

**CULVER CITY CAMPUS
TRAFFIC IMPACT ANALYSIS
CULVER CITY, CALIFORNIA**

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THE HELP GROUP – CULVER CITY CAMPUS
TRAFFIC IMPACT ANALYSIS
CULVER CITY, CALIFORNIA

1. INTRODUCTION

The purpose of this traffic study is to evaluate the potential traffic impacts of 50 additional students to the existing 600 student enrollment of the Help Group's Culver City Campus. The project site is located north of Washington Boulevard between Grand View and Inglewood Boulevard in the City of Culver City. However, a portion of the study area lies within the boundaries of the City of Los Angeles

Study area objectives include (1) documentation of existing traffic conditions in the vicinity of the site; (2) evaluation of existing plus ambient plus related projects traffic conditions; (3) evaluation of existing plus ambient plus related projects plus the proposed project traffic conditions; (4) determination of project related significant impacts; and (5) recommendations regarding on-site circulation, access restrictions, and off-site queuing at the existing school.

1.1 Site Location and Study Area

The proposed expansion of the existing Culver City Campus special education school is located north of Washington Boulevard between Grand View and Inglewood Boulevard in the City of Culver City. Figure 1-A illustrates the location of the site in relation to the surrounding roadway system as well as the study area intersections. As shown on Figure 1-A, the study area lies within both the City of Culver City and the City of Los Angeles.

FIGURE 1-A
STUDY AREA



LEGEND:

10 = EXISTING INTERSECTION ANALYSIS LOCATION



1.2 Proposed Project Development

The proposed project would consist of adding an additional 50 students to the current 600 student enrollment. The layout of the site is not anticipated to change due to the additional students. Currently, the campus currently provides five (5) access points and a drop off area as described below:

Driveway 1 (Grand View) – This access serves both taxis and buses and is designated for outbound traffic only with the ability to turn left or right.

Driveway 2 (Washington Boulevard –West) – This access serves both taxis and buses and is designated for inbound traffic from Washington Boulevard making right turns only.

Driveway 3 (Washington Boulevard – East) - This access serves parents dropping off their students and taxis. This location is designated for inbound traffic from Washington Boulevard making right turns only

Driveway 4 (Inglewood Boulevard – North) – This access serves as an egress for parents dropping off their students and all traffic is required to turn right on Inglewood Boulevard.

Driveway 5 (Inglewood Boulevard – South) – This access serves as an ingress/egress for staff, taxis and students. Inbound traffic is required to turn right from Inglewood Boulevard and outbound traffic is required to turn right onto Inglewood Boulevard.

1.3 Other Development Traffic Volumes

The opening year for the proposed project is anticipated to be Year 2015. To account for ambient traffic volumes that may be added to the roadway system, a 1% growth rate has been applied to the existing traffic volumes. The City of Culver City staff has provided this growth rate based on historical growth in this area and to ensure a conservatively high estimate of future traffic volumes. Additionally, cumulative projects provided by the City of Culver City Planning Division and the City of Los Angeles for the possible inclusion in this traffic study.

2. EXISTING CONDITIONS

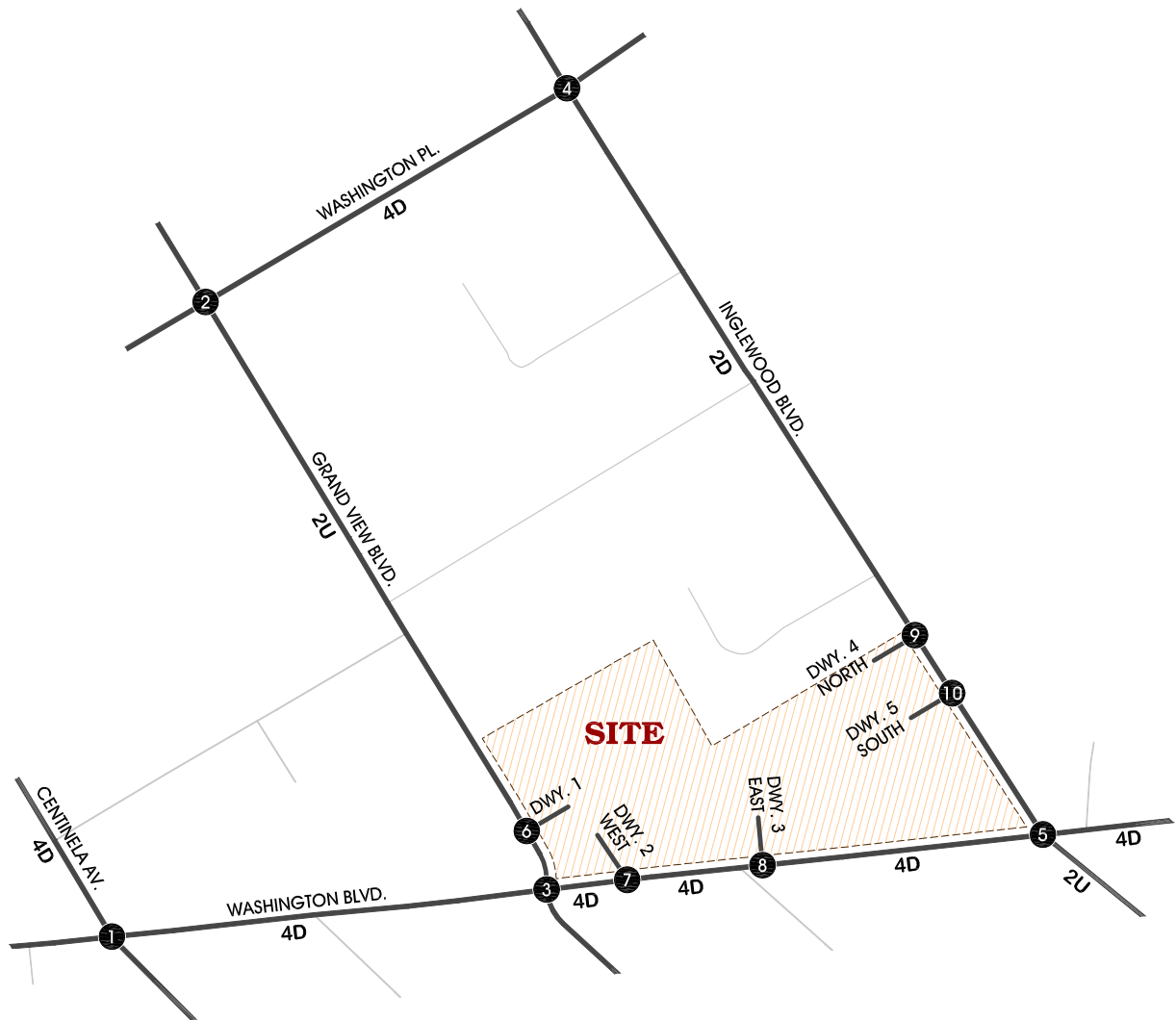
2.1 Study Area Street System

Existing roadways in close proximity to the project include Centinela Avenue, Washington Boulevard, Grand View Boulevard, Washington Place and Inglewood Boulevard. Figure 2-A illustrates the number of through lanes and intersection controls in the vicinity of the study area. The City of Culver City General Plan Circulation Element is illustrated on Figure 2-B. The City of Los Angeles General Plan Circulation Element is depicted on Figure 2-C.

Centinela Avenue: a four-lane divided roadway north of Washington Boulevard and a four-lane undivided roadway south of Washington Boulevard with a north-south orientation and a current speed limit of 35 miles-per-hour. It is currently classified as a Primary Artery on the Culver City General Plan Circulation Element. Centinela Avenue has no parking restrictions. Culver City Bus lines 2 and 5 run along both directions of Centinela Avenue, north of Washington Boulevard. A traffic signal is located at the intersection of Centinela Avenue and Washington Boulevard.

Washington Boulevard: a four-lane divided roadway oriented in an east-west direction with a current speed limit of 35 miles-per-hour. It is currently classified as a Primary Artery on the Culver City General Plan Circulation Element. During the hours of 8AM to 6PM, Washington Boulevard has a 2-hour parking limitation in the vicinity of its intersection with Grand View Boulevard, and also street sweeping restrictions on a weekly basis. Culver City Bus lines 1, 2 and 5 run both directions of Washington Boulevard in the vicinity of the project site. Traffic signals are located at the intersections of Washington Boulevard at Centinela Avenue, Grand View Boulevard and Inglewood Boulevard.

FIGURE 2-A EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRICS



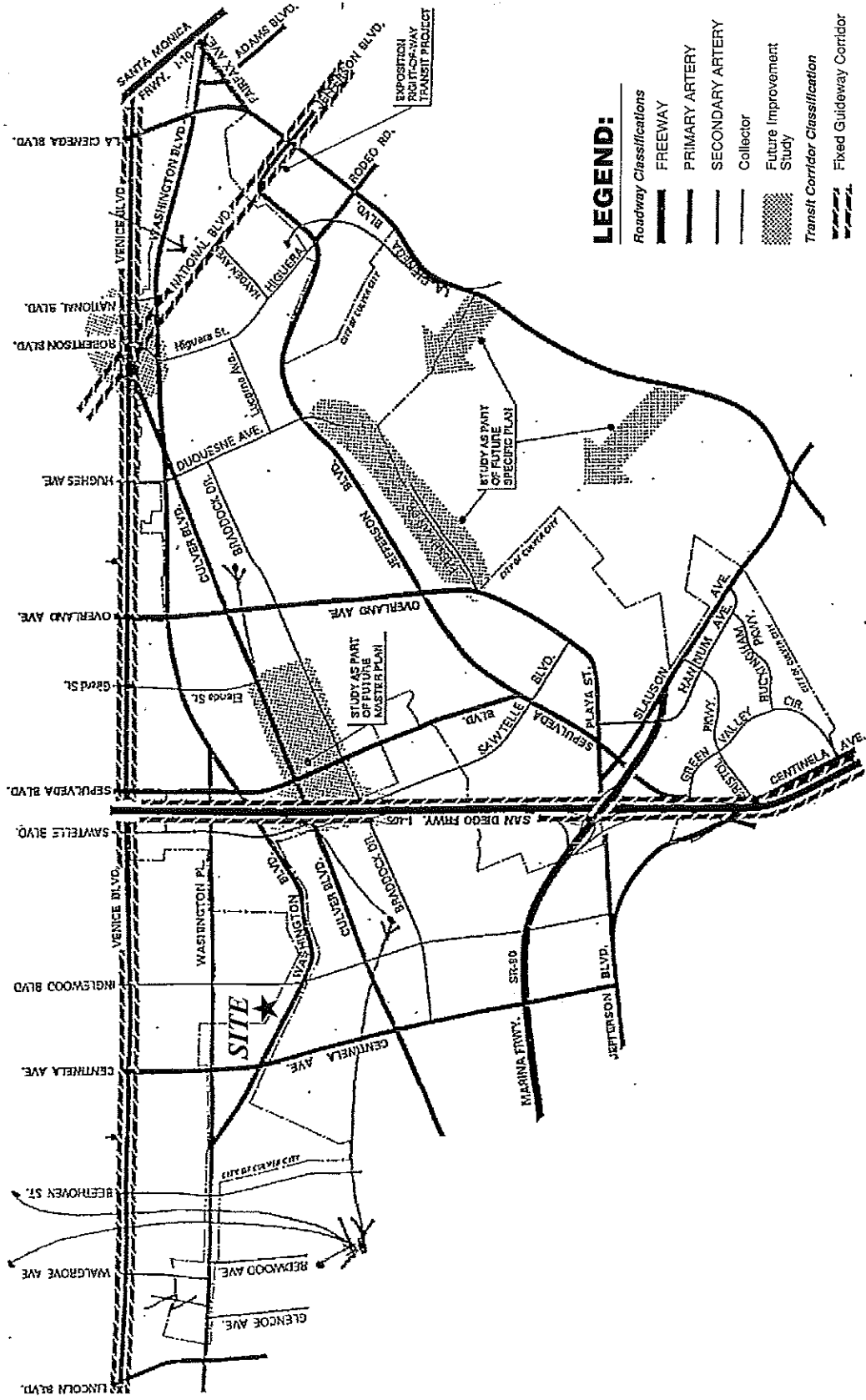
1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South

LEGEND:

- = INTERSECTION ID
- = TRAFFIC SIGNAL
- = STOP SIGN
- 4** = NUMBER OF LANES
- D** = DIVIDED
- U** = UNDIVIDED
- DEF** = DEFACTO RIGHT TURN LANE

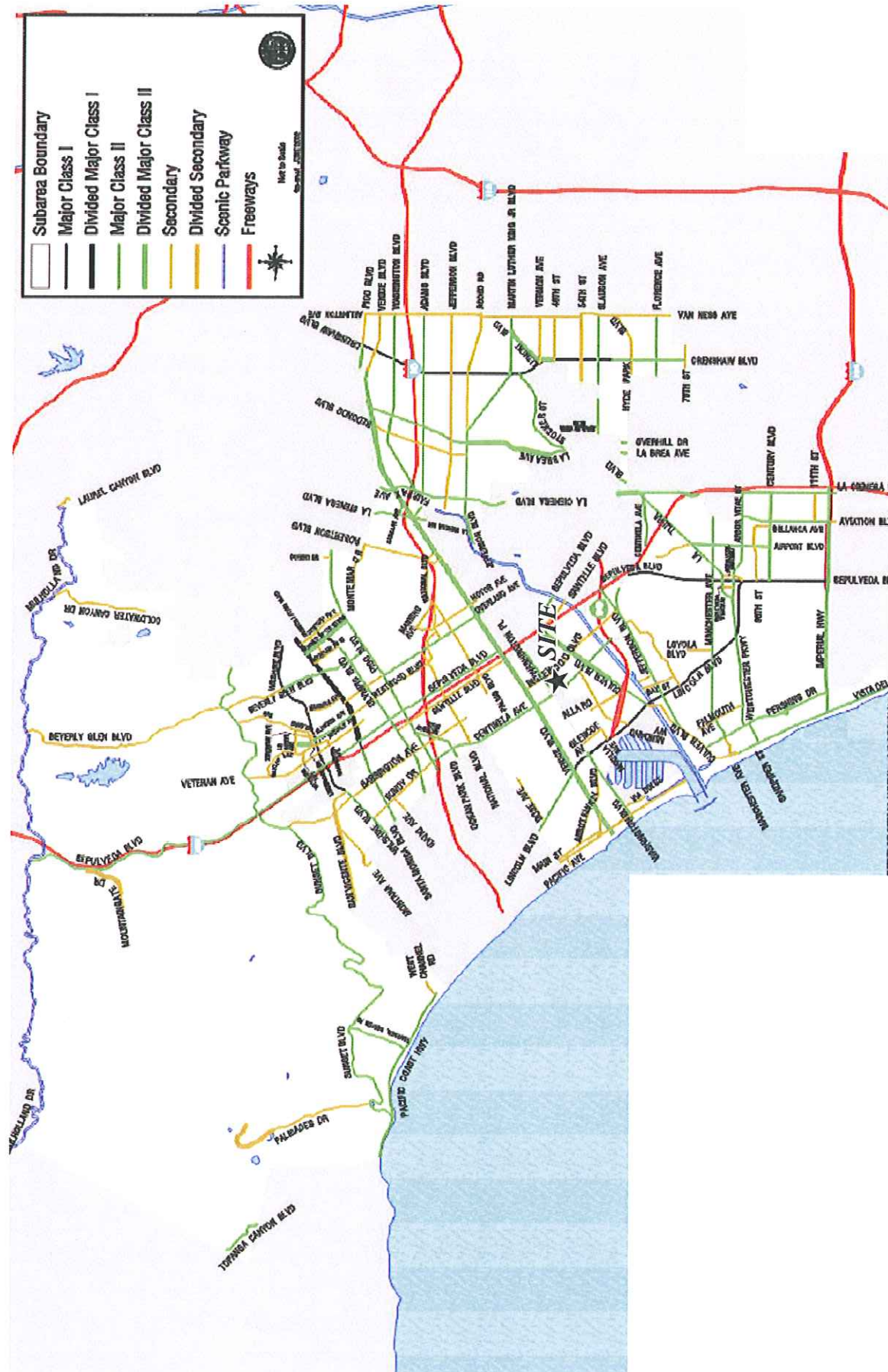


FIGURE 2-B
CULVER CITY GENERAL PLAN CIRCULATION ELEMENT



SOURCE: CULVER CITY

FIGURE 2-C
CITY OF LOS ANGELES GENERAL PLAN CIRCULATION ELEMENT



Grand View Boulevard: a two-lane undivided roadway with a north-south orientation with a current prevailing speed limit of 35 miles per hour. Grand View Boulevard has no regular parking restrictions but has street sweeping restrictions on a weekly basis. There are no Culver City Bus lines that run along Grand View Boulevard. Traffic signals are located at the intersections of Grand View Boulevard at Washington Place and Washington Boulevard.

Washington Place: a four-lane divided roadway with an east-west orientation with a current speed limit of 35 miles per hour. It is currently classified as a Primary Artery on the Culver City General Plan Circulation Element. Washington Place has a 2-hour parking limitation in the vicinity of its intersection with Grand View Boulevard and Inglewood Boulevard, and also street sweeping restrictions on a weekly basis. There are no Culver City Bus lines that run along Washington Place. Traffic signals are located at the intersections of Washington Place at Grand View Boulevard and Inglewood Boulevard.

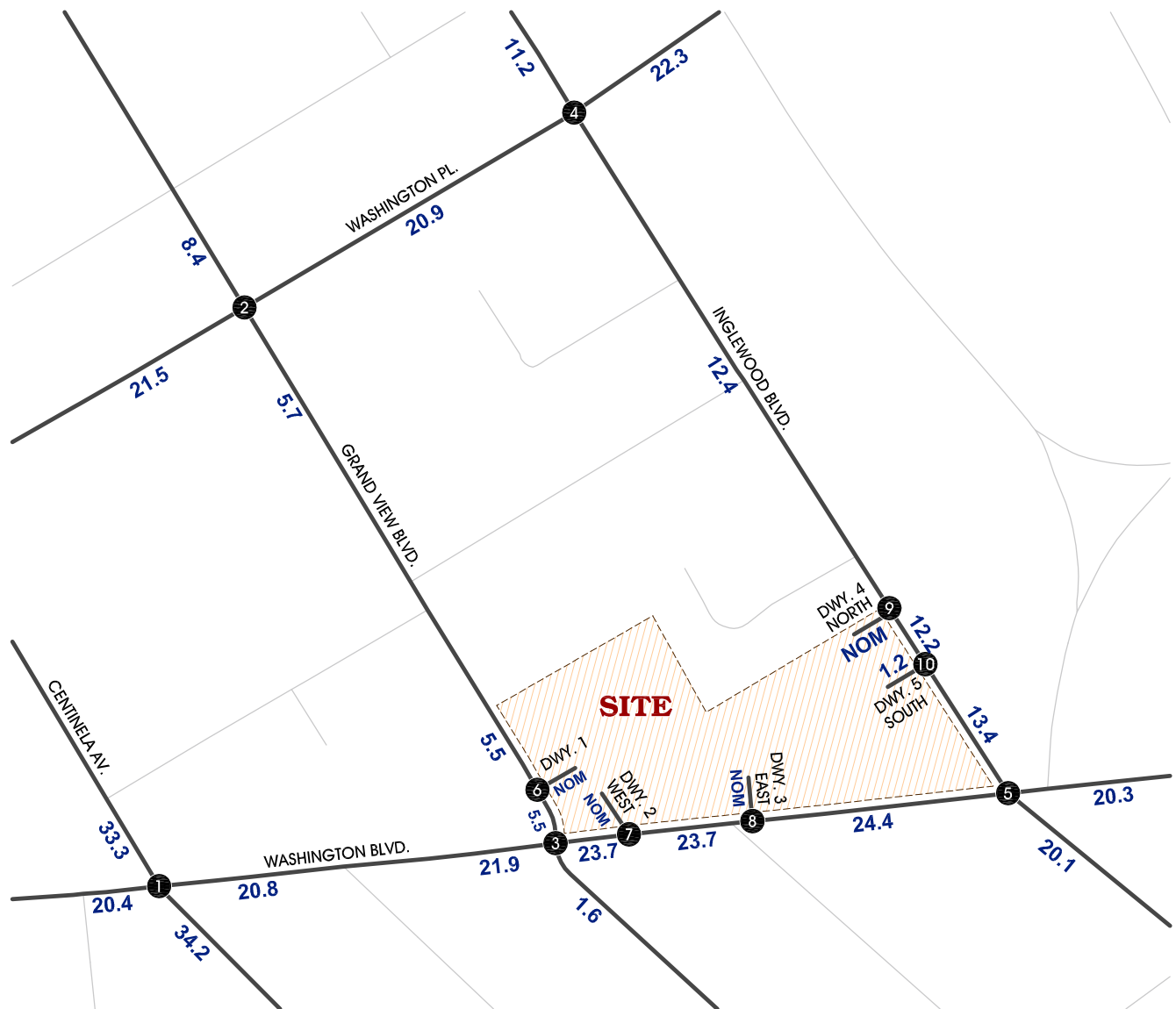
Inglewood Boulevard: a two-lane undivided roadway with a north-south orientation with a current speed limit of 30 miles per hour. It is currently classified as a Secondary Artery on the Culver City General Plan Circulation Element. Inglewood Boulevard has no regular parking restrictions but has street sweeping restrictions on a weekly basis. Culver City Bus lines 2 and 5 run along both directions of Inglewood Boulevard, south of Washington Boulevard. Traffic signals are located at the intersections of Inglewood Boulevard at Washington Place and Washington Boulevard.

2.2 Existing Traffic

Existing daily traffic volumes on arterial highways throughout the study area are shown on Figure 2-D. Average daily traffic volumes (ADT) are based upon empirical data collected from the study area (see Appendix “A”) by factoring up the peak hour intersection counts using the following formula:

ADT Leg Volume = 12 * (PM peak hour inbound leg volume + PM peak hour outbound leg volume)

**FIGURE 2-D
EXISTING (2015) AVERAGE DAILY TRAFFIC (ADT)**



LEGEND:



= INTERSECTION ID

1.0

= VEHICLES PER DAY (1000's)

NOM

= NOMINAL, LESS THAN 50 VEHICLES PER DAY



2.3 Existing Intersection Operations Analysis

The following existing intersections within the City of Culver City have been selected for analysis purposes based on discussions with City staff:

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Grand View Boulevard (NS) at:

- Project Driveway 1 (EW)
- Washington Boulevard (EW)

Project Driveway 2 - West (NS) at:

- Washington Boulevard (EW)

Project Driveway 3 - East (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Project Driveway 4 - North (EW)
- Project Driveway 5 - South (EW)
- Washington Boulevard (EW)

The following existing intersection within the City of Los Angeles has been selected for analysis purposes based on discussions with City staff:

Inglewood Boulevard (NS) at:

- Washington Place (EW)

The following intersection within the jurisdictions of both the Cities of Culver City and Los Angeles has been selected for analysis purposes based on discussions with City staff:

Grand View Boulevard (NS) at:

- Washington Place (EW)

The technique used to assess the operation of an intersection is known as the Intersection Capacity Utilization (ICU) methodology. To calculate an ICU, the volume of traffic using the intersection is compared with the capacity of the intersection. The percent represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

A. Signalized and Unsignalized Intersection Calculations

- a. Intersection Capacity Utilization (ICU) for study area intersections:

Apply ICU methodology to all signalized study area intersections and unsignalized study area intersections.

- b. Saturation Flow Rate:

Saturation flow value of 1,600 vehicles per lane per hour for single lanes and 2,880 for dual turn lanes; no adjustments are used for protected movements with dedicated lanes (including both right and left turns).

- c. Lost Time:

A clearance interval factor of 10% (0.10) is applied to the ICU calculations.

d. Level of Service Ranges:

The resulting volume to capacity (V/C) ratio is converted to a Level of Service (LOS) as follows:

Level of Service	Critical Volume To Capacity Ratio
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.

- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

e. Peak Periods:

Weekday peak hour analysis periods are defined as follows:

- 7:00 to 9:00 AM
- 4:00 to 6:00 PM

f. Peak Hour:

The highest one hour period in both the AM and PM peak periods, as determined by four consecutive 15-minute count periods are used in the ICU calculations. Both AM and PM peak hours are studied.

g. Peak-Hour Data Consistency:

Variations in peak hour volumes can affect LOS calculations because they vary from day-to-day. To minimize these variations, no counts are taken on Mondays, Fridays, holidays or weekends.

h. Right Turn Movements:

If the distance from the edge of the outside through lane is at least 22 feet and parking is prohibited during the peak period, right turning vehicles may be assumed to utilize this “unofficial” or “defacto” right turn lane. Otherwise, all right turn traffic is assigned to the through lane. If a right turn lane exists, right turn activity is checked for conflicts with other critical movements. It is assumed that right turn movements are accommodated during non-conflicting left turn phases (e.g. northbound right turns during westbound left turn phase), as well as non-conflicting through flows (e.g. northbound right turn movements and north / south through flows. Right turn movements become critical when conflicting movements (e.g. northbound right turns, southbound left turns, and eastbound through flows) represent a sum of V/C ratios which are greater than the normal through / left turn critical movements.

If a free right turn lane exists (right turns do not have to stop for the signal), a flow rate of 1,600 vehicles per hour per lane is assumed. The V/C ratio of the right turn lane is reported but not included in the sum of the critical V/C ratios.

For existing conditions, the volume-to-capacity ratios for the study area intersections are shown in Table 2-1. The resulting levels of service are based upon manual AM and PM peak hour turning movement counts shown on Figures 2-E and 2-F, respectively. Existing peak hour intersection traffic count sheets are included in Appendix "A".

For purposes of the analysis in this study, some of the existing movements at the Project Driveways have been adjusted to accommodate the proposed access restrictions into and out of the site (eg. existing left turns in and out of the driveways). These existing AM and PM volumes adjustments are shown on Figures 2-G and 2-H, respectively.

TABLE 2-1
INTERSECTION ANALYSIS FOR
EXISTING (2015) CONDITIONS

ID	Intersection	Traffic Control ¹	Intersection Approach Lanes ²												Volume-to-Capacity Ratio (v/c) ³		Level of Service ³	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Centinela Av. / Washington Blvd.	TS	1	2	0	1	2	0	1	2	0	1	2	d	0.868	0.934	D	E
2	Grand View Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.559	0.741	A	C
3	Grand View Blvd. / Washington Blvd.	TS	0	1!	0	0	1!	0	1	2	d	1	2	0	0.458	0.590	A	A
4	Inglewood Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.899	0.850	D	D
5	Inglewood Blvd. / Washington Blvd.	TS	1	1	1	1	1	1	1	2	d	1	2	1	0.844	0.926	D	E
6	Grand View Blvd. / Project Dwy. 1	CSS	0	1	0	0	1	0	0	0	0	0	1!	0	0.175	0.313	A	A
7	Project Dwy. 2 - West / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.351	0.455	A	A
8	Project Dwy. 3 - East / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.367	0.447	A	A
9	Inglewood Blvd. / Project Dwy. 4 - North	CSS	0	1	0	0	1	0	0	0	1	0	0	0	0.516	0.471	A	A
10	Inglewood Blvd. / Project Dwy. 5 - South	CSS	0	1	0	0	1	d	0	0	1	0	0	0	0.542	0.527	A	A

¹ TS = Traffic Signal; CSS = Cross-Street Stop

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (≥22 ft.) for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane

³ Volume-to-capacity ratio and level of service calculated using the following analysis software: Traffix. Per the ICU 1(Loss as Cycle Length %), overall average volume-to-capacity ratio and level of service are shown for all intersections. Cross-Street stop intersections are analyzed as traffic signals in order obtain the V/C ratio and level of service.

FIGURE 2-E EXISTING (2015) AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
21 794 62 103 550 67	106 83 80 115 616 29	45 8 69 88 622 19	39 275 46 84 645 71	89 306 50 79 571 70
45 612 152 152 152	59 825 27 11 142 45	42 818 13 20 25 30	40 854 38 35 598 83	57 752 155 178 694 373
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South
112 1 3 120	20 709 804	109 734 6 837	400 9 43 613	41 399 0 29 66 612



FIGURE 2-F EXISTING (2015) PM PEAK HOUR INTERSECTION VOLUMES

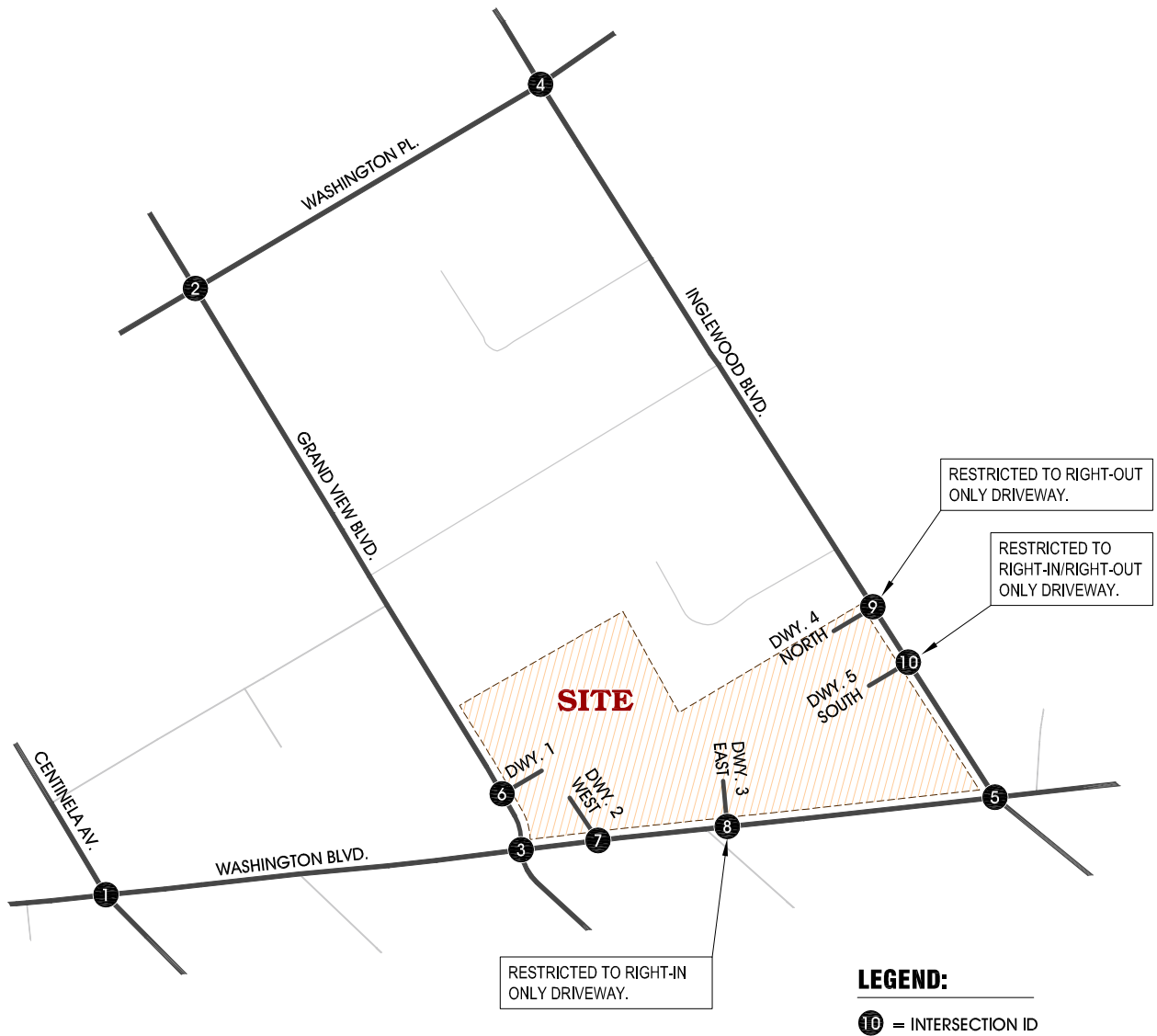


1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
61 1426 161 90 642 81	169 282 96 47 796 38	61 44 191 46 780 12	58 482 56 55 761 165	56 647 61 40 664 124
64 656 183 91 970 100	48 724 46 9 60 43	47 894 13 28 16 21	26 768 46 32 233 52	36 688 403 148 258 96
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South
340 0 0 120	0 841 1135	0 926 0 1110	593 0 2 398	14 597 18 57 11 362



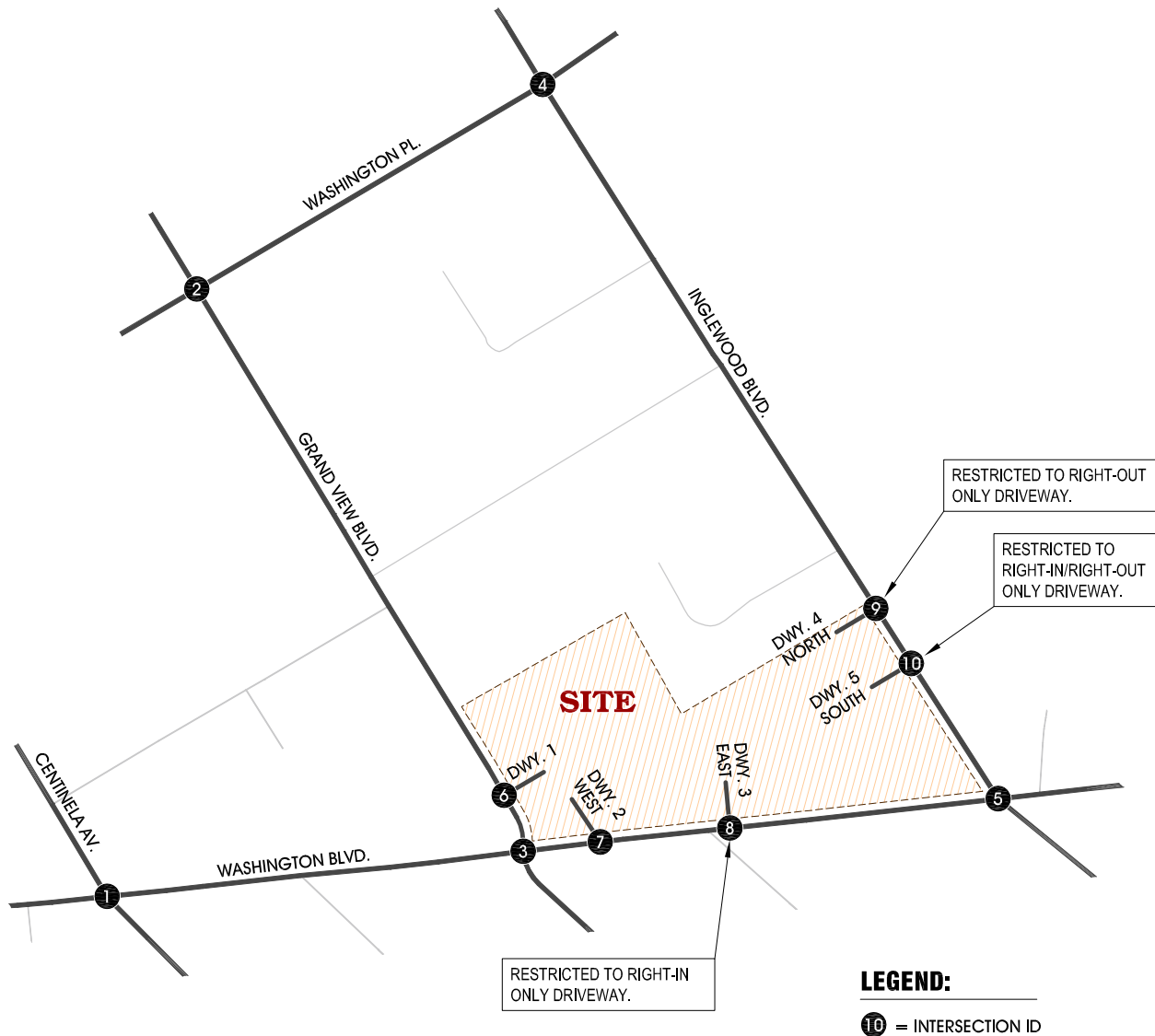
FIGURE 2-G

**EXISTING (2015) AM PEAK HOUR INTERSECTION VOLUMES
WITH ADJUSTMENTS**



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
21 794 62 103 550 67	106 83 80 115 616 29	45 8 69 88 622 19	39 341 46 84 645 71	89 306 59 79 571 70
45 612 152 152 1323 112	59 825 27 11 142 45	42 818 13 20 25 30	40 854 38 35 664 83	63 752 155 178 694 373
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South
112 1 3	20 709 804	115 734 843	466 688	107 408 29 687
120			52	

FIGURE 2-H EXISTING (2015) PM PEAK HOUR INTERSECTION VOLUMES WITH ADJUSTMENTS



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Ingewood Blvd. / Washington Pl.	5. Ingewood Blvd. / Washington Blvd.
61 1426 161 90 642 81	169 282 96 47 796 38	61 44 191 46 780 12	58 493 56 55 761 165	56 647 79 40 664 124
64 656 183 91 970 100	48 724 46 9 60 43	47 894 13 28 16 21	26 768 46 32 244 52	36 688 403 148 258 96
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Ingewood Blvd. / Project Dwy. 4 - North	10. Ingewood Blvd. / Project Dwy. 5 - South
340 0 0 120	0 841 1135	0 926 1110	604 2 409	25 597 75 391



The following study area intersections in the vicinity of the site are currently operating at an undesirable Level of Service (LOS) "E" or "F":

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Washington Boulevard (EW)

The operation analysis worksheets for existing conditions are provided in Appendix "B".

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3. PROJECT DEVELOPMENT

3.1 Project Trip Generation

The trip generation for the additional 50 students has been estimated based upon the current traffic occurring at the site due to the 600 student enrollment. Empirical traffic counts at the driveway have been collected to reflect the current traffic conditions. The total inbound and outbound traffic volumes have been correlated to the current number of students and a trip-per-student rate has been determined. The resulting trip generation rates for the project are shown in Table 3-1.

TABLE 3-1
PROJECT TRIP GENERATION RATES

LAND USE	QUANTITY ²	PEAK HOUR TRIP RATES ¹						DAILY
		AM			PM			
		IN	OUT	TOTAL	IN	OUT	TOTAL	
Help Group School	50 STU	0.35	0.14	0.49	0.03	0.10	0.13	N/A

¹ Source: Trip rates based on empirical driveway count data collected in April 2015 with an enrollment of 600 students.

² STU = Students

Table 3-2 indicates that the 50 additional students would generate approximately 25 trips occurring during the AM peak hour (18 inbound and 7 outbound) and 7 trips during the PM peak hour (2 inbound and 5 outbound).

TABLE 3-2
PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY ¹	PEAK HOUR					
		AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Help Group School	50 STU	18	7	25	2	5	7
TOTAL PROJECT TRIPS		18	7	25	2	5	7

¹ STU = Students

3.2 Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the access limitations into and out of the site, as well as residential development and other school sites within the area. The directional orientation of traffic was determined by evaluating surrounding land uses within the community.

Trip distribution for this study has been based upon near-term conditions. The trip distribution pattern for the proposed project is graphically depicted on Figure 3-A. It should be noted that the patterns shown on Figure 3-A were based on the current traffic pattern to/from the school.

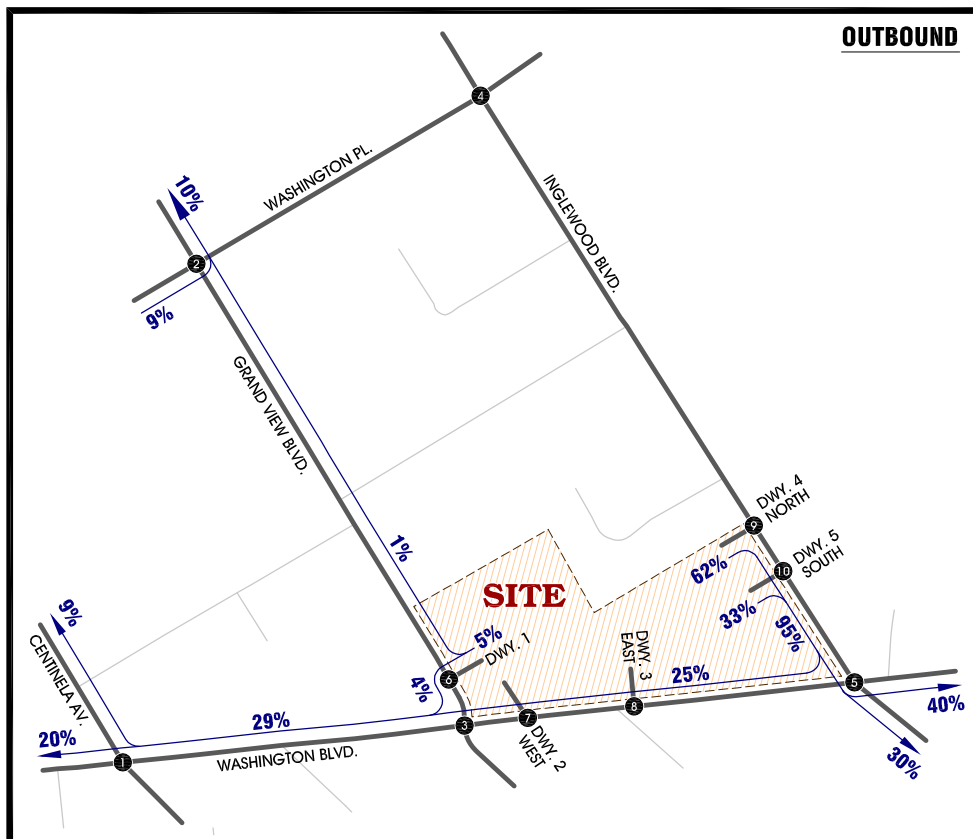
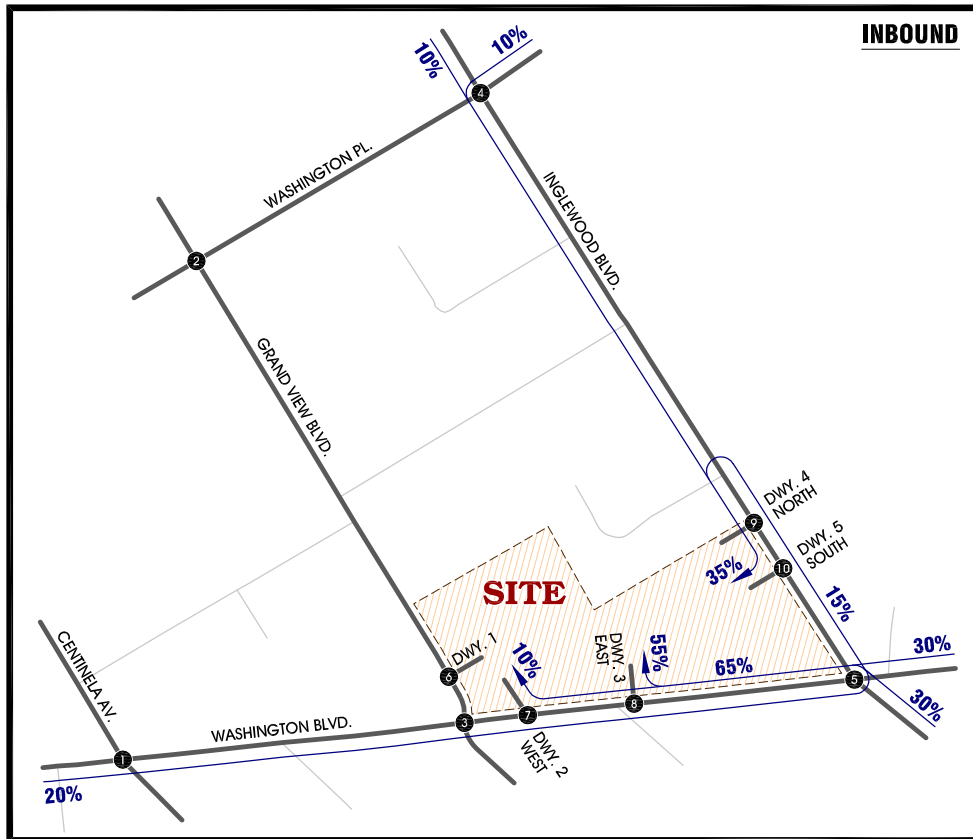
3.3 Modal Split

The traffic reducing potential of public transit has not been considered in this report. Essentially the traffic projections are "conservative" in that public transit might be able to reduce the traffic volumes.

3.4 Project Trip Assignment

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distributions, proposed arterial highway and local street systems, which would be in place by the time of occupancy of the project. The AM and PM peak hour traffic volumes associated with the project have been assigned to the study area roadway system. These traffic volumes are illustrated on Figures 3-B and 3-C for the respective timeframes.

FIGURE 3-A PROJECT TRIP DISTRIBUTION



LEGEND:

- 10 = INTERSECTION ID
- 10%** = PERCENT TO/FROM PROJECT



FIGURE 3-B PROJECT ONLY AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.



FIGURE 3-C PROJECT ONLY PM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.



3.5 Existing Plus Project Traffic Conditions

Existing Plus Project Average Daily Traffic Conditions

Figure 3-D shows the ADT volumes for existing plus project traffic conditions.

Existing Plus Project Intersection Analysis

The ICU methodology has been utilized to evaluate intersection levels of service. Intersection levels of service for existing plus project traffic conditions have been calculated and are shown in Table 3-3. Table 3-3 shows ICU calculations based on the existing geometrics at the intersections. As shown in Table 3-3, the following study area intersections are projected to operate at an undesirable Level of Service "E" or "F" during the peak hours:

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

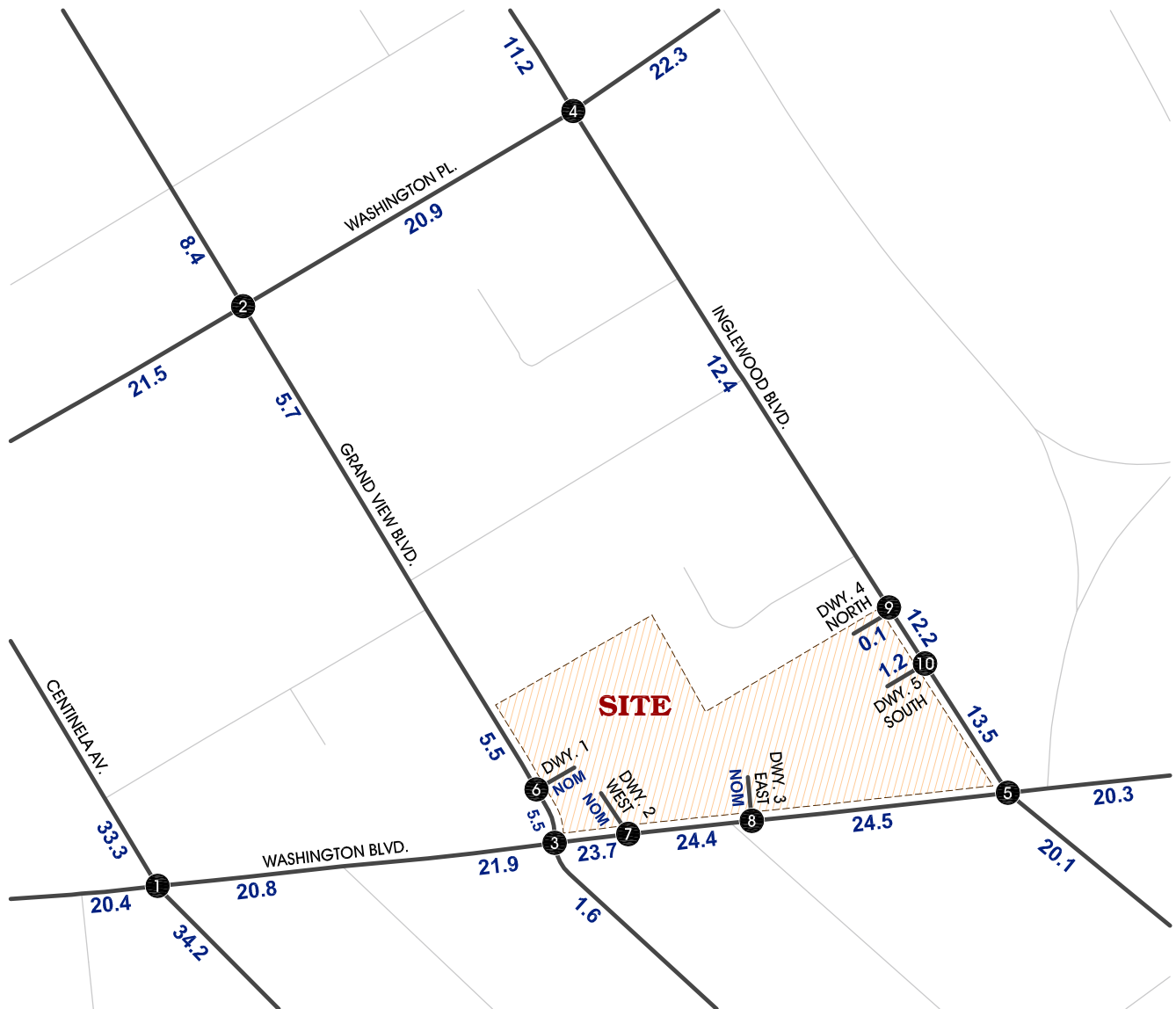
Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

Existing plus project Level of Service calculation worksheets are included in Appendix "C".

Existing plus project AM and PM peak hour turning movement volumes are shown on Figures 3-E and 3-F, respectively.

**FIGURE 3-D
EXISTING PLUS PROJECT
AVERAGE DAILY TRAFFIC (ADT)**



LEGEND:

- 1.0** = VEHICLES PER DAY (1000's)
- 10** = INTERSECTION ID



TABLE 3-3
INTERSECTION ANALYSIS FOR
EXISTING PLUS PROPOSED PROJECT CONDITIONS

ID	Intersection	Traffic Control ¹	Intersection Approach Lanes ²												Volume-to-Capacity Ratio (v/c) ³		Level of Service ³	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Centinela Av. / Washington Blvd.	TS	1	2	0	1	2	0	1	2	0	1	2	d	0.869	0.934	D	E
2	Grand View Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.559	0.741	A	C
3	Grand View Blvd. / Washington Blvd.	TS	0	1!	0	0	1!	0	1	2	d	1	2	0	0.459	0.590	A	A
4	Inglewood Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.942	0.857	E	D
5	Inglewood Blvd. / Washington Blvd.	TS	1	1	1	1	1	1	1	2	d	1	2	1	0.853	0.928	D	E
6	Grand View Blvd. / Project Dwy. 1	CSS	0	1	0	0	1	0	0	0	0	0	1!	0	0.175	0.313	A	A
7	Project Dwy. 2 - West / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.353	0.455	A	A
8	Project Dwy. 3 - East / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.370	0.447	A	A
9	Inglewood Blvd. / Project Dwy. 4 - North	CSS	0	1	0	0	1	0	0	0	1	0	0	0	0.567	0.478	A	A
10	Inglewood Blvd. / Project Dwy. 5 - South	CSS	0	1	0	0	1	d	0	0	1	0	0	0	0.551	0.523	A	A

¹ TS = Traffic Signal; CSS = Cross-Street Stop

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (≥22 ft.) for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane ; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane

³ Volume-to-capacity ratio and level of service calculated using the following analysis software: Traffix. Per the ICU 1(Loss as Cycle Length %), overall average volume-to-capacity ratio and level of service are shown for all intersections. Cross-Street stop intersections are analyzed as traffic signals in order obtain the V/C ratio and level of service.

FIGURE 3-E EXISTING PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Ingledwood Blvd. / Washington Pl.	5. Ingledwood Blvd. / Washington Blvd.
21 794 62 104 551 67	106 83 80 115 616 29	45 8 69 88 624 19	39 343 46 84 645 73	91 308 62 79 576 70
45 616 152 152 152	60 825 27 11 142 45	42 822 13 20 25 30	40 854 38 35 664 83	67 752 155 181 697 373
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Ingledwood Blvd. / Project Dwy. 4 - North	10. Ingledwood Blvd. / Project Dwy. 5 - South
112 1 3 120	22 711 808	125 738 847	472 56 691	113 412 31 690



FIGURE 3-F EXISTING PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
61 1426 161 90 643 81	169 282 96 47 796 38	61 44 191 46 781 12	58 493 56 55 761 165	57 649 81 40 665 124
64 656 183 91 970 100	48 724 46 9 60 43	47 894 13 28 16 21	26 768 46 32 244 52	36 688 403 148 258 96
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South
340 0 0 120	0 842 1135	1 927 1110	605 5 409	26 600 77 391



3.6 Existing Plus Project Significant Impacts

A. City of Culver City

The following study area intersections within the boundaries of the City of Culver City have been analyzed using the Culver City determination of a significant impact (shown below):

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Grand View Boulevard (NS) at:

- Washington Boulevard (EW)

Project Driveway 1 (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Project Driveway 2 (EW)
- Project Driveway 3 (EW)
- Washington Boulevard (EW)

SIGNIFICANT TRANSPORTATION IMPACT FOR AN INTERSECTION WITHIN THE CITY OF CULVER CITY

LEVEL OF SERVICE	FINAL V/C RATIO	PROJECT-RELATED INCREASE IN V/C
D	> 0.80 - 0.90	equal to or greater than 0.0400
E, F	0.90 or greater	equal to or greater than 0.0200

For the purposes of the traffic analysis conducted for the Culver City Campus school site, a significant impact within the City of Culver City has been defined as an increase in the V/C ratio equal to or greater than 0.04 if the intersection is operating at LOS "D" or an increase in the V/C ratio equal to or greater than 0.02 if the intersection is operating at LOS E or F. Furthermore, an 8% increase in traffic on a residential street constitutes a significant impact.

B. City of Los Angeles

The following study area intersections have been analyzed using the City of Los Angeles determination of a significant impact (shown below):

Grand View Boulevard (NS) at:

- Washington Place (EW)

Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

It should be noted that while the Grand View Boulevard and Washington Place intersection is within the jurisdictions of both the Cities of Culver City and Los Angeles, the City of Los Angeles significant impact criteria have been used since the criteria are more conservative than Culver City's criteria.

SIGNIFICANT TRANSPORTATION IMPACT FOR AN INTERSECTION WITHIN THE CITY OF LOS ANGELES

LEVEL OF SERVICE	FINAL V/C RATIO	PROJECT-RELATED INCREASE IN V/C
C	>0.70-0.80	Equal to or greater than 0.0400
D	> 0.80 - 0.90	equal to or greater than 0.0200
E, F	0.90 or greater	equal to or greater than 0.0100

For the purposes of the traffic analysis conducted for the Culver City Campus school site, a significant impact within the City of Los Angeles has been defined as an increase in the V/C ratio equal to or greater than 0.04 if the intersection is operating at LOS "C", an increase in the V/C ratio equal or greater than 0.02 if the intersection is operating at Los "D", or an increase in the V/C ratio equal to or greater than 0.01 if the intersection is operating at LOS E or F. Furthermore, an 8% increase in traffic on a residential street constitutes a significant impact.

Table 3-4 summarizes the change in V/C ratios for the study area intersections. As indicated in Table 3-4, there are no anticipated significant impacts at the study area intersections due to the additional project traffic.

TABLE 3-4
EXISTING PLUS PROJECT SIGNIFICANT IMPACT SUMMARY

ID	Intersection	Existing With Adjustments ¹ Volume-to-Capacity Ratio (v/c) ³		Level of Service ³		Existing + Proposed Project Volume-to- Capacity Ratio (v/c) ³		Level of Service ³		Change in v/c Ratio		Significant Impact? ²		Jurisdiction
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Centinela Av. / Washington Blvd.	0.868	0.934	D	E	0.869	0.934	D	E	0.001	0.000	No	No	Culver City
2	Grand View Blvd. / Washington Pl.	0.559	0.741	A	C	0.559	0.741	A	C	0.000	0.000	No	No	City of Los Angeles
3	Grand View Blvd. / Washington Blvd.	0.458	0.590	A	A	0.459	0.590	A	A	0.001	0.000	No	No	Culver City
4	Inglewood Blvd. / Washington Pl.	0.941	0.857	E	D	0.942	0.857	E	D	0.001	0.000	No	No	City of Los Angeles
5	Inglewood Blvd. / Washington Blvd.	0.849	0.926	D	E	0.853	0.928	D	E	0.004	0.002	No	No	Culver City
6	Grand View Blvd. / Project Dwy. 1	0.175	0.313	A	A	0.175	0.313	A	A	0.000	0.000	No	No	Culver City
7	Project Dwy. 2 - West / Washington Blvd.	0.351	0.455	A	A	0.353	0.455	A	A	0.002	0.000	No	No	Culver City
8	Project Dwy. 3 - East / Washington Blvd.	0.365	0.447	A	A	0.370	0.447	A	A	0.005	0.000	No	No	Culver City
9	Inglewood Blvd. / Project Dwy. 4 - North	0.563	0.478	A	A	0.567	0.478	A	A	0.004	0.000	No	No	Culver City
10	Inglewood Blvd. / Project Dwy. 5 - South	0.548	0.520	A	A	0.551	0.523	A	A	0.003	0.003	No	No	Culver City

¹ For purposes of the analysis in this study, some of the existing movements at the Project Driveways have been adjusted to accommodate the proposed access restrictions into and out of the site (eg. existing left turns in and out of the driveways). These existing AM and PM volumes adjustments are shown previously on Figures 2-G and 2-H, respectively. The operation analysis worksheets for existing conditions with adjustments are also provided in Appendix "B".

² Based on the City of Culver City Significant Impact Criteria, the project impact is considered significant for an intersection if the V/C ratio increases by 0.04 or more for LOS D or by 0.02 or more for LOS E or F.
Based on the City of Los Angeles Significant Impact Criteria, the project impact is considered significant for an intersection if the V/C ratio increases by 0.04 or more for LOS C, by 0.02 or more for LOS D, or by 0.01 or more for LOS E or F.

4. FUTURE TRAFFIC CONDITIONS

Based on the City of Culver City traffic study requirements, the following future traffic scenarios have been analyzed to assess the potential impacts associated with the proposed project:

- Existing Plus Ambient Plus Related Projects
- Existing Plus Ambient Plus Related Projects Plus Proposed Project

4.1 Related Projects Traffic Conditions

Related Projects

A list of cumulative projects that could potentially add traffic to the study area intersections were supplied by the City of Culver City and the City of Los Angeles. Table 4-1 details the related projects trip generation summary. Both daily, AM and PM peak hour trip generation for the related projects are shown in Table 4-1. The cumulative projects are projected to generate a total of approximately 18,592 trip-ends per day with 1,161 vehicles per hour during the AM peak hour and 1,637 vehicles per hour during the PM peak hour.

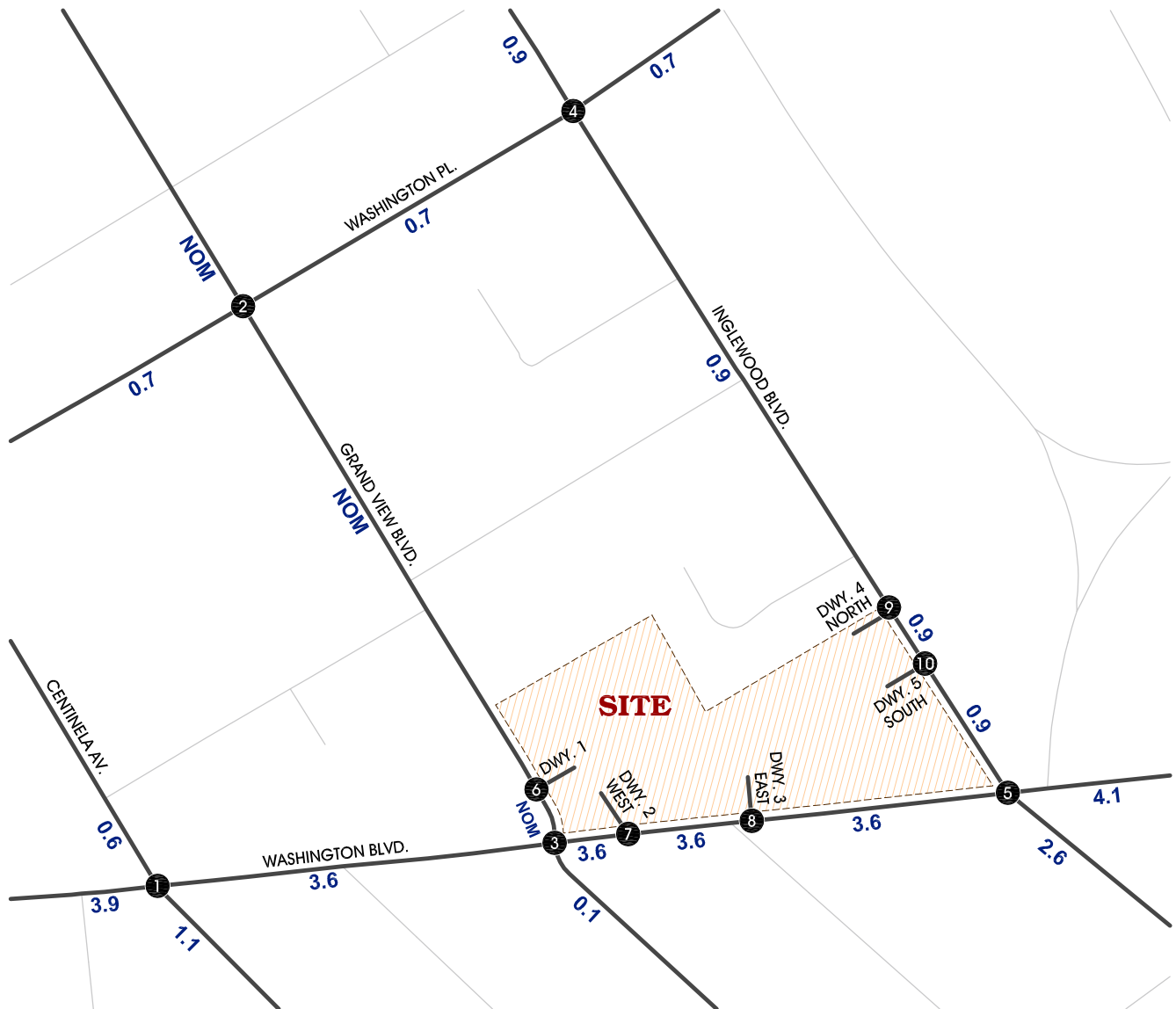
The trip distributions for the related projects are graphically depicted in Appendix “D” of this report. Based on the related projects trip generation and distributions, ADT, AM and PM peak hour volumes of the above mentioned cumulative projects are collectively shown on Figures 4-A, 4-B, and 4-C, respectively.

TABLE 4-1
CUMULATIVE TRIP GENERATION SUMMARY

ID	Project Name	Land Use	Quantity ¹		Peak Hour						Daily
					AM			PM			
					In	Out	Total	In	Out	Total	
1	Mazda 11215 Washington Blvd	Car Dealership	5.492	TSF	8	3	11	6	9	15	177
	Subtotal TAZ 1				8	3	11	6	9	15	177
2	Marcasel 11957 Washington Blvd	Condominium	30	DU	2	11	13	11	5	16	174
		Retail	8.682	TSF	22	13	35	56	61	117	1,387
	Subtotal TAZ 2				24	24	48	67	66	133	1,561
3	12714-12718 Washington Boulevard Mixed Use	Condominium	5	DU	0	2	2	2	1	3	29
		Retail	3.414	TSF	12	8	20	30	32	62	755
	Baldwin Site 12803 Washington Blvd	Condominium	27	DU	2	10	12	9	5	14	157
		Retail	7.293	TSF	20	12	32	50	54	104	1,238
	Washington/Tivoli Mixed Use Project	Condominium	1	DU	0	0	0	0	0	0	6
		Retail	2.252	TSF	10	6	16	23	25	48	577
Subtotal TAZ 3				44	38	82	114	117	231	2,762	
4	Airport Marina Ford	Car Dealership	27.57	TSF	40	13	53	29	43	72	891
	Subtotal TAZ 4				40	13	53	29	43	72	891
5	11198 Washington Place	Retail	3.85	TSF	13	8	21	32	35	67	818
	Culver Center Shopping Center	Restaurant	2	TSF	12	10	22	12	8	20	254
	11281 Washington Place	Retail	6.294	TSF	18	11	29	45	49	94	1,125
	Subtotal TAZ 5				43	29	72	89	92	181	2,197
6	Arora Condominiums	Condominium	2.00	DU	0	1	1	1	0	1	12
	Globe Housing	Condominium	10	DU	1	4	5	4	2	6	58
	Subtotal TAZ 6				1	5	6	5	2	7	70
7	Shell	C Store w/Car Wash	2.285	TSF	77	77	154	61	59	120	1,690
	Chevron	C Store	2.50	TSF	84	84	168	67	64	131	1,845
	Subtotal TAZ 7				161	161	322	128	123	251	3,535
8	Market Hall	Specialty Retail	31.5	TSF	103	112	215	89	70	159	1,396
	Subtotal TAZ 8				103	112	215	89	70	159	1,396
9	Grand View Apts	Apartments	36	DU	4	15	19	14	8	22	239
	Subtotal TAZ 9				4	15	19	14	8	22	239
10	Harbor Freight	Home Improvement	28.53	TSF	24	18	42	32	34	66	876
	Subtotal TAZ 10				24	18	42	32	34	66	876
11	Bentley Condos	Condominium	2	DU	0	1	1	1	0	1	12
	3961 Tilden	Condominium	2	DU	0	1	1	1	0	1	12
	Subtotal TAZ 11				0	2	2	2	0	2	24
12	11924 Washington Blvd.	Condominium	92	DU	6	34	40	32	16	48	535
		Retail	15	TSF	30	19	49	81	87	168	1,979
	Subtotal TAZ 12				36	53	89	113	103	216	2,514
City of LA Cumulative Projects											
13	4090 S. Del Rey Ave.	Apartments	51	DU	5	21	26	23	13	36	339
14	4100 S. Del Rey Ave	Apartments	77	DU	8	31	39	35	19	54	512
15	4210 S. Del Rey Ave.	136 DU Condo/20000 sf Office	136	DU	11	60	71	48	37	85	627
16	4140 S. Glencoe Ave.	67 DU Apt/3211 sf Office			11	28	39	33	23	56	481
17	4091 S. Redwood Ave.	67 DU Condo/7525 sf Office			4	21	25	29	22	51	391
TOTAL CUMULATIVE TRIPS					527	634	1,161	856	781	1,637	18,592

¹ TSF = Thousand Square Feet; DU = Dwelling Units

**FIGURE 4-A
RELATED PROJECTS
AVERAGE DAILY TRAFFIC (ADT)**



LEGEND:



= INTERSECTION ID

1.0

= VEHICLES PER DAY (1000's)

NOM

= NOMINAL, LESS THAN 50 VEHICLES PER DAY



FIGURE 4-B RELATED PROJECTS AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Ingleswood Blvd. / Washington Pl.	5. Ingleswood Blvd. / Washington Blvd.
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Ingleswood Blvd. / Project Dwy. 4 - North	10. Ingleswood Blvd. / Project Dwy. 5 - South



FIGURE 4-C RELATED PROJECTS PM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
0 0 27 25 146 5	0 0 0 0 31 0	0 0 0 0 172 0	0 36 1 0 31 1	0 20 17 15 126 45
0 129 45 58 0 4	0 28 0 0 0 1	0 157 4 0 1 0	0 30 0 0 36 1	0 116 42 46 22 47
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South
0 0 0 0 0 1	0 0 172 157 0 0	0 0 172 157 0 0	37 0 37 0 37 0	0 0 37 0 37 0



4.2 Existing Plus Ambient Growth Plus Related Projects Traffic Conditions

Existing Plus Ambient Growth Plus Related Projects Average Daily Traffic Conditions

Figure 4-D shows the ADT volumes for existing plus ambient growth plus cumulative projects traffic conditions.

Existing Plus Ambient Growth Plus Related Projects Intersection Analysis

The ICU methodology has been utilized to evaluate intersection levels of service. Intersection levels of service for existing plus ambient growth plus related projects traffic conditions have been calculated and are shown in Table 4-2. Table 4-2 shows ICU calculations based on the existing geometrics at the intersections. As shown in Table 4-2, the following study area intersections are projected to operate at an undesirable Level of Service "E" or "F" during the peak hours:

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

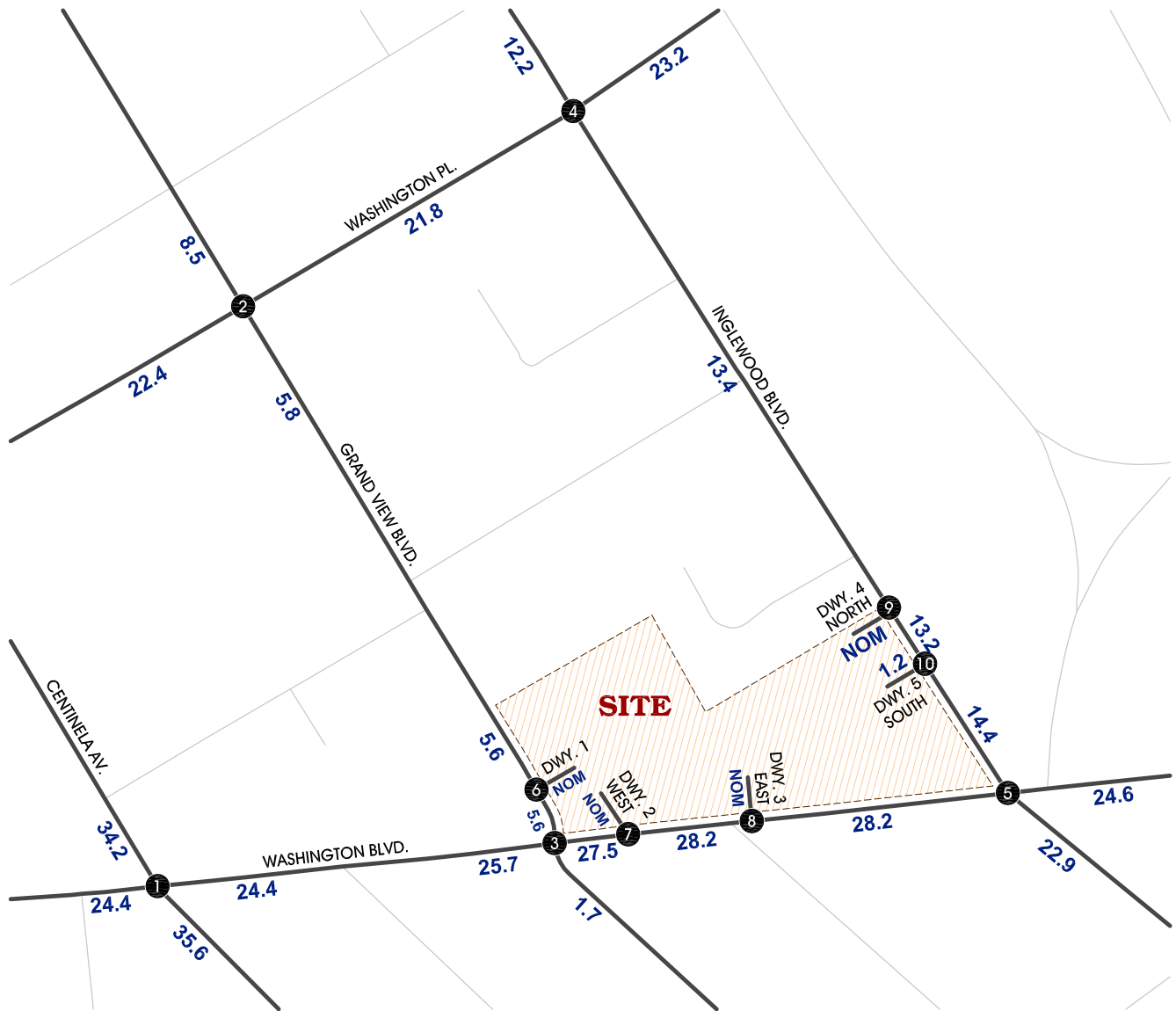
Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

Existing plus ambient growth plus related projects Level of Service calculation worksheets are included in Appendix "E".

Existing plus ambient growth plus related projects AM and PM peak hour turning movement volumes are shown on Figures 4-E and 4-F, respectively.

FIGURE 4-D EXISTING PLUS AMBIENT PLUS RELATED PROJECTS AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

- 1.0** = VEHICLES PER DAY (1000's)
- 10** = INTERSECTION ID



TABLE 4-2
INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS RELATED PROJECTS (2015) CONDITIONS

ID	Intersection	Traffic Control ¹	Intersection Approach Lanes ²												Volume-to-Capacity Ratio (v/c) ³		Level of Service ³	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Centinela Av. / Washington Blvd.	TS	1	2	0	1	2	0	1	2	0	1	2	d	0.931	1.035	E	F
2	Grand View Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.573	0.758	A	C
3	Grand View Blvd. / Washington Blvd.	TS	0	1!	0	0	1!	0	1	2	d	1	2	0	0.500	0.646	A	A
4	Inglewood Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.972	0.898	E	D
5	Inglewood Blvd. / Washington Blvd.	TS	1	1	1	1	1	1	1	2	d	1	2	1	0.909	1.030	E	F
6	Grand View Blvd. / Project Dwy. 1	CSS	0	1	0	0	1	0	0	0	0	0	1!	0	0.176	0.315	A	A
7	Project Dwy. 2 - West / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.390	0.507	A	A
8	Project Dwy. 3 - East / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.395	0.499	A	A
9	Inglewood Blvd. / Project Dwy. 4 - North	CSS	0	1	0	0	1	0	0	0	1	0	0	0	0.581	0.504	A	A
10	Inglewood Blvd. / Project Dwy. 5 - South	CSS	0	1	0	0	1	d	0	0	1	0	0	0	0.566	0.547	A	A

¹ TS = Traffic Signal; CSS = Cross-Street Stop

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (≥22 ft.) for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane ; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane

³ Volume-to-capacity ratio and level of service calculated using the following analysis software: Traffix. Per the ICU 1(Loss as Cycle Length %), overall average volume-to-capacity ratio and level of service are shown for all intersections. Cross-Street stop intersections are analyzed as traffic signals in order obtain the V/C ratio and level of service.

FIGURE 4-E EXISTING PLUS AMBIENT PLUS RELATED PROJECTS AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Ingleswood Blvd. / Washington Pl.	5. Ingleswood Blvd. / Washington Blvd.
21 802 72 116 635 69	107 84 81 117 643 30	45 9 70 89 715 19	39 364 46 86 674 74	90 325 65 88 644 91
45 727 201 182 1336 115	60 860 27 11 143 45	42 941 19 25 25 30	40 890 38 35 692 84	64 848 184 199 715 394
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Ingleswood Blvd. / Project Dwy. 4 - North	10. Ingleswood Blvd. / Project Dwy. 5 - South
114 1 3 121 121	20 803 927 927	116 828 966 966	493 53 717 717	108 434 29 716



FIGURE 4-F EXISTING PLUS AMBIENT PLUS RELATED PROJECTS AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Ingledwood Blvd. / Washington Pl.	5. Ingledwood Blvd. / Washington Blvd.
62 1440 190 116 794 87	171 285 98 47 835 38	62 44 163 46 960 12	59 534 58 56 800 168	57 673 97 55 797 170
65 792 230 148 980 105	48 759 46 9 61 44	47 1060 17 32 17 21	26 806 46 32 282 54	36 811 449 195 283 144
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Ingledwood Blvd. / Project Dwy. 4 - North	10. Ingledwood Blvd. / Project Dwy. 5 - South
343 0 0 122	0 1021 1303	0 1107 1278	647 2 450	25 640 76 432



4.3 Existing Plus Ambient Growth Plus Related Projects Plus Proposed Project Traffic Conditions

Once the ambient growth plus related projects plus project traffic is assigned to the street network and added to existing volumes in the study area, the traffic impact can be assessed. Figure 4-G shows ADT volumes for existing with ambient growth plus related projects plus project traffic conditions.

Existing Plus Ambient Growth Plus Related Projects Plus Proposed Project Intersection Analysis

The ICU methodology has been utilized to evaluate intersection levels of service. Intersection levels of service for existing with ambient growth plus cumulative projects plus project traffic conditions have been calculated and are shown in Table 4-3. Table 4-3 shows ICU calculations based on the existing geometrics at the intersections. As shown in Table 4-3, the study area intersections are projected to operate at an undesirable Level of Service "E" or "F" during the peak hours:

Centinela Avenue (NS) at:

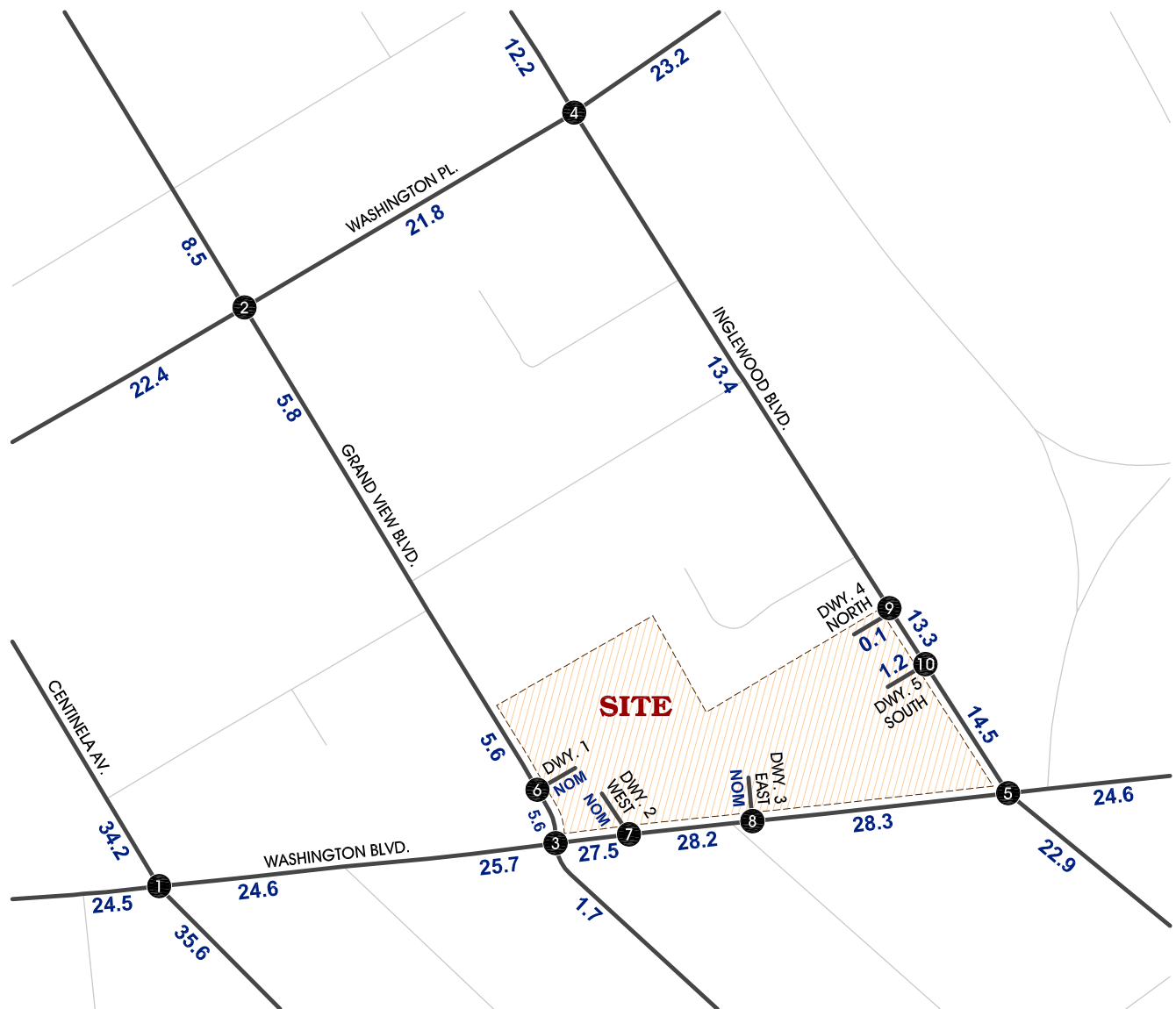
- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

Existing plus ambient growth plus related projects plus project operational Level of Service calculation worksheets are included in Appendix "F". Existing plus ambient growth plus related projects plus project AM and PM peak hour turning movement volumes are shown on Figures 4-H and 4-I, respectively.

FIGURE 4-G **EXISTING PLUS AMBIENT PLUS RELATED PROJECTS PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)**



LEGEND:

- 1.0** = VEHICLES PER DAY (1 000's)
- 10** = INTERSECTION ID



TABLE 4-3
INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS RELATED PROJECTS PLUS PROPOSED PROJECT (2015) CONDITIONS

ID	Intersection	Traffic Control ¹	Intersection Approach Lanes ²												Volume-to-Capacity Ratio (v/c) ³		Level of Service ³	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Centinela Av. / Washington Blvd.	TS	1	2	0	1	2	0	1	2	0	1	2	d	0.932	1.036	E	F
2	Grand View Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.573	0.758	A	C
3	Grand View Blvd. / Washington Blvd.	TS	0	1!	0	0	1!	0	1	2	d	1	2	0	0.500	0.646	A	A
4	Inglewood Blvd. / Washington Pl.	TS	0	1!	0	0	1!	0	1	2	0	1	2	0	0.972	0.898	E	D
5	Inglewood Blvd. / Washington Blvd.	TS	1	1	1	1	1	1	1	2	d	1	2	1	0.912	1.031	E	F
6	Grand View Blvd. / Project Dwy. 1	CSS	0	1	0	0	1	0	0	0	0	0	1!	0	0.176	0.315	A	A
7	Project Dwy. 2 - West / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.391	0.508	A	A
8	Project Dwy. 3 - East / Washington Blvd.	CSS	0	0	0	0	0	0	0	2	0	0	2	0	0.399	0.500	A	A
9	Inglewood Blvd. / Project Dwy. 4 - North	CSS	0	1	0	0	1	0	0	0	1	0	0	0	0.585	0.505	A	A
10	Inglewood Blvd. / Project Dwy. 5 - South	CSS	0	1	0	0	1	d	0	0	1	0	0	0	0.568	0.550	A	A

¹ TS = Traffic Signal; CSS = Cross-Street Stop

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (≥22 ft.) for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;

> = Right Turn Overlap; >> = Free Right Turn Lane

³ Volume-to-capacity ratio and level of service calculated using the following analysis software: Traffix. Per the ICU 1(Loss as Cycle Length %), overall average volume-to-capacity ratio and level of service are shown for all intersections. Cross-Street stop intersections are analyzed as traffic signals in order obtain the V/C ratio and level of service.

FIGURE 4-H

EXISTING PLUS AMBIENT PLUS RELATED PROJECTS PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Ingledwood Blvd. / Washington Pl.	5. Ingledwood Blvd. / Washington Blvd.
21 802 72 116 636 69	107 84 81 117 643 30	45 9 70 89 716 19	39 366 46 86 674 75	92 327 68 88 650 91
45 731 201 182 1336 115	61 860 27 11 143 45	42 944 19 25 25 30	40 890 38 35 692 84	68 848 184 202 717 394
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Ingledwood Blvd. / Project Dwy. 4 - North	10. Ingledwood Blvd. / Project Dwy. 5 - South
114 1 3 121	22 804 930	126 831 969	499 57 719	114 438 31 718



FIGURE 4-I

EXISTING PLUS AMBIENT PLUS RELATED PROJECTS PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES



1. Centinela Av. / Washington Blvd.	2. Grand View Blvd. / Washington Pl.	3. Grand View Blvd. / Washington Blvd.	4. Inglewood Blvd. / Washington Pl.	5. Inglewood Blvd. / Washington Blvd.
62 1440 190 117 795 87	171 285 98 47 835 38	62 44 163 46 961 12	59 534 58 56 800 168	58 675 99 55 798 170
65 793 230 148 980 105	48 759 46 9 61 44	47 1061 17 32 17 21	26 806 46 32 282 54	36 811 449 195 283 144
6. Grand View Blvd. / Project Dwy. 1	7. Project Dwy. 2 - West / Washington Blvd.	8. Project Dwy. 3 - East / Washington Blvd.	9. Inglewood Blvd. / Project Dwy. 4 - North	10. Inglewood Blvd. / Project Dwy. 5 - South
343 0 0 122	0 1022 1304	1 1108 1279	648 5 450	26 643 78 432



4.4 Existing Plus Ambient Plus Related Projects Plus Proposed Project Significant Impacts

A. City of Culver City

The following intersections within the boundaries of the City of Culver City have been analyzed using the Culver City determination of a significant impact (presented previously in Section 3.4):

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Grand View Boulevard (NS) at:

- Washington Boulevard (EW)

Project Driveway 1 (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Project Driveway 2 (EW)
- Project Driveway 3 (EW)
- Washington Boulevard (EW)

B. City of Los Angeles

The following study area intersections have been analyzed using the City of Los Angeles determination of a significant impact (presented previously in Section 3.4):

Grand View Boulevard (NS) at:

- Washington Place (EW)

Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

It should be noted that while the Grand View Boulevard and Washington Place intersection is within the jurisdictions of both the Cities of Culver City and Los Angeles, the City of Los Angeles significant impact criteria have been used since the criteria are more conservative than Culver City's criteria.

Table 4-4 summarizes the change in V/C ratios for the study area intersections. As indicated in Table 4-4, there are no anticipated significant impacts at the study area intersections due to the additional project traffic.

TABLE 4-4
EXISTING PLUS AMBIENT PLUS RELATED PROJECTS PLUS PROPOSED PROJECT
SIGNIFICANT IMPACT SUMMARY

ID	Intersection	Existing + Ambient + Related Projects Volume-to-Capacity Ratio (v/c)		Level of Service		Existing + Ambient + Related Projects + Proposed Project Volume-to-Capacity Ratio (v/c)		Level of Service		Change in v/c Ratio		Significant Impact? ¹		Jurisdiction
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Centinela Av. / Washington Blvd.	0.931	1.035	E	F	0.932	1.036	E	F	0.001	0.001	No	No	Culver City
2	Grand View Blvd. / Washington Pl.	0.573	0.758	A	C	0.573	0.758	A	C	0.000	0.000	No	No	City of Los Angeles
3	Grand View Blvd. / Washington Blvd.	0.500	0.646	A	A	0.500	0.646	A	A	0.000	0.000	No	No	Culver City
4	Inglewood Blvd. / Washington Pl.	0.972	0.898	E	D	0.972	0.898	E	D	0.000	0.000	No	No	City of Los Angeles
5	Inglewood Blvd. / Washington Blvd.	0.909	1.030	E	F	0.912	1.031	E	F	0.003	0.001	No	No	Culver City
6	Grand View Blvd. / Project Dwy. 1	0.176	0.315	A	A	0.176	0.315	A	A	0.000	0.000	No	No	Culver City
7	Project Dwy. 2 - West / Washington Blvd.	0.390	0.507	A	A	0.391	0.508	A	A	0.001	0.001	No	No	Culver City
8	Project Dwy. 3 - East / Washington Blvd.	0.395	0.499	A	A	0.399	0.500	A	A	0.004	0.001	No	No	Culver City
9	Inglewood Blvd. / Project Dwy. 4 - North	0.581	0.504	A	A	0.585	0.505	A	A	0.004	0.001	No	No	Culver City
10	Inglewood Blvd. / Project Dwy. 5 - South	0.566	0.547	A	A	0.568	0.550	A	A	0.002	0.003	No	No	Culver City

¹ Based on the City of Culver City Significant Impact Criteria, the project impact is considered significant for an intersection if the V/C ratio increases by 0.04 or more for LOS D or by 0.02 or more for LOS E or F.

Based on the City of Los Angeles Significant Impact Criteria, the project impact is considered significant for an intersection if the V/C ratio increases by 0.04 or more for LOS C, by 0.02 or more for LOS D, or by 0.01 or more for LOS E or F.

5. SITE ACCESS ISSUES

5.1 Site Access

As previously shown on Figure 1-B, the campus currently provides five (5) access points and a drop off area. The driveway restrictions are not anticipated to change due to the additional proposed 50 students.

No additional recommendations are provided due to the additional traffic.

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6. CONCLUSIONS/RECOMMENDATIONS

The following findings have been reached for Existing and Future Conditions.

6.1 Existing Conditions

1. Existing roadways in close proximity to the project include Centinela Avenue, Washington Boulevard, Grand View Boulevard, Washington Place and Inglewood Boulevard. Figure 2-A, presented previously, illustrates the number of through lanes and intersection controls in the vicinity of the study area.
2. The study area intersections are currently operating at an acceptable level of service during the AM and PM peak hours.

6.2 Project Development

1. The proposed project consists of adding an additional 50 students to the existing 600 student enrollment.
2. The trip generation estimates have been calculated based on surveying the existing traffic volumes entering and exiting the campus. The existing traffic has been correlated to the exiting enrollment to determine empirically derived trip rates. The trip rates were applied to the proposed 50 students to estimate the number of additional trips that would occur during the peak hours. The analysis indicates that the 50 additional students would generate approximately 25 trips during the AM peak hour (18 inbound and 7 outbound) and 7 trips during the PM peak hour (2 inbound and 5 outbound).

6.3 Future Traffic Conditions

1. Existing plus proposed project traffic conditions analysis show that the following study area intersections in the vicinity of the site are anticipated to operate at an undesirable level of service:

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

2. An ambient growth rate of 1 percent per year in the vicinity of the study area has been identified. With the addition of this growth rate and traffic due to related projects, the following study intersections are anticipated to operate at an undesirable level of service under Existing plus Ambient plus Related Projects traffic conditions:

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

3. Existing plus ambient plus related projects plus proposed project traffic conditions analysis show that the following study area intersections in the vicinity of the site are anticipated to continue to operate at an undesirable level of service:

Centinela Avenue (NS) at:

- Washington Boulevard (EW)

Inglewood Boulevard (NS) at:

- Washington Place (EW)
- Washington Boulevard (EW)

4. Based on the Culver City criteria for a significant impact (see Section 3.6 and 4.4), there are no significant impacts anticipated at the study area intersections with the traffic generated by the Project's 50 additional students.

6.4 Recommendations

Based upon the analysis presented in this study, no additional recommendations are provided.

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