – existing intersection or mid-block crosswalk – to route pedestrians to an open sidewalk route.

With this pre-planning done to facilitate use of sidewalks and accommodating alternate pedestrian routes as necessary, the impact to pedestrian travel will be less than significant.

## **5.2 Mitigation Measures/Best Management Practices**

There are not identified mitigation measures that would remove the identified significant impacts during the construction period, although the impacts would be temporary in nature and would only occur as construction work areas are established within relatively short segments along the overall corridor. Localized impacts would be removed as construction progresses along the corridor, and all impacts would be eliminated when all corridor construction activities are completed.

Daily volume/operational impacts cannot be avoided during the construction period. Where feasible, temporarily re-opening construction work areas to vehicular traffic during peak travel times of from 6:00 a.m. to 9:00 a.m. and 3:30 p.m. to 7:00 p.m. could avoid peak-hour impacts. However, in order to reduce overall construction duration to meet the necessary Project schedule, variances to the Mayors Directive #2 within the City of Los Angeles on peak-period construction would be sought. The application to and receipt of variances on

construction hour limitations would be accomplished, as necessary, during the finalization of construction plans.

Specific work zone extents will be established by LADWP as Project construction progresses along the Project corridor. Not all of the significant impacts will occur at the same time, and once segments are completed and work zones are removed and established in other areas, the designed roadway capacity in a given segment will be restored, and there will not be any long-term impacts.

To mitigate Project impacts, the final design of the Project should be performed to minimize the locations of complete roadway closures and to minimize the number and duration of lane closures. Detailed construction traffic control and detour (alternative route) plans should be prepared for each phase of construction, and a public outreach program should be implemented to inform the public on the Project's roadway closure and lane closure characteristics.

Provision of peak-direction directional travel lanes (or opening of lanes during peak periods) through actions defined by traffic control plans, where feasible, and allowing for bicycle, transit, and pedestrian access to the general area, would reduce any potentially significant short-term impacts during peak periods of traffic.

The following general measures are recommended for implementation as part of Project construction planning and mobilization, in order to provide safe movement of traffic within the areas of reduced capacity once construction activities are underway:

- MM-1 Prior to construction, construction traffic control plans shall be prepared by the LADWP for review and approval by the Los Angeles Department of Transportation and the City of Santa Monica.
  - The plan shall include, at a minimum, signage within the proposed Project corridor in advance of the start of construction, warning of potential delays once construction starts.
  - The plan should include signage to alert motorists to temporary or limited access points to adjacent properties; appropriate barricades for road closures; construction speed limit signage along the haul route; and parking restrictions during construction.
- MM-2 Detour plans shall be developed, including identification of wayfinding signage locations, to encourage traffic diversions for through traffic to multiple parallel routes to San Vicente Boulevard, such as Montana Avenue or Sunset Boulevard.
- MM-3 Traffic would be controlled during construction by adhering to the

guidelines contained in Standard Specifications for Public Works Construction used by many municipalities in California, and Caltrans' Traffic Manual, Chapter 5, "Manual of Traffic Controls for Construction and Maintenance Work Zones," and applicable City requirements. These guidelines provide methods to minimize construction effects on traffic flow.

Application of the general measures and practices identified above will mitigate potential impacts along these segments, to the extent feasible.

### **5.3 Operational Impacts**

At the conclusion of Project construction, all associated roadway facilities will be restored by the LADWP to their normal operating conditions. Pre-Project conditions would be restored. The Project does not require personnel to operate the system on a daily basis. Routine maintenance testing may be required, as with any utility infrastructure, but during typical operations there would not be any roadway closures or any new trips generated. Significant impacts would therefore not be created during the operational phase of the Project.

**APPENDIX A –**  
ROADWAY SEGMENT TRAFFIC COUNT SUMMARIES

**VOLUME**

Homewood Rd S/o Elkins Rd

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_001

DAILY TOTALS					NB	SB	EB	WB	Total		
					336	428	0	0	764		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	6	9			15
00:15	0	0			0	12:15	4	4			8
00:30	0	0			0	12:30	9	7			16
00:45	0	0			0	12:45	16	35	16	36	71
01:00	0	0			0	13:00	3	6			9
01:15	0	0			0	13:15	2	5			7
01:30	0	0			0	13:30	12	10			22
01:45	0	0			0	13:45	19	36	18	39	75
02:00	0	0			0	14:00	23	35			58
02:15	0	0			0	14:15	11	15			26
02:30	0	0			0	14:30	5	6			11
02:45	1	1	1	1	2	14:45	7	46	5	61	107
03:00	0	0			0	15:00	4	4			8
03:15	0	0			0	15:15	4	7			11
03:30	0	0			0	15:30	4	10			14
03:45	0	0			0	15:45	1	13	8	29	42
04:00	0	0			0	16:00	4	3			7
04:15	0	0			0	16:15	3	2			5
04:30	0	0			0	16:30	2	1			3
04:45	0	1	1		1	16:45	3	12	6	12	24
05:00	0	0			0	17:00	3	1			4
05:15	0	1			1	17:15	1	3			4
05:30	0	0			0	17:30	2	2			4
05:45	0	0	1		0	17:45	1	7	3	9	16
06:00	1	1			2	18:00	2	3			5
06:15	0	0			0	18:15	1	3			4
06:30	0	1			1	18:30	0	0			0
06:45	0	1	0	2	0	18:45	1	4	2	8	12
07:00	2	0			2	19:00	2	1			3
07:15	0	1			1	19:15	1	1			2
07:30	7	13			20	19:30	2	2			4
07:45	16	25	37	51	53	19:45	2	7	0	4	11
08:00	76	74			150	20:00	0	0			0
08:15	16	23			39	20:15	2	1			3
08:30	4	3			7	20:30	0	0			0
08:45	1	97	4	104	5	20:45	0	2	0	1	3
09:00	5	9			14	21:00	0	0			0
09:15	3	3			6	21:15	0	2			2
09:30	0	1			1	21:30	1	2			3
09:45	2	10	3	16	5	21:45	1	2	1	5	7
10:00	2	5			7	22:00	0	0			0
10:15	4	2			6	22:15	1	1			2
10:30	4	0			4	22:30	0	1			1
10:45	5	15	5	12	10	22:45	1	2	1	3	5
11:00	8	3			11	23:00	1	0			1
11:15	4	13			17	23:15	1	0			1
11:30	4	7			11	23:30	0	1			1
11:45	3	19	9	32	12	23:45	0	2	0	1	3
<b>TOTALS</b>	<b>168</b>	<b>220</b>			<b>388</b>	<b>TOTALS</b>	<b>168</b>	<b>208</b>			<b>376</b>
<b>SPLIT %</b>	<b>43.3%</b>	<b>56.7%</b>			<b>50.8%</b>	<b>SPLIT %</b>	<b>44.7%</b>	<b>55.3%</b>			<b>49.2%</b>

DAILY TOTALS					NB	SB	EB	WB	Total
					336	428	0	0	764

AM Peak Hour	07:30	07:30			07:30	PM Peak Hour	13:30	13:30			13:30
AM Pk Volume	115	147			262	PM Pk Volume	65	78			143
Pk Hr Factor	0.378	0.497			0.437	Pk Hr Factor	0.707	0.557			0.616
7 - 9 Volume	122	155	0	0	277	4 - 6 Volume	19	21	0	0	40
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	115	147	0	0	262	4 - 6 Pk Volume	12	12	0	0	24
Pk Hr Factor	0.378	0.497	0.000	0.000	0.437	Pk Hr Factor	0.750	0.500	0.000	0.000	0.667

**VOLUME**

Homewood Rd S/o Bonhill Rd

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_002

DAILY TOTALS					NB	SB	EB	WB	Total		
					536	498	0	0	1,034		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	19	15			34
00:15	0	0			0	12:15	13	11			24
00:30	0	0			0	12:30	15	9			24
00:45	1	1	1	1	2	12:45	10	57	16	51	26
01:00	1	0			1	13:00	14	8			22
01:15	0	0			0	13:15	9	11			20
01:30	0	0			0	13:30	18	10			28
01:45	0	1	0		0	13:45	12	53	14	43	26
02:00	0	0			0	14:00	9	28			37
02:15	0	0			0	14:15	11	9			20
02:30	0	0			0	14:30	8	12			20
02:45	0	0			0	14:45	9	37	10	59	19
03:00	0	0			0	15:00	10	13			23
03:15	0	0			0	15:15	11	9			20
03:30	0	0			0	15:30	9	8			17
03:45	0	0			0	15:45	7	37	7	37	14
04:00	0	0			0	16:00	11	10			21
04:15	0	0			0	16:15	10	4			14
04:30	0	0			0	16:30	7	5			12
04:45	0	1	1		1	16:45	6	34	5	24	11
05:00	0	0			0	17:00	9	4			13
05:15	0	1			1	17:15	5	6			11
05:30	0	0			0	17:30	6	5			11
05:45	0	1	2		1	17:45	5	25	4	19	9
06:00	1	0			1	18:00	5	3			8
06:15	3	0			3	18:15	7	4			11
06:30	2	2			4	18:30	6	3			9
06:45	4	10	0	2	4	18:45	7	25	2	12	9
07:00	5	1			6	19:00	4	3			7
07:15	4	2			6	19:15	5	3			8
07:30	8	8			16	19:30	6	5			11
07:45	19	36	18	29	37	19:45	3	18	2	13	5
08:00	28	34			62	20:00	5	4			9
08:15	12	20			32	20:15	4	2			6
08:30	9	10			19	20:30	4	3			7
08:45	10	59	9	73	19	20:45	2	15	3	12	5
09:00	6	6			12	21:00	3	2			5
09:15	7	9			16	21:15	2	3			5
09:30	6	8			14	21:30	3	1			4
09:45	6	25	5	28	11	21:45	2	10	0	6	2
10:00	9	5			14	22:00	2	1			3
10:15	8	12			20	22:15	4	0			4
10:30	8	6			14	22:30	3	3			6
10:45	12	37	11	34	23	22:45	3	12	2	6	5
11:00	13	9			22	23:00	1	0			1
11:15	8	11			19	23:15	1	0			1
11:30	7	13			20	23:30	1	1			2
11:45	13	41	10	43	23	23:45	0	3	2	3	2
<b>TOTALS</b>	210	213			423	<b>TOTALS</b>	326	285			611
<b>SPLIT %</b>	49.6%	50.4%			40.9%	<b>SPLIT %</b>	53.4%	46.6%			59.1%

DAILY TOTALS					NB	SB	EB	WB	Total
					536	498	0	0	1,034

AM Peak Hour	07:45	07:45			07:45	PM Peak Hour	12:00	13:15			13:15
AM Pk Volume	68	82			150	PM Pk Volume	57	63			111
Pk Hr Factor	0.607	0.603			0.605	Pk Hr Factor	0.750	0.563			0.750
7 - 9 Volume	95	102	0	0	197	4 - 6 Volume	59	43	0	0	102
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	68	82	0	0	150	4 - 6 Pk Volume	34	24	0	0	58
Pk Hr Factor	0.607	0.603	0.000	0.000	0.605	Pk Hr Factor	0.773	0.600	0.000	0.000	0.690



**VOLUME**

Gretna Green Way S/o Shetland Ln

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_003

DAILY TOTALS					NB	SB	EB	WB	Total		
					904	1,157	0	0	2,061		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	2			3	12:00	10	11			21
00:15	1	2			3	12:15	12	18			30
00:30	2	2			4	12:30	14	13			27
00:45	0	4	2	8	2	12:45	7	43	20	62	105
01:00	1	0			1	13:00	22	16			38
01:15	2	0			2	13:15	12	21			33
01:30	0	1			1	13:30	14	25			39
01:45	2	5	1	2	3	13:45	14	62	19	81	143
02:00	1	0			1	14:00	18	14			32
02:15	0	0			0	14:15	11	18			29
02:30	0	0			0	14:30	12	14			26
02:45	1	2	2	2	3	14:45	8	49	18	64	113
03:00	0	0			0	15:00	16	25			41
03:15	0	0			0	15:15	16	14			30
03:30	0	1			1	15:30	15	22			37
03:45	0	1	2		1	15:45	15	62	49	110	172
04:00	0	1			1	16:00	12	31			43
04:15	0	1			1	16:15	17	19			36
04:30	0	0			0	16:30	10	27			37
04:45	1	1	2	4	3	16:45	13	52	32	109	161
05:00	2	2			4	17:00	11	26			37
05:15	3	0			3	17:15	24	33			57
05:30	0	2			2	17:30	14	17			31
05:45	7	12	4	8	11	17:45	13	62	20	96	158
06:00	6	2			8	18:00	21	19			40
06:15	5	11			16	18:15	15	18			33
06:30	9	4			13	18:30	18	16			34
06:45	9	29	4	21	13	18:45	18	72	18	71	143
07:00	6	6			12	19:00	10	17			27
07:15	18	10			28	19:15	20	10			30
07:30	8	12			20	19:30	18	15			33
07:45	9	41	20	48	29	19:45	13	61	10	52	113
08:00	19	11			30	20:00	12	11			23
08:15	16	18			34	20:15	10	6			16
08:30	18	23			41	20:30	15	9			24
08:45	13	66	23	75	36	20:45	13	50	6	32	82
09:00	14	28			42	21:00	13	7			20
09:15	11	24			35	21:15	10	5			15
09:30	12	22			34	21:30	7	12			19
09:45	11	48	20	94	31	21:45	6	36	5	29	65
10:00	6	12			18	22:00	11	8			19
10:15	14	22			36	22:15	3	13			16
10:30	19	15			34	22:30	11	5			16
10:45	11	50	20	69	31	22:45	5	30	7	33	63
11:00	15	16			31	23:00	2	6			8
11:15	11	18			29	23:15	4	3			7
11:30	15	23			38	23:30	8	1			9
11:45	9	50	16	73	25	23:45	3	17	2	12	29
<b>TOTALS</b>	<b>308</b>	<b>406</b>			<b>714</b>	<b>TOTALS</b>	<b>596</b>	<b>751</b>			<b>1347</b>
<b>SPLIT %</b>	<b>43.1%</b>	<b>56.9%</b>			<b>34.6%</b>	<b>SPLIT %</b>	<b>44.2%</b>	<b>55.8%</b>			<b>65.4%</b>

DAILY TOTALS					NB	SB	EB	WB	Total
					904	1,157	0	0	2,061
AM Peak Hour	08:00	08:30			08:30	PM Peak Hour	17:15	15:45	15:30
AM Pk Volume	66	98			154	PM Pk Volume	72	126	180
Pk Hr Factor	0.868	0.875			0.917	Pk Hr Factor	0.750	0.643	0.703
7 - 9 Volume	107	123	0	0	230	4 - 6 Volume	114	205	319
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:45	16:30	16:30
7 - 9 Pk Volume	66	75	0	0	141	4 - 6 Pk Volume	62	118	176
Pk Hr Factor	0.868	0.815	0.000	0.000	0.860	Pk Hr Factor	0.646	0.894	0.772

### VOLUME

San Vicente Blvd W/o Bristol Ave

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_004

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	16,872	17,349	34,221			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			9	35	44	12:00			291	293	584	
00:15			14	34	48	12:15			248	321	569	
00:30			16	30	46	12:30			266	332	598	
00:45			8	47	16	12:45			293	1098	313	1259
01:00			9	11	20	13:00			261	295	556	
01:15			3	14	17	13:15			287	291	578	
01:30			5	16	21	13:30			267	290	557	
01:45			0	17	6	13:45			282	1097	312	1188
02:00			3	8	11	14:00			294	295	589	
02:15			3	5	8	14:15			375	324	699	
02:30			2	9	11	14:30			354	297	651	
02:45			0	8	5	14:45			326	1349	295	1211
03:00			2	8	10	15:00			343	288	631	
03:15			0	3	3	15:15			363	315	678	
03:30			1	4	5	15:30			362	314	676	
03:45			1	4	5	15:45			338	1406	318	1235
04:00			0	1	1	16:00			335	285	620	
04:15			2	5	7	16:15			304	303	607	
04:30			1	3	4	16:30			314	262	576	
04:45			4	7	13	16:45			314	1267	281	1131
05:00			1	10	11	17:00			324	262	586	
05:15			7	26	33	17:15			300	318	618	
05:30			12	17	29	17:30			296	301	597	
05:45			14	34	46	17:45			274	1194	312	1193
06:00			29	53	82	18:00			295	311	606	
06:15			29	77	106	18:15			273	298	571	
06:30			55	94	149	18:30			286	297	583	
06:45			101	214	144	18:45			294	1148	288	1194
07:00			150	147	297	19:00			250	266	516	
07:15			204	283	487	19:15			224	237	461	
07:30			294	379	673	19:30			228	214	442	
07:45			331	979	340	19:45			200	902	168	885
08:00			322	284	606	20:00			169	159	328	
08:15			327	324	651	20:15			159	161	320	
08:30			324	291	615	20:30			114	139	253	
08:45			316	1289	296	20:45			127	569	126	585
09:00			339	267	606	21:00			125	150	275	
09:15			326	298	624	21:15			118	162	280	
09:30			319	248	567	21:30			114	109	223	
09:45			261	1245	266	21:45			86	443	122	543
10:00			244	255	499	22:00			109	111	220	
10:15			277	235	512	22:15			91	94	185	
10:30			250	283	533	22:30			79	94	173	
10:45			254	1025	282	22:45			62	341	85	384
11:00			247	252	499	23:00			50	88	138	
11:15			256	294	550	23:15			52	68	120	
11:30			247	277	524	23:30			52	44	96	
11:45			267	1017	290	23:45			18	172	53	253
<b>TOTALS</b>			5886	6288	12174	<b>TOTALS</b>			10986	11061	22047	
<b>SPLIT %</b>			48.3%	51.7%	35.6%	<b>SPLIT %</b>			49.8%	50.2%	64.4%	

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	16,872	17,349	34,221

AM Peak Hour			08:15	07:30	07:30	PM Peak Hour			15:00	12:15	15:00
AM Pk Volume			1306	1327	2601	PM Pk Volume			1406	1261	2641
Pk Hr Factor			0.963	0.875	0.966	Pk Hr Factor			0.968	0.950	0.974
7 - 9 Volume	0	0	2268	2344	4612	4 - 6 Volume	0	0	2461	2324	4785
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			16:00	17:00	16:00
7 - 9 Pk Volume	0	0	1304	1327	2601	4 - 6 Pk Volume	0	0	1267	1193	2398
Pk Hr Factor	0.000	0.000	0.985	0.875	0.966	Pk Hr Factor	0.000	0.000	0.946	0.938	0.967

### VOLUME

San Vicente Blvd E/o 21st Pl

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_005

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	12,950	12,451	25,401			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			17	35	52	12:00			229	187	416	
00:15			30	23	53	12:15			205	193	398	
00:30			18	24	42	12:30			186	224	410	
00:45			13	78	11	93	12:45		204	824	210	814
01:00			17	8	25	13:00			203	207	410	
01:15			9	11	20	13:15			225	226	451	
01:30			5	6	11	13:30			202	211	413	
01:45			1	32	10	35	13:45		207	837	212	856
02:00			5	4	9	14:00			234	203	437	
02:15			4	1	5	14:15			210	234	444	
02:30			2	7	9	14:30			202	224	426	
02:45			0	11	3	15	14:45		227	873	242	903
03:00			1	4	5	15:00			247	237	484	
03:15			1	1	2	15:15			264	235	499	
03:30			3	5	8	15:30			236	246	482	
03:45			3	8	3	13	15:45		217	964	242	960
04:00			3	2	5	16:00			245	236	481	
04:15			3	4	7	16:15			257	262	519	
04:30			1	3	4	16:30			253	202	455	
04:45			9	16	10	19	16:45		232	987	216	916
05:00			4	6	10	17:00			247	191	438	
05:15			13	17	30	17:15			248	224	472	
05:30			19	12	31	17:30			240	260	500	
05:45			23	59	27	62	17:45		260	995	228	903
06:00			37	42	79	18:00			229	207	436	
06:15			42	41	83	18:15			248	210	458	
06:30			58	53	111	18:30			213	213	426	
06:45			111	248	78	214	18:45		213	903	209	839
07:00			138	83	221	19:00			203	193	396	
07:15			173	138	311	19:15			193	162	355	
07:30			166	231	397	19:30			178	150	328	
07:45			212	689	258	710	19:45		153	727	138	643
08:00			255	197	452	20:00			141	129	270	
08:15			256	226	482	20:15			131	111	242	
08:30			216	189	405	20:30			98	103	201	
08:45			205	932	226	838	20:45		110	480	84	427
09:00			229	173	402	21:00			91	115	206	
09:15			223	207	430	21:15			92	108	200	
09:30			185	190	375	21:30			89	88	177	
09:45			216	853	179	749	21:45		80	352	106	417
10:00			188	185	373	22:00			108	88	196	
10:15			228	166	394	22:15			76	76	152	
10:30			190	210	400	22:30			65	78	143	
10:45			215	821	173	734	22:45		67	316	56	298
11:00			188	180	368	23:00			33	65	98	
11:15			174	196	370	23:15			41	58	99	
11:30			219	214	433	23:30			46	32	78	
11:45			217	798	203	793	23:45		27	147	45	200
<b>TOTALS</b>			4545	4275	<b>8820</b>	<b>TOTALS</b>			8405	8176	<b>16581</b>	
<b>SPLIT %</b>			51.5%	48.5%	<b>34.7%</b>	<b>SPLIT %</b>			50.7%	49.3%	<b>65.3%</b>	

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	12,950	12,451	25,401

AM Peak Hour			07:45	07:30	07:45	PM Peak Hour			17:00	15:30	15:30
AM Pk Volume			939	912	1809	PM Pk Volume			995	986	1941
Pk Hr Factor			0.917	0.884	0.938	Pk Hr Factor			0.957	0.941	0.935
7 - 9 Volume	0	0	1621	1548	3169	4 - 6 Volume	0	0	1982	1819	3801
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			17:00	16:00	16:00
7 - 9 Pk Volume	0	0	939	912	1809	4 - 6 Pk Volume	0	0	995	916	1903
Pk Hr Factor	0.000	0.000	0.917	0.884	0.938	Pk Hr Factor	0.000	0.000	0.957	0.874	0.917

**VOLUME**

San Vicente Blvd E/o 17th St

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_006

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	11,485	11,039	22,524			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			17	30	47	12:00			201	177	378	
00:15			15	18	33	12:15			174	168	342	
00:30			13	20	33	12:30			153	185	338	
00:45			6	51	7	75	12:45		186	714	167	697
01:00			14	7	21	13:00			176	170	346	
01:15			7	9	16	13:15			192	186	378	
01:30			4	5	9	13:30			181	201	382	
01:45			0	25	6	27	13:45		194	743	181	738
02:00			5	5	10	14:00			205	181	386	
02:15			4	2	6	14:15			194	214	408	
02:30			1	5	6	14:30			179	196	375	
02:45			0	10	2	14	14:45		199	777	206	797
03:00			1	2	3	15:00			229	203	432	
03:15			0	1	1	15:15			233	213	446	
03:30			2	3	5	15:30			227	214	441	
03:45			1	4	2	8	15:45		200	889	220	850
04:00			1	1	2	16:00			243	213	456	
04:15			2	5	7	16:15			241	229	470	
04:30			2	2	4	16:30			239	166	405	
04:45			3	8	14	22	16:45		226	949	205	813
05:00			2	9	11	17:00			226	225	451	
05:15			11	15	26	17:15			214	217	431	
05:30			14	18	32	17:30			205	241	446	
05:45			17	44	23	65	17:45		235	880	213	896
06:00			27	28	55	18:00			211	224	435	
06:15			31	37	68	18:15			217	220	437	
06:30			52	34	86	18:30			194	200	394	
06:45			93	203	47	146	18:45		204	826	218	862
07:00			111	82	193	19:00			184	203	387	
07:15			148	92	240	19:15			172	152	324	
07:30			157	172	329	19:30			152	142	294	
07:45			187	603	173	519	19:45		132	640	129	626
08:00			239	172	411	20:00			118	133	251	
08:15			224	168	392	20:15			110	125	235	
08:30			194	148	342	20:30			91	109	200	
08:45			184	841	170	658	20:45		84	403	93	460
09:00			204	162	366	21:00			89	103	192	
09:15			197	159	356	21:15			77	100	177	
09:30			176	144	320	21:30			79	93	172	
09:45			168	745	135	600	21:45		76	321	89	385
10:00			165	155	320	22:00			92	87	179	
10:15			201	149	350	22:15			71	70	141	
10:30			174	177	351	22:30			57	54	111	
10:45			178	718	144	625	22:45		52	272	57	268
11:00			167	156	323	23:00			31	50	81	
11:15			156	177	333	23:15			34	48	82	
11:30			198	206	404	23:30			34	30	64	
11:45			174	695	186	725	23:45		25	124	35	163
<b>TOTALS</b>			3947	3484	7431	<b>TOTALS</b>			7538	7555	15093	
<b>SPLIT %</b>			53.1%	46.9%	33.0%	<b>SPLIT %</b>			49.9%	50.1%	67.0%	

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	11,485	11,039	22,524

AM Peak Hour			07:45	11:15	07:45	PM Peak Hour			16:00	17:30	15:30
AM Pk Volume			844	746	1505	PM Pk Volume			949	898	1787
Pk Hr Factor			0.883	0.905	0.915	Pk Hr Factor			0.976	0.932	0.951
7 - 9 Volume	0	0	1444	1177	2621	4 - 6 Volume	0	0	1829	1709	3538
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			16:00	17:00	17:00
7 - 9 Pk Volume	0	0	844	685	1505	4 - 6 Pk Volume	0	0	949	896	1776
Pk Hr Factor	0.000	0.000	0.883	0.990	0.915	Pk Hr Factor	0.000	0.000	0.976	0.929	0.984

### VOLUME

San Vicente Blvd E/o Lincoln Blvd

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_007

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	9,881	10,320	20,201		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			14	30	44	12:00			123	158	281
00:15			17	20	37	12:15			124	149	273
00:30			7	20	27	12:30			112	165	277
00:45			10	48	18	12:45		8	127	486	275
				78	126				148	620	1106
01:00			9	7	16	13:00			120	151	271
01:15			8	10	18	13:15			124	154	278
01:30			1	6	7	13:30			131	178	309
01:45			2	20	8	13:45		6	153	528	314
				29	49				161	644	1172
02:00			3	5	8	14:00			170	161	331
02:15			2	2	4	14:15			178	190	368
02:30			1	5	6	14:30			177	175	352
02:45			1	7	3	14:45		2	182	707	365
				14	21				183	709	1416
03:00			1	0	1	15:00			204	180	384
03:15			0	1	1	15:15			231	190	421
03:30			2	3	5	15:30			205	190	395
03:45			1	4	3	15:45		6	203	843	399
				6	10				196	756	1599
04:00			1	1	2	16:00			214	189	403
04:15			2	5	7	16:15			193	193	386
04:30			2	2	4	16:30			206	147	353
04:45			3	8	16	16:45		13	200	813	382
				21	29				182	711	1524
05:00			2	9	11	17:00			215	202	417
05:15			5	16	21	17:15			176	234	410
05:30			19	16	35	17:30			202	176	378
05:45			13	39	38	17:45		66	232	825	453
				66	105				221	833	1658
06:00			24	30	54	18:00			188	200	388
06:15			32	35	67	18:15			212	197	409
06:30			45	39	84	18:30			183	178	361
06:45			73	174	131	18:45		162	185	768	379
				162	336				194	769	1537
07:00			102	85	187	19:00			178	187	365
07:15			116	103	219	19:15			161	135	296
07:30			135	186	321	19:30			139	136	275
07:45			155	508	354	19:45		573	133	611	247
				573	1081				114	572	1183
08:00			198	186	384	20:00			134	118	252
08:15			202	192	394	20:15			109	115	224
08:30			150	172	322	20:30			77	98	175
08:45			153	703	324	20:45		721	106	426	188
				721	1424				82	413	839
09:00			164	180	344	21:00			93	91	184
09:15			154	155	309	21:15			72	88	160
09:30			133	151	284	21:30			93	82	175
09:45			128	579	258	21:45		616	64	322	142
				616	1195				78	339	661
10:00			134	162	296	22:00			77	77	154
10:15			145	140	285	22:15			64	63	127
10:30			125	177	302	22:30			52	48	100
10:45			124	528	266	22:45		621	52	245	102
				621	1149				50	238	483
11:00			133	160	293	23:00			37	45	82
11:15			125	164	289	23:15			38	43	81
11:30			150	187	337	23:30			38	26	64
11:45			138	546	292	23:45		665	30	143	60
				665	1211				30	144	287
<b>TOTALS</b>				3164	3572	<b>TOTALS</b>			6717	6748	<b>13465</b>
<b>SPLIT %</b>				47.0%	53.0%	<b>SPLIT %</b>			49.9%	50.1%	<b>66.7%</b>

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	9,881	10,320	20,201

AM Peak Hour			07:45	07:30	07:45	PM Peak Hour			15:15	17:00	17:00
AM Pk Volume			705	763	1454	PM Pk Volume			853	833	1658
Pk Hr Factor			0.873	0.959	0.923	Pk Hr Factor			0.923	0.890	0.915
7 - 9 Volume	0	0	1211	1294	2505	4 - 6 Volume	0	0	1638	1544	3182
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	705	763	1454	4 - 6 Pk Volume	0	0	825	833	1658
Pk Hr Factor	0.000	0.000	0.873	0.959	0.923	Pk Hr Factor	0.000	0.000	0.889	0.890	0.915

**VOLUME**

Entrada Dr W/o Stassi Ln

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_008

DAILY TOTALS				NB	SB	EB	WB	Total
				0	0	6,534	7,800	14,334

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			14	13	27	12:00			125	120	245	
00:15			5	11	16	12:15			105	123	228	
00:30			6	14	20	12:30			118	134	252	
00:45			2	27	4	42	12:45		104	452	135	512
01:00			5	2	7	13:00			106	130	236	
01:15			4	5	9	13:15			95	134	229	
01:30			3	2	5	13:30			118	144	262	
01:45			1	13	0	9	13:45		128	447	169	577
02:00			1	1	2	14:00			102	165	267	
02:15			1	0	1	14:15			126	179	305	
02:30			3	3	6	14:30			103	167	270	
02:45			1	6	1	5	14:45		121	452	150	661
03:00			0	3	3	15:00			121	174	295	
03:15			1	1	2	15:15			113	187	300	
03:30			1	1	2	15:30			100	172	272	
03:45			1	3	0	5	15:45		113	447	190	723
04:00			2	1	3	16:00			109	153	262	
04:15			4	2	6	16:15			110	152	262	
04:30			3	5	8	16:30			93	97	190	
04:45			2	11	5	13	16:45		109	421	130	532
05:00			3	15	18	17:00			97	149	246	
05:15			6	13	19	17:15			110	145	255	
05:30			13	16	29	17:30			103	92	195	
05:45			11	33	15	59	17:45		99	409	128	514
06:00			18	23	41	18:00			91	100	191	
06:15			23	24	47	18:15			111	128	239	
06:30			37	32	69	18:30			116	154	270	
06:45			56	134	55	134	18:45		107	425	146	528
07:00			83	71	154	19:00			103	130	233	
07:15			77	84	161	19:15			87	105	192	
07:30			109	122	231	19:30			82	89	171	
07:45			110	379	160	437	19:45		60	332	84	408
08:00			143	158	301	20:00			54	75	129	
08:15			146	130	276	20:15			58	71	129	
08:30			130	131	261	20:30			52	63	115	
08:45			131	550	124	543	20:45		54	218	46	255
09:00			130	128	258	21:00			46	78	124	
09:15			125	111	236	21:15			51	50	101	
09:30			114	106	220	21:30			65	49	114	
09:45			124	493	101	446	21:45		38	200	44	221
10:00			117	118	235	22:00			31	52	83	
10:15			119	118	237	22:15			37	41	78	
10:30			112	119	231	22:30			24	36	60	
10:45			106	454	110	465	22:45		31	123	28	157
11:00			112	117	229	23:00			13	17	30	
11:15			99	109	208	23:15			23	27	50	
11:30			106	129	235	23:30			16	16	32	
11:45			115	432	128	483	23:45		21	73	11	71
<b>TOTALS</b>			2535	2641	5176	<b>TOTALS</b>			3999	5159	9158	
<b>SPLIT %</b>			49.0%	51.0%	36.1%	<b>SPLIT %</b>			43.7%	56.3%	63.9%	

DAILY TOTALS				NB	SB	EB	WB	Total
				0	0	6,534	7,800	14,334

AM Peak Hour			08:00	07:45	07:45	PM Peak Hour			13:30	15:00	15:00
AM Pk Volume			550	579	1108	PM Pk Volume			474	723	1170
Pk Hr Factor			0.942	0.905	0.920	Pk Hr Factor			0.926	0.951	0.965
7 - 9 Volume	0	0	929	980	1909	4 - 6 Volume	0	0	830	1046	1876
7 - 9 Peak Hour			08:00	07:45	07:45	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	550	579	1108	4 - 6 Pk Volume	0	0	421	532	953
Pk Hr Factor	0.000	0.000	0.942	0.905	0.920	Pk Hr Factor	0.000	0.000	0.957	0.869	0.909

**VOLUME**

West Channel Rd W/o  
Short St

Day: Thursday  
Date: 06/06/13

City: Los Angeles  
Project #: CA13\_5300\_009

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	8,173	9,277	17,450			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			18	16	34	12:00			138	140	278	
00:15			10	8	18	12:15			118	121	239	
00:30			11	16	27	12:30			149	134	283	
00:45			3	42	9	49	12:45		120	525	126	521
01:00			6	6	12	13:00			125	131	256	
01:15			9	4	13	13:15			143	144	287	
01:30			2	2	4	13:30			140	155	295	
01:45			2	19	1	13	13:45		123	531	168	598
02:00			2	1	3	14:00			122	182	304	
02:15			3	2	5	14:15			139	174	313	
02:30			7	5	12	14:30			97	196	293	
02:45			2	14	1	9	14:45		135	493	175	727
03:00			1	4	5	15:00			142	174	316	
03:15			1	1	2	15:15			122	199	321	
03:30			0	0	0	15:30			135	201	336	
03:45			1	3	1	6	15:45		153	552	219	793
04:00			5	3	8	16:00			155	212	367	
04:15			4	1	5	16:15			120	200	320	
04:30			2	4	6	16:30			98	229	327	
04:45			7	18	5	13	16:45		109	482	210	851
05:00			6	14	20	17:00			124	209	333	
05:15			11	16	27	17:15			141	190	331	
05:30			7	18	25	17:30			124	180	304	
05:45			19	43	11	59	17:45		123	512	193	772
06:00			23	21	44	18:00			133	154	287	
06:15			30	25	55	18:15			146	213	359	
06:30			51	30	81	18:30			137	159	296	
06:45			68	172	49	125	18:45		176	592	176	702
07:00			81	53	134	19:00			152	191	343	
07:15			108	99	207	19:15			113	151	264	
07:30			149	134	283	19:30			127	106	233	
07:45			145	483	175	461	19:45		116	508	106	554
08:00			156	158	314	20:00			80	101	181	
08:15			164	143	307	20:15			87	80	167	
08:30			151	147	298	20:30			65	88	153	
08:45			139	610	137	585	20:45		79	311	67	336
09:00			174	130	304	21:00			99	101	200	
09:15			146	130	276	21:15			99	71	170	
09:30			123	117	240	21:30			97	54	151	
09:45			142	585	112	489	21:45		62	357	56	282
10:00			151	108	259	22:00			49	63	112	
10:15			123	126	249	22:15			63	59	122	
10:30			135	129	264	22:30			49	47	96	
10:45			139	548	133	496	22:45		34	195	32	201
11:00			108	132	240	23:00			30	26	56	
11:15			121	126	247	23:15			24	34	58	
11:30			133	132	265	23:30			23	22	45	
11:45			128	490	148	538	23:45		11	88	15	97
<b>TOTALS</b>			3027	2843	5870	<b>TOTALS</b>			5146	6434	11580	
<b>SPLIT %</b>			51.6%	48.4%	33.6%	<b>SPLIT %</b>			44.4%	55.6%	66.4%	

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	8,173	9,277	17,450

AM Peak Hour			08:15	07:45	07:45	PM Peak Hour			18:15	15:45	15:15
AM Pk Volume			628	623	1239	PM Pk Volume			611	860	1396
Pk Hr Factor			0.902	0.890	0.968	Pk Hr Factor			0.868	0.939	0.938
7 - 9 Volume	0	0	1093	1046	2139	4 - 6 Volume	0	0	994	1623	2617
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			17:00	16:00	16:00
7 - 9 Pk Volume	0	0	616	623	1239	4 - 6 Pk Volume	0	0	512	851	1333
Pk Hr Factor	0.000	0.000	0.939	0.890	0.968	Pk Hr Factor	0.000	0.000	0.908	0.929	0.908

**APPENDIX B –  
LOCAL JURISDICTION SIGNIFICANT IMPACT STANDARDS FOR DEVELOPMENT**

The following standards are used by local jurisdictions, for the determinations of significant impact, typically when analyzing incremental impacts caused by new trips generated by proposed land development.

**CITY OF LOS ANGELES**

The City of Los Angeles Department of Transportation has established specific thresholds for project-related increases in the volume-to-capacity ratio (V/C) of signalized study intersections. The City has separate thresholds for roadway impacts, but those standards are only applied to the analysis of residential roadways for community impacts.

The following increases in peak-hour V/C ratios are considered significant impacts at study intersection in the City of Los Angeles:

<b>Level of Service</b>	<b>Final V/C*</b>	<b>Project Related v/c increase</b>
C	< 0.70 – 0.80	Equal to or greater than 0.040
D	< 0.80 – 0.90	Equal to or greater than 0.020
E and F	0.90 or more	Equal to or greater than 0.010

*Note: Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient growth, trips from area/cumulative projects, but without proposed traffic impact mitigations.*

Significant impact standards follow, for intersections within the City of Santa Monica.



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**CITY OF SANTA MONICA**

<b>Cumulative Base Scenario</b>	<b>Cumulative Plus Project Scenario</b>
If LOS = A, B, or C  And is a collector street intersection And is an arterial intersection	Significant impact if:  Average vehicle delay increase is > 15 seconds or LOS becomes D, E, or F Average vehicle delay increase is > 15 seconds or LOS becomes E or F
IF LOS = D  And is a collector street intersection And is an arterial intersection	Significant impact if:  Any net increase in average seconds of delay per vehicle Average vehicle delay increase is > 15 seconds or LOS becomes E or F
IF LOS = E  And is a collector or arterial intersection	Significant impact if:  Any net increase in average seconds of delay per vehicle
IF LOS = F  And is a collector or arterial intersection	Significant impact if:  HCM V/C ratio net increase is > 0.005

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